FINAL

Glenn Springs Holdings, Inc.

Baseline Human Health Risk Assessment

Newark Bay Study Area

December 2019

Revision 3

Appendices

Appendix A

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Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0017 U	0.0018 U	0.0017 U	0.0034	0.0017 U	0.0016 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.028 U	0.028 U	0.027 U	0.025 U	0.026 U	0.026 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0023 U	0.0023 U	0.0022 U	0.0021 U	0.0022 U	0.0021 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.002 U	0.0021 U	0.002 U	0.0026	0.0019 U	0.0019 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0017 U	0.0057 J	0.0051	0.005	0.0016 U	0.0017 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.027 U	0.031 U	0.038 U	0.03 U	0.026 U	0.028 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0022 U	0.0026 J	0.0031 U	0.0025 U	0.0021 U	0.0023 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.002 U	0.0036 J	0.0028 U	0.0032	0.0019 U	0.002 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0016 U	0.0071	0.0018 U	0.0049	0.0041	0.0031 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.025 U	0.03 U	0.029 U	0.04 U	0.029 U	0.049 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0021 U	0.0024 U	0.0023 U	0.0033 U	0.0024 U	0.0041 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0018 U	0.0058	0.0021 U	0.0029 U	0.0028 J	0.0036 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0019 U	0.002 U	0.0028 U	0.0027	0.0031 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.031 U	0.032 U	0.045 U	0.033 U	0.049 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0025 U	0.0026 U	0.0037 U	0.0027 U	0.0041 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0022 U	0.0023 U	0.0032 U	0.003	0.0036 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0018 U	0.0085	0.0035 U	0.0036 U	0.0032 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.029 U	0.038 U	0.056 U	0.058 U	0.051 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0024 U	0.0031 U	0.0046 U	0.0048 U	0.0042 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0021 U	0.006	0.0041 U	0.016 J	0.0037 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0017 U	0.0028 U	0.0029 U	0.0022 U	0.0026 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.027 U	0.045 U	0.046 U	0.035 U	0.041 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0022 U	0.0037 U	0.0038 U	0.0029 U	0.0034 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.002 U	0.0032 U	0.0034 U	0.0025 U	0.003 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0024 U	0.0052	0.0029 U	0.0032 U	0.0017 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.039 U	0.039 U	0.047 U	0.051 U	0.027 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0032 U	0.0032 U	0.0038 U	0.0042 U	0.0022 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0028 U	0.0047 J	0.0034 U	0.0037 U	0.002 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-1
Analytical Data for Butyltins
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.015 J	0.0035 U	0.0025 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.046 U	0.055 U	0.04 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0038 U	0.0045 U	0.0033 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0081 J	0.004 U	0.0029 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.00141	0.0887 J	0.000822	0.00281	0.000974	0.0112
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00136 J	0.0617 J	0.00092 J	0.000981 J	0.000389 J	0.000886 J
E1699	2,4'-DDT	789-02-6	mg/kg	6.61e-05 J	0.00745	2.42e-05 U	2.42e-05 U	2.42e-05 U	0.000132
E1699	4,4'-DDD	72-54-8	mg/kg	0.0037	0.0791 J	0.00212	0.00802	0.00275	0.0198
E1699	4,4'-DDE	72-55-9	mg/kg	0.00663 J	0.141 J	0.00407	0.00602	0.00214	0.00373
E1699	4,4'-DDT	50-29-3	mg/kg	0.000298 J	0.009	3e-05 U	0.000427	0.000195 J	0.00206
E1699	Aldrin	309-00-2	mg/kg	1.01e-05 U	1.01e-05 U	1.01e-05 U	1.01e-05 U	1.01e-05 U	1.01e-05 U
E1699	Alpha-BHC	319-84-6	mg/kg	7.68e-06 U	3.97e-05 J	7.68e-06 U	7.68e-06 U	1.26e-05 J	8.17e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000693 J	0.00106 J	0.000693 J	0.00352	0.00088	0.000714
E1699	Beta-BHC	319-85-7	mg/kg	1.42e-05 U	5.71e-05	1.42e-05 U	2.21e-05 J	1.42e-05 U	1.42e-05 U
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000337	0.000269	2.14e-05 U	0.000851	2.14e-05 U	2.14e-05 U
E1699	Delta-BHC	319-86-8	mg/kg	1.22e-05 U	1.22e-05 U	1.22e-05 U	1.22e-05 U	1.22e-05 U	1.22e-05 U
E1699	Dieldrin	60-57-1	mg/kg	8.62e-06 U	0.00041 J	8.62e-06 U	0.001 J	0.00038	0.000526
E1699	Endosulfan I	959-98-8	mg/kg	5.6e-05 U	5.6e-05 U	5.6e-05 U	5.6e-05 U	5.6e-05 U	5.6e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	8.31e-05 U	8.31e-05 U	8.31e-05 U	8.31e-05 U	8.31e-05 U	8.31e-05 U
E1699	Endrin	72-20-8	mg/kg	1.48e-05 U	1.48e-05 U	1.48e-05 U	1.48e-05 U	1.48e-05 U	1.48e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.00023 U	0.00023 U	0.00023 U	0.00023 U	0.00023 U	0.00023 U
E1699	Endrin Ketone	53494-70-5	mg/kg	0.000132 U	0.000132 U	0.000132 U	0.000132 U	0.000132 U	0.000132 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	2.2e-05 U	2.2e-05 U	2.2e-05 U	2.2e-05 U	2.2e-05 U	2.2e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	1.91e-05 U	7.21e-05	5.12e-05 J	9.56e-05	1.91e-05 U	6.72e-05
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000504 J	0.00163 J	0.000375 J	0.000415 J	2e-04 J	0.0024 J
E1699	Methoxychlor	72-43-5	mg/kg	8.29e-05 U	8.29e-05 U	8.29e-05 U	8.29e-05 U	8.29e-05 U	8.29e-05 U
E1699	Mirex	2385-85-5	mg/kg	9.87e-06 U	9.87e-06 U	9.87e-06 U	0.000244	9.87e-06 U	9.87e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	1.75e-05 U	0.000623 J	1.75e-05 U	0.002	0.000533	0.000442
E1699	Oxychlordane	27304-13-8	mg/kg	8.66e-06 U	8.66e-06 U	8.66e-06 U	8.66e-06 U	8.66e-06 U	8.66e-06 U
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000939	0.00099	0.000878	0.00373	0.000996	0.000754
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000132	0.000166	5.67e-05 U	5.67e-05 U	5.67e-05 U	5.67e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.000931	0.0152	0.0624 J	0.0169 J	0.00111	0.00105
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000558 J	0.0173	0.0541 J	0.0119 J	0.00144	0.00153
E1699	2,4'-DDT	789-02-6	mg/kg	6.43e-05 J	0.000509	0.0217	0.000816 J	8.18e-05 U	6.92e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.00238	0.0299	0.157 J	0.0653 J	0.0034 J	0.00411
E1699	4,4'-DDE	72-55-9	mg/kg	0.00275	0.0716 J	0.19 J	0.0429 J	0.00392	0.00437
E1699	4,4'-DDT	50-29-3	mg/kg	0.00029 J	0.0127	0.0535 J	0.0057 J	0.000171 J	0.00064 J
E1699	Aldrin	309-00-2	mg/kg	1.01e-05 U	0.000838 J	0.000771 U	1.01e-05 U	0.000409 U	0.000346 U
E1699	Alpha-BHC	319-84-6	mg/kg	7.68e-06 U	6.45e-05	0.000596	0.000127 J	1.91e-05 J	3.46e-05 U
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00552 J	0.00461	0.00929	0.00388 J	0.000247	0.000244
E1699	Beta-BHC	319-85-7	mg/kg	1.42e-05 U	1.42e-05 U	0.000707 J	0.00028 J	4.09e-05 U	3.46e-05 U
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000908	0.0014	0.00254	0.000885 J	8.91e-05	7.53e-05
E1699	Delta-BHC	319-86-8	mg/kg	1.22e-05 U	1.22e-05 U	3.86e-05 U	1.22e-05 U	4.09e-05 U	3.46e-05 U
E1699	Dieldrin	60-57-1	mg/kg	0.001	0.0154	0.0209 J	0.00157 J	0.000144	0.000135
E1699	Endosulfan I	959-98-8	mg/kg	5.6e-05 U	5.6e-05 U	0.000386 U	5.6e-05 U	0.000409 U	0.000346 U
E1699	Endosulfan II	33213-65-9	mg/kg	0.00012 U	0.00012 U	0.000386 U	0.000233 J	0.000409 U	0.000346 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	8.31e-05 U	8.31e-05 U	0.000386 U	8.31e-05 U	0.000409 U	0.000346 U
E1699	Endrin	72-20-8	mg/kg	1.48e-05 U	1.48e-05 U	7.71e-05 U	1.48e-05 U	8.18e-05 U	6.92e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.00023 U	0.00023 U	0.000386 U	0.00023 U	0.000409 U	0.000346 U
E1699	Endrin Ketone	53494-70-5	mg/kg	0.000132 U	0.000132 U	0.000386 U	0.000132 U	0.000409 U	0.000346 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	0.000217	3.95e-05 J	4.09e-05 U	3.46e-05 U
E1699	Heptachlor	76-44-8	mg/kg	3.59e-05 J	2.2e-05 U	0.00386 U	2.95e-05 J	0.000204 U	0.000173 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000354	1.91e-05 U	0.00117	0.000634 J	4.09e-05 U	3.46e-05 U
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000201 J	0.00665 J	0.0248 J	0.00154 J	0.000167 J	0.00017 J
E1699	Methoxychlor	72-43-5	mg/kg	8.29e-05 U	8.29e-05 U	0.00386 U	8.29e-05 U	0.000409 U	0.000346 U
E1699	Mirex	2385-85-5	mg/kg	9.87e-06 U	9.87e-06 U	3.86e-05 U	9.87e-06 U	4.09e-05 U	3.46e-05 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00354 J	0.00271	0.00455	0.00277 J	0.00015	0.000153
E1699	Oxychlordane	27304-13-8	mg/kg	7.66e-05	8.66e-06 U	3.86e-05 U	8.66e-06 U	4.09e-05 U	3.46e-05 U
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00563	0.00973	0.0127 J	0.00337 J	0.000281	0.000292
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000734	5.67e-05 U	0.00108	5.67e-05 U	8.18e-05 U	6.92e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.00102	0.00223	0.00691	0.0641 J	0.0228	0.00461 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000614	0.00627	0.00141	0.011 J	0.0105 J	0.0035 J
E1699	2,4'-DDT	789-02-6	mg/kg	2.42e-05 U	7.08e-05 U	0.000766	0.00778 J	0.000179	0.000295 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00229	0.00529	0.0165	0.176 J	0.072 J	0.0127 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00205	0.0246 J	0.00835	0.0595 J	0.0307 J	0.0233 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00165	0.000211 J	0.0056	0.0638 J	7e-04	0.00136 J
E1699	Aldrin	309-00-2	mg/kg	1.01e-05 U	0.000354 U	1.01e-05 U	1.01e-05 U	1.01e-05 U	R
E1699	Alpha-BHC	319-84-6	mg/kg	7.68e-06 U	4.47e-05	4.26e-05 J	3.87e-05 J	3e-05 J	4.49e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000237 J	0.000995	0.002	0.00529 J	0.00225	0.00646 J
E1699	Beta-BHC	319-85-7	mg/kg	1.42e-05 U	0.00019 J	0.000123	0.000183 J	1.42e-05 U	5.68e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	9.05e-05	0.000518	0.000366	0.000991 J	0.000516	0.00205 J
E1699	Delta-BHC	319-86-8	mg/kg	1.22e-05 U	4.11e-05	1.22e-05 U	1.22e-05 U	1.22e-05 U	7.34e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00012	0.000842	0.000654	0.00364 J	0.000967 J	0.00176 J
E1699	Endosulfan I	959-98-8	mg/kg	5.6e-05 U	0.000354 U	5.6e-05 U	5.6e-05 U	5.6e-05 U	2.05e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	0.00012 U	0.000354 U	0.00012 U	0.00012 U	0.000297	4.26e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	8.31e-05 U	0.000354 U	8.31e-05 U	8.31e-05 U	8.31e-05 U	4.47e-05 U
E1699	Endrin	72-20-8	mg/kg	1.48e-05 U	7.08e-05 U	1.48e-05 U	1.48e-05 U	1.48e-05 U	1.04e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.00023 U	0.000354 U	0.00023 U	0.00023 U	0.00023 U	4.06e-05 U
E1699	Endrin Ketone	53494-70-5	mg/kg	0.000132 U	0.000354 U	0.000132 U	0.000132 U	0.000132 U	2.58e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.61e-05	7.69e-06 U	7.69e-06 U	7.69e-06 U	2.27e-05 J
E1699	Heptachlor	76-44-8	mg/kg	2.2e-05 U	0.000177 U	2.2e-05 U	2.2e-05 U	2.2e-05 U	1.04e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	1.91e-05 U	3.54e-05 U	0.000133	0.000272 J	8.07e-05	0.000552 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000282 J	0.000755 J	0.00208 J	0.0043 J	0.00209 J	0.00127 J
E1699	Methoxychlor	72-43-5	mg/kg	8.29e-05 U	0.000354 U	8.29e-05 U	8.29e-05 U	8.29e-05 U	R
E1699	Mirex	2385-85-5	mg/kg	9.87e-06 U	3.54e-05 U	9.87e-06 U	9.87e-06 U	9.87e-06 U	4.91e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	1.75e-05 U	0.000574	0.00103	0.00257 J	0.00118	0.00399 J
E1699	Oxychlordane	27304-13-8	mg/kg	8.66e-06 U	3.54e-05 U	3.64e-05 J	8.66e-06 U	8.66e-06 U	1.14e-05 U
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000264	0.00153	0.00162	0.00487 J	0.0025	0.00618 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	5.67e-05 U	0.000204	5.67e-05 U	5.67e-05 U	7.95e-05	0.000219 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00308	0.00144	0.0187 J	0.00351	0.0225
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00317 J	0.000845	0.0562 J	0.00487	0.0152
E1699	2,4'-DDT	789-02-6	mg/kg	0.000125	0.000105	0.000618	6.1e-06 U	0.0012
E1699	4,4'-DDD	72-54-8	mg/kg	0.0087	0.00436	0.0435 J	0.00881	0.0639 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0139	0.00459	0.143 J	0.0173	0.0512 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00097 J	0.00057 J	0.00504 J	0.000238 J	0.0074 J
E1699	Aldrin	309-00-2	mg/kg	5.37e-06 U	5.37e-06 U	5.37e-06 U	R	R
E1699	Alpha-BHC	319-84-6	mg/kg	5.62e-05	8.61e-06 J	0.000116	3.3e-05 J	9.75e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00361	0.00144	0.00421	0.00229	0.00363
E1699	Beta-BHC	319-85-7	mg/kg	6.51e-05	1.26e-05 U	0.000127	3.95e-05	0.000139
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000767	0.000398	0.00112	0.00082	0.00119
E1699	Delta-BHC	319-86-8	mg/kg	7.34e-06 U	7.34e-06 U	7.34e-06 U	7.34e-06 U	7.34e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000753	0.000677	0.00187	0.00191	0.00346 J
E1699	Endosulfan I	959-98-8	mg/kg	2.05e-05 U	2.05e-05 U	2.05e-05 U	2.05e-05 U	2.05e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U
E1699	Endrin	72-20-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	4.06e-05 U	4.06e-05 U	4.06e-05 U	4.06e-05 U	4.06e-05 U
E1699	Endrin Ketone	53494-70-5	mg/kg	2.58e-05 U	2.58e-05 U	2.58e-05 U	2.58e-05 U	2.58e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.3e-06 U	7.3e-06 U	7.3e-06 U	7.3e-06 U	7.3e-06 U
E1699	Heptachlor	76-44-8	mg/kg	1.04e-05 U	2.98e-05 J	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000115	0.000161	9.35e-06 U	9.35e-06 U	0.000209
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00196 J	0.000471 J	0.00309 J	0.000882 J	0.00189 J
E1699	Methoxychlor	72-43-5	mg/kg	1.18e-05 U	1.18e-05 U	1.18e-05 U	1.18e-05 U	1.18e-05 U
E1699	Mirex	2385-85-5	mg/kg	4.91e-06 U	4.91e-06 U	4.91e-06 U	4.91e-06 U	4.91e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00184	0.000802	0.00296 J	0.00131	0.00197
E1699	Oxychlordane	27304-13-8	mg/kg	1.14e-05 U	4.18e-05	1.14e-05 U	1.14e-05 U	1.14e-05 U
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00349	0.00227	0.0053	0.00338 J	0.00477
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000123	1.29e-05 U	0.00058	1.29e-05 U	0.000539

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00728	0.00439	0.00533 J	0.00269 J	0.00464 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00291	0.00609	0.00437 J	0.00164 J	0.00358 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000181 J	9.74e-05	0.000458 J	0.000307 J	0.000353 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0119 J	0.0112	0.0161 J	0.00806 J	0.0131 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00692 J	0.0352 J	0.0306 J	0.0102 J	0.0267 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000759 J	0.000764 J	0.00213 J	0.00992 J	0.00166 J
E1699	Aldrin	309-00-2	mg/kg	5.37e-06 U	R	R	5.37e-06 U	5.37e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	1.86e-05 J	8.08e-05	6.98e-05 J	3.39e-05 J	4.47e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000203	0.00301	0.00748 J	0.0026 J	0.00648 J
E1699	Beta-BHC	319-85-7	mg/kg	1.34e-05 J	0.000105	0.000158 J	5.68e-05 J	7.87e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	7.99e-05	0.00152	0.00201 J	0.000749 J	0.00193 J
E1699	Delta-BHC	319-86-8	mg/kg	7.34e-06 U	7.34e-06 U	2.23e-05 J	7.34e-06 U	7.34e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000106 J	0.0015	0.00185 J	0.000718 J	0.00202 J
E1699	Endosulfan I	959-98-8	mg/kg	2.05e-05 U	2.05e-05 U	2.05e-05 U	6.83e-05 J	0.000222 J
E1699	Endosulfan II	33213-65-9	mg/kg	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U
E1699	Endrin	72-20-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	4.06e-05 U	4.06e-05 U	4.06e-05 U	4.06e-05 U	4.06e-05 U
E1699	Endrin Ketone	53494-70-5	mg/kg	2.58e-05 U	2.58e-05 U	R	2.58e-05 U	2.58e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.3e-06 U	7.3e-06 U	7.3e-06 U	7.3e-06 U	1.8e-05 J
E1699	Heptachlor	76-44-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	9.35e-06 U	9.35e-06 U	0.000261 J	0.000131 J	0.000371 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000237 J	0.00225 J	0.00155 J	0.00153 J	0.00151 J
E1699	Methoxychlor	72-43-5	mg/kg	1.18e-05 U	1.18e-05 U	0.00142 J	R	1.18e-05 U
E1699	Mirex	2385-85-5	mg/kg	4.91e-06 U	4.91e-06 U	R	4.91e-06 U	4.91e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.000139	0.002	0.00398 J	0.00157 J	0.00387 J
E1699	Oxychlordane	27304-13-8	mg/kg	1.14e-05 U	1.14e-05 U	1.14e-05 U	2.95e-05 J	3.04e-05 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000261	0.00469	0.00648 J	0.00245 J	0.00625 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.29e-05 U	0.000364	0.000354 J	0.000127 J	0.000295 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.000695 J	0.00294 J	0.00289 J	0.00181 J	0.00414 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000444 J	0.00452 J	0.00445 J	0.00168 J	0.00351 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000366 J	6.1e-06 U	0.000429 J	0.000378 J	0.000214 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00235 J	0.00754 J	0.00692 J	0.00488 J	0.0103 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00274 J	0.0246 J	0.0177 J	0.00775 J	0.0175 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0059 J	0.00095 J	0.00182 J	0.00088 J	0.00117 J
E1699	Aldrin	309-00-2	mg/kg	R	5.37e-06 U	R	R	5.37e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	9.17e-06 J	3.07e-05 J	4.1e-05 J	1.9e-05 J	2.28e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000647 J	0.00296 J	0.00305 J	0.00158 J	0.00578 J
E1699	Beta-BHC	319-85-7	mg/kg	1.26e-05 U	1.26e-05 U	4.72e-05 J	3.62e-05 J	2.96e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	1.01e-05 U	0.00113 J	0.00103 J	0.000542 J	0.0018 J
E1699	Delta-BHC	319-86-8	mg/kg	7.34e-06 U	7.34e-06 U	9.52e-06 J	7.34e-06 U	7.34e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000265 J	0.000355 J	0.00125 J	0.000689 J	0.00259 J
E1699	Endosulfan I	959-98-8	mg/kg	2.05e-05 U	2.05e-05 U	2.05e-05 U	2.05e-05 U	2.05e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U
E1699	Endrin	72-20-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	4.06e-05 U	4.06e-05 U	4.06e-05 U	4.06e-05 U	4.06e-05 U
E1699	Endrin Ketone	53494-70-5	mg/kg	2.58e-05 U	2.58e-05 U	2.58e-05 U	2.58e-05 U	2.58e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.3e-06 U	7.3e-06 U	3.33e-05 J	7.3e-06 U	1.08e-05 J
E1699	Heptachlor	76-44-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.92e-05 J	4.44e-05 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	4.78e-05 J	7.23e-05 J	7.38e-05 J	6.6e-05 J	0.000178 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000207 J	0.000847 J	0.00123 J	0.000567 J	0.00131 J
E1699	Methoxychlor	72-43-5	mg/kg	1.18e-05 U	1.18e-05 U	1.18e-05 U	R	1.18e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000205 J	R	4.91e-06 U	4.91e-06 U	4.91e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.000425 J	0.00156 J	0.00164 J	0.000936 J	0.00349 J
E1699	Oxychlordane	27304-13-8	mg/kg	1.14e-05 U	1.14e-05 U	1.14e-05 U	1.14e-05 U	1.14e-05 U
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000652 J	0.003 J	0.00315 J	0.00162 J	0.00715 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.29e-05 U	1.29e-05 U	0.000219 J	0.00011 J	0.000391 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00332 J	0.00767	0.0438 J	0.00287	0.00062
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00281 J	0.00619	0.111 J	0.00335	0.000495
E1699	2,4'-DDT	789-02-6	mg/kg	0.000219 J	0.000154	7e-04	6.1e-06 U	1.93e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00841 J	0.0224 J	0.0722 J	0.00853 J	0.00193 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0128 J	0.0241 J	0.241 J	0.0132 J	0.00148 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0014 J	0.000644 J	0.00123 J	0.000545 J	0.000336 J
E1699	Aldrin	309-00-2	mg/kg	5.37e-06 U	5.37e-06 U	R	R	5.37e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	1.79e-05 J	5.06e-05 J	0.00013	0.000361	8.06e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00605 J	0.004	0.0017	0.00154	0.00155
E1699	Beta-BHC	319-85-7	mg/kg	2.83e-05 J	1.26e-05 U	1.26e-05 U	6.54e-05 J	6.63e-06 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00154 J	0.00121	0.000605	0.000559	0.000215
E1699	Delta-BHC	319-86-8	mg/kg	7.34e-06 U	7.34e-06 U	7.34e-06 U	7.34e-06 U	7.34e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00181 J	0.00233 J	0.000947 J	0.000605 J	0.000148 J
E1699	Endosulfan I	959-98-8	mg/kg	2.05e-05 U	2.05e-05 U	2.05e-05 U	2.05e-05 U	2.05e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U	4.26e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U	4.47e-05 U
E1699	Endrin	72-20-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	4.06e-05 U	4.06e-05 U	4.06e-05 U	R	4.06e-05 U
E1699	Endrin Ketone	53494-70-5	mg/kg	2.58e-05 U	2.58e-05 U	2.58e-05 U	2.58e-05 U	2.58e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	6.29e-06 J	7.3e-06 U	7.3e-06 U	0.000113	7.3e-06 U
E1699	Heptachlor	76-44-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U	0.000153	1.04e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000171 J	0.000113	0.000188	9.35e-06 U	4.39e-05
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000678 J	0.00118 J	0.0032 J	0.000517 J	0.000217 J
E1699	Methoxychlor	72-43-5	mg/kg	1.18e-05 U	1.18e-05 U	1.18e-05 U	R	1.18e-05 U
E1699	Mirex	2385-85-5	mg/kg	7.72e-05 J	4.91e-06 U	4.91e-06 U	4.91e-06 U	4.91e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00358 J	0.00242	0.00117	0.000828	0.00106
E1699	Oxychlordane	27304-13-8	mg/kg	1.14e-05 U	1.14e-05 U	1.14e-05 U	1.14e-05 U	4.18e-05
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00614 J	0.00495	0.00257	0.00158	0.00179
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00052 J	1.29e-05 U	1.29e-05 U	1.29e-05 U	0.00055

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-2
Analytical Data for Pesticides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	0.0207	0.00921	0.000243
E1699	2,4'-DDE	3424-82-6	mg/kg	0.0318	0.0038	0.000307
E1699	2,4'-DDT	789-02-6	mg/kg	0.00026	0.00134	6.1e-06 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.0725 J	0.0279 J	0.000863 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0849 J	0.0165	0.00105 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00198 J	0.00453 J	0.000381 J
E1699	Aldrin	309-00-2	mg/kg	5.37e-06 U	5.37e-06 U	R
E1699	Alpha-BHC	319-84-6	mg/kg	0.000249	2.43e-05 J	6.59e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00405	0.00135	9.59e-06 U
E1699	Beta-BHC	319-85-7	mg/kg	0.000146	1.26e-05 U	1.26e-05 U
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00194	0.000365	1.01e-05 U
E1699	Delta-BHC	319-86-8	mg/kg	7.34e-06 U	7.34e-06 U	7.34e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00172 J	0.000628	1.05e-05 U
E1699	Endosulfan I	959-98-8	mg/kg	2.05e-05 U	2.05e-05 U	2.05e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	4.26e-05 U	4.26e-05 U	4.26e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	4.47e-05 U	4.47e-05 U	4.47e-05 U
E1699	Endrin	72-20-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	4.06e-05 U	4.06e-05 U	4.06e-05 U
E1699	Endrin Ketone	53494-70-5	mg/kg	2.58e-05 U	2.58e-05 U	2.58e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.3e-06 U	7.3e-06 U	7.3e-06 U
E1699	Heptachlor	76-44-8	mg/kg	1.04e-05 U	1.04e-05 U	1.04e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	9.35e-06 U	9.35e-06 U	9.35e-06 U
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00376 J	0.000867 J	0.000445 J
E1699	Methoxychlor	72-43-5	mg/kg	1.18e-05 U	1.18e-05 U	1.18e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000172	4.91e-06 U	4.91e-06 U
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00231	0.000852	7.6e-06 U
E1699	Oxychlordane	27304-13-8	mg/kg	1.14e-05 U	1.14e-05 U	1.14e-05 U
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00615	0.00164	1.14e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000599	1.29e-05 U	1.29e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-3
Analytical Data for Herbicides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL	NB03SED127ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14	NB03SED127A_09/24/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125	NB03SED127A
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14	09/24/14
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0011 U	0.0034 J	0.0011 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.001 U	0.001 U	0.0011 U	0.00097 U	0.00097 U	0.00094 U	0.00097 U
SW8151A	2,4-D	94-75-7	mg/kg	0.017 U	0.016 U	0.017 U	0.016 U	0.016 U	0.023 J	0.015 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.0087 U	0.0083 U	0.0088 U	0.008 U	0.008 U	0.047	0.008 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL	NB03SED131BCL	NB03SED132ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14	NB03SED131B_09/15/14	NB03SED132A_09/11/14
			Sample ID	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01	NB03SED131B	NB03SED132A
			Sample Date	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14	09/15/14	09/11/14
			Sample Type	N	N	N	N	FD	N	N
Method	Analyte	CAS	Unit							
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0012 U	0.032 U	0.0012 U	0.001 U	0.001 U	0.001 U	0.0011 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.0011 U	0.029 U	0.0025	0.00092 U	0.00094 U	0.00094 U	0.001 U
SW8151A	2,4-D	94-75-7	mg/kg	0.017 U	0.47 U	0.018 U	0.015 U	0.015 U	0.015 U	0.016 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.044	0.24 U	0.0092 U	0.0076 U	0.0077 U	0.0078 U	0.0084 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-3
Analytical Data for Herbicides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136	NB03SED140	NB03SED142
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15
			Sample ID	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136	NB03SED-CHM140	NB03SED-CHM142
			Sample Date	09/22/14	09/25/14	09/19/14	09/14/15	09/29/15	09/28/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0012 U	0.0017 U	0.0012 U	0.0021 U	0.0012 U	0.0013 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.0011 U	0.0016 U	0.0011 U	0.0018 U	0.0011 U	0.0012 U
SW8151A	2,4-D	94-75-7	mg/kg	0.017 U	0.045 J	0.018 U	0.03 U	0.018 U	0.019 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.0089 U	0.013 U	0.0093 U	0.015 U	0.0094 U	0.011 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-3
Analytical Data for Herbicides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED143	NB03SED145	NB03SED149	NB03SED155	NB03SED160	NB03SED161
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15
			Sample ID	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161
			Sample Date	09/29/15	09/29/15	09/22/15	09/20/15	09/28/15	09/15/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0018 U	0.0014 U	0.0069 J	0.0011 U	0.0022 J	0.0022 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.0016 U	0.0013 U	0.0019 U	0.001 U	0.0014 U	0.0021 U
SW8151A	2,4-D	94-75-7	mg/kg	0.026 U	0.021 U	0.029 U	0.016 U	0.022 U	0.033 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.013 U	0.011 U	0.015 U	0.0084 U	0.011 U	0.017 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-3
Analytical Data for Herbicides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED164	NB03SED166	NB03SED167	NB03SED168	NB03SED168	NB03SED169
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15
			Sample ID	NB03SED-CHM164	NB03SED-CHM166	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169
			Sample Date	09/13/15	09/13/15	09/14/15	09/15/15	09/15/15	09/15/15
			Sample Type	N	N	N	N	FD	N
Method	Analyte	CAS	Unit						
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0013 U	0.0021 U	0.0011 U	0.0017 U	0.0017 U	0.0014 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.0012 U	0.0019 U	0.001 U	0.0016 U	0.0016 U	0.0013 U
SW8151A	2,4-D	94-75-7	mg/kg	0.019 U	0.031 U	0.016 U	0.025 U	0.025 U	0.02 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.0099 U	0.016 U	0.0084 U	0.013 U	0.013 U	0.011 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-3
Analytical Data for Herbicides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED170	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM170_09/16/15	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM170	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/16/15	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0023 J	0.0061 J	0.0017 U	0.0019 U	0.007 J	0.0012 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.0014 U	0.0014 U	0.0016 U	0.0017 U	0.0018 U	0.0011 U
SW8151A	2,4-D	94-75-7	mg/kg	0.023 U	0.022 U	0.025 U	0.028 U	0.029 U	0.018 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.012 U	0.03 U	0.013 U	0.014 U	0.015 U	0.0094 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-3
Analytical Data for Herbicides
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
SW8151A	2,4,5-T	93-76-5	mg/kg	0.0037 J	0.0021 U	0.0019 U
SW8151A	2,4,5-TP (Silvex)	93-72-1	mg/kg	0.0017 U	0.002 U	0.0018 U
SW8151A	2,4-D	94-75-7	mg/kg	0.027 U	0.031 U	0.028 U
SW8151A	2,4-DB	94-82-6	mg/kg	0.014 U	0.016 U	0.015 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.000139	0.00011	0.000371	0.000239	0.000194	0.000153
E1631B	Mercury	7439-97-6	mg/kg	0.523	0.676	0.778	0.334	0.414	0.171
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	R	R	R	550 U	110 U	533 U
E365.1	Phosphorus	7723-14-0	mg/kg	315 J	229 J	363 J	284 J	426	338
SW6010C	Titanium	7440-32-6	mg/kg	342	275	270	231	276	302
SW6020	Aluminum	7429-90-5	mg/kg	8920	7200	7270	4990	7840	5930
SW6020	Antimony	7440-36-0	mg/kg	0.293	0.225 J	0.242 J	0.188 J	0.278	0.455
SW6020	Arsenic	7440-38-2	mg/kg	14.4	10	9.33	4.53	7.62	7.31
SW6020	Barium	7440-39-3	mg/kg	62.6	50.4	77.5	51.6	65.1	102
SW6020	Beryllium	7440-41-7	mg/kg	0.486	0.389	0.36	0.284	0.453	0.406
SW6020	Cadmium	7440-43-9	mg/kg	0.836	0.401	0.534	0.384	0.627	0.26
SW6020	Calcium	7440-70-2	mg/kg	2330	1820	2370	1610	4460	3370
SW6020	Chromium	7440-47-3	mg/kg	73.4	37.3	51.6	38.6	73.8	30.2
SW6020	Cobalt	7440-48-4	mg/kg	6.43	5.44	4.72	4.04	6.46	7.14
SW6020	Copper	7440-50-8	mg/kg	87.6	46.1	57.7	62.9	163	44.6
SW6020	Iron	7439-89-6	mg/kg	16400	12900	12800	12300	18200	21500
SW6020	Lead	7439-92-1	mg/kg	74.2	41.2	60.7	115	76.3	105
SW6020	Magnesium	7439-95-4	mg/kg	3720	3410	3050	2520	4220	3280
SW6020	Manganese	7439-96-5	mg/kg	200	160	149	96.6	260	160
SW6020	Nickel	7440-02-0	mg/kg	22.7	15.7	16.4	12.4	55.4	20.6
SW6020	Potassium	7440-09-7	mg/kg	2130	1630	1520	1120	2020	1420
SW6020	Selenium	7782-49-2	mg/kg	0.52 J	0.396 J	0.542	0.175 J	0.385 J	0.579
SW6020	Silver	7440-22-4	mg/kg	0.904	0.334	0.692	1.34	0.345	0.207
SW6020	Sodium	7440-23-5	mg/kg	3590	3400	2950	2590	3050	2960
SW6020	Thallium	7440-28-0	mg/kg	0.232	0.123 J	0.151	0.0877 J	0.14	0.113 J
SW6020	Vanadium	7440-62-2	mg/kg	23.2	17.6	17.3	13.8	20.9	21.1
SW6020	Zinc	7440-66-6	mg/kg	190	144	250	187	205	141
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	R	0.67 U	0.71 U	0.65 U	0.65 U	8
SW9012A	Total Cyanide	57-12-5	mg/kg	0.24 U	0.23 U	0.25 U	0.23 U	0.22 U	0.22 U
SW9030	Sulfide	18496-25-8	mg/kg	11.2	10.4	26.7	268	76.1	44.1

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.000264	0.000503	0.0119	0.00165	0.00111 J	0.00138 J
E1631B	Mercury	7439-97-6	mg/kg	0.401	1.98	7.39	1.06	0.527 J	0.709 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	548 U	606 U	167 U	241 J	105 U	106 U
E365.1	Phosphorus	7723-14-0	mg/kg	226	422	1270 J	484	421	382
SW6010C	Titanium	7440-32-6	mg/kg	164	286	448	393 J	277 J	232
SW6020	Aluminum	7429-90-5	mg/kg	5180	7970	15500	8390 J	8100	7570
SW6020	Antimony	7440-36-0	mg/kg	0.171 J	0.405	7.79	0.732 J	0.249 J	0.29
SW6020	Arsenic	7440-38-2	mg/kg	6.4	13.3	115	11.8	6.1 J	7.33
SW6020	Barium	7440-39-3	mg/kg	63.6	79.2	663	123	186 J	167
SW6020	Beryllium	7440-41-7	mg/kg	0.296	0.46	1.17	0.565 J	0.567 J	0.552
SW6020	Cadmium	7440-43-9	mg/kg	0.515	2.19	13.7	1.14 J	0.49 J	0.411
SW6020	Calcium	7440-70-2	mg/kg	1020	2350	12700	3420 J	8550 J	6620
SW6020	Chromium	7440-47-3	mg/kg	27.1	116	276	55.4 J	29.9 J	31.1
SW6020	Cobalt	7440-48-4	mg/kg	4.43	6.11	22.5	6.47 J	7.3 J	7.4
SW6020	Copper	7440-50-8	mg/kg	25.8	102	443	133	33.9 J	36
SW6020	Iron	7439-89-6	mg/kg	11000	15600	148000	21300 J	11500 J	13900
SW6020	Lead	7439-92-1	mg/kg	41.7	110	2190	108	35	37.8
SW6020	Magnesium	7439-95-4	mg/kg	2460	3610	9450	5230	4680 J	4690
SW6020	Manganese	7439-96-5	mg/kg	86.5	204	579	164	209	201
SW6020	Nickel	7440-02-0	mg/kg	13.2	33.9	104	23.5 J	18.2 J	20.4
SW6020	Potassium	7440-09-7	mg/kg	1420	2120	2370	2380 J	1720	1490
SW6020	Selenium	7782-49-2	mg/kg	0.192 J	0.641	3	1.11	0.233 J	0.272 J
SW6020	Silver	7440-22-4	mg/kg	0.206	1.57	5.8	0.957 J	0.255 J	0.315
SW6020	Sodium	7440-23-5	mg/kg	2560	3700	9440	3800	2610	3460
SW6020	Thallium	7440-28-0	mg/kg	0.0945 J	0.167	0.2 J	0.169	0.125 J	0.119 J
SW6020	Vanadium	7440-62-2	mg/kg	13.8	25.6	142	31 J	21.3 J	21.5
SW6020	Zinc	7440-66-6	mg/kg	70.3	231	2450	182	90.3 J	94
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	0.64 U	1.1 J	R	R	0.62 U	0.62 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.23 U	0.25 U	0.35 U	0.26 U	0.22 U	0.22 U
SW9030	Sulfide	18496-25-8	mg/kg	156	100	R	69.8	163 J	98.5 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.000446	0.000598	0.00052	0.000485	0.0011	0.0021 J
E1631B	Mercury	7439-97-6	mg/kg	0.142	0.935	3.7	1.6	1.42	1.83 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	108 U	117 U	620 U	902 U	636 U	127 U
E365.1	Phosphorus	7723-14-0	mg/kg	155	313	859	1500	378	993
SW6010C	Titanium	7440-32-6	mg/kg	169	277	323	390 J	362	645 J
SW6020	Aluminum	7429-90-5	mg/kg	5560	8840	8330	16300 J	7290	18700 J
SW6020	Antimony	7440-36-0	mg/kg	0.201 J	0.367	0.959	5.52 J	0.634	0.596 J
SW6020	Arsenic	7440-38-2	mg/kg	4.26	9.17	15.4	69.5 J	6.5	11.6 J
SW6020	Barium	7440-39-3	mg/kg	51.6	108	124	384 J	99.9	108 J
SW6020	Beryllium	7440-41-7	mg/kg	0.314	0.621	0.551	3.12 J	0.479	0.952 J
SW6020	Cadmium	7440-43-9	mg/kg	0.142	1.89	0.701	2.67 J	0.652	1.04 J
SW6020	Calcium	7440-70-2	mg/kg	4870	5780	3210	11100 J	3000	4890 J
SW6020	Chromium	7440-47-3	mg/kg	18.1	90.8	80.7	152 J	36.7	121 J
SW6020	Cobalt	7440-48-4	mg/kg	3.41	8.48	6.63	37.4 J	4.12	12.3 J
SW6020	Copper	7440-50-8	mg/kg	14.5	86.2	135	432 J	133	131 J
SW6020	Iron	7439-89-6	mg/kg	13600	15500	20600	86000	15100	32500 J
SW6020	Lead	7439-92-1	mg/kg	26.1	90.1	254	1160 J	84	137 J
SW6020	Magnesium	7439-95-4	mg/kg	2460	5110	4040	8260 J	3210	9450 J
SW6020	Manganese	7439-96-5	mg/kg	87.2	221	193	520	179	362 J
SW6020	Nickel	7440-02-0	mg/kg	10.3	31.3	24.1	124 J	19.9	44.5 J
SW6020	Potassium	7440-09-7	mg/kg	1520	1620	2080	3310 J	1380	4420 J
SW6020	Selenium	7782-49-2	mg/kg	0.141 J	0.405 J	0.828	2.51 J	0.638	0.88 J
SW6020	Silver	7440-22-4	mg/kg	0.117 J	1.49	1.31	1.31 J	0.524	2.11 J
SW6020	Sodium	7440-23-5	mg/kg	2790	3340	4580	13700 J	4080	11500 J
SW6020	Thallium	7440-28-0	mg/kg	0.0541 J	0.169	0.156	0.302 J	0.133 J	0.264 J
SW6020	Vanadium	7440-62-2	mg/kg	16.6	25.3	27.5	80.1 J	18.6	44.1 J
SW6020	Zinc	7440-66-6	mg/kg	93.8	195	199	6810 J	266	259 J
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	R	R	0.73 U	1.1 U	R	1.2 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.23 U	0.24 U	0.26 J	0.72 J	0.26 U	0.44 U
SW9030	Sulfide	18496-25-8	mg/kg	55.2	115	170	80.2	73	632

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.00151 J	0.000829 J	0.00178 J	0.00156 J	0.00497 J
E1631B	Mercury	7439-97-6	mg/kg	0.689 J	0.336 J	2.82 J	1.19 J	2.51 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	77.7 U	132 U	110 U	88.7 U	211 J
E365.1	Phosphorus	7723-14-0	mg/kg	484	522	823	501	698
SW6010C	Titanium	7440-32-6	mg/kg	264	252	411 J	273	491 J
SW6020	Aluminum	7429-90-5	mg/kg	6670	5840	12800 J	8420	16100 J
SW6020	Antimony	7440-36-0	mg/kg	0.311	1.74	0.899 J	0.372	2.72 J
SW6020	Arsenic	7440-38-2	mg/kg	7.1	5.59	29.7 J	9.45	26.8 J
SW6020	Barium	7440-39-3	mg/kg	58.6	54	157 J	80.1	291 J
SW6020	Beryllium	7440-41-7	mg/kg	0.365	0.385	0.789 J	0.471	1.18 J
SW6020	Cadmium	7440-43-9	mg/kg	0.74	0.292	2.28 J	1.11	3.25 J
SW6020	Calcium	7440-70-2	mg/kg	2790	4050	4620 J	2210	5130 J
SW6020	Chromium	7440-47-3	mg/kg	60.3	67.4	194 J	67.3	127 J
SW6020	Cobalt	7440-48-4	mg/kg	5.47	5	10 J	6.64	12.9 J
SW6020	Copper	7440-50-8	mg/kg	56.4	42.6	176 J	89.3	348 J
SW6020	Iron	7439-89-6	mg/kg	13400	12600	27000 J	17300	40900 J
SW6020	Lead	7439-92-1	mg/kg	49.4	66.8	213 J	97	353 J
SW6020	Magnesium	7439-95-4	mg/kg	3590	4160	7700 J	4720	8600 J
SW6020	Manganese	7439-96-5	mg/kg	142	114	297 J	180	336 J
SW6020	Nickel	7440-02-0	mg/kg	17.4	17.7	37.7 J	24	52.3 J
SW6020	Potassium	7440-09-7	mg/kg	1460	1310	3110 J	2010	4440 J
SW6020	Selenium	7782-49-2	mg/kg	0.38 J	0.243 J	1.25 J	0.555 J	1.45 J
SW6020	Silver	7440-22-4	mg/kg	1.02	0.36	2.65 J	1.37	2.26 J
SW6020	Sodium	7440-23-5	mg/kg	5030	4600	11400 J	6410	15600 J
SW6020	Thallium	7440-28-0	mg/kg	0.104 J	0.0841 J	0.245 J	0.172	0.396 J
SW6020	Vanadium	7440-62-2	mg/kg	17.8	17.5	37.5 J	21.7	48.1 J
SW6020	Zinc	7440-66-6	mg/kg	125	139	340 J	165	588 J
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	2 J	0.78 U	1.1 U	0.87 U	1.2 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.27 U	0.27 U	0.37 U	0.3 U	0.42 U
SW9030	Sulfide	18496-25-8	mg/kg	41.6	116	508	289	878

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.00121 J	0.00219 J	0.00443 J	0.00148 J	0.00436 J
E1631B	Mercury	7439-97-6	mg/kg	0.521 J	2.97 J	1.99 J	1.73 J	1.94 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	116 U	93.6 U	140 U	82.5 U	235 J
E365.1	Phosphorus	7723-14-0	mg/kg	433	786	1590	534	1430
SW6010C	Titanium	7440-32-6	mg/kg	396	342	594 J	296	507 J
SW6020	Aluminum	7429-90-5	mg/kg	8810	8220	18000 J	7220	13000 J
SW6020	Antimony	7440-36-0	mg/kg	0.36	0.673	4.43 J	0.385 J	0.641 J
SW6020	Arsenic	7440-38-2	mg/kg	5.92	7.87	12.2 J	6.76	11 J
SW6020	Barium	7440-39-3	mg/kg	368	128	124 J	48.9 J	94 J
SW6020	Beryllium	7440-41-7	mg/kg	0.602	0.82	0.968 J	0.393	0.755 J
SW6020	Cadmium	7440-43-9	mg/kg	0.512	2.52	1.5 J	0.834 J	1.17 J
SW6020	Calcium	7440-70-2	mg/kg	7790	4010	5570 J	R	4420 J
SW6020	Chromium	7440-47-3	mg/kg	34.2	121	109 J	50.9	107 J
SW6020	Cobalt	7440-48-4	mg/kg	7.34	11.3	12.7 J	5.61	10.5 J
SW6020	Copper	7440-50-8	mg/kg	33.1	155	139 J	55.8	118 J
SW6020	Iron	7439-89-6	mg/kg	18500	16900	32800 J	13700	27800 J
SW6020	Lead	7439-92-1	mg/kg	38.8	204	156 J	56	124 J
SW6020	Magnesium	7439-95-4	mg/kg	5080	4720	9550 J	3900	8200 J
SW6020	Manganese	7439-96-5	mg/kg	263	199	419 J	153	303 J
SW6020	Nickel	7440-02-0	mg/kg	19.7	52.7	43.3 J	17.2	37.1 J
SW6020	Potassium	7440-09-7	mg/kg	2910	2120	4410 J	1540	3000 J
SW6020	Selenium	7782-49-2	mg/kg	0.192 J	0.628 J	1.14 J	0.266 J	0.899 J
SW6020	Silver	7440-22-4	mg/kg	0.31	2.12	2.12 J	0.743 J	1.72 J
SW6020	Sodium	7440-23-5	mg/kg	3810	8000	14300 J	5610	13600 J
SW6020	Thallium	7440-28-0	mg/kg	0.181	0.197	0.717 J	0.114 J	0.199 J
SW6020	Vanadium	7440-62-2	mg/kg	24.2	22.3	43.7 J	17.7	35.1 J
SW6020	Zinc	7440-66-6	mg/kg	88.1	346	304 J	125 J	265 J
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	0.68 U	0.92 U	1.4 U	0.81 U	1.3 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.24 U	0.32 U	0.5 U	0.28 U	0.44 U
SW9030	Sulfide	18496-25-8	mg/kg	136	235	794	605	504

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.000624 J	0.00233 J	0.00274 J	0.00142 J	0.00181 J
E1631B	Mercury	7439-97-6	mg/kg	0.254 J	1.9 J	1.93 J	0.843 J	1.48 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	116 U	109 U	106 U	87 U	109 J
E365.1	Phosphorus	7723-14-0	mg/kg	389	620 J	688	423	641
SW6010C	Titanium	7440-32-6	mg/kg	200	533 J	473 J	350	386
SW6020	Aluminum	7429-90-5	mg/kg	4670	14400 J	12600 J	9770	9780
SW6020	Antimony	7440-36-0	mg/kg	0.0877 U	0.708 J	0.691 J	0.571	0.391
SW6020	Arsenic	7440-38-2	mg/kg	2.39	12.8 J	11.9 J	8.12	8.33
SW6020	Barium	7440-39-3	mg/kg	52.8	102 J	94.8 J	61.4	72
SW6020	Beryllium	7440-41-7	mg/kg	0.311	0.762 J	0.709 J	0.501	0.534
SW6020	Cadmium	7440-43-9	mg/kg	0.137	1.15 J	1.01 J	0.648	0.881
SW6020	Calcium	7440-70-2	mg/kg	5910	3460 J	3340 J	3140	5360
SW6020	Chromium	7440-47-3	mg/kg	25.3	114 J	103 J	69.2	70.3
SW6020	Cobalt	7440-48-4	mg/kg	4.25	9.98 J	9.78 J	6.47	6.98
SW6020	Copper	7440-50-8	mg/kg	34.5	102 J	98.7 J	56.6	77.8
SW6020	Iron	7439-89-6	mg/kg	9060	26700 J	23900 J	17100	18100
SW6020	Lead	7439-92-1	mg/kg	40.5	116 J	115 J	62.4	92.8
SW6020	Magnesium	7439-95-4	mg/kg	2290	6940 J	6400 J	4830	5520
SW6020	Manganese	7439-96-5	mg/kg	76.8	274 J	247 J	180	187
SW6020	Nickel	7440-02-0	mg/kg	16.8	34 J	34.4 J	20.6	24.9
SW6020	Potassium	7440-09-7	mg/kg	1070	3340 J	2930 J	2380	2450
SW6020	Selenium	7782-49-2	mg/kg	0.148 J	0.836 J	0.722 J	0.459 J	0.497 J
SW6020	Silver	7440-22-4	mg/kg	0.188	1.75 J	1.67 J	0.854	1.19
SW6020	Sodium	7440-23-5	mg/kg	3380	8670 J	8480 J	6320	8110
SW6020	Thallium	7440-28-0	mg/kg	0.0587 J	0.219 J	0.257 J	0.178	0.134 J
SW6020	Vanadium	7440-62-2	mg/kg	12	36.4 J	32.2 J	23.9	25.2
SW6020	Zinc	7440-66-6	mg/kg	81.8	218 J	209 J	129	206
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	0.68 U	R	1.1 J	0.85 U	0.97 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.24 U	0.37 U	0.37 U	0.31 U	0.34 U
SW9030	Sulfide	18496-25-8	mg/kg	82.8	312 J	119 J	187	781

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0023	0.00108 J	0.00187 J	0.00141 J	0.000334 J
E1631B	Mercury	7439-97-6	mg/kg	0.881 J	1.26 J	3.01 J	1.3 J	0.169 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	103 J	109 U	120 U	188 J	126 U
E365.1	Phosphorus	7723-14-0	mg/kg	852	790	973	1040	158
SW6010C	Titanium	7440-32-6	mg/kg	350	606 J	610 J	675 J	380
SW6020	Aluminum	7429-90-5	mg/kg	10300	18200 J	19700 J	20500 J	5420
SW6020	Antimony	7440-36-0	mg/kg	0.706	1.44 J	4.21 J	0.689 J	0.226 J
SW6020	Arsenic	7440-38-2	mg/kg	8.67	12.4 J	27.4 J	13.9 J	4.67
SW6020	Barium	7440-39-3	mg/kg	87.3	302 J	214 J	133 J	32.1
SW6020	Beryllium	7440-41-7	mg/kg	0.57	1.04 J	1.14 J	1.1 J	0.327
SW6020	Cadmium	7440-43-9	mg/kg	1.15	2.18 J	3.65 J	0.799 J	0.213
SW6020	Calcium	7440-70-2	mg/kg	8810	7520 J	7100 J	9410 J	27400
SW6020	Chromium	7440-47-3	mg/kg	60.7	128 J	280 J	89.1 J	20.8
SW6020	Cobalt	7440-48-4	mg/kg	7.42	15.1 J	17 J	15.9 J	6.22
SW6020	Copper	7440-50-8	mg/kg	108	282 J	262 J	102 J	19
SW6020	Iron	7439-89-6	mg/kg	19200	38000 J	37400 J	37200 J	15000
SW6020	Lead	7439-92-1	mg/kg	116	207 J	265 J	108 J	164
SW6020	Magnesium	7439-95-4	mg/kg	6670	10500 J	11600 J	14000 J	5560
SW6020	Manganese	7439-96-5	mg/kg	189	422 J	440 J	545 J	180
SW6020	Nickel	7440-02-0	mg/kg	26.9	182 J	82.9 J	103 J	18.2
SW6020	Potassium	7440-09-7	mg/kg	2490	4860 J	5220 J	5620 J	1550
SW6020	Selenium	7782-49-2	mg/kg	0.451 J	0.888 J	1.26 J	0.792 J	0.151 J
SW6020	Silver	7440-22-4	mg/kg	1.43	2.85 J	4.32 J	1.75 J	0.263
SW6020	Sodium	7440-23-5	mg/kg	9540	12800 J	13200 J	12900 J	3840
SW6020	Thallium	7440-28-0	mg/kg	0.145 J	0.3 J	0.392 J	0.277 J	0.108 J
SW6020	Vanadium	7440-62-2	mg/kg	28.9	55.1 J	54.2 J	50.3 J	27.2
SW6020	Zinc	7440-66-6	mg/kg	240	353 J	457 J	236 J	79.6
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	0.92 U	1.1 U	1.2 U	1.2 U	0.74 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.32 U	0.37 U	0.41 U	0.42 U	0.26 U
SW9030	Sulfide	18496-25-8	mg/kg	727	639	469	1670	83.2

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-4
Analytical Data for Metals and Inorganics
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.00184 J	0.00137 J	0.00165 J
E1631B	Mercury	7439-97-6	mg/kg	4.48 J	0.386 J	3.23 J
E350.2	Ammonia Nitrogen	7664-41-7	mg/kg	216 J	148 J	120 U
E365.1	Phosphorus	7723-14-0	mg/kg	977	712	855
SW6010C	Titanium	7440-32-6	mg/kg	564 J	316 J	536 J
SW6020	Aluminum	7429-90-5	mg/kg	17100 J	11200 J	23300 J
SW6020	Antimony	7440-36-0	mg/kg	2.13 J	0.385 J	2.58 J
SW6020	Arsenic	7440-38-2	mg/kg	19.5 J	11.2 J	55.6 J
SW6020	Barium	7440-39-3	mg/kg	346 J	87.6 J	374 J
SW6020	Beryllium	7440-41-7	mg/kg	1.78 J	0.995 J	1.29 J
SW6020	Cadmium	7440-43-9	mg/kg	4.11 J	0.432 J	1.86 J
SW6020	Calcium	7440-70-2	mg/kg	8770 J	11300 J	9600 J
SW6020	Chromium	7440-47-3	mg/kg	155 J	41.4 J	163 J
SW6020	Cobalt	7440-48-4	mg/kg	15.7 J	9.18 J	18.8 J
SW6020	Copper	7440-50-8	mg/kg	366 J	76.7 J	319 J
SW6020	Iron	7439-89-6	mg/kg	35300 J	22700 J	47600 J
SW6020	Lead	7439-92-1	mg/kg	274 J	66.5 J	441 J
SW6020	Magnesium	7439-95-4	mg/kg	9680 J	6460 J	12300 J
SW6020	Manganese	7439-96-5	mg/kg	435 J	242 J	589 J
SW6020	Nickel	7440-02-0	mg/kg	78.4 J	39.5 J	86.7 J
SW6020	Potassium	7440-09-7	mg/kg	4520 J	3020 J	6170 J
SW6020	Selenium	7782-49-2	mg/kg	1.84 J	0.725 J	3.74 J
SW6020	Silver	7440-22-4	mg/kg	4.61 J	0.228 J	3.15 J
SW6020	Sodium	7440-23-5	mg/kg	12300 J	18400 J	16100 J
SW6020	Thallium	7440-28-0	mg/kg	0.386 J	0.145 J	0.62 J
SW6020	Vanadium	7440-62-2	mg/kg	51.8 J	29.8 J	66.7 J
SW6020	Zinc	7440-66-6	mg/kg	752 J	257 J	551 J
SW7196A	Hexavalent Chromiu	18540-29-9	mg/kg	1.1 U	1.3 U	1.2 U
SW9012A	Total Cyanide	57-12-5	mg/kg	0.4 U	0.45 U	0.4 U
SW9030	Sulfide	18496-25-8	mg/kg	720	106	561

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.016 J	0.012 J	0.03 J	0.0089 J	0.015 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.023 J	0.017 J	0.041 J	0.013 J	0.022 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.048U	0.054U	0.048U	0.037U	0.039U
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.091	0.06	0.2	0.09	0.053
SW8270SIM	Anthracene	120-12-7	mg/kg	0.08	0.039 J	0.18	0.041	0.054
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.34	0.21	0.84	0.41	0.24
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.55	0.3	1.1	0.67	0.27
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.48	0.3	0.88	0.46	0.24
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.4	0.28	0.72	0.42	0.22
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.26	0.17	0.45	0.32	0.14
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.47	0.32	0.86	0.51	0.24
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.75 J	0.43 J	1.1 J	0.54 J	0.33 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.84 J	0.39 J	1.3 J	0.44 J	0.46 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.048U	0.054U	0.069 J	0.037U	0.039U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.048U	0.054U	0.05 J	0.037U	0.039U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.19 J	0.093 J	0.38 J	0.082 J	0.097 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.42 J	0.23 J	0.54 J	0.27 J	0.22 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.58 J	0.28 J	0.7 J	0.41 J	0.32 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.066 J	0.054U	0.13 J	0.041 J	0.05 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.1 J	0.074 J	0.14 J	0.072 J	0.099 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.34 J	0.16 J	0.66 J	0.17 J	0.23 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.19 J	0.13 J	0.31 J	0.17 J	0.17 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.34 J	0.15 J	0.43 J	0.26 J	0.2 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.14 J	0.096 J	0.24 J	0.11 J	0.082 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.19 J	0.15 J	0.25 J	0.11 J	0.16 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.32 J	0.17 J	0.48 J	0.22 J	0.28 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.06 J	0.054U	0.076 J	0.045 J	0.067 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.12 J	0.059 J	0.24 J	0.077 J	0.18 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.2 J	0.12	0.29 J	0.19 J	0.24 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.38	0.26	0.87	0.42	0.26
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.12	0.073	0.2	0.12	0.055
SW8270SIM	Fluoranthene	206-44-0	mg/kg	0.37	0.28	0.8	0.32	0.28
SW8270SIM	Fluorene	86-73-7	mg/kg	0.048U	0.054U	0.026 J	0.037U	0.039U
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.25	0.17	0.49	0.31	0.13
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.033 J	0.036 J	0.063	0.016 J	0.059
SW8270SIM	Perylene	198-55-0	mg/kg	0.17	0.095	0.28	0.15	0.11
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.1	0.059	0.14	0.086	0.053
SW8270SIM	Pyrene	129-00-0	mg/kg	0.85	0.42	1.3	0.4	0.47

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED125CL	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED125_09/26/14	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14
			Sample ID	NB03SED125	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130
			Sample Date	09/26/14	09/24/14	09/24/14	09/08/14	09/16/14
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.036 J	0.044U	0.07 J	0.34 J	0.077 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.029 J	0.044U	0.063 J	0.33 J	0.082 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.095	0.044U	0.17	0.96	0.14
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.1	0.011 J	0.098	0.39 J	0.2
SW8270SIM	Anthracene	120-12-7	mg/kg	0.36	0.034 J	0.52	2.8	0.79 J
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	1.3	0.078	1.1	7.7	2.4
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	1.4	0.088	1	6.6	2.4
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	1.4	0.1	0.86	6.4	2
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	1	0.086	0.81	4.2	1.6 J
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.92	0.054	0.68	3.9	0.95
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	1.3	0.1	0.86	5.4	2
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.85 J	0.069 J	0.82 J	3.9 J	1.4 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	1.2 J	0.082 J	1.1 J	6 J	1.9 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.093 J	0.044U	0.11 J	0.66U	0.11U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.075U	0.044U	0.091 J	0.66U	0.11
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.96 J	0.044U	0.82 J	4.2 J	1 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.55 J	0.044U	0.7 J	2.4 J	0.66 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.86 J	0.074 J	1.1 J	4.1 J	1.1 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.11 J	0.044U	0.15 J	0.66U	0.17 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.2 J	0.044U	0.35 J	1.3 J	0.37 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.65 J	0.044U	0.75 J	2.7 J	0.85 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.36 J	0.046 J	0.65 J	1.3 J	0.38 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.61 J	0.044U	0.78 J	2.4 J	0.57 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.075U	0.044U	0.3 J	0.66U	0.29 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.3 J	0.091 J	0.53 J	1.4 J	0.49 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.38 J	0.044U	0.71 J	1.8 J	0.51 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.13 J	0.044U	0.25 J	0.66U	0.11 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.19 J	0.044U	0.47 J	1.2 J	0.35 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.25 J	0.044U	0.45 J	1.3 J	0.38 J
SW8270SIM	Chrysene	218-01-9	mg/kg	1.4	0.089	1	6.9	2.6
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.34	0.019 J	0.24	1.4	0.4
SW8270SIM	Fluoranthene	206-44-0	mg/kg	2.5	0.14	2.1	14	3.6
SW8270SIM	Fluorene	86-73-7	mg/kg	0.13	0.044U	0.2	1.1	0.15
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.87	0.053	0.62	3.9	1
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.06 J	0.044U	0.083	0.54 J	0.093 J
SW8270SIM	Perylene	198-55-0	mg/kg	0.34	0.031 J	0.33	1.7	0.55
SW8270SIM	Phenanthrene	85-01-8	mg/kg	1.6	0.074	1.8	11	1.6 J
SW8270SIM	Pyrene	129-00-0	mg/kg	2.5	0.15	1.8	14	3.4

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED131ACL	NB03SED131ACL	NB03SED131BCL	NB03SED132ACL	NB03SED133CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14
			Sample ID	NB03SED131A	NB03SEDDUP-01	NB03SED131B	NB03SED132A	NB03SED133
			Sample Date	09/10/14	09/10/14	09/15/14	09/11/14	09/22/14
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.044U	0.0077 J	0.046U	0.0098 J	0.027 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 J	0.04U	0.046U	0.014 J	0.031 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.0067 J	0.04U	0.046U	0.041U	0.075
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.025 J	0.013 J	0.046U	0.046	0.13
SW8270SIM	Anthracene	120-12-7	mg/kg	0.015 J	0.019 J	0.017 J	0.11	0.28
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.07	0.086	0.045 J	0.36	1.4
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.1	0.12	0.065	0.42	1.2
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.086	0.13	0.077	0.39	1.3
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.074	0.097	0.076	0.31	0.89
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.063	0.054	0.039 J	0.18	0.54
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.084	0.11	0.069	0.35	1.1
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.086 J	0.072 J	0.076 J	0.23 J	0.93 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.081 J	0.088 J	0.05 J	0.36 J	1.2 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.044U	0.04U	0.046U	0.041U	0.12 J
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.044U	0.04U	0.046U	0.041U	0.053U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.044U	0.04U	0.046U	0.12 J	0.63 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.073 J	0.048 J	0.046U	0.17 J	0.49 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.063 J	0.064 J	0.049 J	0.25 J	0.69 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.044U	0.04U	0.046U	0.041U	0.12 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.049 J	0.044 J	0.046U	0.065 J	0.16 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.063 J	0.055 J	0.046U	0.13 J	0.65 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.045 J	0.041 J	0.046U	0.13 J	0.2 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.045 J	0.04U	0.046U	0.14 J	0.36 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.044U	0.04U	0.046U	0.069 J	0.053U
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.11 J	0.089	0.081 J	0.12 J	0.36 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.044U	0.04U	0.046U	0.093 J	0.44 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.044U	0.04U	0.046U	0.057 J	0.068 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.058 J	0.04U	0.046U	0.085 J	0.18 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.044U	0.04U	0.046U	0.098 J	0.26 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.067	0.09	0.076	0.36	1.3
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.025 J	0.022 J	0.016 J	0.075	0.23
SW8270SIM	Fluoranthene	206-44-0	mg/kg	0.08	0.15	0.12	0.47	2.3
SW8270SIM	Fluorene	86-73-7	mg/kg	0.044U	0.04U	0.046U	0.027 J	0.064 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.059	0.06	0.036 J	0.2	0.59
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.044U	0.04U	0.046U	0.034 J	0.082
SW8270SIM	Perylene	198-55-0	mg/kg	0.029 J	0.038 J	0.02 J	0.13	0.3
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.041 J	0.062	0.1	0.16	0.94
SW8270SIM	Pyrene	129-00-0	mg/kg	0.11	0.16	0.12	0.49	1.9

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED134CL	NB03SED135CL	NB03SED136	NB03SED140	NB03SED142
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15
			Sample ID	NB03SED134	NB03SED135	NB03SED-CHM136	NB03SED-CHM140	NB03SED-CHM142
			Sample Date	09/25/14	09/19/14	09/14/15	09/29/15	09/28/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.075 J	0.09 J	0.028 J	0.016 J	0.023 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.21	0.092 J	0.036 J	0.018 J	0.046
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.26	0.62	0.033 J	0.031 J	0.034 J
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.21	0.15 J	0.11	0.056	0.093
SW8270SIM	Anthracene	120-12-7	mg/kg	3.6	1.3	0.12	0.085	0.083
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	2.8	3.8	0.51	0.39	0.44
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	2.8	3.1	0.83	0.49	0.57
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	2.6	3.2	0.91	0.43	0.6
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	2.3	2.1	0.69	0.34	0.43
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	2.2	1.9	0.45	0.3	0.39
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	2.5	2.7	0.91	0.44	0.45
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	2.3 J	1.4 J	0.53 J	0.42 J	0.44 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	2.4 J	2.4 J	0.68 J	0.48 J	0.55 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.16U	0.33U	0.052U	0.045U	0.041U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.2 J	0.33U	0.052U	0.045U	0.049 J
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	1.1 J	1.4 J	0.24 J	0.27 J	0.17 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	1.6 J	0.61 J	0.34 J	0.24 J	0.34 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	2 J	1.2 J	0.44 J	0.36 J	0.46 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.16U	0.33U	0.055 J	0.051 J	0.062 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.4 J	0.33U	0.13 J	0.096 J	0.12 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.8 J	0.75 J	0.27 J	0.25 J	0.26 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	1 J	0.33U	0.22 J	0.099 J	0.24 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	1.3 J	0.6 J	0.28 J	0.19 J	0.31 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.16U	0.33U	0.14 J	0.045U	0.13 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.48 J	0.34 J	0.18 J	0.18 J	0.2 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.63 J	0.39 J	0.21 J	0.18 J	0.32 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.45 J	0.33U	0.063 J	0.045U	0.073 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.29 J	0.33U	0.086 J	0.094 J	0.19 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.6 J	0.33U	0.19 J	0.087 J	0.23 J
SW8270SIM	Chrysene	218-01-9	mg/kg	2.9	3.5	0.64	0.44	0.45
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.88	0.77	0.16	0.11	0.12
SW8270SIM	Fluoranthene	206-44-0	mg/kg	4.5	7.6	0.79	0.56	0.59
SW8270SIM	Fluorene	86-73-7	mg/kg	0.63	0.56	0.031 J	0.026 J	0.023 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	1.9	1.9	0.46	0.28	0.35
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.29	0.16 J	0.082	0.04 J	0.076
SW8270SIM	Perylene	198-55-0	mg/kg	0.76	0.81	0.32	0.14	0.18
SW8270SIM	Phenanthrene	85-01-8	mg/kg	3.1	5.5	0.25	0.28	0.21
SW8270SIM	Pyrene	129-00-0	mg/kg	4.3	6.5	0.98	0.66	0.68

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED143	NB03SED145	NB03SED149	NB03SED155
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15	NB03SED-CHM155_09/20/15
			Sample ID	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149	NB03SED-CHM155
			Sample Date	09/29/15	09/29/15	09/22/15	09/20/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.027 J	0.018 J	0.018 J	0.049U
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.033 J	0.018 J	0.023 J	0.049U
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.051 J	0.026 J	0.083U	0.049U
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.16	0.066	0.086	0.049U
SW8270SIM	Anthracene	120-12-7	mg/kg	0.15	0.11	0.095	0.014 J
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.77	0.23	0.38	0.12
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	1.1	0.3	0.55	0.12
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.93	0.29	0.48	0.095
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.71	0.22	0.37	0.075
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.59	0.17	0.33	0.065
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.86	0.28	0.4	0.1
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.8 J	0.34 J	0.42 J	0.065 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	1.1 J	0.44 J	0.54 J	0.1 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.058U	0.056U	0.083U	0.049U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.058U	0.056U	0.083U	0.049U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.29 J	0.26 J	0.17 J	0.049U
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.52 J	0.31 J	0.3 J	0.049U
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.69 J	0.38 J	0.36 J	0.05 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.067 J	0.056U	0.083U	0.049U
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.14 J	0.15 J	0.11 J	0.049U
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.39 J	0.24 J	0.23 J	0.049U
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.22 J	0.2 J	0.15 J	0.049U
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.34 J	0.24 J	0.22 J	0.049U
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.14 J	0.056U	0.1 J	0.049U
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.23 J	0.22 J	0.18 J	0.049U
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.3 J	0.17 J	0.21 J	0.049U
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.084 J	0.068 J	0.083U	0.049U
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.14 J	0.13 J	0.083U	0.049U
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.2 J	0.13 J	0.15 J	0.049U
SW8270SIM	Chrysene	218-01-9	mg/kg	0.89	0.2	0.44	0.11
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.23	0.064	0.1	0.021 J
SW8270SIM	Fluoranthene	206-44-0	mg/kg	0.97	0.47	0.52	0.15
SW8270SIM	Fluorene	86-73-7	mg/kg	0.045 J	0.036 J	0.083U	0.049U
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.58	0.17	0.3	0.065
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.075	0.028 J	0.034 J	0.049U
SW8270SIM	Perylene	198-55-0	mg/kg	0.36	0.097	0.24	0.036 J
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.31	0.23	0.14	0.027 J
SW8270SIM	Pyrene	129-00-0	mg/kg	1.2	0.61	0.7	0.16

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.047 J	0.027 J	0.015 J	0.032 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.041 J	0.037 J	0.016 J	0.037 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.12	0.048 J	0.018 J	0.074 J
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.06	0.12 J	0.068	0.16
SW8270SIM	Anthracene	120-12-7	mg/kg	0.28	0.14 J	0.051 J	0.21
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.81	0.69 J	0.31	1.1
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.67	0.96 J	0.43	1.4
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.56	1 J	0.37	1.3
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.45	0.75 J	0.31	1
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.4	0.49 J	0.2	0.71
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.6	1 J	0.38	1.3
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.57 J	0.63 J	0.38 J	0.93 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.85 J	0.86 J	0.48 J	1.1 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.12 J	0.076U	0.06U	0.092U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.061 J	0.076U	0.06U	0.092U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.96 J	0.3 J	0.17 J	0.44 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.3 J	0.38 J	0.22 J	0.54 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.62 J	0.54 J	0.3 J	0.66 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.15 J	0.076U	0.06U	0.092U
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.3 J	0.17 J	0.082 J	0.18 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.59 J	0.37 J	0.22 J	0.45 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.14 J	0.21 J	0.1 J	0.25 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.31 J	0.31 J	0.15 J	0.34 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.048U	0.15 J	0.079 J	0.16 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.48 J	0.24 J	0.13 J	0.28 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.27 J	0.29 J	0.16 J	0.34 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.051 J	0.078 J	0.06U	0.092U
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.21 J	0.15 J	0.065 J	0.14 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.1 J	0.21 J	0.1 J	0.22 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.77	0.77 J	0.36	1.1
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	0.18 J	0.077	0.27
SW8270SIM	Fluoranthene	206-44-0	mg/kg	1.4	1 J	0.38	1.7
SW8270SIM	Fluorene	86-73-7	mg/kg	0.12	0.04 J	0.06U	0.054 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.37	0.51 J	0.2	0.72
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.099	0.079 J	0.041 J	0.087 J
SW8270SIM	Perylene	198-55-0	mg/kg	0.17	0.36 J	0.12	0.43
SW8270SIM	Phenanthrene	85-01-8	mg/kg	1.2	0.35 J	0.14	0.55
SW8270SIM	Pyrene	129-00-0	mg/kg	1.4	1.3 J	0.57	1.8

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15
			Sample Type	N	N	FD	N
Method	Analyte	CAS	Unit				
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.035U	0.019 J	0.021 J	0.015 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.035U	0.027 J	0.029 J	0.018 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.0063 J	0.025 J	0.025 J	0.021 J
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.018 J	0.099	0.094	0.085
SW8270SIM	Anthracene	120-12-7	mg/kg	0.015 J	0.077 J	0.16	0.066
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.096	0.31 J	0.35	0.32
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.12	0.62 J	0.56	0.44
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.14	0.57 J	0.78	0.47
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.11	0.46 J	0.53	0.37
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.077	0.29 J	0.31	0.21
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.13	0.57 J	0.6	0.47
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.091 J	0.41 J	0.44 J	0.37 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.1 J	0.52 J	0.61 J	0.43 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.035U	0.076U	0.065U	0.051U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.035U	0.076U	0.065U	0.051U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.035U	0.15 J	0.17 J	0.15 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.058 J	0.35 J	0.36 J	0.23 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.077 J	0.4 J	0.45 J	0.28 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.035U	0.076U	0.065U	0.051U
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.035U	0.13 J	0.11 J	0.1 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.044 J	0.22 J	0.22 J	0.19 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.042 J	0.24 J	0.28 J	0.13 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.049 J	0.29 J	0.34 J	0.18 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.035U	0.077 J	0.1 J	0.07 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.066 J	0.21 J	0.19 J	0.15 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.035U	0.17 J	0.18 J	0.14 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.035U	0.079 J	0.09 J	0.051U
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.035U	0.082 J	0.094 J	0.064 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.035U	0.14 J	0.16 J	0.08 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.12	0.35 J	0.41	0.35
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.028 J	0.11 J	0.12	0.089
SW8270SIM	Fluoranthene	206-44-0	mg/kg	0.13	0.41 J	0.51	0.45
SW8270SIM	Fluorene	86-73-7	mg/kg	0.035U	0.076U	0.034 J	0.022 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.075	0.3 J	0.33	0.23
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.013 J	0.062 J	0.052 J	0.03 J
SW8270SIM	Perylene	198-55-0	mg/kg	0.05	0.22 J	0.26	0.16
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.038	0.15 J	0.19	0.2
SW8270SIM	Pyrene	129-00-0	mg/kg	0.14	0.64 J	0.83	0.58

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED170	NB03SED171	NB03SED172	NB03SED173
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM170_09/16/15	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15
			Sample ID	NB03SED-CHM170	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173
			Sample Date	09/16/15	09/17/15	09/23/15	09/23/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.027 J	0.023 J	0.02 J	0.03 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.032 J	0.025 J	0.029 J	0.057 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.062	0.042 J	0.046U	0.042 J
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.13	0.043 J	0.084	0.19
SW8270SIM	Anthracene	120-12-7	mg/kg	0.16	0.11	0.12	0.14
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.76	0.5	0.47	0.54
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.93	0.57	0.65	1
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	1	0.6	0.67	0.79
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.77	0.46	0.58	0.75
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.45	0.36	0.36	0.53
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.97	0.49	0.6	0.75
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.78 J	0.41 J	0.59 J	1.5 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.95 J	0.41 J	0.81 J	1.8 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.059U	0.049U	0.046U	0.1 J
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.059U	0.049U	0.046U	0.066U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.53 J	0.25 J	0.2 J	0.31 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.43 J	0.26 J	0.88 J	1.8 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.7 J	0.33 J	0.91 J	2.5 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.079 J	0.052 J	0.082 J	0.24 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.16 J	0.12 J	0.13 J	0.28 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.54 J	0.22 J	0.34 J	0.77 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.28 J	0.21 J	0.83 J	1.8 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.53 J	0.28 J	0.92 J	2.1 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.21 J	0.097 J	0.14 J	0.56 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.24 J	0.18 J	0.24 J	0.71 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.42 J	0.16 J	0.41 J	1.5 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.11 J	0.073 J	0.27 J	0.72 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.18 J	0.1 J	0.21 J	1.2 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.38 J	0.15 J	0.53 J	2.3 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.81	0.52	0.39	0.63
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.19	0.13	0.13	0.19
SW8270SIM	Fluoranthene	206-44-0	mg/kg	1.4	0.73	0.5	0.43
SW8270SIM	Fluorene	86-73-7	mg/kg	0.057 J	0.038 J	0.022 J	0.036 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.47	0.33	0.33	0.46
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.04 J	0.04 J	0.053	0.097
SW8270SIM	Perylene	198-55-0	mg/kg	0.31	0.18	0.22	0.37
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.67	0.54	0.18	0.17
SW8270SIM	Pyrene	129-00-0	mg/kg	1.5	0.75	0.89	1.4

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED174	NB03SED175	NB03SED176	NB03SED177
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15
			Sample ID	NB03SED-CHM174	NB03SED-CHM175	NB03SED-CHM176	NB03SED-CHM177
			Sample Date	09/20/15	09/21/15	09/23/15	09/29/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.052 J	0.041U	0.089 J	0.041 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.069	0.041U	0.13 J	0.063 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.069	0.041U	0.16 J	0.049 J
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.068	0.019 J	0.69	0.18
SW8270SIM	Anthracene	120-12-7	mg/kg	0.13	0.029 J	1.4	0.16
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.39	0.13	5.6	0.68
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.52	0.16	5.7	1.2
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.51	0.11	4	0.86
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.4	0.11	3.4	0.91
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.32	0.087	1.9	0.81
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.46	0.095	3.5	0.82
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.53 J	0.074 J	7.2 J	0.91 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.68 J	0.14 J	8.8 J	1 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.055U	0.041U	0.5 J	0.087U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.083 J	0.041U	0.24U	0.087U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.24 J	0.048 J	3.2 J	0.37 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.47 J	0.041U	4.1 J	0.91 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.56 J	0.051 J	5.6 J	1.3 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.055U	0.041U	1.5 J	0.14 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.16 J	0.041U	0.98 J	0.27 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.29 J	0.041 J	7 J	0.56 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.32 J	0.041U	2.2 J	0.65 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.39 J	0.041U	3.7 J	0.88 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.16 J	0.041U	2.6 J	0.22 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.21 J	0.041U	3.5 J	0.44 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.31 J	0.041U	7.1 J	0.65 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.11 J	0.041U	0.62 J	0.38 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.15 J	0.041U	6.5 J	0.48 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.33 J	0.041U	4.6 J	0.45 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.47	0.14	5.3	0.79
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.11	0.023 J	0.84	0.25
SW8270SIM	Fluoranthene	206-44-0	mg/kg	0.62	0.13	7.5	0.89
SW8270SIM	Fluorene	86-73-7	mg/kg	0.066	0.041U	0.19 J	0.046 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.31	0.071	1.9	0.7
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.05 J	0.041U	0.2 J	0.18
SW8270SIM	Perylene	198-55-0	mg/kg	0.26	0.039 J	1.2	0.38
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.36	0.026 J	1.2	0.36
SW8270SIM	Pyrene	129-00-0	mg/kg	0.78	0.22	7.9	1.1

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED178
			Depth	0.0-0.5
			Sample ID and Date	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM178
			Sample Date	09/23/15
			Sample Type	N
Method	Analyte	CAS	Unit	
SW8270SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.01 J
SW8270SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.015 J
SW8270SIM	Acenaphthene	83-32-9	mg/kg	0.042U
SW8270SIM	Acenaphthylene	208-96-8	mg/kg	0.076
SW8270SIM	Anthracene	120-12-7	mg/kg	0.085
SW8270SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.44
SW8270SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.59
SW8270SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.58
SW8270SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.44
SW8270SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.33
SW8270SIM	Benzo(k)fluoranthene	207-08-9	mg/kg	0.47
SW8270SIM	C1-Chrysenes	218-01-9C1	mg/kg	0.52 J
SW8270SIM	C1-Fluoranthenes/Pyrenes	FLUORPYRC1	mg/kg	0.63 J
SW8270SIM	C1-Fluorenes	86-73-7C1	mg/kg	0.042U
SW8270SIM	C1-Naphthalenes	91-20-3C1	mg/kg	0.042U
SW8270SIM	C1-Phenanthrenes/Anthracenes	PHENANTHC1	mg/kg	0.26 J
SW8270SIM	C2-Chrysenes	218-01-9C2	mg/kg	0.42 J
SW8270SIM	C2-Fluoranthenes/Pyrenes	FLUORPYRC2	mg/kg	0.55 J
SW8270SIM	C2-Fluorenes	86-73-7C2	mg/kg	0.056 J
SW8270SIM	C2-Naphthalenes	91-20-3C2	mg/kg	0.074 J
SW8270SIM	C2-Phenanthrenes/Anthracenes	PHENANTHC2	mg/kg	0.31 J
SW8270SIM	C3-Chrysenes	218-01-9C3	mg/kg	0.39 J
SW8270SIM	C3-Fluoranthenes/Pyrenes	FLUORPYRC3	mg/kg	0.47 J
SW8270SIM	C3-Fluorenes	86-73-7C3	mg/kg	0.11 J
SW8270SIM	C3-Naphthalenes	91-20-3C3	mg/kg	0.14 J
SW8270SIM	C3-Phenanthrenes/Anthracenes	PHENANTHC3	mg/kg	0.26 J
SW8270SIM	C4-Chrysenes	218-01-9C4	mg/kg	0.19 J
SW8270SIM	C4-Naphthalenes	91-20-3C4	mg/kg	0.13 J
SW8270SIM	C4-Phenanthrenes/Anthracenes	PHENANTHC4	mg/kg	0.22 J
SW8270SIM	Chrysene	218-01-9	mg/kg	0.47
SW8270SIM	Dibenz(a,h)anthracene	53-70-3	mg/kg	0.12
SW8270SIM	Fluoranthene	206-44-0	mg/kg	0.62
SW8270SIM	Fluorene	86-73-7	mg/kg	0.016 J
SW8270SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.32
SW8270SIM	Naphthalene	91-20-3	mg/kg	0.025 J
SW8270SIM	Perylene	198-55-0	mg/kg	0.18
SW8270SIM	Phenanthrene	85-01-8	mg/kg	0.18
SW8270SIM	Pyrene	129-00-0	mg/kg	0.84

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 U	0.001 U	0.003 U	0.001 U	0.001 U	0.002 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.001 U	0.003 U	0.001 U	0.001 U	0.002 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 U	0.001 U	0.003 U	0.001 U	0.001 U	0.002 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 U	0.001 U	0.003 U	0.001 U	0.001 U	0.002 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 U	0.001 U	0.001 U	0.003 U	0.001 U	0.003 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.001 U	0.001 U	0.003 U	0.001 U	0.003 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 U	0.001 U	0.001 U	0.003 U	0.001 U	0.003 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 U	0.001 U	0.001 U	0.003 U	0.001 U	0.003 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002 U	0.001 U	0.002 U	0.002 U	0.003 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.002 U	0.001 U	0.002 U	0.002 U	0.003 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.002 U	0.001 U	0.002 U	0.002 U	0.003 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.002 U	0.001 U	0.002 U	0.002 U	0.003 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 U	0.002 U	0.004 U	0.002 U	0.003 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.002 U	0.004 U	0.002 U	0.003 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 U	0.002 U	0.004 U	0.002 U	0.003 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 U	0.002 U	0.004 U	0.002 U	0.003 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 U	0.002 U	0.003 U	0.002 U	0.003 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.002 U	0.003 U	0.002 U	0.003 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 U	0.002 U	0.003 U	0.002 U	0.003 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 U	0.002 U	0.003 U	0.002 U	0.003 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002 U	0.002 U	0.003 U	0.004 U	0.001 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.002 U	0.002 U	0.003 U	0.004 U	0.001 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.002 U	0.002 U	0.003 U	0.004 U	0.001 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.002 U	0.002 U	0.003 U	0.004 U	0.001 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-6
Analytical Data for Volatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
SW8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.003 U	0.004 U	0.002 U
SW8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.003 U	0.004 U	0.002 U
SW8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.003 U	0.004 U	0.002 U
SW8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.003 U	0.004 U	0.002 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.01 U	0.009 U	0.01 U	0.009 U	0.009 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.42 U	0.4 U	0.42 U	0.39 U	0.39 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.14 U	0.13 U	0.14 U	0.13 U	0.13 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.068 J	0.055 J	0.15 J	0.057	0.054
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.074 J	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.047 U	0.044 U	0.047 U	0.043 U	0.043 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	Benzidine	92-87-5	mg/kg	0.98 U	0.92 U	0.98 U	0.91 U	0.91 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.025 J	0.022 U	0.043 J	0.022 U	0.022 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.81 J	1.2 J	0.63	1.9	0.52
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.047 U	0.044 U	0.047 U	0.043 U	0.043 U
SW8270D	Carbazole	86-74-8	mg/kg	0.023 U	0.022 U	0.023 U	0.036 J	0.026 J
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.023 U	0.022 U	0.045 J	0.022 U	0.028 J
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U

Table A-7
Analytical Data for Semivolatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.047 U	0.044 U	0.047 U	0.043 U	0.043 U
SW8270D	Isophorone	78-59-1	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.047 U	0.044 U	0.047 U	0.043 U	0.043 U
SW8270D	Phenol	108-95-2	mg/kg	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SW8270D	Pyridine	110-86-1	mg/kg	0.093 U	0.088 U	0.093 U	0.086 U	0.086 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED125CL	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED125_09/26/14	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14
			Sample ID	NB03SED125	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A
			Sample Date	09/26/14	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.009 U	0.009 U	0.01 U	0.014 U	0.01 U	0.009 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.38 U	0.39 U	0.43 U	0.59 U	0.45 U	0.37 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.13 U	0.13 U	0.14 U	0.2 U	0.15 U	0.12 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.021 U	0.021 U	0.024 U	0.089	0.025 U	0.021 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.15	0.021 U	0.2	0.19	0.088	0.031 J
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.21 U	0.21 U	0.24 U	0.33 U	0.25 U	0.21 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.21 U	0.21 U	0.24 U	0.33 U	0.25 U	0.21 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.021 U	0.021 U	0.024 U	0.059 J	0.47	0.021 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.042 U	0.043 U	0.048 U	0.065 U	0.049 U	0.041 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.084 U	0.086 U	0.095 U	0.18 J	0.21 J	0.082 U
SW8270D	Benzidine	92-87-5	mg/kg	0.88 U	0.9 U	1 U	1.4 U	1 U	0.86 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.27 J	0.21 U	0.24 U	0.33 U	0.44 J	0.21 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.03 J	0.021 U	0.063	0.065 J	0.065	0.021 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.27	0.098 J	5.7	1.3 J	1.3	0.099 J
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.14 J	0.082 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.042 U	0.043 U	0.048 U	0.065 U	0.049 U	0.041 U
SW8270D	Carbazole	86-74-8	mg/kg	0.3	0.021 U	0.024 U	0.4	0.14	0.028 J
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.15	0.021 U	0.078	0.33	0.13	0.025 J
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U

			Location ID	NB03SED125CL	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED125_09/26/14	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14
			Sample ID	NB03SED125	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A
			Sample Date	09/26/14	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.21 U	0.21 U	0.24 U	0.33 U	0.25 U	0.21 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.042 U	0.043 U	0.048 U	0.065 U	0.049 U	0.041 U
SW8270D	Isophorone	78-59-1	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.021 U	0.021 U	0.024 U	0.033 U	0.025 U	0.021 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.042 U	0.043 U	0.048 U	0.065 U	0.049 U	0.041 U
SW8270D	Phenol	108-95-2	mg/kg	0.06	0.021 U	0.024 U	0.033 U	0.15	0.021 U
SW8270D	Pyridine	110-86-1	mg/kg	0.084 U	0.086 U	0.095 U	0.13 U	0.099 U	0.082 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED131ACL	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SEDDUP-01_09/10/14	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14
			Sample ID	NB03SEDDUP-01	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134
			Sample Date	09/10/14	09/15/14	09/11/14	09/22/14	09/25/14
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.009 U	0.009 U	0.01 U	0.01 U	0.015 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.37 U	0.38 U	0.41 U	0.44 U	0.64 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.12 U	0.13 U	0.14 U	0.15 U	0.21 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.021 U	0.021 U	0.071	0.27	0.15
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.21 U	0.21 U	0.23 U	0.24 U	0.35 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.21 U	0.21 U	0.23 U	0.24 U	0.35 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.021 U	0.022 J	0.023 U	0.024 U	0.048 J
SW8270D	Atrazine	1912-24-9	mg/kg	0.042 U	0.042 U	0.046 U	0.049 U	0.071 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	Benzidine	92-87-5	mg/kg	0.87 U	0.89 U	0.96 U	1 U	1.5 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.21 U	0.21 U	0.23 U	0.24 U	0.72 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.16
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.16 J	0.13 J	1.9	0.29	3.2
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.042 U	0.042 U	0.046 U	0.049 U	0.071 U
SW8270D	Carbazole	86-74-8	mg/kg	0.021 U	0.021 U	0.023 U	0.084	4.6
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.021 U	0.021 U	0.023 U	0.081	0.97
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U

Table A-7
Analytical Data for Semivolatile Organic Compounds
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED131ACL	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SEDDUP-01_09/10/14	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14
			Sample ID	NB03SEDDUP-01	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134
			Sample Date	09/10/14	09/15/14	09/11/14	09/22/14	09/25/14
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.21 U	0.21 U	0.23 U	0.24 U	0.35 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.042 U	0.042 U	0.046 U	0.049 U	0.071 U
SW8270D	Isophorone	78-59-1	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.035 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.042 U	0.042 U	0.046 U	0.049 U	0.071 U
SW8270D	Phenol	108-95-2	mg/kg	0.021 U	0.021 U	0.023 U	0.024 U	0.082
SW8270D	Pyridine	110-86-1	mg/kg	0.083 U	0.085 U	0.092 U	0.097 U	0.14 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED135CL	NB03SED136	NB03SED140	NB03SED142	NB03SED143
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15
			Sample ID	NB03SED135	NB03SED-CHM136	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143
			Sample Date	09/19/14	09/14/15	09/29/15	09/28/15	09/29/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.01 U	0.016 U	0.01 U	0.01 U	0.014 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.45 U	0.74 U	0.45 U	0.47 U	0.64 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.15 U	0.25 U	0.15 U	0.16 U	0.21 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.025 U	0.082 U	0.05 U	0.052 U	0.071 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.1	0.041 U	0.025 U	0.026 U	0.19 J
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.25 U	0.41 U	0.25 U	0.26 U	0.36 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.25 U	0.41 U	0.25 U	0.26 U	0.36 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.025 U	0.041 U	0.027 J	0.027 J	0.036 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.05 U	0.082 U	0.05 U	0.052 U	0.071 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	Benzidine	92-87-5	mg/kg	1 U	1.7 U	1.1 U	1.1 U	1.5 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.25 U	0.41 U	0.25 U	0.26 U	0.36 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.068	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.6	0.26 J	0.51	0.37	0.74 J
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.05 U	0.082 U	0.05 U	0.052 U	0.071 U
SW8270D	Carbazole	86-74-8	mg/kg	0.44	0.041 U	0.031 J	0.19	0.12 J
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.29	0.041 U	0.025 U	0.16	0.077 J
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U

			Location ID	NB03SED135CL	NB03SED136	NB03SED140	NB03SED142	NB03SED143
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15
			Sample ID	NB03SED135	NB03SED-CHM136	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143
			Sample Date	09/19/14	09/14/15	09/29/15	09/28/15	09/29/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.25 U	0.41 U	0.25 U	0.26 U	0.36 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.05 U	0.082 U	0.05 U	0.052 U	0.071 U
SW8270D	Isophorone	78-59-1	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.05 U	0.082 U	0.05 U	0.052 U	0.071 U
SW8270D	Phenol	108-95-2	mg/kg	0.025 U	0.041 U	0.025 U	0.026 U	0.036 U
SW8270D	Pyridine	110-86-1	mg/kg	0.1 U	0.16 U	0.1 U	0.1 U	0.14 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED145	NB03SED149	NB03SED155	NB03SED160	NB03SED161
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15
			Sample ID	NB03SED-CHM145	NB03SED-CHM149	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161
			Sample Date	09/29/15	09/22/15	09/20/15	09/28/15	09/15/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.012 U	0.016 U	0.009 U	0.012 U	R
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.52 U	0.71 U	0.41 U	0.54 U	R
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.17 U	0.24 U	0.14 U	0.18 U	R
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.058 U	0.079 U	0.045 U	0.06 U	R
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.084	0.12 J	0.023 U	0.03 U	R
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.29 U	0.4 U	0.23 U	0.3 U	R
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.29 U	0.4 U	0.23 U	0.3 U	R
SW8270D	Acetophenone	98-86-2	mg/kg	0.029 U	0.042 J	0.023 U	0.03 U	0.07 J
SW8270D	Atrazine	1912-24-9	mg/kg	0.058 U	0.079 U	0.045 U	0.06 U	R
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	Benzidine	92-87-5	mg/kg	1.2 U	1.7 U	0.95 U	1.3 U	R
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.29 U	0.4 U	0.23 U	0.3 U	R
SW8270D	Biphenyl	92-52-4	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3	0.68	0.09 U	3.1	0.35 J
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	Caprolactam	105-60-2	mg/kg	0.058 U	0.079 U	0.045 U	0.06 U	R
SW8270D	Carbazole	86-74-8	mg/kg	0.042 J	0.066 J	0.023 U	0.03 U	R
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.12 U	0.17 J	0.09 U	0.12 U	R
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.12 U	0.16 U	0.09 U	0.25 J	R
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.049 J	0.051 J	0.023 U	0.03 U	R
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R

			Location ID	NB03SED145	NB03SED149	NB03SED155	NB03SED160	NB03SED161
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15
			Sample ID	NB03SED-CHM145	NB03SED-CHM149	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161
			Sample Date	09/29/15	09/22/15	09/20/15	09/28/15	09/15/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.29 U	0.4 U	0.23 U	0.3 U	R
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.058 U	0.079 U	0.045 U	0.06 U	R
SW8270D	Isophorone	78-59-1	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.029 U	0.04 U	0.023 U	0.03 U	R
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.058 U	0.079 U	0.045 U	0.06 U	R
SW8270D	Phenol	108-95-2	mg/kg	0.029 U	0.04 J	0.023 U	0.03 U	R
SW8270D	Pyridine	110-86-1	mg/kg	0.12 U	0.16 U	0.09 U	0.12 U	R

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED164	NB03SED166	NB03SED167	NB03SED168	NB03SED168
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15
			Sample ID	NB03SED-CHM164	NB03SED-CHM166	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01
			Sample Date	09/13/15	09/13/15	09/14/15	09/15/15	09/15/15
			Sample Type	N	N	N	N	FD
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.011 U	0.017 U	0.009 U	R	R
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.48 U	0.76 U	0.41 U	R	R
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.16 U	0.25 U	0.14 U	R	R
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.053 U	0.084 U	0.045 U	R	R
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.038 J	0.042 U	0.023 U	R	R
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.27 U	0.42 U	0.23 U	R	R
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.27 U	0.42 U	0.23 U	R	R
SW8270D	Acetophenone	98-86-2	mg/kg	0.057	0.1	0.023 U	0.18 J	0.055 J
SW8270D	Atrazine	1912-24-9	mg/kg	0.053 U	0.084 U	0.045 U	R	R
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	Benzidine	92-87-5	mg/kg	1.1 U	1.8 U	0.95 U	R	R
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.27 U	0.42 U	0.23 U	R	R
SW8270D	Biphenyl	92-52-4	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.69	0.46	0.28	0.28 J	R
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	Caprolactam	105-60-2	mg/kg	0.053 U	0.084 U	0.045 U	R	R
SW8270D	Carbazole	86-74-8	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.11 U	0.17 U	0.09 U	R	R
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.11 U	0.17 U	0.09 U	R	R

			Location ID	NB03SED164	NB03SED166	NB03SED167	NB03SED168	NB03SED168
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15
			Sample ID	NB03SED-CHM164	NB03SED-CHM166	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01
			Sample Date	09/13/15	09/13/15	09/14/15	09/15/15	09/15/15
			Sample Type	N	N	N	N	FD
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.27 U	0.42 U	0.23 U	R	R
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.053 U	0.084 U	0.045 U	R	R
SW8270D	Isophorone	78-59-1	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.027 U	0.042 U	0.023 U	R	R
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.053 U	0.084 U	0.045 U	R	R
SW8270D	Phenol	108-95-2	mg/kg	0.14	0.042 U	0.023 U	R	R
SW8270D	Pyridine	110-86-1	mg/kg	0.11 U	0.17 U	0.09 U	R	R

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED169	NB03SED170	NB03SED171	NB03SED172	NB03SED173
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15
			Sample ID	NB03SED-CHM169	NB03SED-CHM170	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173
			Sample Date	09/15/15	09/16/15	09/17/15	09/23/15	09/23/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	R	R	0.012 U	0.014 U	0.016 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	R	R	0.033 J	0.035 U	0.039 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	R	R	0.03 U	0.035 U	0.092
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	R	R	0.54 U	0.63 U	0.7 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	R	R	0.18 U	0.21 U	0.23 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	R	R	0.06 U	0.07 U	0.078 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.033 J	R	0.054 J	0.11 J	0.057 J
SW8270D	4-Nitroaniline	100-01-6	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	R	R	0.3 U	0.35 U	0.39 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	R	R	0.3 U	0.35 U	0.39 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.12 J	0.076 J	0.03 U	0.035 U	0.039 U
SW8270D	Atrazine	1912-24-9	mg/kg	R	R	0.06 U	0.07 U	0.078 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	Benzidine	92-87-5	mg/kg	R	R	1.3 U	1.5 U	1.6 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	R	R	0.3 U	0.35 U	0.39 U
SW8270D	Biphenyl	92-52-4	mg/kg	R	R	0.03 U	0.055 J	0.039 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.28 J	0.94 J	1.7	38 J	0.31 J
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	Caprolactam	105-60-2	mg/kg	R	R	0.06 U	0.07 U	0.078 U
SW8270D	Carbazole	86-74-8	mg/kg	R	0.075 J	0.075	0.48 J	0.039 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	R	0.035 J	0.043 J	0.24 J	0.039 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	R	R	0.12 U	0.14 U	0.16 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	R	R	0.12 U	0.14 U	0.16 U

			Location ID	NB03SED169	NB03SED170	NB03SED171	NB03SED172	NB03SED173
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15
			Sample ID	NB03SED-CHM169	NB03SED-CHM170	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173
			Sample Date	09/15/15	09/16/15	09/17/15	09/23/15	09/23/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	R	R	0.3 U	0.35 U	0.39 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	R	R	0.06 U	0.07 U	0.078 U
SW8270D	Isophorone	78-59-1	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	R	R	0.03 U	0.035 U	0.039 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	R	R	0.06 U	0.07 U	0.078 U
SW8270D	Phenol	108-95-2	mg/kg	R	R	0.03 U	0.088 J	0.039 U
SW8270D	Pyridine	110-86-1	mg/kg	R	R	0.12 U	0.14 U	0.16 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED174	NB03SED175	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM174	NB03SED-CHM175	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/20/15	09/21/15	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.016 U	0.01 U	0.015 U	0.017 U	0.016 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.13
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	0.74 U	0.44 U	0.66 U	0.78 U	0.7 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.25 U	0.15 U	0.22 U	0.26 U	0.23 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.082 U	0.049 U	0.074 U	0.087 U	0.078 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.054 J	0.025 U	0.058 J	0.043 U	0.14 J
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.41 U	0.25 U	0.37 U	0.43 U	0.39 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.41 U	0.25 U	0.37 U	0.43 U	0.39 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.041 U	0.027 J	0.037 U	0.043 U	0.047 J
SW8270D	Atrazine	1912-24-9	mg/kg	0.082 U	0.049 U	0.074 U	0.087 U	0.078 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	Benzidine	92-87-5	mg/kg	1.7 U	1 U	1.6 U	1.8 U	1.6 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.41 U	0.25 U	0.37 U	0.43 U	0.39 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.06 J
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.29 J	0.099 U	2	0.17 U	0.16 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.082 U	0.049 U	0.074 U	0.087 U	0.078 U
SW8270D	Carbazole	86-74-8	mg/kg	0.041 U	0.025 U	0.037 U	0.074 J	0.039 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.041 U	0.025 U	0.037 U	0.056 J	0.075 J
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U

			Location ID	NB03SED174	NB03SED175	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM174	NB03SED-CHM175	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/20/15	09/21/15	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.41 U	0.25 U	0.37 U	0.43 U	0.39 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.082 U	0.049 U	0.074 U	0.087 U	0.078 U
SW8270D	Isophorone	78-59-1	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.082 U	0.049 U	0.074 U	0.087 U	0.078 U
SW8270D	Phenol	108-95-2	mg/kg	0.041 U	0.025 U	0.037 U	0.043 U	0.039 U
SW8270D	Pyridine	110-86-1	mg/kg	0.16 U	0.099 U	0.15 U	0.17 U	0.16 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.0475 U	0.0455 U	0.121 U	0.22 U	0.044 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0923 J	0.0471 J	0.148 J	0.142 U	0.0353 J
8015C	Dotriacontane	544-85-4	mg/kg	0.596 J	0.292 J	0.632 J	0.263 J	0.176
8015C	Heneicosane	629-94-7	mg/kg	0.0307 U	0.0295 U	0.078 U	0.263 J	0.0285 U
8015C	Heptacosane	593-49-7	mg/kg	0.122 J	0.0926 J	0.227 U	0.414 U	0.0828 U
8015C	Heptadecane	629-78-7	mg/kg	0.0833 J	0.0848 J	0.251 J	0.233 U	0.104
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.0307 U	0.0295 U	0.078 U	0.142 U	0.0285 U
8015C	Hexatriacontane	630-06-8	mg/kg	0.0307 U	0.0295 U	0.078 U	0.947 J	0.0285 U
8015C	Hhentriacontane	630-04-6	mg/kg	0.549 J	0.426 J	0.753 J	0.711	0.298
8015C	n-Decane	124-18-5	mg/kg	0.0413 U	0.0396 U	0.105 U	0.191 U	0.0383 U
8015C	n-Docosane	629-97-0	mg/kg	0.561 J	0.312 J	0.782 J	0.142 U	0.0285 U
8015C	n-Dodecane	112-40-3	mg/kg	0.0307 U	0.0295 U	0.0982 J	0.142 U	0.039 J
8015C	n-Eicosane	112-95-8	mg/kg	0.0335 U	0.0321 U	0.0851 U	0.155 U	0.031 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.0531 U	0.0509 U	0.135 U	0.246 U	0.0492 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.0307 U	0.0295 U	0.078 U	0.142 U	0.0285 U
8015C	n-Nonane	111-84-2	mg/kg	0.0307 U	0.0295 U	0.078 U	0.142 U	0.0285 U
8015C	n-Octacosane	630-02-4	mg/kg	0.773 J	0.509 J	1.2 J	0.142 U	0.427
8015C	n-Octadecane	593-45-3	mg/kg	0.0552 J	0.0402 U	0.106 U	0.194 U	0.0388 U
8015C	n-Tetracosane	646-31-1	mg/kg	0.13 J	0.0527 J	0.151 J	0.142 U	0.0285 U
8015C	n-Tetradecane	629-59-4	mg/kg	0.0391 U	0.0375 U	0.0993 U	0.181 U	0.0362 U
8015C	n-Triacontane	638-68-6	mg/kg	0.0564 U	0.0541 U	0.143 U	0.504 J	0.0523 U
8015C	n-Tridecane	629-50-5	mg/kg	0.0307 U	0.0295 U	0.078 U	0.142 U	0.0285 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0564 U	0.0541 U	0.143 U	0.261 U	0.0523 U
8015C	Nonacosane	630-03-5	mg/kg	0.296 J	0.448 J	0.435 J	0.725	0.156
8015C	Nonadecane	629-92-5	mg/kg	0.0447 U	0.0428 U	0.113 U	0.377 J	0.0414 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.0559 U	0.0578 J	0.142 U	0.259 U	0.0517 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.0466 J	0.0402 U	0.106 U	0.194 U	0.0388 U
8015C	Pentacosane	629-99-2	mg/kg	0.0366 J	0.0356 J	0.078 U	0.142 U	0.0285 U
8015C	Pentadecane	629-62-9	mg/kg	0.0307 U	0.0295 U	0.078 U	0.142 U	0.0285 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.0307 U	0.0458 J	0.157 J	0.142 U	0.053 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	2.9 U	2.7 U	2.3 U	2.7 U	2.3 U
8015C	Tetracontane	4181-95-7	mg/kg	0.0307 U	0.0295 U	0.186 J	0.198 J	0.064 J
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0363 U	0.0353 J	0.148 J	0.168 U	0.0336 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	321 J	237 J	469 J	507	234
8015C	Tricosane	638-67-5	mg/kg	0.319 J	0.179 J	0.0993 U	0.449	0.0362 U
8015C	Tritriacontane	630-05-7	mg/kg	0.0615 U	0.0589 U	0.156 U	0.285 U	0.0569 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED125CL	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED125_09/26/14	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14
			Sample ID	NB03SED125	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130
			Sample Date	09/26/14	09/24/14	09/24/14	09/08/14	09/16/14
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.0427 U	0.0219 U	1.18	0.167 U	0.134 J
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0362 J	0.0142 U	0.677 J	0.108 U	0.0885 J
8015C	Dotriacontane	544-85-4	mg/kg	0.133	0.169	0.556 J	0.621	0.904
8015C	Heneicosane	629-94-7	mg/kg	0.0276 U	0.0586	0.332 J	0.207 J	0.175 J
8015C	Heptacosane	593-49-7	mg/kg	0.0803 U	0.0412 U	0.913 U	0.314 U	0.237 U
8015C	Heptadecane	629-78-7	mg/kg	0.0452 U	0.0232 U	0.565 J	0.404	0.147 J
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.0673 J	0.0295 J	0.314 U	0.108 U	0.124 J
8015C	Hexatriacontane	630-06-8	mg/kg	0.0276 U	0.0142 U	0.314 U	0.108 U	0.0816 U
8015C	Hhentriacontane	630-04-6	mg/kg	0.0407 U	0.206	0.462 U	1.7	1.06
8015C	n-Decane	124-18-5	mg/kg	0.0371 U	0.0191 U	0.422 U	0.145 U	0.11 U
8015C	n-Docosane	629-97-0	mg/kg	0.406	0.113	0.326 J	0.386	0.0816 U
8015C	n-Dodecane	112-40-3	mg/kg	0.0276 U	0.0142 U	0.314 U	0.108 U	0.0816 U
8015C	n-Eicosane	112-95-8	mg/kg	0.0303 J	0.0155 U	0.342 U	0.247 J	0.089 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.0477 U	0.0276 J	1.12	0.187 U	0.141 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.068 J	0.0142 U	0.314 U	0.108 U	0.347
8015C	n-Nonane	111-84-2	mg/kg	0.0276 U	0.0142 U	0.314 U	0.108 U	0.0816 U
8015C	n-Octacosane	630-02-4	mg/kg	0.94	0.312	0.575 J	2.59	1.46
8015C	n-Octadecane	593-45-3	mg/kg	0.0406 J	0.0193 U	0.428 U	0.147 U	0.117 J
8015C	n-Tetracosane	646-31-1	mg/kg	0.0276 U	0.0142 U	0.314 U	0.108 U	0.101 J
8015C	n-Tetradecane	629-59-4	mg/kg	0.0351 U	0.018 U	0.399 U	0.138 U	0.104 U
8015C	n-Triacontane	638-68-6	mg/kg	0.0507 U	0.026 U	0.576 U	0.198 U	0.569
8015C	n-Tridecane	629-50-5	mg/kg	0.0479 J	0.0142 U	0.314 U	0.108 U	0.0816 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0507 U	0.026 U	0.576 U	0.198 U	0.15 U
8015C	Nonacosane	630-03-5	mg/kg	0.0276 U	0.0745	0.581 J	0.579	0.563
8015C	Nonadecane	629-92-5	mg/kg	0.141	0.0206 U	0.456 U	0.353	0.119 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.104 J	0.0272 J	0.571 U	0.242 J	0.19 J
8015C	Octatriacontane	7194-85-6	mg/kg	0.0953 J	0.0255 J	0.428 U	0.147 U	0.111 U
8015C	Pentacosane	629-99-2	mg/kg	0.0916	0.063	0.314 U	0.108 U	0.0816 U
8015C	Pentadecane	629-62-9	mg/kg	0.1	0.0145 J	0.314 U	0.237 J	0.181 J
8015C	Pentatriacontane	630-07-9	mg/kg	0.0368 J	0.0142 U	0.314 U	0.108 U	0.154 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	2.6 J	2.5 U	3 U	12 J	0.3 U
8015C	Tetracontane	4181-95-7	mg/kg	0.0852 J	0.0533	0.314 U	0.403 J	0.253 J
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0397 J	0.0168 U	0.371 U	0.128 U	0.166 J
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	241	129	1230	527	388
8015C	Tricosane	638-67-5	mg/kg	0.183	0.018 U	0.539 J	0.181 J	0.33
8015C	Tritriacontane	630-05-7	mg/kg	0.0928 J	0.0284 U	0.628 U	0.216 U	0.163 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED131ACL	NB03SED131ACL	NB03SED131BCL	NB03SED132ACL	NB03SED133CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14
			Sample ID	NB03SED131A	NB03SEDDUP-01	NB03SED131B	NB03SED132A	NB03SED133
			Sample Date	09/10/14	09/10/14	09/15/14	09/11/14	09/22/14
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.021 U	0.0212 U	0.0216 U	0.0468 U	0.0685 J
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0136 U	0.0137 U	0.014 U	0.0426 J	0.0908 J
8015C	Dotriacontane	544-85-4	mg/kg	0.016 U	0.102	0.0165 U	0.161	0.17
8015C	Heneicosane	629-94-7	mg/kg	0.0292 J	0.0323 J	0.0205 J	0.0453 J	0.0321 U
8015C	Heptacosane	593-49-7	mg/kg	0.0395 U	0.0399 U	0.0407 U	0.088 U	0.151 J
8015C	Heptadecane	629-78-7	mg/kg	0.0448	0.0689	0.0496	0.138	0.104
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.0202 J	0.0735 J	0.014 U	0.0303 U	0.0774 J
8015C	Hexatriacontane	630-06-8	mg/kg	0.0136 U	0.019 J	0.014 U	0.0303 U	0.0321 U
8015C	Hhentriacontane	630-04-6	mg/kg	0.0876 J	0.148 J	0.0891	0.204	0.0473 U
8015C	n-Decane	124-18-5	mg/kg	0.0183 U	0.0185 U	0.0188 U	0.0407 U	0.0432 U
8015C	n-Docosane	629-97-0	mg/kg	0.0136 U	0.0137 U	0.014 U	0.0303 U	0.734
8015C	n-Dodecane	112-40-3	mg/kg	0.0136 U	0.0209 J	0.014 U	0.0303 U	0.0455 J
8015C	n-Eicosane	112-95-8	mg/kg	0.0148 U	0.015 U	0.0416 J	0.033 U	0.0655 J
8015C	n-Hexacosane	630-01-3	mg/kg	0.0235 U	0.0237 U	0.0242 U	0.0523 U	0.0555 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.0136 U	0.0252 J	0.0362 J	0.0434 J	0.272
8015C	n-Nonane	111-84-2	mg/kg	0.0136 U	0.0187 J	0.014 U	0.0303 U	0.0321 U
8015C	n-Octacosane	630-02-4	mg/kg	0.122 J	0.23 J	0.101	0.286	1.76
8015C	n-Octadecane	593-45-3	mg/kg	0.0185 U	0.0208 J	0.0191 U	0.0413 U	0.0975
8015C	n-Tetracosane	646-31-1	mg/kg	0.0136 U	0.0315 J	0.014 U	0.0303 U	0.0976
8015C	n-Tetradecane	629-59-4	mg/kg	0.0173 U	0.0186 J	0.0178 U	0.0385 U	0.0409 U
8015C	n-Triacontane	638-68-6	mg/kg	0.0682 J	0.0252 U	0.0887	0.301	0.059 U
8015C	n-Tridecane	629-50-5	mg/kg	0.0136 U	0.0188 J	0.014 U	0.0303 U	0.0321 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0249 U	0.0252 U	0.0257 U	0.0556 U	0.059 U
8015C	Nonacosane	630-03-5	mg/kg	0.0752	0.0784	0.0799	0.101	0.696
8015C	Nonadecane	629-92-5	mg/kg	0.0198 U	0.02 U	0.0204 U	0.108	0.235
8015C	Nonatriacontane	7194-86-7	mg/kg	0.0247 U	0.0267 J	0.0254 U	0.055 U	0.13 J
8015C	Octatriacontane	7194-85-6	mg/kg	0.0185 U	0.0187 U	0.0191 U	0.0413 U	0.0492 J
8015C	Pentacosane	629-99-2	mg/kg	0.0136 U	0.026 J	0.0472	0.0303 U	0.0329 J
8015C	Pentadecane	629-62-9	mg/kg	0.0136 U	0.0347 J	0.014 U	0.0303 U	0.151
8015C	Pentatriacontane	630-07-9	mg/kg	0.0176 J	0.0137 U	0.014 U	0.0729 J	0.134 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	2.3 J	3.7 U	3 U	2.5 U	2.4 U
8015C	Tetracontane	4181-95-7	mg/kg	0.026 J	0.0418 J	0.0244 J	0.0589 J	0.134 J
8015C	Tetratriacontane	14167-59-0	mg/kg	0.016 U	0.0162 U	0.0165 U	0.123 J	0.05 J
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	51.9	55.5	59.8	230	258
8015C	Tricosane	638-67-5	mg/kg	0.0343 J	0.049	0.0178 U	0.0385 U	0.337
8015C	Tritriacontane	630-05-7	mg/kg	0.0272 U	0.0274 U	0.028 U	0.0605 U	0.0642 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED134CL	NB03SED135CL	NB03SED136	NB03SED140	NB03SED142
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15
			Sample ID	NB03SED134	NB03SED135	NB03SED-CHM136	NB03SED-CHM140	NB03SED-CHM142
			Sample Date	09/25/14	09/19/14	09/14/15	09/29/15	09/28/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.361 U	0.26 J	0.0419 U	0.0257 U	0.0261 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.234 U	0.222 J	0.0271 U	0.0167 U	0.0169 U
8015C	Dotriacontane	544-85-4	mg/kg	1.04	1.37	0.0916 J	0.0197 U	0.326 J
8015C	Heneicosane	629-94-7	mg/kg	0.234 U	0.378 J	0.0348 J	0.0167 U	0.0169 U
8015C	Heptacosane	593-49-7	mg/kg	0.679 U	0.479 U	0.079 U	0.0484 U	0.0492 U
8015C	Heptadecane	629-78-7	mg/kg	0.642 J	0.269 U	0.0444 U	0.0272 U	0.0433 J
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.258 J	0.165 U	0.0271 U	0.0167 U	0.0169 U
8015C	Hexatriacontane	630-06-8	mg/kg	0.234 U	0.165 U	0.0271 U	0.0167 U	0.0633 J
8015C	Hhentriacontane	630-04-6	mg/kg	0.344 U	2.74	0.149 J	0.108 J	0.0961 J
8015C	n-Decane	124-18-5	mg/kg	0.314 U	0.222 U	0.0365 U	0.0224 U	0.0227 U
8015C	n-Docosane	629-97-0	mg/kg	1.08	0.165 U	0.0271 U	0.0438 J	0.1 J
8015C	n-Dodecane	112-40-3	mg/kg	0.234 U	0.165 U	0.0271 U	0.0167 U	0.0169 U
8015C	n-Eicosane	112-95-8	mg/kg	0.275 J	0.18 U	0.0296 U	0.0182 U	0.0184 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.403 U	0.284 U	0.0469 U	0.0288 U	0.0292 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.442 J	0.419 J	0.0279 J	0.0167 U	0.0169 U
8015C	n-Nonane	111-84-2	mg/kg	0.234 U	0.165 U	0.0271 U	0.0167 U	0.0169 U
8015C	n-Octacosane	630-02-4	mg/kg	4.25	4.03	0.0271 U	0.0987 J	0.242 J
8015C	n-Octadecane	593-45-3	mg/kg	0.318 U	0.293 J	0.0374 J	0.0227 U	0.023 U
8015C	n-Tetracosane	646-31-1	mg/kg	0.234 U	0.165 U	0.102 J	0.0167 U	0.0169 U
8015C	n-Tetradecane	629-59-4	mg/kg	0.297 U	0.21 U	0.0345 U	0.0212 U	0.0215 U
8015C	n-Triacontane	638-68-6	mg/kg	2.44	0.302 U	0.149 J	0.0488 J	0.0692 J
8015C	n-Tridecane	629-50-5	mg/kg	0.234 U	0.312 J	0.0271 U	0.0167 U	0.0169 U
8015C	n-Undecane	1120-21-4	mg/kg	0.429 U	0.302 U	0.0498 U	0.0306 U	0.031 U
8015C	Nonacosane	630-03-5	mg/kg	2.25	0.517	0.183 J	0.0684 J	0.096 J
8015C	Nonadecane	629-92-5	mg/kg	0.578 J	0.723	0.0395 U	0.0242 U	0.0246 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.425 U	0.382 J	0.0493 U	0.0303 U	0.0307 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.318 U	0.225 U	0.037 U	0.0227 U	0.023 U
8015C	Pentacosane	629-99-2	mg/kg	0.234 U	0.165 U	0.0271 U	0.0405 J	0.0169 U
8015C	Pentadecane	629-62-9	mg/kg	0.708	0.407 J	0.0271 U	0.0167 U	0.0253 J
8015C	Pentatriacontane	630-07-9	mg/kg	0.255 J	0.165 U	0.0271 U	0.0167 U	0.0238 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	37	2.6 U	6.5 U	3.1 U	3 U
8015C	Tetracontane	4181-95-7	mg/kg	0.384 J	0.165 U	0.0321 J	0.0167 U	0.0232 J
8015C	Tetratriacontane	14167-59-0	mg/kg	0.276 U	0.195 U	0.0321 U	0.0197 U	0.02 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	1120	580	70 J	11.4 J	52.3 J
8015C	Tricosane	638-67-5	mg/kg	1.06	0.75	0.0415 J	0.0303 J	0.0471 J
8015C	Tritriacontane	630-05-7	mg/kg	1.04 J	0.329 U	0.0543 U	0.0333 U	0.054 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED143	NB03SED145	NB03SED149	NB03SED155
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15	NB03SED-CHM155_09/20/15
			Sample ID	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149	NB03SED-CHM155
			Sample Date	09/29/15	09/29/15	09/22/15	09/20/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.0364 U	0.0293 U	0.0812 U	0.0231 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0236 U	0.019 U	0.0585 J	0.0149 U
8015C	Dotriacontane	544-85-4	mg/kg	0.0279 U	0.0224 U	0.219 J	0.064 J
8015C	Heneicosane	629-94-7	mg/kg	0.0236 U	0.0537 J	0.0525 U	0.0149 U
8015C	Heptacosane	593-49-7	mg/kg	0.0686 U	0.0552 U	0.153 U	0.0434 U
8015C	Heptadecane	629-78-7	mg/kg	0.0866 J	0.0482 J	0.363 J	0.0925 J
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.0236 U	0.019 U	0.127 J	0.0323 J
8015C	Hexatriacontane	630-06-8	mg/kg	0.0236 U	0.0279 J	0.156 J	0.0149 U
8015C	Hhentriacontane	630-04-6	mg/kg	0.0347 U	0.0478 J	0.0774 U	0.0505 J
8015C	n-Decane	124-18-5	mg/kg	0.0317 U	0.0256 U	0.0707 U	0.0201 U
8015C	n-Docosane	629-97-0	mg/kg	0.0236 U	0.0562 J	0.346 J	0.0317 J
8015C	n-Dodecane	112-40-3	mg/kg	0.0236 U	0.019 U	0.0525 U	0.0149 U
8015C	n-Eicosane	112-95-8	mg/kg	0.0257 U	0.0207 U	0.103 J	0.0163 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.0543 J	0.0527 J	0.145 J	0.0258 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.0236 U	0.0227 J	0.118 J	0.0149 U
8015C	n-Nonane	111-84-2	mg/kg	0.0236 U	0.019 U	0.0525 U	0.0149 U
8015C	n-Octacosane	630-02-4	mg/kg	0.0451 J	0.128 J	1.05 J	0.105 J
8015C	n-Octadecane	593-45-3	mg/kg	0.0322 U	0.0259 U	0.0814 J	0.0204 U
8015C	n-Tetracosane	646-31-1	mg/kg	0.0236 U	0.019 U	0.105 J	0.0149 U
8015C	n-Tetradecane	629-59-4	mg/kg	0.03 U	0.0242 U	0.0669 U	0.019 U
8015C	n-Triacontane	638-68-6	mg/kg	0.109 J	0.234 J	0.292 J	0.0642 J
8015C	n-Tridecane	629-50-5	mg/kg	0.0236 U	0.019 U	0.0525 U	0.0149 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0433 U	0.0349 U	0.0965 U	0.0274 U
8015C	Nonacosane	630-03-5	mg/kg	0.042 J	0.1 J	0.263 J	0.0524 J
8015C	Nonadecane	629-92-5	mg/kg	0.0343 U	0.0276 U	0.0764 U	0.0217 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.0429 U	0.0757 J	0.0955 U	0.0271 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.0322 U	0.0266 J	0.0717 U	0.0204 U
8015C	Pentacosane	629-99-2	mg/kg	0.0462 J	0.019 U	0.162 J	0.0149 U
8015C	Pentadecane	629-62-9	mg/kg	0.0236 U	0.019 U	0.0525 U	0.0149 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.0236 U	0.0319 J	0.16 J	0.0156 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	4.7 U	3.5 U	6.1 U	2.8 U
8015C	Tetracontane	4181-95-7	mg/kg	0.0236 U	0.0617 J	0.127 J	0.0149 U
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0291 J	0.0224 U	0.0621 U	0.0176 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	53.9 J	116 J	329 J	38.9 J
8015C	Tricosane	638-67-5	mg/kg	0.0594 J	0.0429 J	0.345 J	0.0249 J
8015C	Tritriacontane	630-05-7	mg/kg	0.0472 U	0.038 U	0.114 J	0.0299 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.031 U	0.0461 U	0.136 U	0.0431 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
8015C	Dotriacontane	544-85-4	mg/kg	0.0237 U	0.0352 U	0.336 J	0.155 J
8015C	Heneicosane	629-94-7	mg/kg	0.02 U	0.0416 J	0.0879 U	0.0279 U
8015C	Heptacosane	593-49-7	mg/kg	0.0583 U	0.0867 U	0.256 U	0.0812 U
8015C	Heptadecane	629-78-7	mg/kg	0.164 J	0.0997 J	0.144 U	0.0841 J
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.028 J	0.033 J	0.0879 U	0.0478 J
8015C	Hexatriacontane	630-06-8	mg/kg	0.02 U	0.0298 U	0.173 J	0.087 J
8015C	Hhentriacontane	630-04-6	mg/kg	0.0478 J	0.196 J	0.549 J	0.227 J
8015C	n-Decane	124-18-5	mg/kg	0.0269 U	0.0401 U	0.118 U	0.0376 U
8015C	n-Docosane	629-97-0	mg/kg	0.0227 J	0.0298 U	0.423 J	0.0279 U
8015C	n-Dodecane	112-40-3	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
8015C	n-Eicosane	112-95-8	mg/kg	0.0219 U	0.0325 U	0.0958 U	0.0305 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.0346 U	0.0515 U	0.152 U	0.0482 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
8015C	n-Nonane	111-84-2	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
8015C	n-Octacosane	630-02-4	mg/kg	0.0657 J	0.0298 U	0.775 J	0.306 J
8015C	n-Octadecane	593-45-3	mg/kg	0.0322 J	0.0406 U	0.12 U	0.0391 J
8015C	n-Tetracosane	646-31-1	mg/kg	4.8 J	0.144 J	0.116 J	0.0279 U
8015C	n-Tetradecane	629-59-4	mg/kg	0.0812 J	0.0379 U	0.112 U	0.0355 U
8015C	n-Triacontane	638-68-6	mg/kg	0.0922 J	0.155 J	0.161 U	0.171 J
8015C	n-Tridecane	629-50-5	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0368 U	0.0547 U	0.161 U	0.0513 U
8015C	Nonacosane	630-03-5	mg/kg	0.0532 J	0.19 J	0.692 J	0.267 J
8015C	Nonadecane	629-92-5	mg/kg	0.0291 U	0.0433 U	0.128 U	0.0406 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.0364 U	0.0542 U	0.16 U	0.0508 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.0273 U	0.0406 U	0.12 U	0.0381 U
8015C	Pentacosane	629-99-2	mg/kg	0.02 U	0.0298 U	0.192 J	0.0279 U
8015C	Pentadecane	629-62-9	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.02 U	0.0298 U	0.0879 U	0.0279 U
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	3.6 U	8.8 U	4.1 U	7 U
8015C	Tetracontane	4181-95-7	mg/kg	0.02 U	0.0409 J	0.0879 U	0.028 J
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0237 U	0.0352 U	0.104 U	0.033 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	51.3 J	77.2 J	179 J	90 J
8015C	Tricosane	638-67-5	mg/kg	0.0255 U	0.0523 J	0.225 J	0.0684 J
8015C	Tritriacontane	630-05-7	mg/kg	0.0401 U	0.0596 U	0.176 U	0.0558 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15
			Sample Type	N	N	FD	N
Method	Analyte	CAS	Unit				
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.0459 U	0.0359 U	0.035 U	0.0286 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0297 U	0.0232 U	0.0226 U	0.0185 U
8015C	Dotriacontane	544-85-4	mg/kg	0.0351 U	0.131	0.167	0.17
8015C	Heneicosane	629-94-7	mg/kg	0.065 J	0.0464 J	0.0616 J	0.0707
8015C	Heptacosane	593-49-7	mg/kg	0.0864 U	0.142 J	0.137 J	0.189
8015C	Heptadecane	629-78-7	mg/kg	0.0601 J	0.0531 J	0.0866	0.0959
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.111 J	0.131 J	0.0226 U	0.0188 J
8015C	Hexatriacontane	630-06-8	mg/kg	0.0297 U	0.0232 U	0.0226 U	0.0751 J
8015C	Hhentriacontane	630-04-6	mg/kg	0.0869 J	0.183	0.196	0.215
8015C	n-Decane	124-18-5	mg/kg	0.04 U	0.0312 U	0.0305 U	0.0249 U
8015C	n-Docosane	629-97-0	mg/kg	0.0474 J	0.0232 U	0.0226 U	0.13
8015C	n-Dodecane	112-40-3	mg/kg	0.0297 U	0.0232 U	0.0226 U	0.0185 U
8015C	n-Eicosane	112-95-8	mg/kg	0.0324 U	0.0253 U	0.0247 U	0.0202 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.0513 U	0.0401 U	0.0391 U	0.0319 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.0633 J	0.0988 J	0.234 J	0.0185 U
8015C	n-Nonane	111-84-2	mg/kg	0.0297 U	0.0232 U	0.0226 U	0.0185 U
8015C	n-Octacosane	630-02-4	mg/kg	0.14 J	0.262	0.309	0.32
8015C	n-Octadecane	593-45-3	mg/kg	0.0405 U	0.0317 U	0.0387 J	0.0363 J
8015C	n-Tetracosane	646-31-1	mg/kg	0.0297 U	0.129 J	0.0395 J	0.0503 J
8015C	n-Tetradecane	629-59-4	mg/kg	0.0378 U	0.0295 U	0.0288 U	0.0262 J
8015C	n-Triacontane	638-68-6	mg/kg	0.0546 U	0.215	0.223	0.212
8015C	n-Tridecane	629-50-5	mg/kg	0.0297 U	0.0232 U	0.0226 U	0.0185 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0546 U	0.0426 U	0.0416 U	0.034 U
8015C	Nonacosane	630-03-5	mg/kg	0.166 J	0.329	0.333	0.334
8015C	Nonadecane	629-92-5	mg/kg	0.0509 J	0.0338 U	0.0329 U	0.0269 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.054 U	0.0422 U	0.0412 U	0.0336 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.0405 U	0.0317 U	0.0331 J	0.0382 J
8015C	Pentacosane	629-99-2	mg/kg	0.0469 J	0.0232 U	0.0226 U	0.0185 U
8015C	Pentadecane	629-62-9	mg/kg	0.0297 U	0.0232 U	0.0243 J	0.0185 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.0319 J	0.0232 U	0.0394 J	0.0452 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	3.1 U	5.7 U	7.2 J	4.2 U
8015C	Tetracontane	4181-95-7	mg/kg	0.0297 U	0.0243 J	0.0284 J	0.0185 U
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0351 U	0.0274 U	0.0267 U	0.0218 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	105 J	117	131	129
8015C	Tricosane	638-67-5	mg/kg	0.0529 J	0.0869	0.101	0.0995
8015C	Tritriacontane	630-05-7	mg/kg	0.0594 U	0.0464 U	0.0453 U	0.037 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED170	NB03SED171	NB03SED172	NB03SED173
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM170_09/16/15	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15
			Sample ID	NB03SED-CHM170	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173
			Sample Date	09/16/15	09/17/15	09/23/15	09/23/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.0821 J	0.0619 U	0.181 U	0.199 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0421 U	0.04 U	0.117 U	0.129 U
8015C	Dotriacontane	544-85-4	mg/kg	0.111 J	0.157	0.404 J	0.536 J
8015C	Heneicosane	629-94-7	mg/kg	0.132	0.148	0.13 J	0.171 J
8015C	Heptacosane	593-49-7	mg/kg	0.279 J	0.312 J	0.34 U	0.374 U
8015C	Heptadecane	629-78-7	mg/kg	0.0689 U	0.0655 U	0.246 J	0.21 U
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.0643 J	0.0915 J	0.269 J	0.151 J
8015C	Hexatriacontane	630-06-8	mg/kg	0.0481 J	0.112 J	0.117 U	0.129 U
8015C	Hhentriacontane	630-04-6	mg/kg	0.062 U	0.0807 J	0.172 U	0.189 U
8015C	n-Decane	124-18-5	mg/kg	0.0566 U	0.0539 U	0.157 U	0.173 U
8015C	n-Docosane	629-97-0	mg/kg	0.204	0.217	0.303 J	0.268 J
8015C	n-Dodecane	112-40-3	mg/kg	0.0421 U	0.04 U	0.117 U	0.129 U
8015C	n-Eicosane	112-95-8	mg/kg	0.0494 J	0.0767 J	0.128 J	0.264 J
8015C	n-Hexacosane	630-01-3	mg/kg	0.126	0.0891 J	0.478 J	1.04 J
8015C	n-Hexadecane	544-76-3	mg/kg	0.0421 U	0.04 U	0.697 J	0.241 J
8015C	n-Nonane	111-84-2	mg/kg	0.0421 U	0.04 U	0.117 U	0.129 U
8015C	n-Octacosane	630-02-4	mg/kg	0.605	0.826	0.6 J	0.615 J
8015C	n-Octadecane	593-45-3	mg/kg	0.0676 J	0.0756 J	0.16 U	0.175 U
8015C	n-Tetracosane	646-31-1	mg/kg	0.0502 J	0.0469 J	0.117 U	0.129 U
8015C	n-Tetradecane	629-59-4	mg/kg	0.0536 U	0.051 U	0.149 U	0.164 U
8015C	n-Triacontane	638-68-6	mg/kg	0.0773 U	0.0735 U	1.24 J	0.851 J
8015C	n-Tridecane	629-50-5	mg/kg	0.0421 U	0.04 U	0.117 U	0.129 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0773 U	0.0735 U	0.215 U	0.236 U
8015C	Nonacosane	630-03-5	mg/kg	0.938	1.15	0.38 J	0.597 J
8015C	Nonadecane	629-92-5	mg/kg	0.0612 U	0.224	0.17 U	0.187 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.0765 U	0.074 J	0.304 J	0.234 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.0574 U	0.648 J	0.16 U	0.175 U
8015C	Pentacosane	629-99-2	mg/kg	0.396	0.0624 J	0.117 U	0.23 J
8015C	Pentadecane	629-62-9	mg/kg	0.0447 J	0.0407 J	0.117 U	0.129 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.1 J	0.105 J	0.36 J	0.26 J
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	6.6 U	4 U	4.8 U	5.8 J
8015C	Tetracontane	4181-95-7	mg/kg	0.0816 J	0.119 J	0.137 J	0.129 U
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0497 U	0.0473 U	0.138 U	0.152 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	282	395	612 J	643 J
8015C	Tricosane	638-67-5	mg/kg	0.171	0.051 U	0.149 U	0.311 J
8015C	Tritriacontane	630-05-7	mg/kg	0.129	0.118 J	0.234 U	0.257 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED174	NB03SED175	NB03SED176	NB03SED177
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15
			Sample ID	NB03SED-CHM174	NB03SED-CHM175	NB03SED-CHM176	NB03SED-CHM177
			Sample Date	09/20/15	09/21/15	09/23/15	09/29/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.0414 U	0.0249 U	0.0381 U	0.0441 U
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.0268 U	0.0161 U	0.03 J	0.0285 U
8015C	Dotriacontane	544-85-4	mg/kg	0.0327 J	0.019 U	0.0779 J	0.0337 U
8015C	Heneicosane	629-94-7	mg/kg	0.0301 J	0.0161 U	0.0246 U	0.0285 U
8015C	Heptacosane	593-49-7	mg/kg	0.0779 U	0.0469 U	0.0716 U	0.083 U
8015C	Heptadecane	629-78-7	mg/kg	0.0438 U	0.0264 U	0.11 J	0.0467 U
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.0424 J	0.0238 J	0.0834 J	0.0285 U
8015C	Hexatriacontane	630-06-8	mg/kg	0.0268 U	0.0161 U	0.0246 U	0.0589 J
8015C	Hhentriacontane	630-04-6	mg/kg	0.0477 J	0.0237 U	0.173 J	0.0448 J
8015C	n-Decane	124-18-5	mg/kg	0.036 U	0.0217 U	0.0331 U	0.0384 U
8015C	n-Docosane	629-97-0	mg/kg	0.0404 J	0.0161 U	0.169 J	0.0285 U
8015C	n-Dodecane	112-40-3	mg/kg	0.0268 U	0.0161 U	0.0246 U	0.0285 U
8015C	n-Eicosane	112-95-8	mg/kg	0.0292 U	0.0176 U	0.0358 J	0.0311 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.0604 J	0.0278 U	0.0592 J	0.0493 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.0332 J	0.0161 U	0.0693 J	0.0285 U
8015C	n-Nonane	111-84-2	mg/kg	0.0268 U	0.0161 U	0.0246 U	0.0285 U
8015C	n-Octacosane	630-02-4	mg/kg	0.116 J	0.0264 J	0.399 J	0.045 J
8015C	n-Octadecane	593-45-3	mg/kg	0.0365 U	0.022 U	0.0453 J	0.0389 U
8015C	n-Tetracosane	646-31-1	mg/kg	0.0268 U	0.0161 U	0.0371 J	0.0285 U
8015C	n-Tetradecane	629-59-4	mg/kg	0.0341 U	0.0205 U	0.0313 U	0.0363 U
8015C	n-Triacontane	638-68-6	mg/kg	0.135 J	0.0848 J	0.245 J	0.0792 J
8015C	n-Tridecane	629-50-5	mg/kg	0.0268 U	0.0161 U	0.0246 U	0.0285 U
8015C	n-Undecane	1120-21-4	mg/kg	0.0492 U	0.0296 U	0.0452 U	0.0524 U
8015C	Nonacosane	630-03-5	mg/kg	0.136 J	0.054	0.21 J	0.0439 J
8015C	Nonadecane	629-92-5	mg/kg	0.039 U	0.0234 U	0.16 J	0.0415 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.0487 U	0.0317 J	0.0448 U	0.0519 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.0365 U	0.022 U	0.0508 J	0.0389 U
8015C	Pentacosane	629-99-2	mg/kg	0.0268 U	0.02 J	0.113 J	0.0285 U
8015C	Pentadecane	629-62-9	mg/kg	0.0268 U	0.0161 U	0.0343 J	0.0285 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.0512 J	0.0161 U	0.0823 J	0.0285 U
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	8.3 U	2.8 U	5.7 U	8.4 U
8015C	Tetracontane	4181-95-7	mg/kg	0.0268 U	0.0161 U	0.0464 J	0.0285 U
8015C	Tetratriacontane	14167-59-0	mg/kg	0.0317 U	0.019 U	0.0428 J	0.0337 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	58.2 J	23.4 J	153 J	10.4 U
8015C	Tricosane	638-67-5	mg/kg	0.0341 U	0.0205 U	0.12 J	0.0363 U
8015C	Tritriacontane	630-05-7	mg/kg	0.0536 U	0.0322 U	0.0672 J	0.0571 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-8
Analytical Data for Total Petroleum Hydrocarbons
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED178
			Depth	0.0-0.5
			Sample ID and Date	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM178
			Sample Date	09/23/15
			Sample Type	N
Method	Analyte	CAS	Unit	
8015C	2,6,10,14-Tetramethyl Pentadecane	1921-70-6	mg/kg	0.694 J
8015C	2,6,10,14-Tetramethylhexadecane	638-36-8	mg/kg	0.453 J
8015C	Dotriacontane	544-85-4	mg/kg	0.691 J
8015C	Heneicosane	629-94-7	mg/kg	0.258 U
8015C	Heptacosane	593-49-7	mg/kg	0.751 U
8015C	Heptadecane	629-78-7	mg/kg	0.688 J
8015C	Heptatriacontane, -n	7194-84-5	mg/kg	0.258 U
8015C	Hexatriacontane	630-06-8	mg/kg	0.277 J
8015C	Hhentriacontane	630-04-6	mg/kg	0.38 U
8015C	n-Decane	124-18-5	mg/kg	0.348 U
8015C	n-Docosane	629-97-0	mg/kg	0.979 J
8015C	n-Dodecane	112-40-3	mg/kg	0.258 U
8015C	n-Eicosane	112-95-8	mg/kg	0.282 U
8015C	n-Hexacosane	630-01-3	mg/kg	0.446 U
8015C	n-Hexadecane	544-76-3	mg/kg	0.588 J
8015C	n-Nonane	111-84-2	mg/kg	0.258 U
8015C	n-Octacosane	630-02-4	mg/kg	1.92 J
8015C	n-Octadecane	593-45-3	mg/kg	0.352 U
8015C	n-Tetracosane	646-31-1	mg/kg	0.344 J
8015C	n-Tetradecane	629-59-4	mg/kg	0.329 U
8015C	n-Triacontane	638-68-6	mg/kg	0.474 U
8015C	n-Tridecane	629-50-5	mg/kg	0.258 U
8015C	n-Undecane	1120-21-4	mg/kg	0.474 U
8015C	Nonacosane	630-03-5	mg/kg	0.258 U
8015C	Nonadecane	629-92-5	mg/kg	0.376 U
8015C	Nonatriacontane	7194-86-7	mg/kg	0.47 U
8015C	Octatriacontane	7194-85-6	mg/kg	0.352 U
8015C	Pentacosane	629-99-2	mg/kg	1.03 J
8015C	Pentadecane	629-62-9	mg/kg	0.258 U
8015C	Pentatriacontane	630-07-9	mg/kg	0.258 U
SW8015B	PHC AS GASOLINE	PHCG	mg/kg	6.8 J
8015C	Tetracontane	4181-95-7	mg/kg	0.258 U
8015C	Tetratriacontane	14167-59-0	mg/kg	0.305 U
8015C	Total Petroleum Hydrocarbons (C9-C40)	TPHC9C40	mg/kg	1290 J
8015C	Tricosane	638-67-5	mg/kg	0.93 J
8015C	Tritriacontane	630-05-7	mg/kg	0.517 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.005 U	0.0047 U	0.0051 U	0.0047 U	0.0047 U	0.0045 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0064 U	0.0061 U	0.0065 U	0.006 U	0.006 U	0.0058 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.011 U	0.011 U	0.011 U	0.01 U	0.01 U	0.01 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0046 U	0.0043 U	0.0046 U	0.0043 U	0.0043 U	0.0041 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.017 J	0.0091 J	0.018 J	0.4	0.022	0.019 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.019 J	0.011 J	0.025 J	0.21	0.028	0.038 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0068 U	0.0065 U	0.0069 U	0.081	0.012 J	0.0061 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0046 U	0.0043 U	0.0046 U	0.0043 U	0.0043 U	0.0041 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0046 U	0.0043 U	0.0046 U	0.0043 U	0.0043 U	0.0041 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0046 U	0.0051 U	0.0071 U	0.0053 U	0.0044 U	0.0044 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0059 U	0.0066 U	0.009 U	0.0068 U	0.0056 U	0.0056 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.01 U	0.011 U	0.016 U	0.012 U	0.0097 U	0.0098 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0043 U	0.0047 U	0.0065 U	0.0049 U	0.004 U	0.004 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.016 J	0.17	0.28 J	0.2 J	0.032 J	0.023 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.027	0.24	0.0065 U	0.22 J	0.023 J	0.017 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.013 J	0.081	0.07 J	0.0073 U	0.006 U	0.006 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0043 U	0.0047 U	0.0065 U	0.0049 U	0.004 U	0.004 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0043 U	0.0047 U	0.0065 U	0.0049 U	0.004 U	0.004 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0046 U	0.005 U	0.0053 U	0.0076 U	0.027 U	0.0089 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0059 U	0.0063 U	0.0067 U	0.0098 U	0.034 U	0.011 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.01 U	0.011 U	0.012 U	0.017 U	0.06 U	0.02 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0042 U	0.0045 U	0.0048 U	0.007 U	0.025 U	0.0082 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0042 U	0.097 J	0.019 J	0.068	1.2	0.085
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.028	0.0045 U	0.034 J	0.18 J	0.025 U	0.094
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0062 U	0.04 J	0.023 J	0.14 J	0.037 U	0.034 J
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0042 U	0.0045 U	0.0048 U	0.007 U	0.025 U	0.0082 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0042 U	0.0045 U	0.0048 U	0.007 U	0.025 U	0.0082 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0054 U	0.0055 U	0.0077 U	0.0062 U	0.0086 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0069 U	0.0071 U	0.0098 U	0.0079 U	0.011 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.012 U	0.012 U	0.017 U	0.014 U	0.019 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.005 U	0.0051 U	0.007 U	0.0057 U	0.0079 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.074	0.03 J	0.14 J	0.12 J	0.11
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.082 J	0.05 J	0.2 J	0.12 J	0.12
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.032	0.0075 U	0.061	0.042 J	0.012 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.005 U	0.0051 U	0.007 U	0.0057 U	0.021 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.005 U	0.0051 U	0.007 U	0.0057 U	0.0079 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0049 U	0.0066 U	0.0098 U	0.0058 U	0.0092 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0062 U	0.0084 U	0.013 U	0.0074 U	0.012 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.011 U	0.015 U	0.022 U	0.013 U	0.02 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0045 U	0.099	0.009 U	0.0053 U	0.0084 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.022 J	0.006 U	0.054	0.062	0.063
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.021 J	0.17 J	0.045 J	0.063	0.057
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0066 U	0.24 J	0.047	0.031 J	0.044
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0045 U	0.006 U	0.009 U	0.0053 U	0.0084 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0045 U	0.006 U	0.009 U	0.0053 U	0.0084 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0049 U	0.0076 U	0.0074 U	0.0061 U	0.0069 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0062 U	0.0097 U	0.0095 U	0.0077 U	0.0088 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.011 U	0.017 U	0.016 U	0.013 U	0.015 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0045 U	0.007 U	0.0068 U	0.0056 U	0.0063 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.026	0.083	0.08	0.069	0.13
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.029	0.081	0.065	0.073	0.1
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.013 J	0.039 J	0.029 J	0.025 J	0.039
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0045 U	0.007 U	0.0068 U	0.0056 U	0.0063 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0045 U	0.007 U	0.0068 U	0.0056 U	0.0063 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0065 U	0.038 U	0.0084 U	0.0088 U	0.0053 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0083 U	0.048 U	0.011 U	0.011 U	0.0067 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.014 U	0.084 U	0.019 U	0.02 U	0.012 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.006 U	0.035 U	0.0077 U	0.0081 U	0.0048 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.069	0.035 U	0.0077 U	0.078	0.0048 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.063	0.75	0.14	0.093	0.011 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0089 U	0.051 U	0.011 U	0.012 U	0.0072 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.006 U	0.035 U	0.0077 U	0.025 J	0.0048 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.006 U	0.035 U	0.0077 U	0.0081 U	0.02 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-9
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0081 U	0.0094 U	0.0084 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.01 U	0.012 U	0.011 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.018 U	0.021 U	0.019 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0074 U	0.0086 U	0.0077 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.21	0.036 J	0.0077 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.18	0.0086 U	0.0077 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.081 J	0.025 J	0.011 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0074 U	0.0086 U	0.0077 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0074 U	0.0086 U	0.0077 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-1	2051-60-7	mg/kg	0.000226	0.000191	0.000244	0.000937	0.000171	0.000294
E1668A	PCB-2	2051-61-8	mg/kg	0.000151	6.81e-05	0.000124	0.000221	5.19e-05	7.21e-05
E1668A	PCB-3	2051-62-9	mg/kg	0.000311 J	0.000123	0.000209	0.000613	0.000106 J	0.000119
E1668A	PCB-4	13029-08-8	mg/kg	0.000471 J	8.31e-05 U	0.00035	0.00394	0.000337	0.000398
E1668A	PCB-5	16605-91-7	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000129	0.000115 U	8.66e-05 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000212	0.000167	0.000202	0.00362	0.000181	0.00015
E1668A	PCB-7	33284-50-3	mg/kg	4.32e-05 U	3.32e-05 U	2.68e-05 J	0.000355	4.61e-05 U	1.47e-05 J
E1668A	PCB-8	34883-43-7	mg/kg	0.00101 J	0.000613	0.000842	0.011	0.000694	0.000518
E1668A	PCB-9	34883-39-1	mg/kg	4.32e-05 U	2.6e-05 J	4.04e-05 J	0.000536	3.16e-05 J	2.22e-05 J
E1668A	PCB-10	33146-45-1	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000243	0.000115 U	3.51e-05 J
E1668A	PCB-11	2050-67-1	mg/kg	0.00141 J	0.000869 U	0.00135	0.00148	0.000663 U	0.000173 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000292	0.000192	3e-04	0.00255	0.000178	8.66e-05 U
E1668A	PCB-14	34883-41-5	mg/kg	4.32e-05 U	3.32e-05 U	4.22e-05 U	3.82e-05 U	4.61e-05 U	3.46e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00155 J	0.000799	0.00152	0.00979	0.000919	0.000815
E1668A	PCB-16	38444-78-9	mg/kg	0.000607	0.000331	0.00033	0.00438	0.000188	0.000293
E1668A	PCB-17	37680-66-3	mg/kg	0.000839	0.00049	0.000518	0.00722	0.000252	0.000449
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0013	0.000743	0.000717	0.0105	0.000418	0.000636
E1668A	PCB-19	38444-73-4	mg/kg	0.000192	0.000157	0.000137	0.00485	0.000119	0.000135
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00501 J	0.00274	0.00357	0.0418 J	0.00191	0.00251
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00132	0.000697	0.000826	0.00911	0.000483	0.000577
E1668A	PCB-22	38444-85-8	mg/kg	0.00115	0.000641	0.000748	0.0114	0.000487	0.000541
E1668A	PCB-23	55720-44-0	mg/kg	4.32e-05 U	3.32e-05 U	4.22e-05 U	1.45e-05 J	4.61e-05 U	3.46e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	4.32e-05 U	3.32e-05 U	4.22e-05 U	0.000207	4.61e-05 U	3.46e-05 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000467	0.00028	0.000352	0.00613	0.000186	0.000261
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000751	0.000453	0.000546	0.00725	0.000282	0.000422
E1668A	PCB-27	38444-76-7	mg/kg	0.000184	0.000113	0.000145	0.00378	9.27e-05	0.000107
E1668A	PCB-31	16606-02-3	mg/kg	0.00334 J	0.00188	0.00229	0.0235 J	0.00122	0.00152
E1668A	PCB-32	38444-77-8	mg/kg	0.000776	0.000459	0.00043	0.00796	0.000254	0.000362
E1668A	PCB-34	37680-68-5	mg/kg	1.99e-05 J	1.36e-05 J	4.22e-05 U	0.000176	4.61e-05 U	3.46e-05 U
E1668A	PCB-35	37680-69-6	mg/kg	0.000198	9.03e-05	0.000136	0.000689	6.44e-05	7.67e-05
E1668A	PCB-36	38444-87-0	mg/kg	4.32e-05 U	3.32e-05 U	4.22e-05 U	3.82e-05 U	4.61e-05 U	3.46e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.00157	0.00067	0.0013	0.0109	0.000672	0.000663
E1668A	PCB-38	53555-66-1	mg/kg	4.32e-05 U	3.32e-05 U	4.22e-05 U	2.82e-05 J	4.61e-05 U	3.46e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	2.16e-05 J	1.59e-05 J	4.22e-05 U	0.000153	4.61e-05 U	3.46e-05 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00183	0.000958	0.00119	0.0177	0.000538	0.00069
E1668A	PCB-41	52663-59-9	mg/kg	0.000197 J	0.000109 J	0.000211 U	0.00202	0.000231 U	0.000173 U
E1668A	PCB-42	36559-22-5	mg/kg	0.00129	0.000705	0.000861	0.0143	0.000398	0.000528
E1668A	PCB-43	70362-46-8	mg/kg	0.000138	6.9e-05 J	7.5e-05 J	0.00117	3.35e-05 J	8.66e-05 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00399	0.00224	0.00242	0.0358	0.0011	0.00165
E1668A	PCB-45	70362-45-7	mg/kg	0.000436	0.000236	0.00035	0.00805	0.000253	0.000176
E1668A	PCB-46	41464-47-5	mg/kg	0.000184	0.000103	0.000172	0.00331	0.000167	7.85e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000608	0.000327	0.000288	0.00514	0.00015	0.000207
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00282	0.00157	0.0016	0.0259	0.000674	0.00119

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000487	0.000307	0.000493	0.00729	0.000432	0.000227
E1668A	PCB-51	68194-04-7	mg/kg	0.000273	0.000214	0.000282	0.00242	0.000154	0.000108
E1668A	PCB-52	35693-99-3	mg/kg	0.00381 J	0.00207	0.00204	0.0309 J	0.000954	0.00181
E1668A	PCB-54	15968-05-5	mg/kg	0.000108 U	2.66e-05 J	3.01e-05 J	0.00016	0.000115 U	8.66e-05 U
E1668A	PCB-55	74338-24-2	mg/kg	5.17e-05 J	2.44e-05 J	2.98e-05 J	0.000566	0.000115 U	8.66e-05 U
E1668A	PCB-56	41464-43-1	mg/kg	0.00207	0.000993	0.0012	0.0177	0.000655	0.000811
E1668A	PCB-57	70424-67-8	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000189	0.000115 U	8.66e-05 U
E1668A	PCB-58	41464-49-7	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000121	0.000115 U	8.66e-05 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000368 J	0.000205 J	0.000242 J	0.00381	0.000116 J	0.000162 J
E1668A	PCB-60	33025-41-1	mg/kg	0.000933	0.000415	0.000514	0.00907	0.000322	0.000368
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.00697	0.00341	0.00407	0.0497	0.00204	0.00287
E1668A	PCB-63	74472-34-7	mg/kg	0.000171	9.13e-05	9.84e-05 J	0.00125	4.8e-05 J	7.57e-05 J
E1668A	PCB-64	52663-58-8	mg/kg	0.00174	0.000953	0.000897	0.014	0.000445	0.000681
E1668A	PCB-66	32598-10-0	mg/kg	0.00465	0.00226	0.00334	0.0483 J	0.00176	0.00196
E1668A	PCB-67	73575-53-8	mg/kg	0.000151	7.39e-05 J	9.2e-05 J	0.00136	4.78e-05 J	5.53e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	4.2e-05 J	8.31e-05 U	3.66e-05 J	0.000238	0.000115 U	8.66e-05 U
E1668A	PCB-72	41464-42-0	mg/kg	4.98e-05 J	2.82e-05 J	3.47e-05 J	0.000305	0.000115 U	2.65e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000123	0.000115 U	8.66e-05 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000583	0.000271	0.000546	0.0049	0.000314	0.000226
E1668A	PCB-78	70362-49-1	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-79	41464-48-6	mg/kg	3.55e-05 J	8.31e-05 U	3.85e-05 J	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-80	33284-52-5	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000159	0.000115 U	8.66e-05 U
E1668A	PCB-82	52663-62-4	mg/kg	0.000436	0.000214	0.000398	0.00399	0.000257	0.000283
E1668A	PCB-83	60145-20-2	mg/kg	0.000176 J	0.000104 J	0.000183 J	0.00145	0.000147 J	0.000134 J
E1668A	PCB-84	52663-60-2	mg/kg	0.000832	0.000435	0.000827	0.00698	0.000797	0.00058
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.000715	0.00035	0.000627	0.00547	0.000403 J	0.000437
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.0023	0.00121	0.00197	0.0156	0.00126	0.00143
E1668A	PCB-88	55215-17-3	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	5.14e-05 J	2.51e-05 J	5.28e-05 J	0.00066	5.36e-05 J	2.96e-05 J
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.00346	0.00189	0.00276	0.0173	0.00141	0.00207
E1668A	PCB-91	68194-05-8	mg/kg	0.000556	0.000301	0.000613	0.00444	0.000486	0.000362
E1668A	PCB-92	52663-61-3	mg/kg	0.000642	0.000335	0.000561	0.00334	0.000321	0.000417
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000432 U	0.000332 U	0.000422 U	0.000445	0.000461 U	0.000346 U
E1668A	PCB-94	73575-55-0	mg/kg	0.000108 U	2.49e-05 J	3.87e-05 J	0.000206	0.000115 U	8.66e-05 U
E1668A	PCB-95	38379-99-6	mg/kg	0.00268	0.00147	0.00259	0.0162	0.00259	0.00197
E1668A	PCB-96	73575-54-9	mg/kg	0.000108 U	8.31e-05 U	3.38e-05 J	0.000352	0.000115 U	8.66e-05 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00017 J	0.000332 U	0.000189 J	0.0015	0.000461 U	0.000346 U
E1668A	PCB-99	38380-01-7	mg/kg	0.00184	0.000992	0.00181	0.0118	0.00112	0.00115
E1668A	PCB-103	60145-21-3	mg/kg	5.78e-05 J	3.75e-05 J	6.84e-05 J	0.000234	4.03e-05 J	2.58e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00141	0.000698	0.00115	0.00856	0.000653	0.000863
E1668A	PCB-106	70424-69-0	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-107	70424-68-9	mg/kg	0.000281	0.000158	0.000211	0.00131	9.51e-05 J	0.000168
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.00015 J	7.39e-05 J	0.00012 J	0.000723	7.13e-05 J	9.37e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0042	0.00225	0.00355	0.0226	0.00183	0.00307
E1668A	PCB-111	39635-32-0	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-112	74472-36-9	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000105	0.000115 U	8.66e-05 U
E1668A	PCB-114	74472-37-0	mg/kg	8.14e-05 J	4.03e-05 J	0.000105 U	0.000491	0.000115 U	4.09e-05 J
E1668A	PCB-118	31508-00-6	mg/kg	0.00342	0.0017	0.00301	0.0175	0.00186	0.00203
E1668A	PCB-120	68194-12-7	mg/kg	0.000108 U	8.31e-05 U	3e-05 J	5.99e-05 J	0.000115 U	8.66e-05 U
E1668A	PCB-121	56558-18-0	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-122	76842-07-4	mg/kg	0.000108 U	2.78e-05 J	0.000105 U	0.000431	0.000115 U	3.75e-05 J
E1668A	PCB-123	65510-44-3	mg/kg	8.12e-05 J	3.69e-05 J	8.25e-05 J	0.000617	0.000115 U	4.66e-05 J
E1668A	PCB-126	57465-28-8	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	0.000133	0.000115 U	8.66e-05 U
E1668A	PCB-127	39635-33-1	mg/kg	5.46e-05 J	8.31e-05 U	6.73e-05 J	5.36e-05 J	0.000115 U	8.66e-05 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000537	0.000316	0.000832	0.00153	0.000444	0.000398
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.00411	0.00255	0.00502	0.0108	0.00317	0.00265
E1668A	PCB-130	52663-66-8	mg/kg	0.00023	0.000143	0.000265	0.00066	0.000182	0.000166
E1668A	PCB-131	61798-70-7	mg/kg	0.000108 U	8.31e-05 U	5e-05 J	0.00014	0.000115 U	3.41e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	0.00106	0.000654	0.0011	0.00325	0.000913	0.000692
E1668A	PCB-133	35694-04-3	mg/kg	7.76e-05 J	4.72e-05 J	0.000124	0.000181	5.99e-05 J	4.01e-05 J
E1668A	PCB-134	52704-70-8	mg/kg	0.000196 J	0.000132 J	0.000214	0.000545	0.000161 J	0.000173 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00119	0.00077	0.00148	0.00323	0.000945	0.000712
E1668A	PCB-136	38411-22-2	mg/kg	0.000399	0.000251	0.00052	0.00115	0.000329	0.000261
E1668A	PCB-137	35694-06-5	mg/kg	0.000142	8.59e-05	0.00015	0.000508	0.000124	0.000113
E1668A	PCB-139/140	PCB-139/140	mg/kg	6.33e-05 J	0.000166 U	0.000192 J	0.000175 J	0.000231 U	0.000173 U
E1668A	PCB-141	52712-04-6	mg/kg	0.000876	0.000593	0.000987	0.0023	0.000661	0.000466
E1668A	PCB-142	41411-61-4	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000216 U	0.000166 U	0.000211 U	0.000191 U	0.000231 U	0.000173 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000159	9.99e-05	0.000197	0.000438	0.000128	9.36e-05
E1668A	PCB-145	74472-40-5	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000583	0.000348	0.00106	0.00143	0.000395	0.000323
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00291	0.00185	0.00433	0.00725	0.00223	0.00169
E1668A	PCB-148	74472-41-6	mg/kg	0.000108 U	8.31e-05 U	4.3e-05 J	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-150	68194-08-1	mg/kg	0.000108 U	8.31e-05 U	0.00013	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-152	68194-09-2	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00344	0.00219	0.00781	0.00829	0.00239	0.00196
E1668A	PCB-154	60145-22-4	mg/kg	0.000216 U	0.000166 U	0.000745	0.000186 J	0.000231 U	0.000173 U
E1668A	PCB-155	33979-03-2	mg/kg	4.39e-05 J	2.44e-05 J	9.5e-05 J	4.72e-05 J	0.000115 U	8.66e-05 U
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000415	0.000236	0.000408	0.00109	0.000252	0.000269
E1668A	PCB-158	74472-42-7	mg/kg	0.000366	0.000225	0.00048	0.00102	0.000252	0.000246
E1668A	PCB-159	39635-35-3	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-160	41411-62-5	mg/kg	0.000432 U	0.000332 U	0.000422 U	0.000382 U	0.000461 U	0.000346 U
E1668A	PCB-161	74472-43-8	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-164	74472-45-0	mg/kg	0.000274	0.000181	0.000324	0.000722	0.000214	0.000159
E1668A	PCB-165	74472-46-1	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-167	52663-72-6	mg/kg	0.000148	8.87e-05	0.000196	0.000406	0.000119	0.000102
E1668A	PCB-169	32774-16-6	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00111	0.00083	0.00177	0.00236	0.000781	0.000523
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000327	0.000241	0.00129	0.000746	0.000242	0.000167 J
E1668A	PCB-172	52663-74-8	mg/kg	2e-04	0.00015	0.000354	0.000441	0.000161	9.87e-05
E1668A	PCB-174	38411-25-5	mg/kg	0.000973	0.000762	0.00144	0.00238	0.000754	0.000499
E1668A	PCB-175	40186-70-7	mg/kg	5.67e-05 J	8.31e-05 U	0.000195	0.000112	0.000115 U	2.45e-05 J
E1668A	PCB-176	52663-65-7	mg/kg	0.000126	8.78e-05	0.00035	0.00028	9.44e-05 J	6.08e-05 J
E1668A	PCB-177	52663-70-4	mg/kg	0.000647	0.000469	0.00112	0.00147	0.000475	0.000332
E1668A	PCB-178	52663-67-9	mg/kg	0.000247	0.000172	0.00105	0.000566	0.000191	0.00013
E1668A	PCB-179	52663-64-6	mg/kg	0.000443	0.000296	0.00131	0.00101	0.000327	0.000218
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00268	0.00195	0.00653	0.00609	0.00201	0.00134
E1668A	PCB-181	74472-47-2	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-182	60145-23-5	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000785	0.000577	0.00653	0.00173	0.000593	0.000398
E1668A	PCB-184	74472-48-3	mg/kg	0.000108 U	8.31e-05 U	9.35e-05 J	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-186	74472-49-4	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00154	0.00104	0.012	0.00341	0.00112	0.000786
E1668A	PCB-188	74487-85-7	mg/kg	0.000108 U	8.31e-05 U	0.000612	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-189	39635-31-9	mg/kg	4.77e-05 J	3.42e-05 J	9.83e-05 J	9.45e-05 J	3.36e-05 J	8.66e-05 U
E1668A	PCB-190	41411-64-7	mg/kg	0.000227	0.000152	0.000407	0.000498	0.000151	0.000105
E1668A	PCB-191	74472-50-7	mg/kg	4.96e-05 J	8.31e-05 U	0.00027	0.00011	3.72e-05 J	8.66e-05 U
E1668A	PCB-192	74472-51-8	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000682	0.000536	0.00534	0.00151	0.000523	0.000333
E1668A	PCB-195	52663-78-2	mg/kg	0.00021	0.000178	0.00174	0.000514	0.000171	0.000112
E1668A	PCB-196	42740-50-1	mg/kg	0.000313	0.000256	0.00248	0.000722	0.000255	0.000178
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000216 U	0.000166 U	0.000657	0.000191 U	0.000231 U	0.000173 U
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000864	0.000607	0.00428	0.00187	0.000651	0.000445
E1668A	PCB-201	40186-71-8	mg/kg	0.000112	7.91e-05 J	0.000702	0.000216	0.000101 J	6.68e-05 J
E1668A	PCB-202	2136-99-4	mg/kg	0.000257	0.00014 J	0.00203	0.000463	0.000175 J	0.000138 J
E1668A	PCB-203	52663-76-0	mg/kg	0.000483	0.00034	0.00385	0.00113	0.000385	0.000271
E1668A	PCB-204	74472-52-9	mg/kg	0.000108 U	8.31e-05 U	0.000105 U	9.54e-05 U	0.000115 U	8.66e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	3.49e-05 J	8.31e-05 U	0.000289	6.43e-05 J	0.000115 U	8.66e-05 U
E1668A	PCB-206	40186-72-9	mg/kg	0.000675	0.000323	0.0032	0.00118	0.000391	0.000402
E1668A	PCB-207	52663-79-3	mg/kg	6.26e-05 J	3.89e-05 J	0.000672	0.000122	5.18e-05 J	4.33e-05 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000277	0.000126	0.000874	0.000411	0.000128	0.000149
E1668A	PCB-209	2051-24-3	mg/kg	0.000638 U	0.000315 U	0.000622 U	0.000687	0.000302 U	0.000453 U
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.112 J	0.0653 J	0.147 J	0.679 J	0.0616 J	0.0602 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.118 J	0.0687 J	0.153 J	0.713 J	0.0655 J	0.0642 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.11e-05 J	8.44e-06 J	1.07e-05 J	1.49e-05	1.16e-05 J	8.81e-06 J

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1668A	PCB-1	2051-60-7	mg/kg	0.000145	0.000582	0.00285	0.000814	0.000369 J	0.000453
E1668A	PCB-2	2051-61-8	mg/kg	4.22e-05 J	0.000203	0.00157	0.000386	9.24e-05	5.21e-05
E1668A	PCB-3	2051-62-9	mg/kg	6.51e-05 J	0.00093	0.00263	0.000598	0.000162	0.000126
E1668A	PCB-4	13029-08-8	mg/kg	0.000116 U	0.00222	0.0153	0.00199	0.000704 J	0.000359 J
E1668A	PCB-5	16605-91-7	mg/kg	0.000116 U	7.72e-05 J	0.000474	5.68e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-6	25569-80-6	mg/kg	4.64e-05 U	0.000895	0.00422	0.00109	0.000119 J	0.000177
E1668A	PCB-7	33284-50-3	mg/kg	4.64e-05 U	0.000177	0.00101	0.000132	3.91e-05 U	3.83e-05 U
E1668A	PCB-8	34883-43-7	mg/kg	0.000321	0.00564	0.0227 J	0.00499	0.000919 J	0.000652
E1668A	PCB-9	34883-39-1	mg/kg	4.64e-05 U	0.000241	0.00109 J	0.000194	3.91e-05 U	2.9e-05 J
E1668A	PCB-10	33146-45-1	mg/kg	0.000116 U	0.000108 J	0.00062	0.000112 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-11	2050-67-1	mg/kg	0.00051 U	0.00841	0.0218	0.00679	0.000575 U	0.000881 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000128	0.00159	0.00732	0.00154	0.000161	0.000233
E1668A	PCB-14	34883-41-5	mg/kg	4.64e-05 U	5.01e-05 U	3.41e-05 J	4.93e-05 U	3.91e-05 U	3.83e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000522	0.00854	0.0262 J	0.00716	0.00119	0.00112
E1668A	PCB-16	38444-78-9	mg/kg	0.000115	0.00521	0.0201	0.00186	0.000181	0.000173
E1668A	PCB-17	37680-66-3	mg/kg	0.000235	0.00603	0.023 J	0.00262	0.000318	0.000307
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000336	0.0108	0.0402	0.00427	0.000427	0.000412
E1668A	PCB-19	38444-73-4	mg/kg	7.73e-05	0.00227	0.00812	0.00114	0.000144	0.000108
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00136	0.0282	0.123 J	0.0195	0.00255	0.00244
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000258	0.00942	0.0392	0.00544	0.00056	0.000554
E1668A	PCB-22	38444-85-8	mg/kg	0.000263	0.00805	0.0345 J	0.00477	0.000507	0.000505
E1668A	PCB-23	55720-44-0	mg/kg	4.64e-05 U	5.01e-05 U	7.34e-05 U	4.93e-05 U	3.91e-05 U	3.83e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	4.64e-05 U	0.000138	7.34e-05 U	4.84e-05 J	3.91e-05 U	3.83e-05 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00016	0.00228	0.0104	0.00188	0.000263	0.000246
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000259	0.00388	0.0185	0.00274	0.00041	0.000365
E1668A	PCB-27	38444-76-7	mg/kg	7.06e-05	0.00174	0.00478	0.000813	0.000101	0.000104
E1668A	PCB-31	16606-02-3	mg/kg	0.000912	0.022 J	0.0825 J	0.0136	0.0018	0.00164
E1668A	PCB-32	38444-77-8	mg/kg	0.000214	0.00505	0.0203	0.00261	0.000306	0.000254
E1668A	PCB-34	37680-68-5	mg/kg	4.64e-05 U	8.82e-05	0.000511	6.49e-05	3.91e-05 U	3.83e-05 U
E1668A	PCB-35	37680-69-6	mg/kg	4.08e-05 J	0.00113	0.00315	0.000567	8.02e-05	7.97e-05
E1668A	PCB-36	38444-87-0	mg/kg	4.64e-05 U	5.01e-05 U	7.34e-05 U	4.93e-05 U	3.91e-05 U	3.83e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000376	0.00857	0.025 J	0.00629	0.000753	0.000845
E1668A	PCB-38	53555-66-1	mg/kg	4.64e-05 U	2.13e-05 J	0.000105	4.93e-05 U	3.91e-05 U	3.83e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	4.64e-05 U	0.000121	0.000675	8.17e-05	3.91e-05 U	3.83e-05 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000474	0.0123	0.0381	0.00653	0.000639	0.000773
E1668A	PCB-41	52663-59-9	mg/kg	0.000232 U	0.00182	0.00593	0.000547	0.000195 U	0.000192 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000329	0.00785	0.0275	0.0048	0.000491	0.000563
E1668A	PCB-43	70362-46-8	mg/kg	0.000116 U	0.000977	0.00396	0.000464	5.49e-05 J	4.9e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00107	0.0229	0.0785	0.0134	0.00131	0.00156
E1668A	PCB-45	70362-45-7	mg/kg	0.000166	0.0075	0.0128	0.00243	0.000175	0.000219
E1668A	PCB-46	41464-47-5	mg/kg	7.19e-05	0.00276	0.00538	0.00105	7.98e-05	0.000101
E1668A	PCB-48	70362-47-9	mg/kg	0.000126	0.00397	0.0151	0.0017	0.000155	0.000186
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000792	0.0144	0.0509	0.00909	0.000862	0.001

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000223 J	0.00613	0.012	0.00279	0.000214	0.000268
E1668A	PCB-51	68194-04-7	mg/kg	8.68e-05 J	0.00613	0.00334	0.000907	7.18e-05 J	0.000112
E1668A	PCB-52	35693-99-3	mg/kg	0.00121	0.0261	0.0844 J	0.0135	0.00114	0.00135
E1668A	PCB-54	15968-05-5	mg/kg	0.000116 U	0.00011 J	0.000315	0.000104 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-55	74338-24-2	mg/kg	0.000116 U	0.000323	0.00127	0.000174	9.77e-05 U	9.58e-05 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000491	0.0118	0.048 J	0.00799	0.000913	0.000984
E1668A	PCB-57	70424-67-8	mg/kg	0.000116 U	9.24e-05 J	0.000524	6.54e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-58	41464-49-7	mg/kg	0.000116 U	5.74e-05 J	0.000259	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000114 J	0.00224	0.00813	0.00128	0.000126 J	0.000152 J
E1668A	PCB-60	33025-41-1	mg/kg	0.000221	0.00642	0.0181	0.00359	0.000395	0.000439
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.00177	0.0431	0.153	0.0251	0.00289	0.0031
E1668A	PCB-63	74472-34-7	mg/kg	4.78e-05 J	0.000979	0.00394	0.000563	6.72e-05 J	7.44e-05 J
E1668A	PCB-64	52663-58-8	mg/kg	0.000433	0.0106	0.0375	0.00535	0.000502	0.000564
E1668A	PCB-66	32598-10-0	mg/kg	0.00123	0.0282	0.0968 J	0.0195	0.00241	0.00281
E1668A	PCB-67	73575-53-8	mg/kg	3.59e-05 J	0.00076	0.00292	0.000473	6.18e-05 J	6.95e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000116 U	0.000121 J	0.000485	0.00013	9.77e-05 U	9.58e-05 U
E1668A	PCB-72	41464-42-0	mg/kg	0.000116 U	0.000153	0.000797	0.000147	9.77e-05 U	9.58e-05 U
E1668A	PCB-73	74338-23-1	mg/kg	0.000116 U	7.31e-05 J	0.000183 U	6.27e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000169	0.00534	0.0103	0.00263	0.000286	0.000376
E1668A	PCB-78	70362-49-1	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000116 U	0.000125 U	0.00105	0.000194	9.77e-05 U	2.36e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000116 U	0.000122 J	0.000401	9.3e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-82	52663-62-4	mg/kg	0.000244	0.00622	0.0118	0.00318	0.000256	0.000312
E1668A	PCB-83	60145-20-2	mg/kg	0.000126 J	0.00288	0.00497	0.000247 U	0.000195 U	0.000138 J
E1668A	PCB-84	52663-60-2	mg/kg	0.000621	0.0138	0.0239	0.00613	0.00043	0.000579
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.000342 J	0.00796	0.0166	0.00438	0.000382 J	0.000497
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.00122	0.0279	0.026	0.014	0.00111	0.00152
E1668A	PCB-88	55215-17-3	mg/kg	0.000449	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000116 U	0.000724	0.00138	0.000389	3.13e-05 J	3.92e-05 J
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.00179	0.0355	0.0758	0.0181	0.00146 J	0.0026 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000409	0.00702	0.0117	0.00365	0.000281	0.000369
E1668A	PCB-92	52663-61-3	mg/kg	0.000376	0.00708	0.0146	0.00359	0.000278	0.000439
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000464 U	0.000409 J	0.000906	0.000376 J	0.000391 U	0.000383 U
E1668A	PCB-94	73575-55-0	mg/kg	0.000116 U	0.000258	0.000513	0.000174	9.77e-05 U	9.58e-05 U
E1668A	PCB-95	38379-99-6	mg/kg	0.00206	0.0431 J	0.0857 J	0.0187	0.00135	0.00212
E1668A	PCB-96	73575-54-9	mg/kg	0.000116 U	0.000358	0.000681	0.000197	9.77e-05 U	9.58e-05 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000464 U	0.0018	0.00333	0.00101	0.000391 U	0.000383 U
E1668A	PCB-99	38380-01-7	mg/kg	0.00096	0.0197	0.0386	0.0105	0.000889	0.00119
E1668A	PCB-103	60145-21-3	mg/kg	0.000116 U	0.000303	0.000588	0.00022	9.77e-05 U	2.68e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-105	32598-14-4	mg/kg	0.000668	0.0151	0.0358	0.00801	0.000741	0.000982
E1668A	PCB-106	70424-69-0	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1668A	PCB-107	70424-68-9	mg/kg	0.000141	0.00227	0.00769	0.00139	9.77e-05 U	0.000169
E1668A	PCB-108/124	PCB-108/124	mg/kg	7.48e-05 J	0.00152	0.00428	0.000817	7.93e-05 J	9.7e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00267	0.0474	0.0952 J	0.0241	0.00189	0.00267
E1668A	PCB-111	39635-32-0	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-112	74472-36-9	mg/kg	0.000116 U	0.000125 U	0.000183 U	6.6e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-114	74472-37-0	mg/kg	3.67e-05 J	0.000753	0.00211	0.000403	4.04e-05 J	5.01e-05 J
E1668A	PCB-118	31508-00-6	mg/kg	0.00163	0.04 J	0.083 J	0.0186	0.00176	0.00249
E1668A	PCB-120	68194-12-7	mg/kg	0.000116 U	8.32e-05 J	0.000183 J	6.48e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-121	56558-18-0	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-122	76842-07-4	mg/kg	3.24e-05 J	0.000622	0.00168	0.000385	9.77e-05 U	4.67e-05 J
E1668A	PCB-123	65510-44-3	mg/kg	4.17e-05 J	0.000961	0.00223	0.000539	9.77e-05 U	7.17e-05 J
E1668A	PCB-126	57465-28-8	mg/kg	0.000116 U	0.000125 U	0.00036	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-127	39635-33-1	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000143	9.77e-05 U	9.58e-05 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000428	0.00814	0.0143	0.00367	0.000261	0.00045
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.00285	0.0536	0.0917	0.0246	0.00175 J	0.00534 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000172	0.00339	0.00587	0.00147	0.000103	0.000223
E1668A	PCB-131	61798-70-7	mg/kg	0.000116 U	0.000801	0.0014	0.000354	9.77e-05 U	4.66e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	0.000806	0.0158	0.0281	0.00717	0.000444 J	0.00132 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000116 U	0.000728	0.00147	0.000385	9.77e-05 U	7.03e-05 J
E1668A	PCB-134	52704-70-8	mg/kg	0.00015 J	0.00295	0.00598	0.00134	0.000102 J	0.000251
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000862	0.0131	0.0219	0.00675	0.000485 J	0.00196 J
E1668A	PCB-136	38411-22-2	mg/kg	0.00031	0.00502	0.00794	0.00243	0.000163 J	0.000612 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000124	0.00265	0.00443	0.00118	7.31e-05 J	9.64e-05
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000232 U	0.000896	0.00156	0.000409	0.000195 U	0.000192 U
E1668A	PCB-141	52712-04-6	mg/kg	0.00057	0.0114	0.0183	0.00508	0.00033 J	0.00162 J
E1668A	PCB-142	41411-61-4	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000232 U	0.00017 J	0.000209 J	0.000247 U	0.000195 U	0.000192 U
E1668A	PCB-144	68194-14-9	mg/kg	0.00012	0.00209	0.00334	0.000964	6.41e-05 J	0.000289
E1668A	PCB-145	74472-40-5	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000384	0.00585	0.0112	0.00301	0.000236 J	0.000689 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00215	0.0326	0.0591	0.016	0.00114 J	0.00414 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000116 U	4.4e-05 J	8.97e-05 J	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-150	68194-08-1	mg/kg	0.000116 U	8.88e-05 J	0.000127 J	5.58e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-152	68194-09-2	mg/kg	0.000116 U	4.1e-05 J	6.67e-05 J	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00226	0.0349	0.0642	0.0174	0.00132 J	0.00493 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000201 J	0.00056	0.000734	0.000352	0.000195 U	0.000192 U
E1668A	PCB-155	33979-03-2	mg/kg	0.000116 U	7.66e-05 J	0.000161 J	9.21e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000281	0.00579	0.0125	0.00272	0.00019 J	0.000432
E1668A	PCB-158	74472-42-7	mg/kg	0.000263	0.00537	0.00936	0.00226	0.000149 J	0.00046 J
E1668A	PCB-159	39635-35-3	mg/kg	0.000116 U	0.000125 U	0.00071	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-160	41411-62-5	mg/kg	0.000464 U	0.000501 U	0.000734 U	0.000493 U	0.000391 U	0.000383 U
E1668A	PCB-161	74472-43-8	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000116 U	0.000125 U	0.000427	8.49e-05 J	9.77e-05 U	9.58e-05 U

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1668A	PCB-164	74472-45-0	mg/kg	0.000197	0.00347	0.00625	0.00158	0.000106 J	0.000354 J
E1668A	PCB-165	74472-46-1	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-167	52663-72-6	mg/kg	0.000104 J	0.00204	0.00416	0.00088	7.48e-05 J	0.000159
E1668A	PCB-169	32774-16-6	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000559	0.00921	0.0188	0.00516	0.000371 J	0.00217 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000192 J	0.00275	0.0059	0.00154	0.000109 J	0.00066
E1668A	PCB-172	52663-74-8	mg/kg	0.000113 J	0.00156	0.0033	0.000909	6.65e-05 J	0.00042
E1668A	PCB-174	38411-25-5	mg/kg	0.00061	0.008	0.0173	0.00487	0.000324 J	0.00231 J
E1668A	PCB-175	40186-70-7	mg/kg	0.000116 U	0.000423	0.000734	0.000212	9.77e-05 U	0.000105
E1668A	PCB-176	52663-65-7	mg/kg	7.6e-05 J	0.00102	0.00198	0.000611	4.47e-05 J	0.000279
E1668A	PCB-177	52663-70-4	mg/kg	0.000378	0.00498	0.0108	0.00297	9.77e-05 U	0.00133
E1668A	PCB-178	52663-67-9	mg/kg	0.00017	0.00182	0.00326	0.00109	9.44e-05 J	0.000458
E1668A	PCB-179	52663-64-6	mg/kg	0.000286	0.00331	0.00625	0.00206	0.000148 J	0.000893 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00157	0.0207	0.000367 U	0.0123	0.000868 J	0.00553 J
E1668A	PCB-181	74472-47-2	mg/kg	0.000116 U	0.000103 J	0.000207	5.42e-05 J	9.77e-05 U	9.58e-05 U
E1668A	PCB-182	60145-23-5	mg/kg	0.000116 U	0.000125 U	9.23e-05 J	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000505	0.00623	0.0131	0.00359	0.000263 J	0.00162 J
E1668A	PCB-184	74472-48-3	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-186	74472-49-4	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00108	0.0108	0.019	0.00671	0.00055 J	0.00277 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000116 U	0.000125 U	7.74e-05 J	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-189	39635-31-9	mg/kg	0.000116 U	0.000364	0.000811	0.000199	9.77e-05 U	7.89e-05 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000119	0.00177	0.00379	0.00103	6.73e-05 J	0.000439
E1668A	PCB-191	74472-50-7	mg/kg	0.000116 U	0.000384	0.000804	0.000209	9.77e-05 U	9.61e-05
E1668A	PCB-192	74472-51-8	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000445	0.00484	0.0108	0.00295	0.000216 J	0.0013 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000128	0.0016	0.00379	0.00103	9.77e-05 U	0.000459
E1668A	PCB-196	42740-50-1	mg/kg	0.000233	0.00244	0.00473	0.00147	9.77e-05 U	0.000637
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000232 U	0.000655	0.00126	0.000386	0.000195 U	0.000192 U
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000726	0.00601	0.0111	0.00338	0.000282 J	0.00129 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000117	0.000706	0.0013	4e-04	4.78e-05 J	0.000164
E1668A	PCB-202	2136-99-4	mg/kg	0.000246	0.00156	0.00287	0.000818	0.000195 U	0.000267
E1668A	PCB-203	52663-76-0	mg/kg	0.000449	0.00367	0.00648	0.002	0.000163 J	0.000749 J
E1668A	PCB-204	74472-52-9	mg/kg	0.000116 U	0.000125 U	0.000183 U	0.000123 U	9.77e-05 U	9.58e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000116 U	0.000201	0.000482	0.000129	9.77e-05 U	5.68e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.000762	0.00432	0.00783	0.0018	0.000217 J	0.000514 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000116 U	0.000426	0.000896	0.000185	9.77e-05 U	5.31e-05 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000279	0.00142	0.00274	0.000599	8.79e-05 J	0.000148
E1668A	PCB-209	2051-24-3	mg/kg	0.000631 U	0.00378	0.00911	0.00159	0.000295 U	0.000921
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0567 J	0.901 J	2.23 J	0.488 J	0.0525 J	0.0939 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0601 J	0.972 J	2.38 J	0.522 J	0.0561 J	0.0988 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.17e-05 J	1.53e-05 J	4.2e-05	1.37e-05 J	9.91e-06 J	9.77e-06 J

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-1	2051-60-7	mg/kg	3.66e-05 U	0.000325	0.000287	0.000521	0.00386	0.000906
E1668A	PCB-2	2051-61-8	mg/kg	3.66e-05 U	0.000187	0.000117	0.000166	0.00109	0.000172
E1668A	PCB-3	2051-62-9	mg/kg	9.15e-05 U	0.000357	0.000177	0.000432	0.00452	0.00043
E1668A	PCB-4	13029-08-8	mg/kg	9.15e-05 U	0.000788	0.00057	0.00065	0.0218 J	0.00184
E1668A	PCB-5	16605-91-7	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-6	25569-80-6	mg/kg	3.66e-05 U	0.00033	0.000218	0.000305	0.0267 J	0.000905
E1668A	PCB-7	33284-50-3	mg/kg	3.66e-05 U	5.81e-05	4.53e-05 U	7.44e-05 U	0.00112	8.92e-05 U
E1668A	PCB-8	34883-43-7	mg/kg	0.00034	0.00194	0.000798	0.00113	0.0444 J	0.00266
E1668A	PCB-9	34883-39-1	mg/kg	3.66e-05 U	8.01e-05	3.66e-05 J	5.94e-05 J	0.0018	8.25e-05 U
E1668A	PCB-10	33146-45-1	mg/kg	9.15e-05 U	3.94e-05 J	5.78e-05 J	0.000186 U	0.000751	0.000191 J
E1668A	PCB-11	2050-67-1	mg/kg	0.000483 U	0.00333	0.00128	0.00159	0.00591	0.00222
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.15e-05 U	0.000621	0.000263	0.000186 U	0.0232	0.00114
E1668A	PCB-14	34883-41-5	mg/kg	3.66e-05 U	3.71e-05 U	4.53e-05 U	7.44e-05 U	4.7e-05 U	8.25e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000632	0.00324	0.00124	0.0022	0.0781 J	0.00631
E1668A	PCB-16	38444-78-9	mg/kg	6.14e-05	0.000742	0.000507	0.000571	0.0132	0.00126
E1668A	PCB-17	37680-66-3	mg/kg	0.000154	0.00104	0.000749	0.00072	0.0252 J	0.00241
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000199	0.00154	0.00111	0.00118	0.0414 J	0.00322
E1668A	PCB-19	38444-73-4	mg/kg	4.1e-05	0.000543	0.000201	0.000594	0.0219 J	0.000602
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00119	0.00712	0.00395	0.00614	0.25 J	0.0153
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000236	0.00188	0.000875	0.00141	0.034 J	0.00272
E1668A	PCB-22	38444-85-8	mg/kg	0.000218	0.0016	0.000878	0.0014	0.0518 J	0.00287
E1668A	PCB-23	55720-44-0	mg/kg	3.66e-05 U	3.71e-05 U	4.53e-05 U	7.44e-05 U	6.23e-05	8.25e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	3.66e-05 U	3.71e-05 U	4.53e-05 U	7.44e-05 U	0.000508	8.25e-05 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000128	0.000643	0.000423	0.000602	0.0474 J	0.00186
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000202	0.000947	0.000658	0.000917	0.0484 J	0.00276
E1668A	PCB-27	38444-76-7	mg/kg	4.92e-05	0.000455	0.000186	0.000396	0.0202 J	0.000646
E1668A	PCB-31	16606-02-3	mg/kg	0.000819	0.00478	0.0029	0.00317	0.118 J	0.00936
E1668A	PCB-32	38444-77-8	mg/kg	0.000133	0.00084	0.000679	0.000778	0.0307 J	0.00219
E1668A	PCB-34	37680-68-5	mg/kg	3.66e-05 U	2.22e-05 J	1.86e-05 J	7.44e-05 U	0.000746	8.2e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	2.15e-05 J	0.00037	0.00016	0.000193	0.00513	0.000407
E1668A	PCB-36	38444-87-0	mg/kg	3.66e-05 U	3.71e-05 U	4.53e-05 U	7.44e-05 U	4.7e-05 U	8.25e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000401	0.00273	0.00102	0.0016	0.0911 J	0.0045
E1668A	PCB-38	53555-66-1	mg/kg	3.66e-05 U	3.71e-05 U	4.53e-05 U	7.44e-05 U	0.000163	8.25e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	3.66e-05 U	3.35e-05 J	2e-05 J	3.02e-05 J	0.000751	7.61e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000335	0.00343	0.00167	0.000372 U	0.0882 J	0.005
E1668A	PCB-41	52663-59-9	mg/kg	0.000183 U	0.000185 U	0.000141 J	0.000372 U	0.00754	0.000361 J
E1668A	PCB-42	36559-22-5	mg/kg	0.000199	0.00227	0.00109	0.000186 U	0.0667 J	0.00356
E1668A	PCB-43	70362-46-8	mg/kg	9.15e-05 U	9.26e-05 U	0.000149	0.000186 U	0.00519	0.000371
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.000651	0.00695	0.00359	0.00441	0.208 J	0.0111
E1668A	PCB-45	70362-45-7	mg/kg	8.47e-05 J	0.0022	0.000374	0.000186 U	0.0301 J	0.00106
E1668A	PCB-46	41464-47-5	mg/kg	2.7e-05 J	0.000659	0.000155	7.44e-05 U	0.0107	0.000516
E1668A	PCB-48	70362-47-9	mg/kg	4.63e-05 J	0.000726	0.000462	0.000186 U	0.0191	0.00135
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000457	0.00478	0.00251	0.000372 U	0.179 J	0.00839

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000131 J	0.00172	0.000459	0.000372 U	0.0332	0.00151
E1668A	PCB-51	68194-04-7	mg/kg	5.24e-05 J	0.0018	0.000272	0.000186 U	0.00866	0.00101
E1668A	PCB-52	35693-99-3	mg/kg	0.000709	0.0106	0.00327	0.000186 U	0.204 J	0.00979
E1668A	PCB-54	15968-05-5	mg/kg	9.15e-05 U	9.26e-05 U	3.62e-05 J	7.44e-05 J	0.000686	0.000206 U
E1668A	PCB-55	74338-24-2	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.00261	0.000206 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000376	0.00264	0.00159	0.00198	0.115 J	0.00524
E1668A	PCB-57	70424-67-8	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000817	8.24e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000762	0.000206 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000366 U	0.000569	0.000325 J	0.000744 U	0.0217	0.00102
E1668A	PCB-60	33025-41-1	mg/kg	0.000155	0.00126	0.000666	0.000643	0.0562 J	0.00176
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.00128	0.0136	0.00534	0.00462	0.317 J	0.0168
E1668A	PCB-63	74472-34-7	mg/kg	9.15e-05 U	0.000236	0.000137	0.000145 J	0.00637	0.000457
E1668A	PCB-64	52663-58-8	mg/kg	0.000224	0.00241	0.0015	0.000186 U	0.0651 J	0.00441
E1668A	PCB-66	32598-10-0	mg/kg	0.0011	0.00887	0.00357	0.000186 U	0.337 J	0.0124
E1668A	PCB-67	73575-53-8	mg/kg	9.15e-05 U	2e-04	0.000114	0.000149 J	0.00804	0.000389
E1668A	PCB-68	73575-52-7	mg/kg	9.15e-05 U	6.71e-05 J	3.91e-05 J	7.88e-05 J	0.00147	0.000137 J
E1668A	PCB-72	41464-42-0	mg/kg	9.15e-05 U	5.37e-05 J	4.39e-05 J	6.2e-05 J	0.00221	0.00017 J
E1668A	PCB-73	74338-23-1	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	7e-04	0.000206 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000161	0.00172	0.000467	0.000694	0.0434 J	0.00163
E1668A	PCB-78	70362-49-1	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-79	41464-48-6	mg/kg	9.15e-05 U	0.000187	2.83e-05 J	0.000138 J	0.00129	9.19e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-81	70362-50-4	mg/kg	9.15e-05 U	3.61e-05 J	0.000113 U	0.000186 U	0.00154	0.000206 U
E1668A	PCB-82	52663-62-4	mg/kg	0.000154	0.00246	0.000483	0.00126	0.0223	0.00117
E1668A	PCB-83	60145-20-2	mg/kg	0.000183 U	0.0011	0.00023	0.000689	0.00826	0.000413 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000362	0.00482	0.001	7.44e-05 U	0.0355 J	0.00233
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.000366 U	0.00369	0.000759	0.0016	0.0321	0.00191
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.000817	0.0136	0.00126	0.00604	0.0865	0.00589 J
E1668A	PCB-88	55215-17-3	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-89	73575-57-2	mg/kg	9.15e-05 U	0.000224	5.67e-05 J	0.000134 J	0.00305	0.00015 J
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.00121	0.0201	0.00359	0.00924	0.0929 J	0.00895
E1668A	PCB-91	68194-05-8	mg/kg	0.000206	0.00287	0.000698	0.00194	0.0249	0.00165
E1668A	PCB-92	52663-61-3	mg/kg	0.00022	0.00355	0.000738	0.00193	0.0179	0.00172
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000366 U	0.000371 U	0.000453 U	0.000744 U	0.00204	0.000378 J
E1668A	PCB-94	73575-55-0	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	8.47e-05 J	0.00106	0.000116 J
E1668A	PCB-95	38379-99-6	mg/kg	0.0012	0.0176	0.00345	0.0156	0.0876 J	0.0075
E1668A	PCB-96	73575-54-9	mg/kg	9.15e-05 U	0.000115	3.66e-05 J	9.65e-05 J	0.00178	7.57e-05 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000366 U	0.000741	0.000208 J	0.000542 J	0.00826	0.000541 J
E1668A	PCB-99	38380-01-7	mg/kg	0.000665	0.0104	0.00196	0.00515	0.0662 J	0.00524
E1668A	PCB-103	60145-21-3	mg/kg	9.15e-05 U	9.26e-05 U	7.33e-05 J	0.000187	0.00125	0.000185 J
E1668A	PCB-104	56558-16-8	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	5.14e-05 J	0.000206 U
E1668A	PCB-105	32598-14-4	mg/kg	0.000552	0.00743	0.00132	0.00263	0.0677 J	0.00371
E1668A	PCB-106	70424-69-0	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000143	0.000206 U

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-107	70424-68-9	mg/kg	9.15e-05 U	0.00127	0.000278	0.000671	0.00915	0.000752
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000183 U	0.000866	0.000134 J	0.000375	0.00575	0.000356 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00169	0.0228	0.00571	0.0135	0.133 J	0.0112 J
E1668A	PCB-111	39635-32-0	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	6.52e-05 J	0.000206 U
E1668A	PCB-112	74472-36-9	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000618	0.000206 U
E1668A	PCB-114	74472-37-0	mg/kg	9.15e-05 U	0.000383	6.79e-05 J	0.000117 J	0.00338	0.000191 J
E1668A	PCB-118	31508-00-6	mg/kg	0.00129	0.0191	0.00323	0.00779	0.128 J	0.00872
E1668A	PCB-120	68194-12-7	mg/kg	9.15e-05 U	4.54e-05 J	0.000113 U	0.000186 U	0.000319	5.4e-05 J
E1668A	PCB-121	56558-18-0	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-122	76842-07-4	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000175 J	0.00328	0.000206 U
E1668A	PCB-123	65510-44-3	mg/kg	9.15e-05 U	0.000428	8.16e-05 J	0.000255	0.00475	0.000214
E1668A	PCB-126	57465-28-8	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.0011	0.000101 J
E1668A	PCB-127	39635-33-1	mg/kg	9.15e-05 U	0.000169	0.000113 U	0.000186 U	0.000127	0.000206 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000252	0.00357	0.000823	0.00248	0.00867	0.00148
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.00192	0.0238	0.00647	0.0238	0.0509	0.0105
E1668A	PCB-130	52663-66-8	mg/kg	8.47e-05 J	0.00142	0.00036	0.00113	0.00352	0.000632
E1668A	PCB-131	61798-70-7	mg/kg	9.15e-05 U	0.000337	6.42e-05 J	0.00024	0.000761	0.000107 J
E1668A	PCB-132	38380-05-1	mg/kg	0.000455	0.0064	0.00167	0.00682	0.0144	0.00268
E1668A	PCB-133	35694-04-3	mg/kg	9.15e-05 U	0.000298	0.000112 J	0.000371	0.000745	0.000182 J
E1668A	PCB-134	52704-70-8	mg/kg	0.000183 U	0.0013	0.000324	0.00121	0.0028	0.000496
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000426	0.00585	0.00197	0.00793	0.0106	0.00241
E1668A	PCB-136	38411-22-2	mg/kg	0.00013	0.00192	0.000631	0.00253	0.00404	0.00081
E1668A	PCB-137	35694-06-5	mg/kg	6.5e-05 J	0.00132	0.000226	0.000637	0.00319	0.000387
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000183 U	0.000434	8.62e-05 J	0.000265 J	0.000933	0.000158 J
E1668A	PCB-141	52712-04-6	mg/kg	0.000341	0.00482	0.00125	0.00581	0.00997	0.00158
E1668A	PCB-142	41411-61-4	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000183 U	0.000185 U	0.000227 U	0.000372 U	0.000219 J	0.000413 U
E1668A	PCB-144	68194-14-9	mg/kg	9.15e-05 U	0.000934	0.000236	0.00107	0.0016	0.000298
E1668A	PCB-145	74472-40-5	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000211	0.00273	0.00093	0.00316	0.00588	0.00151
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00115	0.0149	0.00462	0.0202	0.0281	0.00738
E1668A	PCB-148	74472-41-6	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	7.21e-05 J	0.000206 U
E1668A	PCB-150	68194-08-1	mg/kg	9.15e-05 U	3.91e-05 J	0.000113 U	6.06e-05 J	0.000101 J	0.000206 U
E1668A	PCB-152	68194-09-2	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	6.48e-05 J	0.000206 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00133	0.0169	0.00456	0.0206	0.0327	0.00862
E1668A	PCB-154	60145-22-4	mg/kg	0.000183 U	0.000274	0.000128 J	0.000411	0.000674	0.000211 J
E1668A	PCB-155	33979-03-2	mg/kg	9.15e-05 U	0.00013	3.44e-05 J	7.11e-05 J	0.000118 U	8.35e-05 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000161 J	0.00282	0.000514	0.00165	0.00801	0.00104
E1668A	PCB-158	74472-42-7	mg/kg	0.000132	0.00244	0.000551	0.00196	0.00545	0.000914
E1668A	PCB-159	39635-35-3	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000371	0.000118 U	0.000206 U
E1668A	PCB-160	41411-62-5	mg/kg	0.000366 U	0.000371 U	0.000453 U	0.000744 U	0.00047 U	0.000825 U
E1668A	PCB-161	74472-43-8	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-162	39635-34-2	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	6.19e-05 J	0.000275	0.000206 U

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-164	74472-45-0	mg/kg	9.45e-05	0.00146	0.00044	0.0017	0.00317	0.000687
E1668A	PCB-165	74472-46-1	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-167	52663-72-6	mg/kg	5.6e-05 J	0.00089	0.000199	0.000772	0.00244	0.000372
E1668A	PCB-169	32774-16-6	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000412	0.00407	0.00198	0.00886	0.00972	0.00252
E1668A	PCB-171/173	PCB-171/173	mg/kg	8.87e-05 J	0.00124	0.000527	0.00269	0.00246	0.000768
E1668A	PCB-172	52663-74-8	mg/kg	9.15e-05 U	0.000684	0.000357	0.00159	0.00156	0.00048
E1668A	PCB-174	38411-25-5	mg/kg	0.000358	0.00355	0.00186	0.00971	0.0072	0.00215
E1668A	PCB-175	40186-70-7	mg/kg	9.15e-05 U	0.000177	8.71e-05 J	0.000347	0.000329	0.000112 J
E1668A	PCB-176	52663-65-7	mg/kg	2.78e-05 J	0.000441	0.000197	0.000991	0.000793	0.000267
E1668A	PCB-177	52663-70-4	mg/kg	0.00023	0.00214	0.00113	0.00548	0.00443	0.00151
E1668A	PCB-178	52663-67-9	mg/kg	7.52e-05 J	0.000768	0.000423	0.00173	0.00153	0.000555
E1668A	PCB-179	52663-64-6	mg/kg	0.000137	0.0014	0.000737	0.0034	0.00249	0.000922
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00105	0.00927	0.00448	0.0226	0.0197	0.00618
E1668A	PCB-181	74472-47-2	mg/kg	9.15e-05 U	4.51e-05 J	0.000113 U	0.000186 U	1e-04 J	0.000206 U
E1668A	PCB-182	60145-23-5	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000249	0.00271	0.00133	0.00674	0.00506	0.00181
E1668A	PCB-184	74472-48-3	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-186	74472-49-4	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000522	0.00462	0.00274	0.0103	0.00866	0.00334
E1668A	PCB-188	74487-85-7	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	8.98e-05 J	0.000118 U	0.000206 U
E1668A	PCB-189	39635-31-9	mg/kg	9.15e-05 U	0.000163	7.04e-05 J	0.000311	0.000431	9.78e-05 J
E1668A	PCB-190	41411-64-7	mg/kg	6.72e-05 J	8e-04	0.000387	0.00189	0.00189	0.000502
E1668A	PCB-191	74472-50-7	mg/kg	9.15e-05 U	0.000176	0.000113 U	0.000376	0.000375	0.000114 J
E1668A	PCB-192	74472-51-8	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000243	0.00202	0.00125	0.00615	0.00517	0.00174
E1668A	PCB-195	52663-78-2	mg/kg	7.71e-05 J	0.000698	0.000418	0.00225	0.00174	0.000562
E1668A	PCB-196	42740-50-1	mg/kg	9.58e-05	0.000995	0.000608	0.00265	0.00217	0.000775
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000183 U	0.000185 U	0.000166 J	0.000747	0.000546	0.000202 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000276	0.00226	0.00176	0.00575	0.00478	0.00195
E1668A	PCB-201	40186-71-8	mg/kg	9.15e-05 U	0.000286	2e-04	0.000695	0.000511	0.000264
E1668A	PCB-202	2136-99-4	mg/kg	5.66e-05 J	0.000567	0.000527	0.0013	0.000948	0.000627
E1668A	PCB-203	52663-76-0	mg/kg	0.00016	0.00135	0.00106	0.00335	0.00278	0.00118
E1668A	PCB-204	74472-52-9	mg/kg	9.15e-05 U	9.26e-05 U	0.000113 U	0.000186 U	0.000118 U	0.000206 U
E1668A	PCB-205	74472-53-0	mg/kg	9.15e-05 U	9.13e-05 J	6.03e-05 J	0.000272	0.000236	7.42e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.000162	0.00125	0.00224	0.00295	0.00349	0.0023
E1668A	PCB-207	52663-79-3	mg/kg	9.15e-05 U	0.000125	0.000164	0.000347	0.000297	0.000226
E1668A	PCB-208	52663-77-1	mg/kg	5.02e-05 J	0.000444	0.000853	0.00102	0.00121	0.000828
E1668A	PCB-209	2051-24-3	mg/kg	0.000221 U	0.00118	0.00247	0.00333	0.0043	0.00155
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0378 J	0.347 J	0.126 J	0.32 J	3.74 J	0.287 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0406 J	0.38 J	0.133 J	0.335 J	4 J	0.304 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	9.25e-06 J	1.05e-05 J	1.15e-05 J	1.91e-05 J	0.000122	1.08e-05 J

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	0.00033	0.000151	0.00082	0.000489	0.00141
E1668A	PCB-2	2051-61-8	mg/kg	0.00011	4.77e-05 U	0.000181	0.00016	0.000687
E1668A	PCB-3	2051-62-9	mg/kg	0.000226	6.72e-05 J	0.000371	0.000356	0.00105
E1668A	PCB-4	13029-08-8	mg/kg	0.000982	0.000372	0.00156	0.00162	0.00393
E1668A	PCB-5	16605-91-7	mg/kg	0.000144 U	0.000119 U	0.000142 U	5.24e-05 J	0.000164 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000578	0.000212	0.000619	0.000814	0.00153
E1668A	PCB-7	33284-50-3	mg/kg	7.03e-05 U	4.77e-05 U	5.69e-05 U	0.000114 U	6.57e-05 U
E1668A	PCB-8	34883-43-7	mg/kg	0.00271	0.000526	0.00198	0.00316	0.00562
E1668A	PCB-9	34883-39-1	mg/kg	0.000144 U	4.77e-05 U	1e-04 U	0.000142 U	0.000269
E1668A	PCB-10	33146-45-1	mg/kg	0.000144 U	0.000119 U	0.000127 J	0.000136 U	0.000164 U
E1668A	PCB-11	2050-67-1	mg/kg	0.00151	0.000716	0.00359	0.00366	0.00717
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000741	0.000223	0.000142 U	0.00126	0.00251
E1668A	PCB-14	34883-41-5	mg/kg	5.74e-05 U	4.77e-05 U	5.69e-05 U	5.43e-05 U	6.57e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00338	0.0012	0.00444	0.00652	0.009
E1668A	PCB-16	38444-78-9	mg/kg	0.00187	0.000309	0.00118	0.00253	0.00383
E1668A	PCB-17	37680-66-3	mg/kg	0.00231	0.000542	0.00188	0.00373	0.00552
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00356	0.000742	0.00262	0.00569	0.00856
E1668A	PCB-19	38444-73-4	mg/kg	0.000518	0.000157	0.00047	0.000709	0.00159
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0119	0.00351	0.0108	0.0194	0.0326
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00456	0.000656	0.00233	0.00518	0.0081
E1668A	PCB-22	38444-85-8	mg/kg	0.00313	0.000697	0.00214	0.00445	0.0074
E1668A	PCB-23	55720-44-0	mg/kg	5.74e-05 U	4.77e-05 U	5.69e-05 U	5.43e-05 U	6.57e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	5.74e-05 U	4.77e-05 U	3.6e-05 J	6.42e-05	9.48e-05
E1668A	PCB-25	55712-37-3	mg/kg	0.0011	0.000399	0.00124	0.00195	0.00315
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00187	0.000605	0.00205	0.00331	0.0052
E1668A	PCB-27	38444-76-7	mg/kg	0.000413	0.000149	0.000442	0.000701	0.00119
E1668A	PCB-31	16606-02-3	mg/kg	0.00797	0.00211	0.00706	0.0138	0.0215 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00172	0.000515	0.00149	0.00283	0.00539
E1668A	PCB-34	37680-68-5	mg/kg	5.6e-05 J	1.77e-05 J	5.84e-05	8.67e-05	6.57e-05 U
E1668A	PCB-35	37680-69-6	mg/kg	0.000304	8.06e-05	0.000624	0.000529	0.000838 J
E1668A	PCB-36	38444-87-0	mg/kg	5.74e-05 U	4.77e-05 U	5.69e-05 U	5.43e-05 U	3.14e-05 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00363	0.000973	0.00325	0.00548	0.00658
E1668A	PCB-38	53555-66-1	mg/kg	5.74e-05 U	4.77e-05 U	5.69e-05 U	5.43e-05 U	6.57e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	5.76e-05	1.93e-05 J	6.32e-05	8.73e-05	0.000168
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00359	0.00144	0.00363	0.00575	0.0102
E1668A	PCB-41	52663-59-9	mg/kg	0.000356	0.000238 U	0.000338	0.000607	0.000919
E1668A	PCB-42	36559-22-5	mg/kg	0.00234	0.000974	0.00235	0.00397	0.00734
E1668A	PCB-43	70362-46-8	mg/kg	0.000144 U	0.000119 U	0.000258	0.000136 U	0.000164 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.007	0.003	0.00822	0.0125	0.0221
E1668A	PCB-45	70362-45-7	mg/kg	0.000959	0.000346	0.000939	0.00156	0.00286
E1668A	PCB-46	41464-47-5	mg/kg	0.000369	0.000149	0.000485	0.000636	0.00116
E1668A	PCB-48	70362-47-9	mg/kg	0.00129	0.000373	0.00103	0.00212	0.0036
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00507	0.00221	0.00599	0.00927	0.0167

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00102	0.00046	0.00133	0.00157	0.00294
E1668A	PCB-51	68194-04-7	mg/kg	0.000505	0.000213	0.000548	0.000497	0.001
E1668A	PCB-52	35693-99-3	mg/kg	0.00662	0.00303	0.0105	0.0137	0.0228
E1668A	PCB-54	15968-05-5	mg/kg	4.99e-05 J	0.000119 U	6.42e-05 J	0.000136 U	0.000111 J
E1668A	PCB-55	74338-24-2	mg/kg	0.000144 U	0.000119 U	8.77e-05 J	0.000152	0.000164 U
E1668A	PCB-56	41464-43-1	mg/kg	0.00386	0.00135	0.0037	0.00671	0.0107
E1668A	PCB-57	70424-67-8	mg/kg	0.000144 U	0.000119 U	0.000142 U	9.51e-05 J	0.000142 J
E1668A	PCB-58	41464-49-7	mg/kg	0.000144 U	0.000119 U	0.000142 U	5.9e-05 J	0.000104 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000694	0.000288 J	0.000695	0.00119	0.00235
E1668A	PCB-60	33025-41-1	mg/kg	0.00135	0.000483	0.00139	0.00261	0.00327
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.0131	0.00462	0.0155	0.0249	0.0374
E1668A	PCB-63	74472-34-7	mg/kg	0.000336	0.000132	0.000361	0.000632	0.000975
E1668A	PCB-64	52663-58-8	mg/kg	0.00309	0.00119	0.0033	0.00567	0.0103
E1668A	PCB-66	32598-10-0	mg/kg	0.00881	0.00333	0.00945	0.0156	0.0247
E1668A	PCB-67	73575-53-8	mg/kg	0.000297	0.000111 J	0.00028	0.000499	0.00079
E1668A	PCB-68	73575-52-7	mg/kg	0.000144 U	0.000119 U	0.000122 J	0.000143	0.00023
E1668A	PCB-72	41464-42-0	mg/kg	9.48e-05 J	5.49e-05 J	0.000146	0.000182	0.000351
E1668A	PCB-73	74338-23-1	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-77	32598-13-3	mg/kg	0.0012	0.000383	0.00199	0.00192	0.00267
E1668A	PCB-78	70362-49-1	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-79	41464-48-6	mg/kg	5.78e-05 J	0.000119 U	0.00016	0.000141	0.000164 U
E1668A	PCB-80	33284-52-5	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000144 U	0.000119 U	0.000142 U	6.42e-05 J	8.08e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	0.000661	0.000439	0.00191	0.00166	0.00233
E1668A	PCB-83	60145-20-2	mg/kg	0.000284 J	0.000244	0.0011	0.00077	0.00117
E1668A	PCB-84	52663-60-2	mg/kg	0.00128	0.000994	0.00532	0.00347	0.0051
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.00108	0.000701	0.00283	0.00256	0.00369
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.00364	0.00234	0.0104	0.00894	0.0121
E1668A	PCB-88	55215-17-3	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.00378
E1668A	PCB-89	73575-57-2	mg/kg	9.36e-05 J	0.000119 U	0.000209	0.00019	0.000302
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.00542	0.00358	0.0154	0.0134	0.0182
E1668A	PCB-91	68194-05-8	mg/kg	0.00092	0.000658	0.00295	0.0022	0.00345
E1668A	PCB-92	52663-61-3	mg/kg	0.00102	0.000682	0.00305	0.00257	0.00356
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000224 J	0.000477 U	0.000297 J	0.000242 J	0.000446 J
E1668A	PCB-94	73575-55-0	mg/kg	0.000144 U	0.000119 U	0.000118 J	0.000103 J	0.000164 U
E1668A	PCB-95	38379-99-6	mg/kg	0.00454	0.00366	0.0184	0.0122	0.0188
E1668A	PCB-96	73575-54-9	mg/kg	0.000144 U	0.000119 U	0.000105 J	9.29e-05 J	0.000161 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000315 J	0.000477 U	0.000733	0.000597	0.000895
E1668A	PCB-99	38380-01-7	mg/kg	0.00311	0.00194	0.00861	0.00722	0.0103
E1668A	PCB-103	60145-21-3	mg/kg	0.000119 J	0.000119 U	0.000212	0.000155	0.000314
E1668A	PCB-104	56558-16-8	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-105	32598-14-4	mg/kg	0.000144 U	0.00148	0.00617	0.00608	0.00735
E1668A	PCB-106	70424-69-0	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-107	70424-68-9	mg/kg	0.000496	0.000302	0.00113	0.00126	0.00179
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000239 J	0.00016 J	0.00062	0.000647	0.00083
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00646	0.00482	0.0199	0.0166	0.0241
E1668A	PCB-111	39635-32-0	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-112	74472-36-9	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000176	7.99e-05 J	0.000273	0.000136 U	0.000432
E1668A	PCB-118	31508-00-6	mg/kg	0.00567	0.00365	0.0162	0.0147	0.0198
E1668A	PCB-120	68194-12-7	mg/kg	0.000144 U	0.000119 U	8.64e-05 J	0.000136 U	0.000113 J
E1668A	PCB-121	56558-18-0	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-122	76842-07-4	mg/kg	0.000144 U	0.000119 U	0.000206	0.00023	0.000164 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00014 J	8.85e-05 J	0.00032	0.000338	0.00046
E1668A	PCB-126	57465-28-8	mg/kg	6.42e-05 J	4.46e-05 J	0.000188	0.000152	0.000188
E1668A	PCB-127	39635-33-1	mg/kg	0.000144 U	0.000119 U	0.000117 J	0.000145	0.000169
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000832	0.000691	0.00376	0.00231	0.0029
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.00706	0.00458	0.0249	0.016	0.0235
E1668A	PCB-130	52663-66-8	mg/kg	0.000381	0.00028	0.00146	0.000935	0.00142
E1668A	PCB-131	61798-70-7	mg/kg	0.000144 U	6.3e-05 J	0.000327	0.000202	0.000267
E1668A	PCB-132	38380-05-1	mg/kg	0.00172	0.00122	0.0072	0.00406	0.006
E1668A	PCB-133	35694-04-3	mg/kg	0.000121 J	8.43e-05 J	0.00038	0.000263	0.000496
E1668A	PCB-134	52704-70-8	mg/kg	0.000367	0.000272	0.00142	0.000831	0.00128
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00191	0.00104	0.00551	0.00355	0.00536
E1668A	PCB-136	38411-22-2	mg/kg	0.000583	0.000365	0.00194	0.00119	0.00197
E1668A	PCB-137	35694-06-5	mg/kg	0.000257	0.000192	0.00114	0.000756	0.000896
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000106 J	0.000238 U	0.000427	0.000272 U	0.000564
E1668A	PCB-141	52712-04-6	mg/kg	0.00125	0.000725	0.0036	0.00263	0.00357
E1668A	PCB-142	41411-61-4	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000287 U	0.000238 U	0.000284 U	0.000272 U	0.000329 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000216	0.000147	0.000773	0.00052	0.000669
E1668A	PCB-145	74472-40-5	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00105	0.000632	0.00301	0.002	0.00365
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00522	0.00312	0.0171	0.0102	0.0172
E1668A	PCB-148	74472-41-6	mg/kg	0.000144 U	0.000119 U	4.5e-05 J	0.000136 U	0.000164 U
E1668A	PCB-150	68194-08-1	mg/kg	0.000144 U	0.000119 U	5.38e-05 J	4.14e-05 J	0.000212
E1668A	PCB-152	68194-09-2	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00624	0.00346	0.0178	0.0119	0.0201
E1668A	PCB-154	60145-22-4	mg/kg	0.000184 J	0.000238 U	0.000346	0.000281	0.00116
E1668A	PCB-155	33979-03-2	mg/kg	5.94e-05 J	0.000119 U	6.16e-05 J	0.000136 U	0.000158 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000781	0.000487	0.00229	0.00204	0.00241
E1668A	PCB-158	74472-42-7	mg/kg	0.000645	0.000425	0.00219	0.00152	0.00214
E1668A	PCB-159	39635-35-3	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-160	41411-62-5	mg/kg	0.000574 U	0.000477 U	0.000569 U	0.000543 U	0.000657 U
E1668A	PCB-161	74472-43-8	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000265

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-164	74472-45-0	mg/kg	0.000475	0.000308	0.0016	0.000979	0.00143
E1668A	PCB-165	74472-46-1	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-167	52663-72-6	mg/kg	0.000295	0.000187	0.000868	0.000676	0.000835
E1668A	PCB-169	32774-16-6	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0025	0.000917	0.00555	0.00348	0.00499
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000592	0.000279	0.00172	0.00105	0.00176
E1668A	PCB-172	52663-74-8	mg/kg	0.000406	0.000171	0.000999	0.000613	0.000912
E1668A	PCB-174	38411-25-5	mg/kg	0.00195	0.000796	0.00519	0.00287	0.00453
E1668A	PCB-175	40186-70-7	mg/kg	8.84e-05 J	4.29e-05 J	0.000232	0.000154	0.000249
E1668A	PCB-176	52663-65-7	mg/kg	0.000216	1e-04 J	0.000631	0.000329	0.000596
E1668A	PCB-177	52663-70-4	mg/kg	0.00119	0.000596	0.00338	0.00198	0.00321
E1668A	PCB-178	52663-67-9	mg/kg	0.000144 U	0.000208	0.00119	0.000708	0.00124
E1668A	PCB-179	52663-64-6	mg/kg	0.000786	0.000357	0.00217	0.0012	0.00229
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00537	0.00227	0.0138	0.00834	0.0134
E1668A	PCB-181	74472-47-2	mg/kg	0.000144 U	0.000119 U	5.67e-05 J	3.57e-05 J	0.000164 U
E1668A	PCB-182	60145-23-5	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00148	0.000684	0.00436	0.00251	0.00412
E1668A	PCB-184	74472-48-3	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-186	74472-49-4	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00275	0.00127	0.00743	0.00431	0.00853
E1668A	PCB-188	74487-85-7	mg/kg	4.63e-05 J	0.000119 U	0.000176	7.3e-05 J	0.000139 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000144 U	3.68e-05 J	0.000206	0.000143	0.00021
E1668A	PCB-190	41411-64-7	mg/kg	0.000449	0.00019	0.00115	0.000717	0.00102
E1668A	PCB-191	74472-50-7	mg/kg	0.000115 J	0.000119 U	0.000243	0.000175	0.000281
E1668A	PCB-192	74472-51-8	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00162	0.000515	0.004	0.00226	0.00284
E1668A	PCB-195	52663-78-2	mg/kg	0.000517	0.000188	0.00128	0.000699	0.00099
E1668A	PCB-196	42740-50-1	mg/kg	0.000708	0.000119 U	0.0019	0.0011	0.00147
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000287 U	0.000238 U	0.000516	0.000276	0.000383
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00154	0.000644	0.00527	0.00303	0.00371
E1668A	PCB-201	40186-71-8	mg/kg	0.000234	0.000101 J	0.000727	0.000378	0.000476
E1668A	PCB-202	2136-99-4	mg/kg	0.000413	0.000213 J	0.00187	0.00108	0.00117
E1668A	PCB-203	52663-76-0	mg/kg	0.00104	0.000397	0.00323	0.00179	0.00211
E1668A	PCB-204	74472-52-9	mg/kg	0.000144 U	0.000119 U	0.000142 U	0.000136 U	0.000164 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000103 J	0.000119 U	0.00017	0.000136 U	0.000129 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00125	0.000461	0.00594	0.00288	0.00264
E1668A	PCB-207	52663-79-3	mg/kg	0.000148	5.61e-05 J	0.000548	0.000252	0.000235
E1668A	PCB-208	52663-77-1	mg/kg	0.000371	0.000191	0.00245	0.00115	0.000939
E1668A	PCB-209	2051-24-3	mg/kg	0.00139	0.000449	0.00829	0.00242	0.00221
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.209 J	0.0963 J	0.4 J	0.386 J	0.607 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.218 J	0.103 J	0.429 J	0.412 J	0.642 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	6.81e-06 J	4.71e-06 J	1.99e-05	1.62e-05	2.02e-05

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	9.81e-05	0.000364	0.00415	0.00146 J	0.00111
E1668A	PCB-2	2051-61-8	mg/kg	3.06e-05 J	0.000289	0.000583	0.000264 J	0.000237
E1668A	PCB-3	2051-62-9	mg/kg	4.4e-05 J	0.000477	0.00133	0.00053 J	0.000526
E1668A	PCB-4	13029-08-8	mg/kg	0.000121 U	0.00231	0.00556	0.00247 J	0.00259
E1668A	PCB-5	16605-91-7	mg/kg	0.000121 U	0.000176 U	6.44e-05 J	2.83e-05 J	0.000222 U
E1668A	PCB-6	25569-80-6	mg/kg	4.86e-05 U	0.00103	0.00199	0.000732 J	0.0012
E1668A	PCB-7	33284-50-3	mg/kg	4.86e-05 U	0.000207 U	0.000173	5.31e-05 U	0.000116 U
E1668A	PCB-8	34883-43-7	mg/kg	0.000355	0.0052	0.00617	0.00299 J	0.00334
E1668A	PCB-9	34883-39-1	mg/kg	4.86e-05 U	0.000281 U	0.000268	0.000134 J	0.000153 U
E1668A	PCB-10	33146-45-1	mg/kg	0.000121 U	0.000176 U	0.000584	0.000133 U	0.00026
E1668A	PCB-11	2050-67-1	mg/kg	0.000486	0.0098	0.0053	0.00253 J	0.00348
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000147	0.00154	0.0024	0.000908	0.00144
E1668A	PCB-14	34883-41-5	mg/kg	4.86e-05 U	7.03e-05 U	8.52e-05 U	5.31e-05 U	8.86e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000726	0.00815	0.0112	0.00383 J	0.00749
E1668A	PCB-16	38444-78-9	mg/kg	0.000191	0.00467	0.00254	0.00134	0.00184
E1668A	PCB-17	37680-66-3	mg/kg	0.000332	0.00622	0.00507	0.00209	0.00371
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000464	0.00971	0.00653	0.00298 J	0.00483
E1668A	PCB-19	38444-73-4	mg/kg	4.86e-05 U	0.00147	0.0012	0.000605 J	0.000937
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00247	0.0311	0.027	0.0107 J	0.0207
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00059	0.0105	0.00544	0.00265	0.0038
E1668A	PCB-22	38444-85-8	mg/kg	0.000537	0.0087	0.00529	0.00239	0.00391
E1668A	PCB-23	55720-44-0	mg/kg	4.86e-05 U	2.69e-05 J	8.52e-05 U	5.31e-05 U	8.86e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	4.86e-05 U	0.000147	0.000118	3.28e-05 J	6.41e-05 J
E1668A	PCB-25	55712-37-3	mg/kg	0.000256	0.00274	0.00339	0.0012	0.00258
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000414	0.00476	0.00523	0.00184	0.0039
E1668A	PCB-27	38444-76-7	mg/kg	8.07e-05	0.00122	0.00128	0.000495	0.000974
E1668A	PCB-31	16606-02-3	mg/kg	0.0015	0.0225 J	0.0184	0.0075	0.0135
E1668A	PCB-32	38444-77-8	mg/kg	0.000301	0.00483	0.00391	0.00161	0.00304
E1668A	PCB-34	37680-68-5	mg/kg	4.86e-05 U	0.000125	0.000153	5.69e-05	0.000112
E1668A	PCB-35	37680-69-6	mg/kg	7.43e-05	0.00106	0.000757	0.00036	0.000605
E1668A	PCB-36	38444-87-0	mg/kg	4.86e-05 U	3.44e-05 J	4.55e-05 J	5.31e-05 U	8.86e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000722	0.00849	0.00767	0.00285	0.00593
E1668A	PCB-38	53555-66-1	mg/kg	4.86e-05 U	7.03e-05 U	8.52e-05 U	5.31e-05 U	8.86e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	4.86e-05 U	0.000155	8.52e-05 U	5.51e-05	0.000116
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000882	0.012	0.00825	0.00346	0.00779
E1668A	PCB-41	52663-59-9	mg/kg	0.000243 U	0.000351 U	0.000715	0.000319	0.000523
E1668A	PCB-42	36559-22-5	mg/kg	0.000597	0.00811	0.00579	0.00241	0.0058
E1668A	PCB-43	70362-46-8	mg/kg	0.000121 U	0.000176 U	0.000824	R	0.000555
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00183	0.0266	0.0188	0.00796	0.018
E1668A	PCB-45	70362-45-7	mg/kg	0.000204	0.00347	0.00164	0.00075	0.00182
E1668A	PCB-46	41464-47-5	mg/kg	8.07e-05	0.00134	0.000826	0.000359	0.000785
E1668A	PCB-48	70362-47-9	mg/kg	0.000302	0.00422	0.00243	0.00107	0.00223
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00137	0.018	0.0139	0.00575	0.0137

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000216 J	0.00336	0.00237	0.00107	0.00239
E1668A	PCB-51	68194-04-7	mg/kg	1e-04 J	0.00101	0.0018	0.00083	0.00141
E1668A	PCB-52	35693-99-3	mg/kg	0.00184	0.0383	0.0171	0.00709	0.0165
E1668A	PCB-54	15968-05-5	mg/kg	0.000121 U	8.84e-05 J	0.000181 J	0.00012 J	0.000153 J
E1668A	PCB-55	74338-24-2	mg/kg	3.12e-05 J	0.000176 U	0.00018 J	0.000133 U	0.000222 U
E1668A	PCB-56	41464-43-1	mg/kg	0.00121	0.0108	0.00827	0.00347	0.00797
E1668A	PCB-57	70424-67-8	mg/kg	0.000121 U	0.000176 U	0.000213 U	4.76e-05 J	0.00011 J
E1668A	PCB-58	41464-49-7	mg/kg	0.000121 U	0.000176 U	8.28e-05 J	0.000133 U	8.03e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000174 J	0.00215	0.00162	0.000699	0.00158
E1668A	PCB-60	33025-41-1	mg/kg	0.000515	0.00455	0.0028	0.00118	0.00243
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.00407	0.0499	0.0287	0.0118	0.0266
E1668A	PCB-63	74472-34-7	mg/kg	0.000105 J	0.00115	0.000793	0.000286	0.000733
E1668A	PCB-64	52663-58-8	mg/kg	0.000878	0.0118	0.00735	0.00323	0.00713
E1668A	PCB-66	32598-10-0	mg/kg	0.00279	0.0263	0.0198	0.00795	0.0188
E1668A	PCB-67	73575-53-8	mg/kg	7.62e-05 J	0.000878	0.000635	0.000249	0.000575
E1668A	PCB-68	73575-52-7	mg/kg	0.000121 U	0.000182	0.000268	9.11e-05 J	0.000239
E1668A	PCB-72	41464-42-0	mg/kg	0.000121 U	0.000247	0.000309	0.00011 J	0.000296
E1668A	PCB-73	74338-23-1	mg/kg	0.000121 U	0.000176 U	7.27e-05 J	0.000133 U	8.99e-05 J
E1668A	PCB-77	32598-13-3	mg/kg	0.000318	0.00339	0.00263	0.00115 J	0.00272
E1668A	PCB-78	70362-49-1	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000121 U	0.00051	0.000191 J	0.000133 U	0.000222 U
E1668A	PCB-80	33284-52-5	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000121 U	0.000117 J	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-82	52663-62-4	mg/kg	0.000262	0.00685	0.00217	0.000837	0.00198
E1668A	PCB-83	60145-20-2	mg/kg	0.000243 U	0.00353	0.00104	0.000376 J	0.000984
E1668A	PCB-84	52663-60-2	mg/kg	0.000435	0.0176	0.00443	0.00175	0.00412
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.000385 J	0.0101	0.00348	0.00136	0.00327
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.000556 J	0.0422	0.012	0.00444	0.0105 J
E1668A	PCB-88	55215-17-3	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000121 U	0.000637	0.000256	0.000103 J	0.000232
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.00166	0.0635	0.0219	0.00688	0.0164
E1668A	PCB-91	68194-05-8	mg/kg	0.000271	0.00807	0.00313	0.00125	0.00302
E1668A	PCB-92	52663-61-3	mg/kg	0.000121 U	0.0121	0.00413	0.00129	0.00303
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000486 U	0.000583 J	0.000743 J	0.000352 J	0.000698 J
E1668A	PCB-94	73575-55-0	mg/kg	0.000121 U	0.000308	0.000218	9.91e-05 J	0.000222 U
E1668A	PCB-95	38379-99-6	mg/kg	0.00152	0.0594 J	0.0184	0.0054	0.0126
E1668A	PCB-96	73575-54-9	mg/kg	0.000121 U	0.000338	0.000174 J	7.59e-05 J	0.000222 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000486 U	0.00198	0.00101	0.000426 J	0.000934
E1668A	PCB-99	38380-01-7	mg/kg	0.000921	0.0252	0.0108	0.00387	0.0097
E1668A	PCB-103	60145-21-3	mg/kg	0.000121 U	0.000386	0.000474	0.00017	0.000354
E1668A	PCB-104	56558-16-8	mg/kg	0.000121 U	0.000176 U	8.04e-05 J	4.5e-05 J	7.96e-05 J
E1668A	PCB-105	32598-14-4	mg/kg	0.000895	0.0227	0.00654	0.00242	0.00604
E1668A	PCB-106	70424-69-0	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-107	70424-68-9	mg/kg	0.000169	0.00456	0.00161	0.000511	0.00137
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000243 U	0.003	0.000706	0.000253 J	0.000623
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00205	0.0734	0.0237	0.00821	0.0203 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-112	74472-36-9	mg/kg	R	0.000124 J	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-114	74472-37-0	mg/kg	5.71e-05 J	0.00143	0.000381	0.000146 J	0.000318
E1668A	PCB-118	31508-00-6	mg/kg	0.00209	0.0571 J	0.0185	0.00643	0.016
E1668A	PCB-120	68194-12-7	mg/kg	0.000121 U	8.72e-05 J	0.000139 J	0.000133 U	0.000102 J
E1668A	PCB-121	56558-18-0	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-122	76842-07-4	mg/kg	R	0.000886	0.000276	9.89e-05 J	0.000264
E1668A	PCB-123	65510-44-3	mg/kg	5.66e-05 J	0.00113	0.000408	0.000139 J	0.000385
E1668A	PCB-126	57465-28-8	mg/kg	0.000121 U	0.000176 U	0.000198 J	5.87e-05 J	0.000222 U
E1668A	PCB-127	39635-33-1	mg/kg	0.000121 U	0.000176 U	0.000213 U	4.32e-05 J	0.000222 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000276	0.0127	0.00407	0.000951	0.00278
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.00187	0.0821	0.0371	0.00781	0.0198
E1668A	PCB-130	52663-66-8	mg/kg	0.000116 J	0.00549	0.00189	0.000423	0.00113
E1668A	PCB-131	61798-70-7	mg/kg	0.000121 U	0.00145	0.000332	7.75e-05 J	0.000207 J
E1668A	PCB-132	38380-05-1	mg/kg	0.000496	0.0263	0.00974	0.002	0.00506
E1668A	PCB-133	35694-04-3	mg/kg	2.98e-05 J	0.00108	0.000614	0.000133 U	0.000336
E1668A	PCB-134	52704-70-8	mg/kg	9.11e-05 J	0.00523	0.00175	0.000397	0.00102
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000243 U	0.0164	0.0122	0.00236	0.00465
E1668A	PCB-136	38411-22-2	mg/kg	0.000116 J	0.00669	0.00389	0.00082	0.00156
E1668A	PCB-137	35694-06-5	mg/kg	8.07e-05 J	0.00466	0.000889	0.000264	0.000743
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000243 U	0.00155	0.00043	0.00012 J	0.000338 J
E1668A	PCB-141	52712-04-6	mg/kg	0.000309	0.0144	0.00728	0.00123	0.00293
E1668A	PCB-142	41411-61-4	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000243 U	0.000222 J	0.000426 U	0.000265 U	0.000443 U
E1668A	PCB-144	68194-14-9	mg/kg	5.62e-05 J	0.00257	0.00157	0.000281	0.000591
E1668A	PCB-145	74472-40-5	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000241	0.00912	0.00566	0.00111	0.00283
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00122	0.0494	0.0291	0.00581	0.0176
E1668A	PCB-148	74472-41-6	mg/kg	0.000121 U	0.000176 U	9.25e-05 J	0.000133 U	0.000222 U
E1668A	PCB-150	68194-08-1	mg/kg	0.000121 U	8.09e-05 J	9.22e-05 J	0.000133 U	8.1e-05 J
E1668A	PCB-152	68194-09-2	mg/kg	0.000121 U	7.18e-05 J	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00141	0.051	0.0331	0.00674	0.0166
E1668A	PCB-154	60145-22-4	mg/kg	0.000243 U	0.000566	0.000699	0.000216 J	0.000505
E1668A	PCB-155	33979-03-2	mg/kg	0.000121 U	0.00083	0.000206 J	7.95e-05 J	0.00021 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000216 J	0.0112	0.003	0.000784	0.00195
E1668A	PCB-158	74472-42-7	mg/kg	0.000169	0.00876	0.00313	0.000673	0.00173
E1668A	PCB-159	39635-35-3	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-160	41411-62-5	mg/kg	0.000486 U	0.000703 U	0.000852 U	0.000531 U	0.000886 U
E1668A	PCB-161	74472-43-8	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-164	74472-45-0	mg/kg	0.000125	0.00511	0.00247	0.000513	0.00129
E1668A	PCB-165	74472-46-1	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-167	52663-72-6	mg/kg	8.16e-05 J	0.00329	0.00109	0.000271	0.000708
E1668A	PCB-169	32774-16-6	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00043	0.013	0.0115	0.00192	0.00525
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000128 J	0.00398	0.00341	0.00059	0.00146
E1668A	PCB-172	52663-74-8	mg/kg	7.86e-05 J	0.00214	0.00213	0.000339	0.000954
E1668A	PCB-174	38411-25-5	mg/kg	0.000363	0.0101	0.011	0.00179	0.00439
E1668A	PCB-175	40186-70-7	mg/kg	0.000121 U	0.00049	0.000507	9.33e-05 J	0.000209 J
E1668A	PCB-176	52663-65-7	mg/kg	4.47e-05 J	0.00119	0.00136	0.000238	0.00052
E1668A	PCB-177	52663-70-4	mg/kg	0.000247	0.00639	0.00686	0.00118	0.00309
E1668A	PCB-178	52663-67-9	mg/kg	6.93e-05 J	0.00191	0.00245	0.000491	0.00113
E1668A	PCB-179	52663-64-6	mg/kg	0.000134	0.00356	0.00446	0.000853	0.00197
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00109	0.000351 U	0.0274	0.00487	0.0124
E1668A	PCB-181	74472-47-2	mg/kg	0.000121 U	0.000214	6.75e-05 J	0.000133 U	0.000222 U
E1668A	PCB-182	60145-23-5	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000314	0.00752	0.00814	0.00144	0.0049
E1668A	PCB-184	74472-48-3	mg/kg	0.000121 U	5.39e-05 J	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-186	74472-49-4	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000484	0.0109	0.0146	0.00297	0.00709
E1668A	PCB-188	74487-85-7	mg/kg	0.000121 U	6.25e-05 J	0.000213 U	0.000133 U	0.000143 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000121 U	0.00054	0.000399	7.46e-05 J	0.000188 J
E1668A	PCB-190	41411-64-7	mg/kg	8.79e-05 J	0.00237	0.00235	0.000384	0.00104
E1668A	PCB-191	74472-50-7	mg/kg	0.000121 U	0.000511	0.000511	8.76e-05 J	0.000207 J
E1668A	PCB-192	74472-51-8	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000297	0.00498	0.0065	0.00123	0.00369
E1668A	PCB-195	52663-78-2	mg/kg	0.000109 J	0.00176	0.00236	0.000427	0.00119
E1668A	PCB-196	42740-50-1	mg/kg	0.000119 J	0.00241	0.00312	0.000596	0.00162
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	0.000639	0.000817	0.000176 J	0.000451
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000312	0.00513	0.00685	0.00153	0.0041
E1668A	PCB-201	40186-71-8	mg/kg	5.32e-05 J	0.000665	0.000838	0.000219	0.000661
E1668A	PCB-202	2136-99-4	mg/kg	9.73e-05 J	0.00128	0.00172	0.000448	0.00126
E1668A	PCB-203	52663-76-0	mg/kg	0.000176	0.00311	0.00428	0.000944	0.00266
E1668A	PCB-204	74472-52-9	mg/kg	0.000121 U	0.000176 U	0.000213 U	0.000133 U	0.000222 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000121 U	0.000227	0.000323	0.000133 U	0.000168 J
E1668A	PCB-206	40186-72-9	mg/kg	0.000121 U	0.00272	0.00425	0.00105	0.00354
E1668A	PCB-207	52663-79-3	mg/kg	0.000121 U	0.000309	0.000445	0.000107 J	0.000376
E1668A	PCB-208	52663-77-1	mg/kg	9.48e-05 J	0.000931	0.0014	0.000366	0.0012
E1668A	PCB-209	2051-24-3	mg/kg	0.000281	0.00216	0.00348	0.000913	0.00283
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0564 J	1.11 J	0.686 J	0.215 J	0.48 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0606 J	1.21 J	0.72 J	0.227 J	0.508 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.23e-05 J	2.13e-05 J	2.11e-05 J	6.35e-06 J	2.34e-05 J

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	0.000404	0.000694 J	0.000255 J	0.000734	0.00102
E1668A	PCB-2	2051-61-8	mg/kg	7.27e-05	0.000277	1e-04	0.000227	0.000235
E1668A	PCB-3	2051-62-9	mg/kg	0.000136	0.000424	0.000145 J	0.000312	0.00048
E1668A	PCB-4	13029-08-8	mg/kg	0.000629	0.00177 J	0.000585 J	0.00147	0.00295
E1668A	PCB-5	16605-91-7	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000201	0.00103 J	0.000275 J	0.000571	0.00167
E1668A	PCB-7	33284-50-3	mg/kg	4e-05 U	6.03e-05 U	6.24e-05 U	7.02e-05	0.000105 U
E1668A	PCB-8	34883-43-7	mg/kg	0.000645	0.00331 J	0.00108 J	0.00233	0.00425
E1668A	PCB-9	34883-39-1	mg/kg	4e-05 U	0.00015 U	6.24e-05 U	4.66e-05 U	0.000177 U
E1668A	PCB-10	33146-45-1	mg/kg	9.99e-05 U	0.000158	0.000156 U	0.000116 U	0.000183
E1668A	PCB-11	2050-67-1	mg/kg	0.00075	0.00339 J	0.00104 J	0.00245	0.00397
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000285	0.0012	0.00034 U	0.000769	0.00171
E1668A	PCB-14	34883-41-5	mg/kg	4e-05 U	6.03e-05 U	6.24e-05 U	4.66e-05 U	6.08e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00127	0.00707 J	0.00198 J	0.00409	0.00708
E1668A	PCB-16	38444-78-9	mg/kg	0.000248	0.00255 J	0.000798 J	0.00146	0.00312
E1668A	PCB-17	37680-66-3	mg/kg	0.000462	0.00388 J	0.00114 J	0.00217	0.00489
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000586	0.00607 J	0.00184 J	0.00327	0.0073
E1668A	PCB-19	38444-73-4	mg/kg	0.000138	0.000746 J	0.000231 J	0.000496	0.00122
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00267	0.0209 J	0.00559 J	0.0108	0.0229
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000498	0.00526 J	0.00144 J	0.00286	0.00511
E1668A	PCB-22	38444-85-8	mg/kg	0.00047	0.00452 J	0.00125 J	0.00238	0.00507
E1668A	PCB-23	55720-44-0	mg/kg	4e-05 U	6.03e-05 U	6.24e-05 U	4.66e-05 U	6.08e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	4e-05 U	7.83e-05	6.24e-05 U	4.23e-05 J	0.000108
E1668A	PCB-25	55712-37-3	mg/kg	0.000317	0.00214 J	0.00053 J	0.00112	0.0025
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000484	0.00341 J	0.000893 J	0.0019	0.00412
E1668A	PCB-27	38444-76-7	mg/kg	0.000138	0.000829 J	0.000232 J	0.000478	0.00101
E1668A	PCB-31	16606-02-3	mg/kg	0.00177	0.0138 J	0.00378 J	0.00743	0.0151
E1668A	PCB-32	38444-77-8	mg/kg	0.000377	0.00313 J	0.000897 J	0.00158	0.00382
E1668A	PCB-34	37680-68-5	mg/kg	1.52e-05 J	0.000106	2.74e-05 J	5.78e-05	0.000118
E1668A	PCB-35	37680-69-6	mg/kg	4e-05 U	0.000587 J	0.000156 J	0.00028	0.000555
E1668A	PCB-36	38444-87-0	mg/kg	4e-05 U	3.6e-05 J	6.24e-05 U	4.66e-05 U	6.08e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000811	0.00586 J	0.00153 J	0.0032	0.00582
E1668A	PCB-38	53555-66-1	mg/kg	4e-05 U	6.03e-05 U	6.24e-05 U	4.66e-05 U	6.08e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	4e-05 U	6.03e-05 U	2.5e-05 J	5.22e-05	0.00011
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000903	0.00754 J	0.00189 J	0.00351	0.00691
E1668A	PCB-41	52663-59-9	mg/kg	2e-04 U	0.000715	0.000219 J	0.000233 U	0.000662
E1668A	PCB-42	36559-22-5	mg/kg	0.000597	0.0054 J	0.00135 J	0.00249	0.00503
E1668A	PCB-43	70362-46-8	mg/kg	9.99e-05 U	0.000779	0.00016	0.000365	0.000774
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0018	0.0168 J	0.00418 J	0.00778	0.0152
E1668A	PCB-45	70362-45-7	mg/kg	0.00019	0.00195 J	0.000532 J	0.000832	0.00177
E1668A	PCB-46	41464-47-5	mg/kg	8.55e-05	0.000795 J	0.000212 J	0.00038	0.000735
E1668A	PCB-48	70362-47-9	mg/kg	0.000212	0.00263 J	0.000651 J	0.00115	0.00238
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00126	0.0122 J	0.00302 J	0.00563	0.0113

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000265	0.00219 J	0.000512 J	0.000983	0.0019
E1668A	PCB-51	68194-04-7	mg/kg	0.000139	0.000942	0.000201	0.000491	0.000747
E1668A	PCB-52	35693-99-3	mg/kg	0.00162	0.017 J	0.00426 J	0.0077	0.015
E1668A	PCB-54	15968-05-5	mg/kg	9.99e-05 U	9.09e-05 J	0.000156 U	4.55e-05 J	8.45e-05 J
E1668A	PCB-55	74338-24-2	mg/kg	9.99e-05 U	0.000208	4.45e-05 J	8.68e-05 J	0.000179
E1668A	PCB-56	41464-43-1	mg/kg	0.000808	0.00795 J	0.00192 J	0.00354	0.00699
E1668A	PCB-57	70424-67-8	mg/kg	9.99e-05 U	9.98e-05 J	0.000156 U	0.000116 U	0.000117 J
E1668A	PCB-58	41464-49-7	mg/kg	9.99e-05 U	6.26e-05 J	0.000156 U	3.81e-05 J	6.58e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000165 J	0.00153	0.000387 J	0.000723	0.00149
E1668A	PCB-60	33025-41-1	mg/kg	0.000278	0.00291 J	0.000753 J	0.00131	0.0026
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.00264	0.0277 J	0.00655 J	0.0121	0.0243
E1668A	PCB-63	74472-34-7	mg/kg	7.25e-05 J	0.000713	0.000173	0.000319	0.000706
E1668A	PCB-64	52663-58-8	mg/kg	0.000666	0.00737 J	0.00184 J	0.00332	0.00683
E1668A	PCB-66	32598-10-0	mg/kg	0.00214	0.0183 J	0.00428 J	0.00823	0.0161
E1668A	PCB-67	73575-53-8	mg/kg	6.24e-05 J	0.000581	0.000135 J	0.000271	0.000533
E1668A	PCB-68	73575-52-7	mg/kg	9.99e-05 U	0.000156	0.000156 U	8.15e-05 J	0.00015 J
E1668A	PCB-72	41464-42-0	mg/kg	9.99e-05 U	0.000208	4.98e-05 J	0.000102 J	0.00022
E1668A	PCB-73	74338-23-1	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000284	0.00233 J	0.000526 J	0.00113	0.00194
E1668A	PCB-78	70362-49-1	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-79	41464-48-6	mg/kg	9.99e-05 U	0.000135 J	4.12e-05 J	5.62e-05 J	0.00014 J
E1668A	PCB-80	33284-52-5	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-81	70362-50-4	mg/kg	9.99e-05 U	6.92e-05 J	0.000156 U	0.000116 U	6.94e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	0.000255	0.0019 J	0.000467 J	0.000908	0.00178
E1668A	PCB-83	60145-20-2	mg/kg	2e-04 U	0.000882	0.000312 U	0.000375	0.000744
E1668A	PCB-84	52663-60-2	mg/kg	0.000475	0.00389 J	0.00094 J	0.00174	0.00349
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.000416	0.00306	0.000708	0.00146	0.0028
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.000675	0.00981 J	0.00235 J	0.00473	0.00911
E1668A	PCB-88	55215-17-3	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-89	73575-57-2	mg/kg	9.99e-05 U	0.000213	5.79e-05 J	1e-04 J	0.000204
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.0019	0.0153 J	0.00369 J	0.00718	0.0137
E1668A	PCB-91	68194-05-8	mg/kg	0.000328	0.00253 J	0.000605 J	0.00119	0.00225
E1668A	PCB-92	52663-61-3	mg/kg	0.000377	0.00286 J	0.000717 J	0.00137	0.0026
E1668A	PCB-93/100	PCB-93/100	mg/kg	4e-04 U	0.000423 J	0.000624 U	0.000203 J	0.000346 J
E1668A	PCB-94	73575-55-0	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	6.59e-05 J	0.000117 J
E1668A	PCB-95	38379-99-6	mg/kg	0.00151	0.0124 J	0.00294 J	0.00544	0.0115
E1668A	PCB-96	73575-54-9	mg/kg	9.99e-05 U	0.000112 J	0.000156 U	6.19e-05 J	9.84e-05 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	4e-04 U	0.000722	0.000624 U	0.000345 J	0.000652
E1668A	PCB-99	38380-01-7	mg/kg	0.00115	0.00826 J	0.00192 J	0.00391	0.00763
E1668A	PCB-103	60145-21-3	mg/kg	3.32e-05 J	0.00022	5.14e-05 J	0.000111 J	0.000196
E1668A	PCB-104	56558-16-8	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-105	32598-14-4	mg/kg	0.000813	0.00581 J	0.00139 J	0.00297	0.00574
E1668A	PCB-106	70424-69-0	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-107	70424-68-9	mg/kg	0.000164	0.00124	0.000291	0.000588	0.0012
E1668A	PCB-108/124	PCB-108/124	mg/kg	7.75e-05 J	0.000603	0.000139 J	0.000281	0.000595
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00241	0.0181 J	0.00422 J	0.00875	0.0172
E1668A	PCB-111	39635-32-0	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-112	74472-36-9	mg/kg	9.99e-05 U	5.11e-05 J	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-114	74472-37-0	mg/kg	9.99e-05 U	0.000335	7.76e-05 J	0.000157	0.000325
E1668A	PCB-118	31508-00-6	mg/kg	0.00203	0.0149 J	0.00351 J	0.0074	0.0149
E1668A	PCB-120	68194-12-7	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	3.44e-05 J	6.29e-05 J
E1668A	PCB-121	56558-18-0	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-122	76842-07-4	mg/kg	9.99e-05 U	0.000254	0.000156 U	9.73e-05 J	0.00023
E1668A	PCB-123	65510-44-3	mg/kg	5.75e-05 J	0.000318	7.61e-05 J	0.000159	0.000323
E1668A	PCB-126	57465-28-8	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	9.03e-05 J	0.000152 U
E1668A	PCB-127	39635-33-1	mg/kg	9.99e-05 U	0.000162	0.000156 U	0.000116 U	0.000176
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000366	0.00239	0.000538	0.00137	0.00231
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.00273	0.0172 J	0.00385 J	0.00921	0.0172
E1668A	PCB-130	52663-66-8	mg/kg	0.000159	0.001	0.000231	0.000555	0.00103
E1668A	PCB-131	61798-70-7	mg/kg	9.99e-05 U	0.000213	0.000156 U	0.000115 J	0.000214
E1668A	PCB-132	38380-05-1	mg/kg	0.000662	0.00454 J	0.000998 J	0.00234	0.00437
E1668A	PCB-133	35694-04-3	mg/kg	9.99e-05 U	0.000267	6.14e-05 J	0.000131	0.000269
E1668A	PCB-134	52704-70-8	mg/kg	0.000126 J	0.000854	0.000204 J	0.000451	0.000911
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000675	0.00389 J	0.00095 J	0.00227	0.00362
E1668A	PCB-136	38411-22-2	mg/kg	0.00021	0.00135 J	0.000335 J	0.000798	0.00119
E1668A	PCB-137	35694-06-5	mg/kg	0.00011	0.000701	0.000158	0.000388	0.000667
E1668A	PCB-139/140	PCB-139/140	mg/kg	2e-04 U	0.000273 J	0.000312 U	0.000151 J	0.000256 J
E1668A	PCB-141	52712-04-6	mg/kg	0.000402	0.00265 J	0.000589 J	0.0013	0.00257
E1668A	PCB-142	41411-61-4	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-143	68194-15-0	mg/kg	2e-04 U	0.000301 U	0.000312 U	0.000233 U	0.000304 U
E1668A	PCB-144	68194-14-9	mg/kg	7.74e-05 J	0.000508	0.000132 J	0.000298	0.000501
E1668A	PCB-145	74472-40-5	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000362	0.00233 J	0.000519 J	0.00119	0.00226
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00172	0.0119 J	0.0026 J	0.00587	0.0116
E1668A	PCB-148	74472-41-6	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-150	68194-08-1	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-152	68194-09-2	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00206	0.0138 J	0.00304 J	0.00703	0.0132
E1668A	PCB-154	60145-22-4	mg/kg	2e-04 U	0.000269 J	0.000312 U	0.000154 J	0.00024 J
E1668A	PCB-155	33979-03-2	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	4.01e-05 J	0.000149 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000273	0.00176	0.000405	0.00114	0.00183
E1668A	PCB-158	74472-42-7	mg/kg	0.000238	0.0016 J	0.000358 J	0.000877	0.00159
E1668A	PCB-159	39635-35-3	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-160	41411-62-5	mg/kg	4e-04 U	0.000603 U	0.000624 U	0.000466 U	0.000608 U
E1668A	PCB-161	74472-43-8	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-162	39635-34-2	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-164	74472-45-0	mg/kg	0.000169	0.00109	0.000239	0.000559	0.00109
E1668A	PCB-165	74472-46-1	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-167	52663-72-6	mg/kg	9.91e-05 J	0.000602	0.000138 J	0.000349	0.000614
E1668A	PCB-169	32774-16-6	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00058	0.00376 J	0.000813 J	0.00201	0.00367
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000177 J	0.00114	0.000249 J	0.000655	0.00116
E1668A	PCB-172	52663-74-8	mg/kg	0.00011	0.000684	0.000146 J	0.000357	0.000683
E1668A	PCB-174	38411-25-5	mg/kg	0.000507	0.00325 J	0.000704 J	0.00172	0.00314
E1668A	PCB-175	40186-70-7	mg/kg	9.99e-05 U	0.000174	0.000156 U	9.62e-05 J	0.000158
E1668A	PCB-176	52663-65-7	mg/kg	9.99e-05 U	0.000419	9.57e-05 J	0.000232	0.000399
E1668A	PCB-177	52663-70-4	mg/kg	0.00037	0.00232 J	0.000491 J	0.00124	0.00228
E1668A	PCB-178	52663-67-9	mg/kg	0.000137	0.000853	0.000188	0.000457	0.000808
E1668A	PCB-179	52663-64-6	mg/kg	0.00021	0.00142 J	0.000321 J	0.000773	0.00138
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00146	0.00911 J	0.00196 J	0.00476	0.00897
E1668A	PCB-181	74472-47-2	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-182	60145-23-5	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000411	0.00282	0.000606	0.00142	0.00271
E1668A	PCB-184	74472-48-3	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-186	74472-49-4	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000815	0.00487 J	0.00113 J	0.00273	0.00485
E1668A	PCB-188	74487-85-7	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-189	39635-31-9	mg/kg	9.99e-05 U	0.000138 J	0.000156 U	8.68e-05 J	0.000142 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000125	0.000744	0.000168	0.000428	0.00078
E1668A	PCB-191	74472-50-7	mg/kg	9.99e-05 U	0.000166	0.000156 U	9.69e-05 J	0.000171
E1668A	PCB-192	74472-51-8	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000342	0.0023 J	0.000492 J	0.00121	0.00229
E1668A	PCB-195	52663-78-2	mg/kg	0.000119	0.00073	0.000169	0.000441	0.000754
E1668A	PCB-196	42740-50-1	mg/kg	0.000161	0.00103	0.000243	0.000619	0.00105
E1668A	PCB-197/200	PCB-197/200	mg/kg	2e-04 U	0.000267 J	0.000312 U	0.000176 J	0.000268 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000434	0.00273	0.000623	0.0016	0.00258
E1668A	PCB-201	40186-71-8	mg/kg	8.64e-05 J	0.000335	9.58e-05 J	0.000209	0.00035
E1668A	PCB-202	2136-99-4	mg/kg	0.000132 J	0.000957	0.000207 J	0.000518	0.000884
E1668A	PCB-203	52663-76-0	mg/kg	0.000275	0.00162 J	0.000373 J	0.000989	0.00159
E1668A	PCB-204	74472-52-9	mg/kg	9.99e-05 U	0.000151 U	0.000156 U	0.000116 U	0.000152 U
E1668A	PCB-205	74472-53-0	mg/kg	9.99e-05 U	0.000103 J	0.000156 U	5.84e-05 J	9.75e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00035	0.0027 J	0.000598 J	0.00134	0.00222
E1668A	PCB-207	52663-79-3	mg/kg	9.99e-05 U	0.00025	0.000156 U	0.000134	0.000207
E1668A	PCB-208	52663-77-1	mg/kg	0.000128	0.00104	0.000217	0.000507	0.000807
E1668A	PCB-209	2051-24-3	mg/kg	0.00039 U	0.00244 J	0.000541 J	0.00116	0.00168
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0621 J	0.434 J	0.114 J	0.219 J	0.423 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0661 J	0.46 J	0.121 J	0.232 J	0.449 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.01e-05 J	1.62e-05 J	1.59e-05 J	9.58e-06 J	1.62e-05 J

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	0.000995 J	0.00135	0.000861	0.00386	0.000103
E1668A	PCB-2	2051-61-8	mg/kg	0.000189 J	0.000345	0.000112	0.000452	2.01e-05 J
E1668A	PCB-3	2051-62-9	mg/kg	0.000341 J	0.000737	0.000325	0.00128	4.52e-05 J
E1668A	PCB-4	13029-08-8	mg/kg	0.0018 J	0.00344	0.00154	0.00886	0.000171
E1668A	PCB-5	16605-91-7	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000633 J	0.00165	0.000713	0.00324	8.15e-05
E1668A	PCB-7	33284-50-3	mg/kg	5.84e-05 J	0.000184	5.13e-05 J	7.5e-05 U	4.84e-05 U
E1668A	PCB-8	34883-43-7	mg/kg	0.00213 J	0.00563	0.00207	0.00922	0.000227
E1668A	PCB-9	34883-39-1	mg/kg	5.1e-05 U	0.000239	9.37e-05	7.5e-05 U	4.84e-05 U
E1668A	PCB-10	33146-45-1	mg/kg	0.000228 J	0.000278	0.000229	0.000781	0.000121 U
E1668A	PCB-11	2050-67-1	mg/kg	0.00219 J	0.00619	0.0035	0.00539	0.000289
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.00082 J	0.00215	0.00097	0.00398	0.000102 J
E1668A	PCB-14	34883-41-5	mg/kg	5.1e-05 U	5.98e-05 U	5.29e-05 U	7.5e-05 U	4.84e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.0043 J	0.0117	0.00518	0.0183	0.000597
E1668A	PCB-16	38444-78-9	mg/kg	0.00128 J	0.00292	0.00124	0.00236	7.76e-05
E1668A	PCB-17	37680-66-3	mg/kg	0.00243 J	0.00511	0.00226	0.00573	0.000198
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00322 J	0.00719	0.00312	0.00645	0.000219
E1668A	PCB-19	38444-73-4	mg/kg	0.000538 J	0.00118	0.000396	0.00163	4.84e-05 U
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.012 J	0.031	0.0115	0.0342	0.00113
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00218 J	0.00645	0.00217	0.00548	0.000169
E1668A	PCB-22	38444-85-8	mg/kg	0.0023 J	0.00614	0.0021	0.00575	0.000182
E1668A	PCB-23	55720-44-0	mg/kg	5.1e-05 U	5.98e-05 U	5.29e-05 U	7.5e-05 U	4.84e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	3.99e-05 J	7.61e-05	3.48e-05 J	7.41e-05 J	4.84e-05 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00136 J	0.00537	0.00138	0.00523	0.000141
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00218 J	0.00995	0.0023	0.00878	0.000234
E1668A	PCB-27	38444-76-7	mg/kg	0.000588 J	0.00127	0.000544	0.00156	6.29e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00847 J	0.0203 J	0.00837	0.0238 J	0.000755
E1668A	PCB-32	38444-77-8	mg/kg	0.00181 J	0.00475	0.00158	0.00516	0.000141
E1668A	PCB-34	37680-68-5	mg/kg	6.34e-05 J	5.98e-05 U	6.45e-05	0.00023	4.84e-05 U
E1668A	PCB-35	37680-69-6	mg/kg	0.000356 J	0.000906	0.0012	0.000851	3.01e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	5.1e-05 U	3.48e-05 J	2.32e-05 J	5.3e-05 J	4.84e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.00322 J	0.00828	0.00368	0.00874	0.000391
E1668A	PCB-38	53555-66-1	mg/kg	5.1e-05 U	5.98e-05 U	5.29e-05 U	7.5e-05 U	4.84e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	6.23e-05 J	0.000168	6.05e-05	0.000184	4.84e-05 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00411 J	0.0115	0.00356	0.00644	0.00031
E1668A	PCB-41	52663-59-9	mg/kg	0.000422 J	0.000837	0.000395	0.000352 J	0.000242 U
E1668A	PCB-42	36559-22-5	mg/kg	0.00294 J	0.00858	0.00231	0.00425	0.000195
E1668A	PCB-43	70362-46-8	mg/kg	0.000127 U	0.000149 U	0.000306	0.000188 U	0.000121 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00934 J	0.0343	0.00879	0.0149	0.000638
E1668A	PCB-45	70362-45-7	mg/kg	0.000127 U	0.00189	0.000848	0.00112	6.81e-05 J
E1668A	PCB-46	41464-47-5	mg/kg	0.000422 J	0.00121	0.000365	0.000537	2.84e-05 J
E1668A	PCB-48	70362-47-9	mg/kg	0.00126 J	0.0029	0.00109	0.00163	6.82e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00696 J	0.0313	0.00653	0.013	0.000475

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00119 J	0.00379	0.000939	0.00174	8.81e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	0.000494 J	0.0018	0.000328	0.000816	0.000121 U
E1668A	PCB-52	35693-99-3	mg/kg	0.00946 J	0.0485 J	0.0119	0.015	0.000565
E1668A	PCB-54	15968-05-5	mg/kg	5.67e-05 J	0.000162	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-55	74338-24-2	mg/kg	9.56e-05 J	0.000266	8.3e-05 J	0.000188 U	0.000121 U
E1668A	PCB-56	41464-43-1	mg/kg	0.00389 J	0.011	0.00373	0.00682	0.000279
E1668A	PCB-57	70424-67-8	mg/kg	5.45e-05 J	0.000149 U	4.89e-05 J	0.000196	0.000121 U
E1668A	PCB-58	41464-49-7	mg/kg	4.51e-05 J	0.00018	0.000132 U	0.000112 J	0.000121 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000875 J	0.00262	0.000725	0.00134	0.000484 U
E1668A	PCB-60	33025-41-1	mg/kg	0.00139 J	0.00367	0.0016	0.00201	9.68e-05 J
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.0138 J	0.0568	0.0164	0.026	0.000952
E1668A	PCB-63	74472-34-7	mg/kg	0.000385 J	0.00123	0.000364	0.000816	0.000121 U
E1668A	PCB-64	52663-58-8	mg/kg	0.00397 J	0.0115	0.0036	0.00545	0.000229
E1668A	PCB-66	32598-10-0	mg/kg	0.00936 J	0.0337	0.0093	0.0183	0.000737
E1668A	PCB-67	73575-53-8	mg/kg	0.000292 J	0.00107	0.000132 U	0.000611	0.000121 U
E1668A	PCB-68	73575-52-7	mg/kg	0.000101 J	0.000621	9.96e-05 J	0.000333	0.000121 U
E1668A	PCB-72	41464-42-0	mg/kg	0.000144 J	0.000825	0.000135	0.000424	0.000121 U
E1668A	PCB-73	74338-23-1	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-77	32598-13-3	mg/kg	0.00121 J	0.00331	0.00343	0.00226	0.000114 J
E1668A	PCB-78	70362-49-1	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000127 U	0.000149 U	0.000142	0.000197	0.000121 U
E1668A	PCB-80	33284-52-5	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000127 U	0.000149 U	0.000132 U	6.92e-05 J	0.000121 U
E1668A	PCB-82	52663-62-4	mg/kg	0.0012 J	0.00625	0.00196	0.00131	7.71e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	5e-04 J	0.00386	0.00101	0.000793	0.000242 U
E1668A	PCB-84	52663-60-2	mg/kg	0.00258 J	0.0182	0.00508	0.00341	0.000161
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.00196 J	0.0103	0.00298	0.00234	0.000119 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.0035 J	0.0453	0.0108	0.00843	0.000393 J
E1668A	PCB-88	55215-17-3	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000137 J	0.00044	0.00017	0.000126 J	0.000121 U
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.00994 J	0.0726	0.0167	0.0142	0.000638
E1668A	PCB-91	68194-05-8	mg/kg	0.00167 J	0.0138	0.00291	0.00293	0.000122
E1668A	PCB-92	52663-61-3	mg/kg	0.00184 J	0.0147	0.00297	0.00292	0.000131
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000259 J	0.00152	0.000273 J	0.00046 J	0.000484 U
E1668A	PCB-94	73575-55-0	mg/kg	9.57e-05 J	0.000149 U	0.000109 J	0.000134 J	0.000121 U
E1668A	PCB-95	38379-99-6	mg/kg	0.00832 J	0.0689 J	0.0162	0.0142	0.000495
E1668A	PCB-96	73575-54-9	mg/kg	8.67e-05 J	0.000373	0.000118 J	0.000107 J	0.000121 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000482 J	0.00235	0.000662	0.000717 J	0.000484 U
E1668A	PCB-99	38380-01-7	mg/kg	0.0054 J	0.0432 J	0.00869	0.00881	0.00038
E1668A	PCB-103	60145-21-3	mg/kg	0.00014 J	0.00103	0.000183	0.000282	0.000121 U
E1668A	PCB-104	56558-16-8	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00385 J	0.0239	0.00692	0.00505	0.000236
E1668A	PCB-106	70424-69-0	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-107	70424-68-9	mg/kg	0.000803 J	0.0064	0.00122	0.00147	5.68e-05 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000374 J	0.00328	0.000655	0.000631	0.000242 U
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0129 J	0.0916 J	0.0232	0.0177	0.000781
E1668A	PCB-111	39635-32-0	mg/kg	0.000127 U	6.2e-05 J	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-112	74472-36-9	mg/kg	0.000127 U	0.000149 U	5.43e-05 J	0.000188 U	0.000121 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000204 J	0.00124	0.000368	0.000309	0.000121 U
E1668A	PCB-118	31508-00-6	mg/kg	0.00976 J	0.0794 J	0.0165	0.0164	0.000667
E1668A	PCB-120	68194-12-7	mg/kg	5.7e-05 J	0.000506	5.66e-05 J	0.000103 J	0.000121 U
E1668A	PCB-121	56558-18-0	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-122	76842-07-4	mg/kg	0.000137 J	0.000883	0.000262	0.000204	0.000121 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000196 J	0.00156	0.000387	0.000358	0.000121 U
E1668A	PCB-126	57465-28-8	mg/kg	0.000127 U	0.000149 U	0.000175	0.000188 U	0.000121 U
E1668A	PCB-127	39635-33-1	mg/kg	0.000127 U	0.00036	8.43e-05 J	0.000188 U	0.000121 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00162 J	0.0115	0.00379	0.00214	0.000107 J
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.0119 J	0.0853	0.0248	0.0153	0.000831
E1668A	PCB-130	52663-66-8	mg/kg	0.000706 J	0.00482	0.00146	0.000941	4.62e-05 J
E1668A	PCB-131	61798-70-7	mg/kg	0.000142 J	0.00122	0.000334	0.000166 J	0.000121 U
E1668A	PCB-132	38380-05-1	mg/kg	0.00317 J	0.0214	0.0069	0.00351	0.000216
E1668A	PCB-133	35694-04-3	mg/kg	0.000186 J	0.00143	0.000341	0.000328	0.000121 U
E1668A	PCB-134	52704-70-8	mg/kg	0.000644 J	0.00597	0.00133	0.000947	0.000242 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00317 J	0.0187	0.00677	0.0035	0.00025
E1668A	PCB-136	38411-22-2	mg/kg	0.00113 J	0.00759	0.00241	0.00124	8.58e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000502 J	0.00394	0.00118	0.000613	0.000121 U
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000191 J	0.00142	0.00043	0.000251 J	0.000242 U
E1668A	PCB-141	52712-04-6	mg/kg	0.00173 J	0.0107	0.00375	0.00202	0.000117 J
E1668A	PCB-142	41411-61-4	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000255 U	0.000181 J	0.000264 U	0.000375 U	0.000242 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000416 J	0.0021	0.000959	0.000395	0.000121 U
E1668A	PCB-145	74472-40-5	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00157 J	0.0127	0.00299	0.00225	0.000133
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00811 J	0.0619	0.017	0.0107	0.000621
E1668A	PCB-148	74472-41-6	mg/kg	0.000127 U	0.00016	4.8e-05 J	0.000188 U	0.000121 U
E1668A	PCB-150	68194-08-1	mg/kg	0.000127 U	0.000312	6.99e-05 J	0.000188 U	0.000121 U
E1668A	PCB-152	68194-09-2	mg/kg	0.000127 U	7.16e-05 J	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00907 J	0.074 J	0.0189	0.0127	0.00075
E1668A	PCB-154	60145-22-4	mg/kg	0.000209 J	0.00183	0.000418	0.000397	0.000242 U
E1668A	PCB-155	33979-03-2	mg/kg	6.12e-05 J	0.000145 J	0.000132 U	6e-05 J	0.000121 U
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00121 J	0.0108	0.0027	0.00183	7.99e-05 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00109 J	0.00811	0.00245	0.00132	7.05e-05 J
E1668A	PCB-159	39635-35-3	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-160	41411-62-5	mg/kg	0.00051 U	0.000598 U	0.000529 U	0.00075 U	0.000484 U
E1668A	PCB-161	74472-43-8	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000127 U	0.000588	0.000132 U	0.000188 U	0.000121 U

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-164	74472-45-0	mg/kg	0.000728 J	0.00614	0.00158	0.000983	5.15e-05 J
E1668A	PCB-165	74472-46-1	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-167	52663-72-6	mg/kg	0.000423 J	0.00383	0.000884	0.000698	0.000121 U
E1668A	PCB-169	32774-16-6	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00242 J	0.0114	0.00522	0.00296	0.000191
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000746 J	0.00349	0.00156	0.000865	0.000242 U
E1668A	PCB-172	52663-74-8	mg/kg	0.000419 J	0.00183	0.000921	0.000517	3.9e-05 J
E1668A	PCB-174	38411-25-5	mg/kg	0.00207 J	0.00787	0.005	0.00235	0.000202
E1668A	PCB-175	40186-70-7	mg/kg	0.000114 J	0.000424	0.000264	0.000149 J	0.000121 U
E1668A	PCB-176	52663-65-7	mg/kg	0.00028 J	0.00104	0.000669	0.00031	0.000121 U
E1668A	PCB-177	52663-70-4	mg/kg	0.00149 J	0.00547	0.00308	0.00179	0.000148
E1668A	PCB-178	52663-67-9	mg/kg	0.000568 J	0.00221	0.00128	0.000716	7.48e-05 J
E1668A	PCB-179	52663-64-6	mg/kg	0.001 J	0.00397	0.00236	0.00116	0.00012 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00584 J	0.0228	0.0138	0.0076	0.000714
E1668A	PCB-181	74472-47-2	mg/kg	0.000127 U	0.00021	4.91e-05 J	0.000188 U	0.000121 U
E1668A	PCB-182	60145-23-5	mg/kg	0.000127 U	7.49e-05 J	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00172 J	0.00639	0.00442	0.00212	0.000201 J
E1668A	PCB-184	74472-48-3	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-186	74472-49-4	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00338 J	0.0135	0.00841	0.00444	0.000777
E1668A	PCB-188	74487-85-7	mg/kg	0.000127 U	0.000147 J	6.17e-05 J	0.000112 J	0.000121 U
E1668A	PCB-189	39635-31-9	mg/kg	9.03e-05 J	0.000643	0.000206	0.000132 J	0.000121 U
E1668A	PCB-190	41411-64-7	mg/kg	0.000487 J	0.00217	0.0011	0.000632	4.29e-05 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000107 J	0.000561	0.000232	0.000188 U	0.000121 U
E1668A	PCB-192	74472-51-8	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00141 J	0.00444	0.00462	0.00239	0.000773
E1668A	PCB-195	52663-78-2	mg/kg	0.000458 J	0.00153	0.00135	0.000652	7.55e-05 J
E1668A	PCB-196	42740-50-1	mg/kg	0.000724 J	0.00206	0.0024	0.00104	0.00031
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.00019 J	0.000583	0.000612	0.000258 J	0.000242 U
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00187 J	0.00526	0.00712	0.00312	0.0022
E1668A	PCB-201	40186-71-8	mg/kg	0.000272 J	0.000645	0.000798	0.000404	0.000169
E1668A	PCB-202	2136-99-4	mg/kg	0.000637 J	0.00156	0.00251	0.00115	0.000712
E1668A	PCB-203	52663-76-0	mg/kg	0.00115 J	0.00322	0.00461	0.00194	0.0017
E1668A	PCB-204	74472-52-9	mg/kg	0.000127 U	0.000149 U	0.000132 U	0.000188 U	0.000121 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000127 U	0.000197	0.00019	9.36e-05 J	0.000121 U
E1668A	PCB-206	40186-72-9	mg/kg	0.00157 J	0.00435	0.00906	0.00329	0.00443
E1668A	PCB-207	52663-79-3	mg/kg	0.000142 J	0.000397	0.000789	0.000317	0.000366
E1668A	PCB-208	52663-77-1	mg/kg	0.000612 J	0.0015	0.00359	0.0012	0.00156
E1668A	PCB-209	2051-24-3	mg/kg	0.00137 J	0.00283	0.00982	0.00345	0.00112
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.262 J	1.28 J	0.426 J	0.487 J	0.0438 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.279 J	1.4 J	0.457 J	0.515 J	0.0457 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.34e-05 J	1.93e-05 J	1.88e-05	1.99e-05 J	1.22e-05 J

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	0.00082	0.000197	0.000435
E1668A	PCB-2	2051-61-8	mg/kg	0.000294	0.000101 U	7.35e-05
E1668A	PCB-3	2051-62-9	mg/kg	0.000628	0.000197 J	0.000166
E1668A	PCB-4	13029-08-8	mg/kg	0.00387	0.000252 U	0.000575
E1668A	PCB-5	16605-91-7	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-6	25569-80-6	mg/kg	0.00158	0.000101 U	0.000201
E1668A	PCB-7	33284-50-3	mg/kg	0.000204	0.000101 U	6.55e-05 U
E1668A	PCB-8	34883-43-7	mg/kg	0.00577	0.00047	0.000536
E1668A	PCB-9	34883-39-1	mg/kg	0.000254	0.000101 U	6.55e-05 U
E1668A	PCB-10	33146-45-1	mg/kg	0.00035	0.000252 U	5.56e-05 J
E1668A	PCB-11	2050-67-1	mg/kg	0.00782	0.00086	0.000658
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.00265	0.000252 U	0.00025
E1668A	PCB-14	34883-41-5	mg/kg	7.15e-05 U	0.000101 U	6.55e-05 U
E1668A	PCB-15	2050-68-2	mg/kg	0.0129	0.000817	0.00104
E1668A	PCB-16	38444-78-9	mg/kg	0.00692	0.000477	0.000131
E1668A	PCB-17	37680-66-3	mg/kg	0.0107	0.000663	0.000322
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0157	0.00105	0.00036
E1668A	PCB-19	38444-73-4	mg/kg	0.00188	0.00019	9.86e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0455 J	0.0034	0.00185
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.01	0.000931	0.000276
E1668A	PCB-22	38444-85-8	mg/kg	0.0102	0.000877	0.000306
E1668A	PCB-23	55720-44-0	mg/kg	7.15e-05 U	0.000101 U	6.55e-05 U
E1668A	PCB-24	55702-45-9	mg/kg	0.000173	0.000101 U	6.55e-05 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00464	0.000292	0.000259
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00743	0.000541	0.000448
E1668A	PCB-27	38444-76-7	mg/kg	0.00217	0.000165	9.44e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0321 J	0.00236	0.00125
E1668A	PCB-32	38444-77-8	mg/kg	0.00732	0.000554	0.000291
E1668A	PCB-34	37680-68-5	mg/kg	0.000231	0.000101 U	6.55e-05 U
E1668A	PCB-35	37680-69-6	mg/kg	0.00121	8.71e-05 J	6.18e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	4.5e-05 J	0.000101 U	6.55e-05 U
E1668A	PCB-37	38444-90-5	mg/kg	0.0121	0.000882	0.000491
E1668A	PCB-38	53555-66-1	mg/kg	2.89e-05 J	0.000101 U	6.55e-05 U
E1668A	PCB-39	38444-88-1	mg/kg	0.000221	0.000101 U	6.55e-05 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.0177	0.00151	0.000416
E1668A	PCB-41	52663-59-9	mg/kg	0.000357 U	0.000504 U	0.000328 U
E1668A	PCB-42	36559-22-5	mg/kg	0.0116	0.00099	0.000271
E1668A	PCB-43	70362-46-8	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0348	0.00311	0.00093
E1668A	PCB-45	70362-45-7	mg/kg	0.0047	0.000448	7.81e-05 J
E1668A	PCB-46	41464-47-5	mg/kg	0.00176	0.000184	3.89e-05 J
E1668A	PCB-48	70362-47-9	mg/kg	0.00633	0.000514	0.000164 U
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0252	0.00217	0.000739

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00438	0.000491 J	0.00012 J
E1668A	PCB-51	68194-04-7	mg/kg	0.0013	0.000189 J	0.000164 U
E1668A	PCB-52	35693-99-3	mg/kg	0.0345	0.0035	0.00157
E1668A	PCB-54	15968-05-5	mg/kg	9.73e-05 J	0.000252 U	0.000164 U
E1668A	PCB-55	74338-24-2	mg/kg	0.000362	0.000252 U	0.000164 U
E1668A	PCB-56	41464-43-1	mg/kg	0.016	0.0015	0.000429
E1668A	PCB-57	70424-67-8	mg/kg	0.000257	0.000252 U	0.000164 U
E1668A	PCB-58	41464-49-7	mg/kg	0.000131 J	0.000252 U	0.000164 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00346	0.00101 U	0.000655 U
E1668A	PCB-60	33025-41-1	mg/kg	0.00571	0.000648	0.000146 J
E1668A	PCB-61/70/74/76	PCB-61/70/74	mg/kg	0.055	0.00523	0.00159
E1668A	PCB-63	74472-34-7	mg/kg	0.00155	0.000137 J	0.000164 U
E1668A	PCB-64	52663-58-8	mg/kg	0.0164	0.00144	0.000347
E1668A	PCB-66	32598-10-0	mg/kg	0.0356	0.00322	0.00112
E1668A	PCB-67	73575-53-8	mg/kg	0.00114	0.000252 U	0.000164 U
E1668A	PCB-68	73575-52-7	mg/kg	0.000278	0.000252 U	0.000164 U
E1668A	PCB-72	41464-42-0	mg/kg	0.000441	0.000252 U	0.000164 U
E1668A	PCB-73	74338-23-1	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-77	32598-13-3	mg/kg	0.00437	0.000343	0.000145 J
E1668A	PCB-78	70362-49-1	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-80	33284-52-5	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000147 J	0.000252 U	0.000164 U
E1668A	PCB-82	52663-62-4	mg/kg	0.004	0.000479	9.46e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	0.00176	0.000504 U	0.000328 U
E1668A	PCB-84	52663-60-2	mg/kg	0.00814	0.000998	0.000189
E1668A	PCB-85/116/117	PCB-85/116/1	mg/kg	0.00607	0.000668 J	0.000159 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97	mg/kg	0.0197	0.00247	0.000502 J
E1668A	PCB-88	55215-17-3	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000525	0.000252 U	0.000164 U
E1668A	PCB-90/101/113	PCB-90/101/1	mg/kg	0.0291	0.00378	0.000877
E1668A	PCB-91	68194-05-8	mg/kg	0.00492	0.000611	0.000138 J
E1668A	PCB-92	52663-61-3	mg/kg	0.0055	0.000665	0.000156 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000513 J	0.00101 U	0.000655 U
E1668A	PCB-94	73575-55-0	mg/kg	0.000246	0.000252 U	0.000164 U
E1668A	PCB-95	38379-99-6	mg/kg	0.0234	0.00328	0.000692
E1668A	PCB-96	73575-54-9	mg/kg	0.00029	0.000252 U	0.000164 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00147	0.00101 U	0.000655 U
E1668A	PCB-99	38380-01-7	mg/kg	0.0154	0.00187	0.000487
E1668A	PCB-103	60145-21-3	mg/kg	0.000341	0.000252 U	0.000164 U
E1668A	PCB-104	56558-16-8	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0111	0.00138	0.000307
E1668A	PCB-106	70424-69-0	mg/kg	0.000179 U	0.000252 U	0.000164 U

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1668A	PCB-107	70424-68-9	mg/kg	0.00231	0.000273	7.72e-05 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.00109	0.000151 J	0.000328 U
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0358	0.00458	0.000999
E1668A	PCB-111	39635-32-0	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-112	74472-36-9	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000684	8.17e-05 J	0.000164 U
E1668A	PCB-118	31508-00-6	mg/kg	0.0278	0.00324	0.000941
E1668A	PCB-120	68194-12-7	mg/kg	0.000149 J	0.000252 U	0.000164 U
E1668A	PCB-121	56558-18-0	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-122	76842-07-4	mg/kg	0.000434	0.000252 U	0.000164 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000679	0.000252 U	0.000164 U
E1668A	PCB-126	57465-28-8	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-127	39635-33-1	mg/kg	0.000447	0.000252 U	0.000164 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00411	0.000557	0.000328 U
E1668A	PCB-129/138/163	PCB-129/138/	mg/kg	0.034	0.00474	0.000898
E1668A	PCB-130	52663-66-8	mg/kg	0.00201	0.000244 J	0.000164 U
E1668A	PCB-131	61798-70-7	mg/kg	0.000418	0.000252 U	0.000164 U
E1668A	PCB-132	38380-05-1	mg/kg	0.00917	0.0013	0.000256
E1668A	PCB-133	35694-04-3	mg/kg	0.000549	8.11e-05 J	0.000164 U
E1668A	PCB-134	52704-70-8	mg/kg	0.00186	0.000243 J	0.000328 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.0102	0.00149	0.000247 J
E1668A	PCB-136	38411-22-2	mg/kg	0.00324	0.00051	8.21e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00116	0.000148 J	0.000164 U
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000489	0.000504 U	0.000328 U
E1668A	PCB-141	52712-04-6	mg/kg	0.00554	0.000901	0.000129 J
E1668A	PCB-142	41411-61-4	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000357 U	0.000504 U	0.000328 U
E1668A	PCB-144	68194-14-9	mg/kg	0.00139	0.000195 J	0.000164 U
E1668A	PCB-145	74472-40-5	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00461	0.000624	0.000153 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0234	0.00354	0.000686
E1668A	PCB-148	74472-41-6	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-150	68194-08-1	mg/kg	8.21e-05 J	0.000252 U	0.000164 U
E1668A	PCB-152	68194-09-2	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0276	0.00389	0.000803
E1668A	PCB-154	60145-22-4	mg/kg	0.000513	0.000504 U	0.000328 U
E1668A	PCB-155	33979-03-2	mg/kg	0.000219	0.000252 U	0.000164 U
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00344	0.000476 J	0.000113 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00314	0.000436	8.16e-05 J
E1668A	PCB-159	39635-35-3	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-160	41411-62-5	mg/kg	0.000715 U	0.00101 U	0.000655 U
E1668A	PCB-161	74472-43-8	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000179 U	0.000252 U	0.000164 U

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1668A	PCB-164	74472-45-0	mg/kg	0.00222	0.000328	6.56e-05 J
E1668A	PCB-165	74472-46-1	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-167	52663-72-6	mg/kg	0.00117	0.000168 J	0.000164 U
E1668A	PCB-169	32774-16-6	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0087	0.00132	0.000172
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00261	0.000389 J	0.000328 U
E1668A	PCB-172	52663-74-8	mg/kg	0.00151	0.000263	0.000164 U
E1668A	PCB-174	38411-25-5	mg/kg	0.008	0.00117	0.000155 J
E1668A	PCB-175	40186-70-7	mg/kg	0.000403	0.000252 U	0.000164 U
E1668A	PCB-176	52663-65-7	mg/kg	0.00105	0.000142 J	0.000164 U
E1668A	PCB-177	52663-70-4	mg/kg	0.0052	0.000763	0.000164 U
E1668A	PCB-178	52663-67-9	mg/kg	0.00203	0.00028	0.000164 U
E1668A	PCB-179	52663-64-6	mg/kg	0.00365	0.00054	9.69e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0212	0.00318	0.000478
E1668A	PCB-181	74472-47-2	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-182	60145-23-5	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00642	9e-04	0.000138 J
E1668A	PCB-184	74472-48-3	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-186	74472-49-4	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0122	0.00163	0.000312
E1668A	PCB-188	74487-85-7	mg/kg	0.000179 U	7.78e-05 J	0.000164 U
E1668A	PCB-189	39635-31-9	mg/kg	0.000319	0.000252 U	0.000164 U
E1668A	PCB-190	41411-64-7	mg/kg	0.00177	0.000268	0.000164 U
E1668A	PCB-191	74472-50-7	mg/kg	0.000377	0.000252 U	0.000164 U
E1668A	PCB-192	74472-51-8	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00595	0.000716	0.00018
E1668A	PCB-195	52663-78-2	mg/kg	0.00199	0.000268	0.000164 U
E1668A	PCB-196	42740-50-1	mg/kg	0.00304	0.000397	9.12e-05 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000801	0.000504 U	0.000328 U
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00722	0.000869	0.000278 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000914	0.000159 J	0.000164 U
E1668A	PCB-202	2136-99-4	mg/kg	0.00201	0.000237 J	0.000328 U
E1668A	PCB-203	52663-76-0	mg/kg	0.00436	0.000505	0.000182
E1668A	PCB-204	74472-52-9	mg/kg	0.000179 U	0.000252 U	0.000164 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000271	0.000252 U	0.000164 U
E1668A	PCB-206	40186-72-9	mg/kg	0.00538	0.000538	0.000346
E1668A	PCB-207	52663-79-3	mg/kg	0.000533	0.000252 U	0.000164 U
E1668A	PCB-208	52663-77-1	mg/kg	0.00185	0.00018 J	0.000159 J
E1668A	PCB-209	2051-24-3	mg/kg	0.00446	0.000574	0.000383
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.902 J	0.115 J	0.0458 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.952 J	0.122 J	0.0484 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.99e-05 J	2.54e-05 J	1.65e-05 J

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			

Notes:
J - Estimated Concentration
R- Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-11
Analytical Data for Dioxins and Furans
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED122ACL	NB03SED122BCL	NB03SED122CCL	NB03SED123ACL	NB03SED123BCL	NB03SED125CL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED122A_09/17/14	NB03SED122B_09/18/14	NB03SED122C_09/18/14	NB03SED123A_09/23/14	NB03SED123B_09/23/14	NB03SED125_09/26/14
			Sample ID	NB03SED122A	NB03SED122B	NB03SED122C	NB03SED123A	NB03SED123B	NB03SED125
			Sample Date	09/17/14	09/18/14	09/18/14	09/23/14	09/23/14	09/26/14
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.17e-05 J	1.23e-05 J	1.78e-05 J	1.33e-05 J	6.11e-06 J	5.43e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.64e-06 J	8.76e-07 J	1.03e-06 J	9.85e-07 J	5.76e-07 J	7.88e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.32e-06 J	8.44e-07 J	8.29e-07 J	1.17e-06 J	5.54e-07 J	8.64e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.85e-06 J	2.25e-06 J	2.95e-06 J	3.62e-06 J	1.51e-06 J	1.93e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.64e-06 J	1.59e-06 J	1.96e-06 J	2.37e-06 J	1.03e-06 J	1.11e-06 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	5.28e-05 J	2.96e-05 J	4.48e-05 J	5.89e-05	2.48e-05	2.43e-05 J
E1613B	OCDD	3268-87-9	mg/kg	0.000637 J	0.000379 J	0.000611 J	0.00056 J	0.000335 J	6e-04 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	5.23e-06 J	2.65e-06 J	4.47e-06 J	4.03e-06 J	1.33e-06 J	1.8e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	5.82e-06 J	2.3e-06 J	3.1e-06 J	2.24e-06 J	9.36e-07 J	2.76e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.16e-05 J	4.83e-06 J	5.92e-06 J	4.62e-06 J	2.32e-06 J	5.86e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	5.94e-05 J	2.08e-05 J	2.8e-05 J	1.46e-05 J	5.83e-06 J	R
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.43e-05 J	5.89e-06 J	7.08e-06 J	4.29e-06 J	1.92e-06 J	9.1e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	2.28e-06 J	1.05e-07 U	1.17e-06 J	8.83e-07 J	5.31e-07 J	9.96e-08 U
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	5.84e-06 J	3.24e-06 J	4.06e-06 J	3.45e-06 J	1.41e-06 J	4.21e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	0.000212 J	7.53e-05 J	0.000101 J	5.9e-05 J	2.26e-05 J	0.00014 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.78e-06 J	2.41e-06 J	3.29e-06 J	2.26e-06 J	9.37e-07 J	2.66e-06 J
E1613B	OCDF	39001-02-0	mg/kg	0.000274 J	9.99e-05 J	0.00013 J	8.12e-05 J	3.32e-05 J	0.000183 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	4.95e-05 J	1.96e-05 J	2.75e-05 J	2.06e-05 J	9.42e-06 J	1.19e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-11
Analytical Data for Dioxins and Furans
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED127ACL	NB03SED127BCL	NB03SED129CL	NB03SED130CL	NB03SED131ACL	NB03SED131ACL
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED127A_09/24/14	NB03SED127B_09/24/14	NB03SED129_09/08/14	NB03SED130_09/16/14	NB03SED131A_09/10/14	NB03SEDDUP-01_09/10/14
			Sample ID	NB03SED127A	NB03SED127B	NB03SED129	NB03SED130	NB03SED131A	NB03SEDDUP-01
			Sample Date	09/24/14	09/24/14	09/08/14	09/16/14	09/10/14	09/10/14
			Sample Type	N	N	N	N	N	FD
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.93e-06 J	9.07e-05 J	0.000271	2.62e-05 J	4.62e-06	5.6e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	4.43e-07 J	4.22e-06 J	1.38e-05	2.77e-06 J	4.25e-07 J	3.8e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.07e-07 J	3.64e-06 J	1.24e-05	2.48e-06 J	2.98e-07 J	4.63e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.56e-06 J	1.57e-05 J	4.98e-05	1.04e-05 J	1.35e-06 J	1.88e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.01e-06 J	8.34e-06 J	2.74e-05	5.74e-06 J	9.52e-07 J	9.89e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	5.37e-05	0.000218	0.00117 J	0.000227 J	2.72e-05 J	2.7e-05 J
E1613B	OCDD	3268-87-9	mg/kg	0.000656 J	0.00214 J	0.0117 J	0.00223 J	0.000288 J	0.000306 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.37e-06 J	1.03e-05 J	5.03e-05 J	1.26e-05 J	1.77e-06 J	1.82e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	7.53e-07 J	6.24e-06 J	3.65e-05 J	6.16e-06 J	6.11e-07 J	1.08e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.66e-06 J	1.19e-05 J	4.9e-05 J	9.24e-06 J	1.66e-06 J	1.84e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.16e-06 J	4e-05 J	9.33e-05 J	R	3e-06 J	3.51e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.44e-06 J	1.41e-05 J	4.97e-05 J	6.84e-06 J	1.18e-06 J	1.21e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7.61e-08 U	3.2e-06 J	6.58e-07 U	2.27e-06 J	3.94e-07 J	1.34e-07 U
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.25e-06 J	7.77e-06 J	3.83e-05 J	5.51e-06 J	1.1e-06 J	1.08e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.84e-05 J	0.000228 J	0.000478 J	8.02e-05 J	1.53e-05 J	1.74e-05 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	8.83e-07 J	8.57e-06 J	3.07e-05	5.46e-06 J	9.6e-07 J	9.38e-07 J
E1613B	OCDF	39001-02-0	mg/kg	2.94e-05 J	0.000331 J	0.000732 J	0.000149 J	3.03e-05 J	2.82e-05 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	6.97e-06 J	0.000114 J	0.000353	4.04e-05 J	7.1e-06	8.22e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-11
Analytical Data for Dioxins and Furans
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED131BCL	NB03SED132ACL	NB03SED133CL	NB03SED134CL	NB03SED135CL	NB03SED136
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED131B_09/15/14	NB03SED132A_09/11/14	NB03SED133_09/22/14	NB03SED134_09/25/14	NB03SED135_09/19/14	NB03SED-CHM136_09/14/15
			Sample ID	NB03SED131B	NB03SED132A	NB03SED133	NB03SED134	NB03SED135	NB03SED-CHM136
			Sample Date	09/15/14	09/11/14	09/22/14	09/25/14	09/19/14	09/14/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.83e-06	8.45e-05	9.71e-05 J	1.28e-05	1.23e-05 J	0.00011 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	2.74e-07 J	2.19e-06 J	2.94e-06 J	4.74e-06 J	2.21e-06 J	4.51e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.99e-07 J	1.78e-06 J	1.99e-06 J	4.5e-06 J	1.32e-06 J	4.66e-06 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.15e-06 J	9.08e-06	6.21e-06 J	2.05e-05	7.24e-06 J	1.63e-05 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	7.64e-07 J	5.06e-06 J	3.67e-06 J	1.03e-05 J	3.29e-06 J	1.08e-05 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.13e-05 J	0.000132 J	8.52e-05	0.000393 J	9.74e-05 J	0.000291 J
E1613B	OCDD	3268-87-9	mg/kg	0.000226 J	0.00117 J	0.000956 J	0.00415 J	0.000848 J	0.00297 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.16e-07 J	6.38e-06 J	6.04e-06 J	1.34e-05 J	1.3e-05	1.73e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	4.81e-07 J	4.38e-06 J	6.44e-06 J	7.35e-06	5.85e-06 J	1.04e-05 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	7.9e-07 J	8.65e-06 J	1.02e-05 J	1.06e-05 J	1.11e-05 J	2.29e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.84e-06 J	3.84e-05 J	5.93e-05 J	R	1.18e-05	0.000133 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	8.3e-07 J	1.04e-05 J	1.4e-05 J	1.18e-05 J	6.97e-06 J	2.78e-05 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.71e-07 J	1.97e-06 J	1.31e-07 U	2.05e-07 U	4.71e-07 U	3.1e-07 U
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	7.83e-07 J		5.32e-06 J	1.21e-05 J	4.44e-06 J	1.3e-05 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.03e-05 J	0.000165 J	0.000268 J	0.000823 J	5.26e-05 J	0.000504 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	6.18e-07 J	5.58e-06	6.85e-06 J	1.16e-05 J	4.43e-06 J	1.84e-05 J
E1613B	OCDF	39001-02-0	mg/kg	1.64e-05 J	0.000249 J	0.000392 J	0.000505 J	0.000118 J	0.000886 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	4.43e-06	1e-04	0.000117 J	4.19e-05 J	2.47e-05 J	0.000153 J

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Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-11
Analytical Data for Dioxins and Furans
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED140	NB03SED142	NB03SED143	NB03SED145	NB03SED149
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM140_09/29/15	NB03SED-CHM142_09/28/15	NB03SED-CHM143_09/29/15	NB03SED-CHM145_09/29/15	NB03SED-CHM149_09/22/15
			Sample ID	NB03SED-CHM140	NB03SED-CHM142	NB03SED-CHM143	NB03SED-CHM145	NB03SED-CHM149
			Sample Date	09/29/15	09/28/15	09/29/15	09/29/15	09/22/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1e-04 J	1.43e-05 J	7.76e-05 J	5.36e-05 J	5.83e-05 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.02e-06 J	9.99e-07 J	4.66e-06 J	2.62e-06 J	7.03e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	3.91e-06 J	1.07e-06 J	4.4e-06 J	2.66e-06 J	6.61e-06 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	9.65e-06 J	3.53e-06 J	1.96e-05 J	1.13e-05 J	2.18e-05 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	5.42e-06 J	2.2e-06 J	1.14e-05 J	6.9e-06 J	1.32e-05 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1e-04 J	5.83e-05 J	0.000329 J	0.000201 J	0.000382 J
E1613B	OCDD	3268-87-9	mg/kg	0.00092 J	0.000729 J	0.00347 J	0.00189 J	0.0036 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.11e-05 J	4.01e-06 J	1.34e-05 J	9.84e-06 J	2.55e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	3.45e-05 J	2.21e-06 J	8.59e-06 J	5.49e-06 J	1.8e-05 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.58e-05 J	3.73e-06 J	1.82e-05 J	8.11e-06 J	2.94e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	0.000433 J	1.1e-05 J	7.19e-05 J	2.87e-05 J	4.6e-05 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	9.52e-05 J	3.38e-06 J	1.87e-05 J	9.12e-06 J	2.73e-05 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	8.93e-08 U	4.38e-08 U	1.09e-06 U	5.35e-08 U	1.36e-06 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.94e-05 J	2.97e-06 J	1.27e-05 J	4.72e-06 J	2.48e-05 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	0.00188 J	4.51e-05 J	0.000345 J	0.000132 J	0.000212 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	3.71e-05 J	1.95e-06 J	1.26e-05 J	6.19e-06 J	1.28e-05 J
E1613B	OCDF	39001-02-0	mg/kg	0.00266 J	6.67e-05 J	0.000472 J	0.000215 J	0.000315 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2e-04 J	2.06e-05 J	0.000111 J	7.02e-05 J	9.86e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED155	NB03SED160	NB03SED161	NB03SED164	NB03SED166
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM155_09/20/15	NB03SED-CHM160_09/28/15	NB03SED-CHM161_09/15/15	NB03SED-CHM164_09/13/15	NB03SED-CHM166_09/13/15
			Sample ID	NB03SED-CHM155	NB03SED-CHM160	NB03SED-CHM161	NB03SED-CHM164	NB03SED-CHM166
			Sample Date	09/20/15	09/28/15	09/15/15	09/13/15	09/13/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	5.62e-06 J	8.39e-05 J	0.000137 J	4.82e-05	9.46e-05 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	4.04e-07 J	6.63e-06 J	7.68e-06 J	1.39e-06 J	4.53e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	4.05e-07 J	3.37e-06 J	6.82e-06 J	1.44e-06 J	4.44e-06 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.68e-06 J	2.14e-05 J	2.42e-05 J	5.42e-06	1.69e-05 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.05e-06 J	1.19e-05 J	2.19e-05 J	3.39e-06 J	1.06e-05 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.77e-05 J	0.000257 J	0.000486 J	8.31e-05 J	0.000275 J
E1613B	OCDD	3268-87-9	mg/kg	0.000303 J	0.00221 J	0.00574 J	0.000922 J	0.00295 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.68e-06 J	1.44e-05 J	1.97e-05 J	6.72e-06 J	1.65e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	9.01e-07 J	6.95e-06 J	9.92e-06 J	4.99e-06 J	1.04e-05 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.57e-06 J	1.54e-05 J	2.05e-05 J	1e-05 J	2.41e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.23e-06 J	4.85e-05 J	0.000101 J	5.07e-05 J	0.000137 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.22e-06 J	1.44e-05 J	2.43e-05 J	1.16e-05 J	2.76e-05 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	4.52e-07 J	1.88e-07 U	4.86e-06 J	2.03e-06 J	2.62e-07 U
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.18e-06 J	7.94e-06 J	1.24e-05 J	5.06e-06 J	1.41e-05 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.68e-05 J	0.000221 J	0.000405 J	0.000176 J	0.000485 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.04e-06 J	7.94e-06 J	1.61e-05 J	5.48e-06 J	1.89e-05 J
E1613B	OCDF	39001-02-0	mg/kg	2.66e-05 J	0.000305 J	0.00065 J	0.000266 J	0.000781 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	8.17e-06 J	0.000113 J	0.000184 J	6.44e-05	0.000138 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Location ID	NB03SED167	NB03SED168	NB03SED168	NB03SED169	NB03SED170
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM167_09/14/15	NB03SED-CHM168_09/15/15	NB03SED-DUP-01_09/15/15	NB03SED-CHM169_09/15/15	NB03SED-CHM170_09/16/15
			Sample ID	NB03SED-CHM167	NB03SED-CHM168	NB03SED-DUP-01	NB03SED-CHM169	NB03SED-CHM170
			Sample Date	09/14/15	09/15/15	09/15/15	09/15/15	09/16/15
			Sample Type	N	N	FD	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	9.98e-06	9.14e-05 J	0.000129 J	4.86e-05	5.38e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	4.66e-07 J	2.99e-06 J	4.66e-06 J	2.07e-06 J	3.39e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	6.33e-07 J	3.21e-06 J	3.65e-06 J	2.06e-06 J	3.37e-06 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.97e-06 J	1.25e-05 J	1.4e-05 J	7.43e-06	1.47e-05
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.23e-06 J	8.01e-06 J	8.64e-06 J	4.4e-06 J	8.37e-06 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	4.42e-05 J	0.000202 J	0.000233 J	0.00014 J	0.000263 J
E1613B	OCDD	3268-87-9	mg/kg	0.000435 J	0.00206 J	0.00233 J	0.00152 J	0.00265 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.1e-06 J	1.35e-05 J	1.31e-05 J	7.19e-06 J	1.29e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.19e-06 J	6.8e-06 J	8.43e-06 J	3.87e-06 J	6.88e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.97e-06 J	1.42e-05 J	1.47e-05 J	7.47e-06 J	1.16e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	8.06e-06 J	5.99e-05 J	6.45e-05 J	3.15e-05 J	4.33e-05 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	2.15e-06 J	1.51e-05 J	1.72e-05 J	7.34e-06 J	1.19e-05 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	5.05e-07 J	1.79e-07 U	3.43e-06 J	1.87e-06 J	2.63e-06 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.47e-06 J	7.8e-06 J	8.1e-06 J	4.16e-06 J	6.52e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.19e-05 J	0.000233 J	0.000258 J	0.000123 J	0.000179 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.33e-06 J	9.36e-06 J	1.02e-05 J	5.59e-06	7.82e-06
E1613B	OCDF	39001-02-0	mg/kg	5.02e-05 J	0.000356 J	0.000391 J	0.000215 J	0.000286 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.38e-05	0.000116 J	0.000157 J	6.28e-05	7.66e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-11
Analytical Data for Dioxins and Furans
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED171	NB03SED172	NB03SED173	NB03SED174	NB03SED175
			Depth	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM171_09/17/15	NB03SED-CHM172_09/23/15	NB03SED-CHM173_09/23/15	NB03SED-CHM174_09/20/15	NB03SED-CHM175_09/21/15
			Sample ID	NB03SED-CHM171	NB03SED-CHM172	NB03SED-CHM173	NB03SED-CHM174	NB03SED-CHM175
			Sample Date	09/17/15	09/23/15	09/23/15	09/20/15	09/21/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.88e-05	4.92e-05 J	0.000261 J	2.03e-05 J	1.76e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	3.12e-06 J	4.28e-06 J	5.22e-06 J	2.88e-06 J	2.22e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.97e-06 J	4.26e-06 J	4.24e-06 J	3.23e-06 J	3.2e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.02e-05	1.73e-05 J	2.19e-05 J	1.42e-05 J	1.23e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	6.35e-06 J	9.02e-06 J	1.04e-05 J	9e-06 J	6.85e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	0.000187 J	0.000252 J	0.000339 J	0.000244 J	2e-05 J
E1613B	OCDD	3268-87-9	mg/kg	0.00178 J	0.00241 J	0.00317 J	0.00252 J	0.000212 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.75e-06 J	2.07e-05 J	1.56e-05 J	1.56e-05 J	1.28e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	5.19e-06 J	9.95e-06 J	9.61e-06 J	6.56e-06 J	7.28e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	8.49e-06 J	1.48e-05 J	2.2e-05 J	9.65e-06 J	1.04e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	2.79e-05 J	3.93e-05 J	6.28e-05 J	2.61e-05 J	2.14e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	8.31e-06 J	1.51e-05 J	2.09e-05 J	9.32e-06 J	1.21e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	2.06e-06 J	3.86e-06 J	5.43e-07 U	2.28e-06 J	4.73e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	5.66e-06 J	1.01e-05 J	1.16e-05 J	5.21e-06 J	1.05e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	0.000126 J	0.000189 J	0.000394 J	0.000134 J	1.12e-05 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.59e-06	8.97e-06 J	1.4e-05 J	6.63e-06 J	2.78e-06 J
E1613B	OCDF	39001-02-0	mg/kg	0.000193 J	0.000266 J	0.000449 J	0.000211 J	1.89e-05 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	5.57e-05	7.55e-05 J	0.000296 J	3.94e-05 J	3.56e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-11
Analytical Data for Dioxins and Furans
NBSA Accessible Surface Sediment
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Location ID	NB03SED176	NB03SED177	NB03SED178
			Depth	0.0-0.5	0.0-0.5	0.0-0.5
			Sample ID and Date	NB03SED-CHM176_09/23/15	NB03SED-CHM177_09/29/15	NB03SED-CHM178_09/23/15
			Sample ID	NB03SED-CHM176	NB03SED-CHM177	NB03SED-CHM178
			Sample Date	09/23/15	09/29/15	09/23/15
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	5.04e-05 J	6.12e-06 J	2.53e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	6.58e-06 J	1.59e-06 J	1.12e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	6.82e-06 J	2.09e-06 J	1.18e-06 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.12e-05 J	4.84e-06 J	3.22e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.6e-05 J	4.58e-06 J	2.42e-06 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	0.000503 J	9.83e-05 J	7.59e-05 J
E1613B	OCDD	3268-87-9	mg/kg	0.00478 J	0.00145 J	0.00158 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.92e-05 J	3.63e-06 J	5.94e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.69e-05 J	2.1e-06 J	3.47e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.35e-05 J	3.56e-06 J	4.1e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	6.23e-05 J	4.42e-06 J	5.93e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	2.69e-05 J	2.09e-06 J	3.56e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.42e-07 U	4.95e-08 U	1.25e-06 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.7e-05 J	2.45e-06 J	3.47e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	0.000308 J	2.34e-05 J	2.68e-05 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.28e-05 J	1.57e-06 J	2.53e-06 J
E1613B	OCDF	39001-02-0	mg/kg	0.000551 J	3.23e-05 J	6.19e-05 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	9.34e-05 J	1.29e-05 J	9.23e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN	N02-CE03-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3	3.14
				Stream Code	NB	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS	N02-CE03-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit							
KRONE	T	Dibutyltin	14488-53-0	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tributyltin cation	36643-28-4	ug/l							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE	N02-TNNE	N02-TNNE
				N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE
				3.3	2.98	2.91	3.15	3.09	2.07	2.77	2.78
				NB	NB	NB	NB	NB	NB	NB	NB
				3.87	0.97	0.99	0.99	0.97	4.57	4.57	4.57
				N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS
				N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS
				3.28	3.14	3.04	2.94	3.09	3.02	2.99	2.96
				NB	NB	NB	NB	NB	NB	NB	NB
				4.57	2.68	2.68	3.87	3.87	3.87	3.87	0.97
				N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS
				08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U							
KRONE	T	Monobutyltin	78763-54-9	0.05 U							
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U							
KRONE	T	Tri-n-butyltin hydride	688-73-3	0.05 U							
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE
				3.05	3.1	3.04	2.63	1.1	2.75	3.1	2.9
				NB	NB	NB	NB	NB	NB	NB	NB
				0.98	0.98	0.98	2.68	4.57	4.57	4.57	4.57
				N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0								
KRONE	T	Monobutyltin	78763-54-9								
KRONE	T	Tetrabutyltin	1461-25-2								
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE
				N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE
				2.6	2.7	3.14	2.97	3	3	3	3
				NB	NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77				
				N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0					0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9					0.084	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2					0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4					0.05 U	0.05 U	0.05 U	0.05 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNBN	N04-TNBN	N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS
				N04-CE11-TNBN	N04-CE12-TNBN	N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS
				3.2	3.13	2.76	2.95	3	3	3	3
				NB	NB	NB	NB	NB	NB	NB	NB
				N04-CE11-TNBN-AS	N04-CE12-TNBN-AS	N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS
				02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNNE	N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE12-TNNE	N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				3.26	1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB	NB
											2.68
				N04-CE12-TNNE-AS	N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3								0.05 U
KRONE	T	Tributyltin cation	36643-28-4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

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Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91	3.11
				NB	NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012	03/29/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW
				N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW
				3.07	2.93	1.28	2.94	2.81	2.58	2.5	2.92
				NB	NB	NB	NB	NB	NB	NB	NB
				0.97	0.97	4.57	4.57	4.57	4.57	3.77	3.77
				N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
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				N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN	N06-TNBN	N06-TNBN
				N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN
				2.96	3.07	2.93	2.7	3.11	3	3.16	2.98
				NB	NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	2.68	2.68	2.68	3.87	3.87	3.87
				N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS
				03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U						
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U						
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U						
KRONE	T	Tri-n-butyltin hydride	688-73-3	0.05 U	0.05 U						
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS	N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE
				N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS	N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE
				3.02	3	3.02	2.98	3.1	1.26	2.5	2.84
				NB	NB	NB	NB	NB	NB	NB	NB
				3.87	0.97	0.98	0.98	0.97	4.57	4.57	4.57
				N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS	N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS
				06/06/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0								
KRONE	T	Monobutyltin	78763-54-9								
KRONE	T	Tetrabutyltin	1461-25-2								
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

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Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N06-TNNE	N06-TNNW	N06-TNNW	N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW	N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE
				2.98	2.63	3	3	3	2.05	2.95	3.1
				NB	NB	NB	NB	NB	NB	NB	NB
				4.57	3.77	3.78	3.77	3.77			
				N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS	N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0						0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9						0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2						0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4						0.05 U	0.05 U	0.05 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNBE	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE04-TNBE	N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS
				3.05	3	3	3.05	2.97	3	3.03	3.12
				NB	NB	NB	NB	NB	NB	NB	NB
				N07-CE04-TNBE-AS	N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:
J - Estimated Concentration
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				N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				3.05	0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB	NB
				N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Monobutyltin	78763-54-9	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

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Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN
				3.01	2.1	3	3	3.1	3.1	3	3
				NB	NB				NB		
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0	0.05 U							
KRONE	T	Monobutyltin	78763-54-9	0.05 U							
KRONE	T	Tetrabutyltin	1461-25-2	0.05 U							
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4	0.05 U							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE	N09-TNNE	N09-TNNE
				N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE	N09-CE20-TNNE	N09-CE21-TNNE
				3.2	3	2.9	3	3.06	3	3	3.1
					NB				NB		
				N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS	N09-CE20-TNNE-AS	N09-CE21-TNNE-AS
				06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
KRONE	T	Dibutyltin	14488-53-0								
KRONE	T	Monobutyltin	78763-54-9								
KRONE	T	Tetrabutyltin	1461-25-2								
KRONE	T	Tri-n-butyltin hydride	688-73-3								
KRONE	T	Tributyltin cation	36643-28-4								

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-12
Analytical Data for Butyltins
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3.3	3.1	3	3
				NB			
				N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N
Method	Fraction	Analyte	CAS				
KRONE	T	Dibutyltin	14488-53-0				
KRONE	T	Monobutyltin	78763-54-9				
KRONE	T	Tetrabutyltin	1461-25-2				
KRONE	T	Tri-n-butyltin hydride	688-73-3				
KRONE	T	Tributyltin cation	36643-28-4				

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95
				Stream Code	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit					
USEPA 1699 MOD	N	Aldrin	309-00-2	ug/l	2.61e-05 U	0.000102 U	1.88e-05 U	1.44e-05 U	2.04e-05 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	ug/l	0.000414 J	0.000366 J	0.00035 J	0.000356 J	0.000436
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	ug/l	0.00012 U	0.000271 U	0.00011 U	5.72e-05 U	6e-05 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	ug/l	0.000135 J	0.000268 J	0.000157 J	0.000142 J	0.000152 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	ug/l	0.00034 J	0.00019 J	0.000233 J	0.000283 J	0.00032 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	ug/l	0.000221 U	0.000268 U	7.43e-05 U	9.8e-05 J	0.000181 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	ug/l	0.000165 J	0.000209 J	0.000179 J	0.000173 J	0.000185 J
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	ug/l	8.8e-05 J	8.71e-05 U	8.1e-05 J	8.5e-05 J	0.000131 J
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	ug/l	3.04e-05 U	0.000119 U	2.94e-05 U	3e-05 U	2.75e-05 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	ug/l	0.000713	0.000577	0.000531	0.000599	0.00071
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	ug/l	0.000123 U	8.91e-05 J	0.000109 J	9.6e-05 J	0.000118 U
USEPA 1699 MOD	N	Endrin	72-20-8	ug/l	4.09e-05 U	7.52e-05 U	2.78e-05 U	2.76e-05 U	2.35e-05 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	ug/l	5.47e-05 U	0.000257 U	5.05e-05 U	5.64e-05 U	6.05e-05 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	ug/l	5e-05 U	0.000205 U	5.3e-05 J	6.64e-05 J	0.000101 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	ug/l	6.7e-05 J	0.00011 U	8.52e-05 J	8.28e-05 J	9.51e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	ug/l	1.07e-05 U	4.7e-05 U	9.36e-06 U	8.39e-06 U	1.5e-05 J
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	ug/l	0.000382 J	0.000327 J	0.000239 J	0.000288 J	0.000318 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	ug/l	0.000183 J	0.000117 J	1e-04 J	0.000141 U	0.000206 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	ug/l	2.21e-05 U	5.64e-05 U	1.57e-05 U	1.86e-05 U	1.86e-05 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	ug/l	0.000226 J	0.000112 U	0.000186 J	0.000178 J	0.000222 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	ug/l	6.31e-05 U	0.000276 U	9.17e-05 J	8.5e-05 J	5.86e-05 U
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	ug/l	5.04e-05 U	0.000152 U	3.69e-05 U	3.51e-05 U	5.32e-05 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	ug/l	3.22e-05 U	1e-04 U	2.3e-05 U	1.84e-05 U	2.68e-05 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	ug/l	0.000533	0.000428 J	0.000453	0.00045	0.000484
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	ug/l	0.000441 J	0.000354 U	0.000296 J	0.000376 J	0.000505
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	ug/l	8.5e-05 J	0.000151 U	5.1e-05 J	3.67e-05 U	9.1e-05 J
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	ug/l	0.000187 J	0.000123 J	0.00011 J	0.00016 J	0.000149 J

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNBN	N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS
				N02-CE02-TNBN	N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS
				3	3.14	3.3	2.98	2.91	3.15
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	0.97	0.99	0.99
				N02-CE02-TNBN-AS	N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	0.000101 U	1.47e-05 U	1.88e-05 U	1.74e-05 U	9.85e-05 U	1.14e-05 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.000314 J	0.000277 J	0.000428	0.000353 J	0.000373 J	0.000256 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	0.000479 U	6.02e-05 U	5.85e-05 U	9.62e-05 U	0.000495 U	4.29e-05 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	0.000137 J	0.000164 J	0.000162 J	0.000156 J	0.000219 J	0.000162 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.000175 U	0.000207 J	0.000318 J	0.000246 J	0.000241 J	0.000184 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.000473 U	5.52e-05 U	9.17e-05 U	7.34e-05 U	0.000503 U	5.57e-05 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	0.000164 U	0.000209 J	0.000178 J	0.000201 J	0.000154 U	0.000162 J
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	0.000145 U	5.06e-05 J	0.000101 J	8.5e-05 J	0.000176 U	6.42e-05 J
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	0.000202 U	2.29e-05 U	2.6e-05 U	2.66e-05 U	0.000195 U	2.49e-05 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.000566	0.000625	0.000675	0.000543	0.000488	0.000453
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	0.000145 J	0.000101 J	0.000116 J	0.000118 J	0.000125 J	9.04e-05 J
USEPA 1699 MOD	N	Endrin	72-20-8	0.000137 U	1.7e-05 U	2.52e-05 U	3.39e-05 U	0.000137 U	2.19e-05 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	0.000353 U	3.93e-05 U	4.36e-05 U	4.23e-05 U	0.00031 U	3.86e-05 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	0.000339 U	3.29e-05 J	7.1e-05 J	5.99e-05 J	0.000367 U	2.3e-05 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	0.000172 U	7.88e-05 J	7.49e-05 J	9.38e-05 J	0.000157 U	8.06e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	7.34e-05 U	6.87e-06 U	5.69e-06 U	9.51e-06 U	6.91e-05 U	6.46e-06 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	0.000173 J	0.000238 J	0.000304 J	0.000285 J	0.00019 U	0.000224 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	0.000142 U	0.000133 U	0.000175 U	0.000122 U	8.96e-05 U	0.000133 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	8.39e-05 U	1.53e-05 U	2.15e-05 U	2.83e-05 J	7.77e-05 U	2e-05 J
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	0.000205 U	0.000172 J	0.000208 J	0.000182 J	0.000248 U	0.000183 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	0.000491 U	5.8e-05 J	9.49e-05 J	0.000101 J	0.000454 U	0.000139 J
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	0.000271 U	3.63e-05 U	2.5e-05 U	3.78e-05 U	0.000333 U	3.31e-05 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	0.000191 U	1.48e-05 U	1.77e-05 U	3.14e-05 J	2e-04 U	1.73e-05 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.000224 U	0.000409	0.000487	0.00042	0.000262 U	0.000418
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.000545 U	0.000272 J	0.000418	0.00032 J	0.000686 U	0.000346 J
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	0.000321 U	3.88e-05 U	7.9e-05 J	5.6e-05 J	0.000361 U	3.59e-05 U
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	0.000179 U	0.000105 J	0.00018 J	0.000169 J	0.000212 U	7.4e-05 J

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N02-TNBS	N02-TNNE	N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE
				N02-CE04-TNBS	N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE
				3.09	2.07	2.77	2.78	3.28	3.14
				NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	2.68
				N02-CE04-TNBS-AS	N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	1.36e-05 U	6.46e-05 U	1.62e-05 U	2.05e-05 U	1.58e-05 U	
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.000318 J	0.000532	0.000375 J	0.000443 J	0.000342 J	
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	2.99e-05 U	0.000351 U	6.17e-05 U	0.000192 U	3.56e-05 U	
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	0.000165 J	0.000169 J	0.000119 J	0.000145 J	0.000155 J	
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.000209 J	0.000114 U	0.000292 J	0.000328 J	0.000256 J	
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.000108 U	0.000539 U	7.24e-05 U	0.000148 U	7.3e-05 J	
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	0.000168 J	0.000234 J	0.000188 J	0.000184 J	0.00019 J	
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	9.09e-05 J	0.000182 U	0.000131 J	0.000158 J	6.8e-05 J	
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	2.93e-05 U	9.73e-05 U	2.5e-05 U	3.32e-05 U	2.7e-05 U	
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.000494	0.000987	0.000644	7e-04	0.000572	
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	8.89e-05 J	0.00011 U	0.000104 U	1.08e-05 U	0.000102 U	
USEPA 1699 MOD	N	Endrin	72-20-8	2.22e-05 U	0.000108 U	3.34e-05 U	3.61e-05 U	2.3e-05 U	
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	5.79e-05 U	0.000302 U	3.52e-05 U	6.16e-05 U	3.94e-05 U	
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	6.61e-05 J	0.000297 U	6.4e-05 J	8.09e-05 J	5.9e-05 J	
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	8.19e-05 J	8.7e-05 U	8.7e-05 J	8.8e-05 J	7.7e-05 J	
USEPA 1699 MOD	N	Heptachlor	76-44-8	7.45e-06 U	4e-05 U	8.34e-06 U	1.28e-05 U	6.04e-06 J	
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	0.000247 J	0.000474	0.000324 J	0.000351 J	0.00027 J	
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	0.000136 U	0.00019 J	0.000134 U	0.000149 J	0.000161 U	
USEPA 1699 MOD	N	Methoxychlor	72-43-5	1.37e-05 U	7.17e-05 U	2.6e-05 J	2.15e-05 U	1.72e-05 U	
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	0.000176 J	0.00015 U	0.000197 J	0.000242 J	0.000186 J	
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	3.82e-05 U	0.000454 U	8.87e-05 J	0.000102 J	9.07e-05 J	
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	3.32e-05 U	0.00022 U	3.74e-05 U	4.75e-05 U	3.09e-05 U	
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	1.94e-05 U	0.000144 U	1.86e-05 U	2.12e-05 U	1.68e-05 U	
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.000376 J	0.000166 U	0.000456	0.00053	0.000446	
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.000231 J	0.000466 U	0.00042	0.000488	0.000396	
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	3.64e-05 U	0.000226 U	9.64e-05 J	4.62e-05 U	7.9e-05 J	
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	9.2e-05 J	0.000331 J	0.000154 J	0.000171 J	0.000115 J	

Notes:
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Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNBE	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS
				N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS
				3.04	2.94	3.09	3.02	2.99	2.96
				NB	NB	NB	NB	NB	NB
				2.68	3.87	3.87	3.87	3.87	0.97
				N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS
				02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
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				N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE
				3.05	3.1	3.04	2.63	1.1	2.75
				NB	NB	NB	NB	NB	NB
				0.98	0.98	0.98	2.68	4.57	4.57
				N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
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R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW
				3.1	2.9	2.6	2.7	3.14	2.97
				NB	NB	NB	NB	NB	NB
				4.57	4.57	3.77	3.77	3.77	3.77
				N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB
				N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	0.00039 U	9.3e-06 U	0.00039 U	4e-04 U	0.00039 U	8.7e-06 J
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	8e-05 J	0.00013 J	0.00018 J	0.00018 J	0.00019 J	9.4e-05 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	4.7e-05 U	6e-05 U	5.4e-05 U	5.4e-05 U	5.4e-05 J	5.1e-05 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	7.3e-05 J	0.00013 J	0.00014 J	0.00015 J	0.00015 J	8.7e-05 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	2.5e-05 U	3.6e-05 U	3.8e-05 U	4.2e-05 U	4e-05 J	3.8e-05 J
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	2.5e-05 J	0.00039 U	4.5e-05 J	5.2e-05 J	0.00039 U	0.00039 U
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00017 J	0.00019 J	0.00025 J	0.00031 J	0.00025 J	0.00016 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	2.2e-05 J	2.5e-05 J	3.2e-05 J	3e-05 U	2.3e-05 U	2.2e-05 U
USEPA 1699 MOD	N	Endrin	72-20-8	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	4.3e-05 U	3.7e-05 U	3.7e-05 U	4.9e-05 U	4.1e-05 J	3.2e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	0.00039 U	0.00039 U	4.8e-06 U	7.7e-06 U	6.4e-06 J	0.00039 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	7.2e-05 U	9.8e-05 J	0.00013 J	0.00018 J	0.00012 J	7.7e-05 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	3.5e-05 U	6.7e-05 U	6.6e-05 U	6.9e-05 U	7.9e-05 U	4.1e-05 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	5.9e-05 J	0.00039 U	6.1e-05 J	4e-04 U	0.00039 U	6.3e-05 J
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	1e-04 J	7.2e-05 J	9.9e-05 J	8e-05 J	1e-04 J	9.3e-05 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	5.1e-05 J
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	0.00039 U	0.00039 U	0.00039 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00026 J	0.00018 J	0.00024 J	0.00018 J	0.00028 J	0.00023 J
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	2e-04 J	0.00019 J	0.00024 J	0.00023 J	0.00039	0.00021 J
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	0.00032 J	7.7e-05 J	1e-04 J	4e-04 U	0.00015 J	7.1e-05 J
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	4e-05 J	9e-05 J	0.00012 J	1e-04 J	0.00011 J	5.6e-05 J

Notes:
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				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS
				2.76	2.95	3	3	3	3
				NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	1.8e-05 J	4e-04 U	7.2e-06 U	4e-04 U	0.00039 U	8.6e-06 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	3e-04 J	0.00016 J	0.00012 J	0.00011 J	0.00019 J	0.00014 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	5.8e-05 J	5.6e-05 J	5.2e-05 U	5.7e-05 U	6.3e-05 U	4.9e-05 U
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.00024 J	0.00013 J	9.1e-05 J	1e-04 J	0.00014 J	0.00011 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	5e-05 J	4.4e-05 J	3.3e-05 U	3.3e-05 U	4.3e-05 U	3.9e-05 U
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	7.8e-05 J	4.5e-05 J	0.00038 U	4e-04 U	5.1e-05 J	2.9e-05 J
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00036 J	0.00025 J	0.00018 J	0.00021 J	0.00028 J	2e-04 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	3.6e-05 U	3.6e-05 U	2.1e-05 J	1.9e-05 J	3.2e-05 J	2.7e-05 U
USEPA 1699 MOD	N	Endrin	72-20-8	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	3.7e-05 J	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	4.4e-05 J	5e-05 J	3.6e-05 U	3.8e-05 U	3.8e-05 U	3.6e-05 U
USEPA 1699 MOD	N	Heptachlor	76-44-8	4e-04 U	9.4e-06 J	0.00038 U	4e-04 U	1.2e-05 U	6.3e-06 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	2e-04 J	0.00015 J	9.2e-05 J	9.7e-05 J	0.00015 U	7.6e-05 U
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	9.8e-05 U	5.9e-05 U	4.9e-05 U	5.4e-05 U	0.00014 U	5.5e-05 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	4e-04 U	4e-04 U	4.9e-05 J	4e-04 U	5.1e-05 J	9.6e-05 J
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	0.00013 J	6.9e-05 J	9.3e-05 J	8.6e-05 J	0.00011 J	0.00012 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	4e-04 U	4e-04 U	0.00038 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00032 J	0.00021 J	0.00023 J	2e-04 J	0.00025 J	0.00029 J
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.00038 J	0.00024 J	0.00022 J	0.00019 J	0.00027 J	0.00055
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	0.00015 J	4e-04 U	7e-05 J	4e-04 U	1e-04 J	8.7e-05 J
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	0.00015 J	6.9e-05 J	4.8e-05 J	6.1e-05 J	1e-04 J	7.1e-05 J

Notes:
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				N04-TNNE	N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW
				N04-CE12-TNNE	N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW
				3.26	1.75	2.65	2.97	3.01	2.95
				NB	NB	NB	NB	NB	NB
				N04-CE12-TNNE-AS	N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	4e-04 U	0.00039 U	4e-04 U	1.2e-05 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.00017 J	0.00024 J	0.00021 J	0.00013 J	0.00012 J	0.00042
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	5.4e-05 J	6.2e-05 J	5.4e-05 J	7.4e-05 J	5.2e-05 J	5.7e-05 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.00012 J	0.00021 J	0.00016 J	0.00012 J	7.9e-05 J	0.00038 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	3.8e-05 J	5e-05 J	3.9e-05 J	8.3e-05 J	3.7e-05 J	0.00039 U
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	4e-04 U	5.2e-05 J	4.1e-05 J	4e-04 U	0.00039 U	0.00013 J
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00027 J	0.00034 J	0.00035 J	0.00022 J	0.00016 J	0.00035 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	2.3e-05 J	4e-05 J	3.9e-05 U	2.3e-05 U	2.1e-05 U	3.4e-05 U
USEPA 1699 MOD	N	Endrin	72-20-8	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	4e-04 U	0.00039 U	4.9e-05 J	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	4.4e-05 J	4.6e-05 J	4.9e-05 J	4.8e-05 J	3.5e-05 J	0.00039 U
USEPA 1699 MOD	N	Heptachlor	76-44-8	4e-04 U	1.1e-05 J	9e-06 J	7e-06 J	0.00039 U	0.00039 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	0.00014 J	0.00018 J	2e-04 J	0.00011 J	8.3e-05 J	0.00018 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	6.4e-05 U	0.00015 U	6.7e-05 U	6.6e-05 U	5.2e-05 U	0.00013 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	4e-04 U	0.00039 U	3.3e-05 J	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	7.4e-05 J	0.00012 J	8.3e-05 J	8.7e-05 J	7.9e-05 J	0.00025 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00014 J
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	5.3e-05 J
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	4e-04 U	0.00039 U	4e-04 U	4e-04 U	0.00039 U	0.00039 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00018 J	0.00033 J	0.00021 J	0.00022 J	0.00024 J	0.00067
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.00024 J	0.00035 J	0.00028 J	0.00022 J	2e-04 J	0.00081
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	9.8e-05 J	0.00012 J	4e-04 U	9.6e-05 J	8.6e-05 J	0.00021 J
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	9.2e-05 J	0.00014 J	4e-04 U	8.2e-05 J	5.7e-05 J	0.00024 J

Notes:
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				N04-TNNW	N05-TNBE	N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN
				N04-CE21-TNNW	N05-CE01-TNBE	N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN
				2.8	2.32	3.46	3.34	3.12	3.13
				NB	NB	NB	NB	NB	NB
					2.68	2.68	2.68	3.87	3.87
				N04-CE21-TNNW-AS	N05-CE01-TNBE-AS	N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS
				03/04/2013	03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	4e-04 U	9.49e-06 U	1.6e-05 U	1.1e-05 J	7.01e-06 U	7.18e-06 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.00022 J	0.000185 J	0.000222 J	8.5e-05 J	0.000208 J	0.000126 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	4e-04 U	3.02e-05 U	3.55e-05 U	0.000125 J	2.15e-05 U	4.97e-05 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	6.8e-05 J	0.000105 J	0.000136 J	0.00015 J	0.000127 J	0.000132 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.00018 J	0.000132 J	0.000182 J	0.000118 J	0.000191 J	9.85e-05 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	4e-04 U	4.25e-05 U	0.000117 U	9.24e-05 U	7.2e-05 U	9.03e-05 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	5e-05 J	6.47e-05 J	2.16e-05 U	9.15e-05 J	6.01e-05 U	4.91e-05 J
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	4.6e-05 J	1.38e-05 U	5.8e-05 J	3.13e-05 U	2.2e-05 U	3.18e-05 U
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	4e-04 U	1.05e-05 U	2.4e-05 U	2.85e-05 U	2.16e-05 J	1.22e-05 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00033 J	0.000295 J	0.000389 J	0.000226 J	0.00033 J	0.000229 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	3.4e-05 U	5.2e-05 U	1.8e-05 U	4.51e-05 U	3.3e-05 U	2.15e-05 J
USEPA 1699 MOD	N	Endrin	72-20-8	4e-04 U	2.6e-05 J	2.15e-05 U	7e-05 J	1.84e-05 U	2.88e-05 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	4e-04 U	2.97e-05 U	4.87e-05 U	5.02e-05 U	4.41e-05 U	5.99e-05 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	3.9e-05 J	2.67e-05 U	7.02e-05 U	6.86e-05 U	6.81e-05 J	3.98e-05 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	6e-05 J	5.4e-05 J	6.59e-05 J	9.95e-05 J	5.64e-05 J	4.77e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	1.1e-05 J	8e-06 J	1.5e-05 J	9.2e-06 J	4.87e-06 U	5.71e-06 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	0.00017 J	0.000148 J	0.000167 J	0.000182 J	0.00015 J	7.89e-05 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	8.7e-05 U	7.56e-05 U	8.53e-05 U	4.5e-05 U	9.69e-05 U	4.87e-05 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	5.4e-05 J	1.33e-05 U	2.45e-05 U	2.24e-05 U	1.07e-05 U	1.4e-05 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	1e-04 J	2.73e-05 U	0.000176 J	4.85e-05 U	0.00012 J	5.3e-05 U
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	4e-04 U	4.17e-05 U	6.85e-05 U	5.44e-05 U	4.19e-05 U	7.59e-05 U
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	4e-04 U	3.96e-05 U	7.11e-05 U	6.42e-05 U	3.38e-05 U	7.41e-05 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	4e-04 U	7.37e-06 U	2.6e-05 J	1e-05 J	1.25e-05 J	1.3e-05 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00026 J	0.000302 J	0.000304 J	7.11e-05 U	0.00027 J	0.000205 J
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.00032 J	0.000213 J	0.000127 U	9e-05 U	0.000261 J	0.000233 U
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	8.5e-05 J	5.05e-05 U	0.000108 U	1e-04 U	3.79e-05 U	8.6e-05 U
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	1e-04 J	0.000102 J	0.000129 J	6.32e-05 J	9.31e-05 J	7.8e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBN	N05-TNBN	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNBS
				N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS
				3.02	3.18	2.91	3.11	3.07	2.93
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.98	0.98	0.97	0.97
				N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS
				03/28/2012	03/28/2012	03/29/2012	03/29/2012	03/29/2012	03/29/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	7.64e-06 U	2.65e-05 U	1.9e-05 J	9.2e-06 U	6.8e-06 U	6.83e-06 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.000113 J	0.000202 J	0.000159 J	0.000136 J	5.8e-05 J	0.000114 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	3.42e-05 U	2.35e-05 U	3.42e-05 U	6.2e-05 U	3.65e-05 U	4.14e-05 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	0.000123 J	0.00014 J	0.000145 J	0.000136 J	9.12e-05 J	9.2e-05 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	8.44e-05 J	0.000148 J	0.00012 J	0.000135 J	6.2e-05 J	0.000132 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.000101 U	3.97e-05 U	4.64e-05 U	0.00015 U	7.7e-05 U	9.5e-05 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	4.95e-05 J	6.18e-05 J	8.24e-05 J	4.44e-05 J	2.53e-05 U	6.1e-05 J
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	2.98e-05 U	1.26e-05 U	1.9e-05 J	4.66e-05 U	2.44e-05 U	3.26e-05 U
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	1.07e-05 U	1.67e-05 J	9.59e-06 U	2.28e-05 U	2.8e-05 U	3.25e-05 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00022 J	0.000339 J	0.00029 J	0.000322 J	0.000256 J	0.000227 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	2.4e-05 J	3.6e-05 J	5.79e-05 U	3.14e-05 U	1.06e-05 U	1.4e-05 U
USEPA 1699 MOD	N	Endrin	72-20-8	1.92e-05 U	1.03e-05 U	7.4e-05 J	2.43e-05 U	2.08e-05 U	2.02e-05 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	3.76e-05 U	1.96e-05 U	2.23e-05 U	6.7e-05 U	4.98e-05 U	6.17e-05 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	3.51e-05 U	0.000122 J	2.39e-05 U	5.91e-05 U	6.54e-05 U	7.73e-05 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	4.44e-05 J	5.51e-05 J	8.77e-05 J	7.9e-05 J	1.9e-05 U	5.38e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	3.37e-06 U	5.66e-06 U	8e-06 J	8e-06 J	4e-06 U	3.46e-06 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	7.58e-05 J	0.000143 J	0.000142 J	0.000166 J	9.35e-05 J	0.000101 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	5.54e-05 U	0.00016 U	6.73e-05 U	5.3e-05 U	3.32e-05 U	4.01e-05 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	1.33e-05 U	7.09e-05 J	7.96e-05 U	3.6e-05 U	4.2e-05 U	2.26e-05 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	4.38e-05 U	0.000107 J	2.27e-05 U	5.08e-05 U	5.12e-05 U	9.95e-05 U
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	7.35e-05 U	4.12e-05 J	4.15e-05 U	7.75e-05 U	7.33e-05 U	8.14e-05 U
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	6.16e-05 U	2.15e-05 U	3.27e-05 U	7.26e-05 U	6.49e-05 U	9.23e-05 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	1.17e-05 U	6.73e-06 U	6.2e-06 U	1.23e-05 U	8.24e-06 U	9.83e-06 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.000185 J	0.00034 J	0.000274 J	0.000238 J	7.27e-05 U	9.83e-05 U
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.000168 J	0.000245 J	6.15e-05 U	0.000132 U	0.000133 U	0.000143 U
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	6.79e-05 U	2.76e-05 U	4.05e-05 U	0.000102 U	9.87e-05 U	0.000136 U
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	2.68e-05 J	8.59e-05 J	7.09e-05 J	6.1e-05 J	5.44e-05 J	6.78e-05 J

Notes:
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				N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW
				N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW
				1.28	2.94	2.81	2.58	2.5	2.92
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77
				N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	6.54e-06 U	9.09e-06 U	4.65e-06 U	4.11e-06 U	1.91e-05 J	3.98e-06 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.000216 J	0.000178 J	0.000136 J	0.000192 J	0.000286 J	0.000141 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	1.83e-05 U	4.53e-05 U	2.71e-05 U	1.83e-05 U	0.000239 J	2.16e-05 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	0.000169 J	0.000109 J	0.000103 J	0.000119 J	0.000136 J	0.000101 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.00017 J	0.000141 J	0.000111 J	0.000174 J	0.000179 J	0.000119 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	4.01e-05 U	5.97e-05 U	3.65e-05 U	4.72e-05 U	5.95e-05 U	3.85e-05 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	6.44e-05 U	6.87e-05 U	5.64e-05 U	8.32e-05 U	0.000113 J	5.88e-05 U
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	2.59e-05 U	3.35e-05 U	1.59e-05 U	6.4e-05 J	3.14e-05 J	1.24e-05 U
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	6.88e-06 U	2e-05 J	8.55e-06 U	3.43e-05 J	4.34e-05 J	8.55e-06 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.000395 J	0.000263 J	0.000239 J	0.00028 J	0.000456 J	0.000248 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	5.09e-05 U	3.74e-05 U	6.7e-05 U	9.49e-05 U	0.000107 U	5.74e-05 U
USEPA 1699 MOD	N	Endrin	72-20-8	8.43e-06 U	1.73e-05 U	1.56e-05 J	6.34e-05 J	0.000194 J	1.24e-05 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	1.4e-05 U	3.87e-05 U	1.78e-05 J	6.03e-05 J	0.000117 J	1.43e-05 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	9.26e-05 J	2.96e-05 U	7.38e-05 U	0.00014 J	0.000158 J	7.48e-05 J
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	5.28e-05 J	5.58e-05 J	4.75e-05 J	6.54e-05 J	5.74e-05 J	4.12e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	1.85e-06 U	3.87e-06 U	1.89e-06 U	6.84e-06 J	6.68e-06 J	7e-06 J
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	0.000194 J	0.00012 J	0.000107 J	0.000123 J	0.000223 J	9.78e-05 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	7.54e-05 U	7.19e-05 U	4.92e-05 U	5.74e-05 U	9.26e-05 U	5.02e-05 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	6.74e-05 J	1.42e-05 U	1.07e-05 U	0.000104 J	0.00013 J	5.4e-05 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	0.000121 J	0.000102 J	2.31e-05 U	1.91e-05 U	0.000116 J	9.18e-05 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	2.63e-05 U	6.66e-05 U	3.68e-05 U	3.16e-05 U	2.79e-05 U	1.99e-05 U
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	2.18e-05 U	5.8e-05 U	3.21e-05 U	2.66e-05 U	2.08e-05 U	2.3e-05 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	5.59e-06 U	1.12e-05 J	4.89e-06 U	1.21e-05 U	1.25e-05 J	5.13e-06 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.000325 J	0.000264 J	0.000285 J	0.000372 J	0.000486	0.000241 J
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	4.5e-05 U	0.000114 U	9.02e-05 U	0.000241 J	0.00031 J	0.000188 J
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	2.69e-05 U	6.82e-05 U	4.11e-05 U	3.47e-05 U	2.64e-05 U	2.82e-05 U
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	8.85e-05 J	8.98e-05 J	5.26e-05 J	8.76e-05 J	0.000111 J	6.16e-05 J

Notes:
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Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN
				N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN
				2.96	3.07	2.93	2.7	3.11	3
				NB	NB	NB	NB	NB	NB
				3.77	3.77	2.68	2.68	2.68	3.87
				N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS
				03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	4.43e-06 U	1.1e-05 U				
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.000139 J	0.000308 J				
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	2.42e-05 U	0.000221 J				
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	9.9e-05 J	0.000182 J				
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	8.52e-05 J	0.000202 J				
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	4.3e-05 U	6.06e-05 U				
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	5.45e-05 J	0.000131 J				
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	1.38e-05 U	2.08e-05 U				
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	7.2e-06 U	5.55e-05 J				
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00024 J	0.000482 J				
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	6.94e-05 U	0.000128 U				
USEPA 1699 MOD	N	Endrin	72-20-8	1.04e-05 U	0.000304 J				
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	2.1e-05 U	0.000219 J				
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	7.53e-05 J	0.000222 J				
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	3.76e-05 J	6.07e-05 J				
USEPA 1699 MOD	N	Heptachlor	76-44-8	1.92e-06 U	9.6e-06 J				
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	9.37e-05 J	0.000233 J				
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	4.31e-05 U	7.59e-05 U				
USEPA 1699 MOD	N	Methoxychlor	72-43-5	8.78e-05 J	0.00043 J				
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	6.63e-05 J	0.000131 J				
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	4.2e-05 U	3.55e-05 U				
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	2.57e-05 U	2.34e-05 U				
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	5.99e-06 U	6.07e-06 U				
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.000297 J	0.000582				
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	4.9e-05 U	0.000545				
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	3.15e-05 U	2.86e-05 U				
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	5.16e-05 J	0.000114 J				

Notes:
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				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
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				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63
				NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNNW	N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE02-TNNW	N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE
				3	3	3	2.05	2.95	3.1
				NB	NB	NB	NB	NB	NB
				3.78	3.77	3.77			
				N06-CE02-TNNW-AS	N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS
				06/06/2012	06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2				R	4.4e-05 U	0.00039 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9				0.00012 J	0.00017 J	0.00014 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8				R	0.00015 J	0.00039 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6				8e-05 U	0.00028 J	0.00016 U
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2				0.00013 J	0.00016 J	9e-05 U
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9				R	0.00019 J	0.00039 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7				6.6e-05 U	0.00023 U	0.00012 U
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1				R	3.8e-05 J	3.7e-05 J
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8				R	3e-04 J	6.6e-05 U
USEPA 1699 MOD	N	Dieldrin	60-57-1				2e-04 U	0.00054	0.00029 U
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8				R	1e-04 U	3.3e-05 U
USEPA 1699 MOD	N	Endrin	72-20-8				R	0.00046	0.00012 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4				R	0.00017 U	0.00039 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5				R	0.00021 U	0.00039 U
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9				7.7e-05 U	0.00011 U	8.5e-05 U
USEPA 1699 MOD	N	Heptachlor	76-44-8				R	8.3e-05 U	2.4e-05 U
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3				6.8e-05 U	0.00016 J	9.6e-05 U
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1				9e-05 U	0.00015 U	9.3e-05 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5				R	4e-04 U	0.00039 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0				R	1e-04 J	1e-04 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6				R	6.4e-05 J	6.5e-05 J
USEPA 1699 MOD	N	o,p'-DDT	789-02-6				R	4e-04 U	0.00039 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8				R	4e-04 U	0.00039 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8				0.00031 U	0.00043 U	0.00025 U
USEPA 1699 MOD	N	p,p'-DDE	72-55-9				R	0.00032 J	0.00024 J
USEPA 1699 MOD	N	p,p'-DDT	50-29-3				R	0.00012 J	0.00039 U
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5				6.4e-05 J	5.4e-05 J	4.9e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNBE	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS
				N07-CE04-TNBE	N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS
				3.05	3	3	3.05	2.97	3
				NB	NB	NB	NB	NB	NB
				N07-CE04-TNBE-AS	N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	4e-05 J
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	1e-04 J	0.00024 J	0.00017 J	0.00013 J	0.00024 J	0.00018 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00039 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	0.00013 U	9.5e-05 J	9.8e-05 J	8.6e-05 J	1e-04 J	0.00076
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	0.00012 U	0.00021 J	0.00015 J	0.00011 J	0.00023 J	0.00016 J
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00039 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	9.2e-05 U	9.9e-05 J	7.9e-05 J	6.2e-05 J	8.7e-05 J	0.00049
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	3.4e-05 J	6e-05 J	0.00038 U	0.00039 U	6.3e-05 J	0.00039 U
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	5e-05 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00025 J
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00025 U	0.00036 J	0.00023 J	0.00023 J	0.00028 J	0.00029 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	3.6e-05 U	3.3e-05 J	3.8e-05 J	2.1e-05 J	2.3e-05 J	0.00018 J
USEPA 1699 MOD	N	Endrin	72-20-8	1e-04 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	7.8e-05 J
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00034 J
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00032 J
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	6.4e-05 U	8.2e-05 J	7.1e-05 J	6.2e-05 J	7.4e-05 J	2e-04 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	1.9e-05 U	0.00038 U	0.00038 U	0.00039 U	6.7e-06 U	0.00011 J
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	8.2e-05 U	0.00014 J	7.4e-05 J	7.1e-05 J	8.5e-05 J	0.00013 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	1e-04 U	4e-04 U	2e-04 U	0.00017 U	0.00023 U	0.00017 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00039 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	9.9e-05 J	0.00015 J	0.00015 J	0.00012 J	0.00022 J	0.00015 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	0.00039 U	9.4e-05 J	0.00015 J	8.7e-05 J	0.00016 J	7.8e-05 J
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	0.00039 U	0.00038 U	0.00038 U	0.00039 U	3.3e-05 J	0.00039 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	0.00039 U	0.00038 U	0.00038 U	0.00039 U	0.00038 U	0.00039 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00026 U	0.00042	0.00039	3e-04 J	0.00052	0.00054
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.00023 J	0.00047	0.00048	0.00031 J	0.00066	0.00039
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	0.00039 U	0.00035 J	0.00011 J	7.1e-05 J	0.00014 J	0.00022 J
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	3.7e-05 J	0.00011 J	8.6e-05 J	7.8e-05 J	0.00015 J	6.7e-05 J

Notes:
J - Estimated Concentration
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				N07-TNBS	N07-TNBS	N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE
				N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE
				3.03	3.12	3.05	0.55	1.62	3
				NB	NB	NB	NB	NB	NB
				N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS
				12/13/2012	12/13/2012	12/13/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	0.00039 U	4e-04 U	2.1e-05 J	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	0.00012 J	9.5e-05 J	0.00014 J	0.00035 J	0.00022 J	0.00012 J
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	0.00039 U	4e-04 U	8e-05 J	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	0.00013 J	0.00018 J	0.00021 J	9.5e-05 J	0.00011 J	9.4e-05 J
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	9.5e-05 J	1e-04 J	0.00012 J	0.00029 J	0.00021 J	0.00011 U
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.00039 U	4e-04 U	0.00012 J	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	7.7e-05 J	0.00011 J	0.00017 J	9.9e-05 J	8e-05 J	6.5e-05 J
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	3.8e-05 J	6.5e-05 J	4.6e-05 J	8.9e-05 J	4.5e-05 J	4e-04 U
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	5.5e-05 J	8.9e-05 J	2e-04 J	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00022 J	0.00025 J	4e-04	0.00044	3e-04 J	0.00024 J
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	3.1e-05 U	4.1e-05 J	3.7e-05 J	3.8e-05 J	3.2e-05 J	2.7e-05 J
USEPA 1699 MOD	N	Endrin	72-20-8	4.6e-05 J	0.00014 J	0.00025 J	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	0.00039 U	4e-04 U	0.00039 U	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	0.00039 U	4e-04 U	0.00039 U	0.00039 U	0.00038 U	1.6e-05 J
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	7.2e-05 J	6.9e-05 J	9.3e-05 J	0.00012 J	1e-04 J	7.2e-05 J
USEPA 1699 MOD	N	Heptachlor	76-44-8	1.6e-05 J	3.5e-05 J	4.3e-05 J	5.7e-06 J	0.00038 U	6.8e-06 J
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	6.3e-05 J	6.8e-05 J	0.00013 J	0.00024 J	0.00013 J	8.5e-05 J
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	0.00013 U	6.2e-05 U	8.9e-05 U	0.00036 U	0.00032 U	0.00015 U
USEPA 1699 MOD	N	Methoxychlor	72-43-5	0.00039 U	4e-04 U	0.00039 U	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	0.00011 J	8.5e-05 J	9.3e-05 J	0.00022 J	0.00016 J	0.00012 J
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	9.1e-05 J	4e-04 U	6.5e-05 J	9.9e-05 J	0.00011 J	7.8e-05 J
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	0.00039 U	4e-04 U	0.00039 U	0.00039 U	0.00038 U	4e-04 U
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	0.00039 U	4e-04 U	0.00039 U	1.3e-05 J	0.00038 U	4e-04 U
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00027 J	0.00023 J	3e-04 J	0.00053	0.00039	0.00028 J
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.00035 J	0.00027 J	0.00024 J	0.00053	0.00046	0.00028 J
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	0.00039 U	0.00015 J	5.6e-05 J	0.00017 J	0.00012 J	8.5e-05 J
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	7.5e-05 J	5e-05 J	4.4e-05 J	0.00016 J	1e-04 J	5.5e-05 J

Notes:
J - Estimated Concentration
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Table A-13
Analytical Data for Pesticides
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW	N07-TNNW	N09-TNBE
				N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW	N07-CE04-TNNW	N09-CE11-TNBE
				2.6	3.09	3.1	3.1	3.01	2.1
				NB	NB	NB	NB	NB	NB
				N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS	N07-CE04-TNNW-AS	N09-CE11-TNBE-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	06/08/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9	2e-04 J	0.00027 J	0.00019 J	0.00013 J	4e-04	
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6	1e-04 J	0.00011 J	1e-04 J	9.7e-05 J	0.00011 J	
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2	2e-04 J	0.00023 J	0.00013 J	9.5e-05 J	0.00041	
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7	5.8e-05 J	8e-05 J	7.1e-05 J	5.6e-05 J	9.5e-05 J	
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1	7.5e-05 J	8.2e-05 J	4.3e-05 J	2.9e-05 J	0.00015 J	
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	Dieldrin	60-57-1	0.00027 J	0.00037 J	0.00022 J	0.00021 J	0.00036 J	
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8	3.7e-05 J	3.7e-05 J	3.1e-05 J	2e-05 J	3.7e-05 J	
USEPA 1699 MOD	N	Endrin	72-20-8	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	Endrin ketone	53494-70-5	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9	6.3e-05 J	8.2e-05 J	6.8e-05 J	5.7e-05 J	7.7e-05 J	
USEPA 1699 MOD	N	Heptachlor	76-44-8	3.5e-06 J	0.00041 U	4e-04 U	5.9e-06 J	4e-04 U	
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3	8.8e-05 J	0.00015 J	7.8e-05 J	6.8e-05 J	1e-04 J	
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1	0.00021 U	0.00033 U	0.00024 U	0.00016 U	0.00051 U	
USEPA 1699 MOD	N	Methoxychlor	72-43-5	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	o,p'-DDD	53-19-0	2e-04 J	0.00019 J	0.00015 J	0.00012 J	0.00033 J	
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6	0.00016 J	0.00011 J	9.8e-05 J	8.5e-05 J	0.00023 J	
USEPA 1699 MOD	N	o,p'-DDT	789-02-6	2.9e-05 J	0.00041 U	4e-04 U	0.00039 U	7.4e-05 J	
USEPA 1699 MOD	N	Oxychlordane	27304-13-8	0.00041 U	0.00041 U	4e-04 U	0.00039 U	4e-04 U	
USEPA 1699 MOD	N	p,p'-DDD	72-54-8	0.00049	0.00049	0.00037 J	0.00029 J	9e-04	
USEPA 1699 MOD	N	p,p'-DDE	72-55-9	0.00068	0.00056	0.00047	0.00029 J	0.0012	
USEPA 1699 MOD	N	p,p'-DDT	50-29-3	0.00013 J	1e-04 J	8.2e-05 J	7.8e-05 J	0.00064	
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5	0.00014 J	0.00017 J	8.9e-05 J	5.8e-05 J	0.00024 J	

Notes:
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				N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN
				N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN
				3	3	3.1	3.1	3	3
							NB		
				N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS
				06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3.2	3	2.9	3	3.06	3
					NB				NB
				N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

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				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
USEPA 1699 MOD	N	Aldrin	309-00-2						
USEPA 1699 MOD	N	alpha-Chlordane	5103-71-9						
USEPA 1699 MOD	N	alpha-Endosulfan	959-98-8						
USEPA 1699 MOD	N	alpha-Hexachlorocyclohexane (alpha BHC)	319-84-6						
USEPA 1699 MOD	N	beta-Chlordane	5103-74-2						
USEPA 1699 MOD	N	beta-Endosulfan	33213-65-9						
USEPA 1699 MOD	N	beta-Hexachlorocyclohexane (beta BHC)	319-85-7						
USEPA 1699 MOD	N	cis-Nonachlor	5103-73-1						
USEPA 1699 MOD	N	delta-Hexachlorocyclohexane (delta BHC)	319-86-8						
USEPA 1699 MOD	N	Dieldrin	60-57-1						
USEPA 1699 MOD	N	Endosulfan sulfate	1031-07-8						
USEPA 1699 MOD	N	Endrin	72-20-8						
USEPA 1699 MOD	N	Endrin aldehyde	7421-93-4						
USEPA 1699 MOD	N	Endrin ketone	53494-70-5						
USEPA 1699 MOD	N	gamma-BHC (Lindane)	58-89-9						
USEPA 1699 MOD	N	Heptachlor	76-44-8						
USEPA 1699 MOD	N	Heptachlor epoxide	1024-57-3						
USEPA 1699 MOD	N	Hexachlorobenzene	118-74-1						
USEPA 1699 MOD	N	Methoxychlor	72-43-5						
USEPA 1699 MOD	N	o,p'-DDD	53-19-0						
USEPA 1699 MOD	N	o,p'-DDE	3424-82-6						
USEPA 1699 MOD	N	o,p'-DDT	789-02-6						
USEPA 1699 MOD	N	Oxychlordane	27304-13-8						
USEPA 1699 MOD	N	p,p'-DDD	72-54-8						
USEPA 1699 MOD	N	p,p'-DDE	72-55-9						
USEPA 1699 MOD	N	p,p'-DDT	50-29-3						
USEPA 1699 MOD	N	trans-Nonachlor	39765-80-5						

Notes:
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				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
218.6	D	Chromium, Hexavalent	18540-29-9	ug/l	0.89 U	0.77 U	0.92 U	1.19 U	0.86 U	0.74
E1630	T	Methyl Mercury	22967-92-6	ug/l	6e-05	5.8e-05	5.7e-05	5.3e-05	0.000108	5e-05
E1631E	T	Mercury	7439-97-6	ug/l	0.0164	0.0117	0.0171	0.0139	0.0261	0.0163
E200.8	T	Arsenic	7440-38-2	ug/l			0.84			
E200.8	T	Beryllium	7440-41-7	ug/l			0.02 U			
E200.8	T	Cadmium	7440-43-9	ug/l			0.027			
E200.8	T	Chromium	7440-47-3	ug/l			0.49			
E200.8	T	Cobalt	7440-48-4	ug/l			0.098			
E200.8	T	Copper	7440-50-8	ug/l			1.29			
E200.8	T	Lead	7439-92-1	ug/l			0.643			
E200.8	T	Nickel	7440-02-0	ug/l			1.8			
E200.8	T	Silver	7440-22-4	ug/l			0.004 J			
E200.8	T	Thallium	7440-28-0	ug/l			0.02 U			
E200.8	T	Zinc	7440-66-6	ug/l			4.09			
E335.4	T	Cyanide	57-12-5	ug/l	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	ug/l	218	213	202	213	254	204
SW6010	T	Aluminum	7429-90-5	ug/l	120 J	90 J	86	98.8	171 J	114 J
SW6010	T	Barium	7440-39-3	ug/l	30.7	29.3	28.2 J	29.8	37.6	28.7
SW6010	T	Calcium	7440-70-2	ug/l	154000	172000	195000	178000	145000	186000
SW6010	T	Iron	7439-89-6	ug/l	269	196	192	237	368	248
SW6010	T	Magnesium	7439-95-4	ug/l	433000	489000	556000	446000	403000	522000
SW6010	T	Manganese	7439-96-5	ug/l	98.3	92.6	93.1 J	94.4	117	95.4 J
SW6010	T	Potassium	7440-09-7	ug/l	143000	161000	187000	170000	133000	174000
SW6010	T	Sodium	7440-23-5	ug/l	3620000	4110000	4600000	3950000	3370000	4380000
SW6010	T	Titanium	7440-32-6	ug/l	3.4	3.1	2.9	3	5.3	3.5
SW6010	T	Vanadium	7440-62-2	ug/l	4.4	3.5	4.6	4.4	5	3.7
SW6020	T	Antimony	7440-36-0	ug/l	1 U	1 U	1 U	1.1 J	1 U	1 U
SW6020	T	Arsenic	7440-38-2	ug/l	1.51	1.6		1.7	1.68	1.69
SW6020	T	Beryllium	7440-41-7	ug/l	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U
SW6020	T	Cadmium	7440-43-9	ug/l	0.049	0.049		0.056	0.051	0.058
SW6020	T	Chromium	7440-47-3	ug/l	1.19	0.92		1.07	1.6	1.15
SW6020	T	Cobalt	7440-48-4	ug/l	0.224	0.21		0.218	0.276	0.218
SW6020	T	Copper	7440-50-8	ug/l	2.67	2.51		2.71	2.94	2.78
SW6020	T	Lead	7439-92-1	ug/l	1.79	1.34		1.5	2.21	1.55
SW6020	T	Nickel	7440-02-0	ug/l	1.79	1.87		1.89	2.09	1.98
SW6020	T	Silver	7440-22-4	ug/l	0.017 J	0.011 J		0.013 J	0.019 J	0.014 J
SW6020	T	Thallium	7440-28-0	ug/l	0.006 J	0.006 J		0.006 J	0.006 J	0.007 J
SW6020	T	Zinc	7440-66-6	ug/l	7.31	7.62		8	8.25	8.29
SW7742	T	Selenium	7782-49-2	ug/l	1 U	1 U	1 U	0.5 J	1 U	1 U

Notes:
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				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	0.72	0.73 U	0.66 U	0.54 U	0.93 U	1.16 U	0.59 U
E1630	T	Methyl Mercury	22967-92-6	4.9e-05	6.3e-05	5.3e-05	5.1e-05 U	5.1e-05	3.7e-05 J	4.1e-05 J
E1631E	T	Mercury	7439-97-6	0.00881	0.0216	0.0136	0.012	0.00962	0.0088	0.0267
E200.8	T	Arsenic	7440-38-2	1.59	1.54		1.56	1.7		1.55
E200.8	T	Beryllium	7440-41-7	0.02 U	0.02 U		0.02 U	0.0947		0.02 U
E200.8	T	Cadmium	7440-43-9	0.056	0.058		0.054	0.057		0.05
E200.8	T	Chromium	7440-47-3	0.63	1.21		0.58	0.61		1.52
E200.8	T	Cobalt	7440-48-4	0.182	0.224		0.158	0.246		0.244
E200.8	T	Copper	7440-50-8	2.43	2.88		2.26	2.46		2.9
E200.8	T	Lead	7439-92-1	1.07	2.03		0.932	0.98		2.16
E200.8	T	Nickel	7440-02-0	1.82	1.89		1.71	1.73		1.98 J
E200.8	T	Silver	7440-22-4	0.838	0.025		0.02 U	0.02 U		0.021
E200.8	T	Thallium	7440-28-0	0.02 U	0.02 U		0.02 U	0.02 U		0.02 U
E200.8	T	Zinc	7440-66-6	7.66	8.04		7.51	7.6		7.94
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	203	218	225	190	204	205	230
SW6010	T	Aluminum	7429-90-5	65.5	133	95.3 J	148	63.1	66.1	160
SW6010	T	Barium	7440-39-3	29.7 J	32.3	29.3 J	30.3	27.1 J	29.4	34.6
SW6010	T	Calcium	7440-70-2	195000	156000	179000	210000	192000	188000	143000
SW6010	T	Iron	7439-89-6	146	302	205	311	138	161	360
SW6010	T	Magnesium	7439-95-4	551000	439000	510000	543000	559000	503000	386000
SW6010	T	Manganese	7439-96-5	90.7 J	105	94.8 J	88.7 J	86 J	89.3 J	110
SW6010	T	Potassium	7440-09-7	185000	146000	167000	211000	187000	184000	127000
SW6010	T	Sodium	7440-23-5	4580000	3710000	4250000	4600000	4510000	4280000	3250000
SW6010	T	Titanium	7440-32-6	7.5 J	10.9 J	2.6	4.5	9.6 J	1.4	13 J
SW6010	T	Vanadium	7440-62-2	4.5	3.7	4.1	7.1	4.1	4.4	4.8
SW6020	T	Antimony	7440-36-0	1.01	1 U	1 U	0.45 J	1 U	1 U	1 U
SW6020	T	Arsenic	7440-38-2			1.64			1.67	
SW6020	T	Beryllium	7440-41-7			0.02 U			0.02 U	
SW6020	T	Cadmium	7440-43-9			0.047			0.056	
SW6020	T	Chromium	7440-47-3			1.02			0.81	
SW6020	T	Cobalt	7440-48-4			0.204			0.195	
SW6020	T	Copper	7440-50-8			2.8			2.31	
SW6020	T	Lead	7439-92-1			1.42			1.14	
SW6020	T	Nickel	7440-02-0			1.84			1.75	
SW6020	T	Silver	7440-22-4			0.017 J			0.01 J	
SW6020	T	Thallium	7440-28-0			0.007 J			0.006 J	
SW6020	T	Zinc	7440-66-6			7.54			7.7	
SW7742	T	Selenium	7782-49-2	1 U	0.7 J	1 U	1 U	0.3 J	1 U	1 U

Notes:
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				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	0.86 U	0.79 U	0.64 U				
E1630	T	Methyl Mercury	22967-92-6	8.9e-05	7.4e-05	4.6e-05 J				
E1631E	T	Mercury	7439-97-6	0.0353	0.024	0.0205	0.0107	0.00761	0.0278	0.0204
E200.8	T	Arsenic	7440-38-2	1.57	1.66	1.61				
E200.8	T	Beryllium	7440-41-7	0.02 U	0.124	0.02 U				
E200.8	T	Cadmium	7440-43-9	0.06	0.051	0.058	0.058	0.057	0.233	0.082
E200.8	T	Chromium	7440-47-3	1.98	1.24	1.24				
E200.8	T	Cobalt	7440-48-4	0.25	0.27	0.228				
E200.8	T	Copper	7440-50-8	3.58	2.83	2.8	1.75	1.79	3.22	2.5
E200.8	T	Lead	7439-92-1	2.96	2.16	1.85	0.897	0.768	2.38	1.72
E200.8	T	Nickel	7440-02-0	2.04 J	1.86 J	1.98 J				
E200.8	T	Silver	7440-22-4	0.033	0.025	0.029				
E200.8	T	Thallium	7440-28-0	0.02 U	0.02 U	0.024				
E200.8	T	Zinc	7440-66-6	9.06	7.92	8.1				
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U				
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	226	214	263				
SW6010	T	Aluminum	7429-90-5	251	173	151				
SW6010	T	Barium	7440-39-3	34.8	33.9	30.2 J				
SW6010	T	Calcium	7440-70-2	154000	155000	178000				
SW6010	T	Iron	7439-89-6	532	358	329				
SW6010	T	Magnesium	7439-95-4	386000	391000	499000				
SW6010	T	Manganese	7439-96-5	104	99	100 J				
SW6010	T	Potassium	7440-09-7	148000	145000	165000				
SW6010	T	Sodium	7440-23-5	3320000	3330000	4140000				
SW6010	T	Titanium	7440-32-6	7.5	4.8	14.3 J				
SW6010	T	Vanadium	7440-62-2	5.8	6.7	4.3				
SW6020	T	Antimony	7440-36-0	1 U	1 U	1 U				
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	1 U	1 U	1 U				

Notes:
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				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9							
E1630	T	Methyl Mercury	22967-92-6							
E1631E	T	Mercury	7439-97-6	0.0102	0.0236	0.0111	0.0139	0.00833	0.00525	0.0196
E200.8	T	Arsenic	7440-38-2							
E200.8	T	Beryllium	7440-41-7							
E200.8	T	Cadmium	7440-43-9	0.06	0.078	0.06	0.052	0.059	0.055	0.062
E200.8	T	Chromium	7440-47-3							
E200.8	T	Cobalt	7440-48-4							
E200.8	T	Copper	7440-50-8	2.13	2.78	1.94	1.89	1.79	1.8	2.08
E200.8	T	Lead	7439-92-1	1.07	2.09	1.11	0.874	0.907	0.823	1.15
E200.8	T	Nickel	7440-02-0							
E200.8	T	Silver	7440-22-4							
E200.8	T	Thallium	7440-28-0							
E200.8	T	Zinc	7440-66-6							
E335.4	T	Cyanide	57-12-5							
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0							
SW6010	T	Aluminum	7429-90-5							
SW6010	T	Barium	7440-39-3							
SW6010	T	Calcium	7440-70-2							
SW6010	T	Iron	7439-89-6							
SW6010	T	Magnesium	7439-95-4							
SW6010	T	Manganese	7439-96-5							
SW6010	T	Potassium	7440-09-7							
SW6010	T	Sodium	7440-23-5							
SW6010	T	Titanium	7440-32-6							
SW6010	T	Vanadium	7440-62-2							
SW6020	T	Antimony	7440-36-0							
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2							

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9							
E1630	T	Methyl Mercury	22967-92-6							
E1631E	T	Mercury	7439-97-6	0.0374	0.0559	0.0118	0.0133	0.0311	0.0464	0.0105
E200.8	T	Arsenic	7440-38-2							
E200.8	T	Beryllium	7440-41-7							
E200.8	T	Cadmium	7440-43-9	0.088	0.086	0.071	0.064	0.084	0.076	0.056
E200.8	T	Chromium	7440-47-3							
E200.8	T	Cobalt	7440-48-4							
E200.8	T	Copper	7440-50-8	3.31	3.22	2.1	2.22	3	3.12	2.03
E200.8	T	Lead	7439-92-1	2.44	2.6	1.14	1.41	2.36	2.43	1.01
E200.8	T	Nickel	7440-02-0							
E200.8	T	Silver	7440-22-4							
E200.8	T	Thallium	7440-28-0							
E200.8	T	Zinc	7440-66-6							
E335.4	T	Cyanide	57-12-5							
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0							
SW6010	T	Aluminum	7429-90-5							
SW6010	T	Barium	7440-39-3							
SW6010	T	Calcium	7440-70-2							
SW6010	T	Iron	7439-89-6							
SW6010	T	Magnesium	7439-95-4							
SW6010	T	Manganese	7439-96-5							
SW6010	T	Potassium	7440-09-7							
SW6010	T	Sodium	7440-23-5							
SW6010	T	Titanium	7440-32-6							
SW6010	T	Vanadium	7440-62-2							
SW6020	T	Antimony	7440-36-0							
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2							

Notes:
J - Estimated Concentration
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				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9		0.02 U	R	R	0.13	0.02 U	R
E1630	T	Methyl Mercury	22967-92-6		3e-05 J	4e-05 J	2.7e-05 J	5e-05 U	5.1e-05 J	3.7e-05 J
E1631E	T	Mercury	7439-97-6	0.0371	0.00758	0.00824	0.0104	0.00942	0.0151	0.00841
E200.8	T	Arsenic	7440-38-2		1.01	1.03	0.98	0.73	1.02	1.02
E200.8	T	Beryllium	7440-41-7		0.02 U	0.0043 J	0.0047 J	0.02 U	0.02 U	0.02 U
E200.8	T	Cadmium	7440-43-9	0.085	0.05	0.054	0.053	0.05	0.06	0.053
E200.8	T	Chromium	7440-47-3		0.67	0.77	0.96	0.68	1.3	0.7
E200.8	T	Cobalt	7440-48-4		0.106	0.157	0.138	0.101	0.158	0.122
E200.8	T	Copper	7440-50-8	3.41	1.86	2.26	2.14	1.96	2.53	1.94
E200.8	T	Lead	7439-92-1	2.87	0.72	1.1	1.16	0.954	1.72	0.93
E200.8	T	Nickel	7440-02-0		0.89	0.98	1.01	0.91 J	1.13	0.93
E200.8	T	Silver	7440-22-4		0.011 J	0.012 J	0.014 J	0.016 J	0.025	0.014 J
E200.8	T	Thallium	7440-28-0		0.007 J	0.008 J	0.007 J	0.02 U	0.015 J	0.02 U
E200.8	T	Zinc	7440-66-6		6.54	8.66	8.24	7.42	8.89	7.22
E335.4	T	Cyanide	57-12-5		10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0		107	89	91	91	140	82
SW6010	T	Aluminum	7429-90-5		125	140	154	133	232	124
SW6010	T	Barium	7440-39-3		19.5	28.3	24.4	24.1	22.7	18.8
SW6010	T	Calcium	7440-70-2		259000	221000	211000	185000	243000	255000
SW6010	T	Iron	7439-89-6		189	294	261	256	418	230
SW6010	T	Magnesium	7439-95-4		779000	637000	599000	568000	713000	762000
SW6010	T	Manganese	7439-96-5		50.1 J	63.1 J	62.2 J	59.9 J	63 J	51.7 J
SW6010	T	Potassium	7440-09-7		219000	215000	210000	177000	210000	232000
SW6010	T	Sodium	7440-23-5		6420000	5780000	5460000	4760000	5960000	6330000
SW6010	T	Titanium	7440-32-6		1 U	1.4 J	1.1 J	3.7	5.8 J	1.9
SW6010	T	Vanadium	7440-62-2		2 U	2 J	2 U	3.1	2.2 J	2 U
SW6020	T	Antimony	7440-36-0		1 U	1 U	1 U	1 U	1 U	1 U
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2		1 U	1 U	1 U	1 U	1 U	1 U

Notes:
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				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	R	0.18	0.02 U		R	0.1	R
E1630	T	Methyl Mercury	22967-92-6	7.4e-05 J	3.8e-05 J	3.7e-05 J	4.9e-05 J	4.2e-05 J	6.7e-05	3.5e-05 J
E1631E	T	Mercury	7439-97-6	0.0526	0.0103	0.00961	0.00794	0.00993	0.0411	0.0017 J
E200.8	T	Arsenic	7440-38-2	0.97	0.95	1.02	1.02	0.97	1.34	0.97
E200.8	T	Beryllium	7440-41-7	0.0084 J	0.02 U	0.02 U	0.0038 J	0.0043 J	0.02 U	0.004 J
E200.8	T	Cadmium	7440-43-9	0.066	0.054	0.051	0.047	0.052	0.06	0.051
E200.8	T	Chromium	7440-47-3	1.53	0.73	0.66	0.65	0.81	1.58	0.85
E200.8	T	Cobalt	7440-48-4	0.167	0.106	0.111	0.107	0.125	0.259	0.127
E200.8	T	Copper	7440-50-8	2.89	2.05	1.86	2.44	2.04	3.12	2.23
E200.8	T	Lead	7439-92-1	2.06	0.93	0.898	0.839	1.07	2.64	1.13
E200.8	T	Nickel	7440-02-0	1.2	0.94 J	0.89	0.91	0.99	1.35	0.99
E200.8	T	Silver	7440-22-4	0.026	0.019 J	0.016 J	0.013 J	0.013 J	0.042	0.014 J
E200.8	T	Thallium	7440-28-0	0.02 U	0.02 U	0.02 U	0.007 J	0.006 J	0.02 U	0.007 J
E200.8	T	Zinc	7440-66-6	10.8	7.8	7.07	7.02	7.94	8.74	7.86
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	8 J	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	123	89	112	85	96	104	89
SW6010	T	Aluminum	7429-90-5	296	141	139	126	157	464	155
SW6010	T	Barium	7440-39-3	29	23.2	21.2	21.3	24.2	19.3	24.2
SW6010	T	Calcium	7440-70-2	190000	218000	244000	237000	217000	258000	212000
SW6010	T	Iron	7439-89-6	483	266	219	202	247	997	260
SW6010	T	Magnesium	7439-95-4	473000	690000	694000	670000	619000	814000	606000
SW6010	T	Manganese	7439-96-5	78	58.3 J	54.5 J	53.5 J	61.2 J	68.3 J	61.6 J
SW6010	T	Potassium	7440-09-7	178000	214000	210000	231000	210000	254000	206000
SW6010	T	Sodium	7440-23-5	4170000	5680000	5930000	6010000	5560000	6780000	5360000
SW6010	T	Titanium	7440-32-6	11.2	4.6	0.7 J	1 U	1.2 J	20.6	3.5 J
SW6010	T	Vanadium	7440-62-2	2 U	4.9	2 U	2 U	2 U	4.8	2 J
SW6020	T	Antimony	7440-36-0	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
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				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	R	0.23	0.02 U	R	R	0.12	R
E1630	T	Methyl Mercury	22967-92-6	9.5e-05 J	5e-05 U	3.6e-05 J	3.2e-05 J	9e-05	4.1e-05 J	3e-05 J
E1631E	T	Mercury	7439-97-6	0.0261	0.00999	0.01	0.00874	0.041	0.0142	0.0113
E200.8	T	Arsenic	7440-38-2	0.95	0.78	1.04	1.1	1.18	0.84	0.99
E200.8	T	Beryllium	7440-41-7	0.0077 J	0.02 U	0.02 U	0.0046 J	0.0143 J	0.02 U	0.0259
E200.8	T	Cadmium	7440-43-9	0.068	0.049	0.054	0.049	0.08	0.06	0.075
E200.8	T	Chromium	7440-47-3	1.64	0.75	0.85	0.7	2.45	0.86	0.73
E200.8	T	Cobalt	7440-48-4	0.193	0.099	0.134	0.115	0.264	0.131	0.161 J
E200.8	T	Copper	7440-50-8	2.83	2.09	2.11	1.85	3.85	2.13	2.46
E200.8	T	Lead	7439-92-1	1.93	0.912	1.15	0.925	3.09	1.1	0.958
E200.8	T	Nickel	7440-02-0	1.17	0.99 J	0.99	0.92	1.31	1.09	1.27
E200.8	T	Silver	7440-22-4	0.024	0.017 J	0.015 J	0.013 J	0.041	0.019 J	0.019 J
E200.8	T	Thallium	7440-28-0	0.007 J	0.02 U	0.007 J	0.02 U	0.009 J	0.02 U	0.026
E200.8	T	Zinc	7440-66-6	10.9	7.92	7.77	6.92	12.7	8.82	7.03
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	109	92	86	85	125	91	110
SW6010	T	Aluminum	7429-90-5	262	128	165	152	396	151	108 J
SW6010	T	Barium	7440-39-3	29	26	20.8	19.5	26.9	26.3	23.4
SW6010	T	Calcium	7440-70-2	190000	176000	249000	245000	207000	183000	238000
SW6010	T	Iron	7439-89-6	452	260	271	233	714	287	243 J
SW6010	T	Magnesium	7439-95-4	526000	541000	705000	714000	563000	554000	725000
SW6010	T	Manganese	7439-96-5	80.8 J	65.3 J	55.7 J	52.3 J	81 J	68.7 J	53.5
SW6010	T	Potassium	7440-09-7	176000	168000	202000	247000	196000	173000	229000
SW6010	T	Sodium	7440-23-5	4780000	4490000	5870000	6500000	5090000	4580000	5830000
SW6010	T	Titanium	7440-32-6	9.3	2.7	1.5 J	2.6	15.4	4.2	7.4 J
SW6010	T	Vanadium	7440-62-2	2 U	3.7	2 U	2 U	2.9 J	2.4	2.6
SW6020	T	Antimony	7440-36-0	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
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				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	R	R	0.18	0.22	0.062	0.17	R
E1630	T	Methyl Mercury	22967-92-6	2.8e-05 J	2.5e-05 J	6e-05	2.9e-05 J	2.4e-05 J	5.6e-05	2.2e-05 J
E1631E	T	Mercury	7439-97-6	0.0095	0.00715	0.0185	0.00988	0.00764	0.0206 J	0.00813
E200.8	T	Arsenic	7440-38-2	0.99	0.98	1.1	1.2	1.09	1.08	0.97
E200.8	T	Beryllium	7440-41-7	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	T	Cadmium	7440-43-9	0.064	0.068	0.077	0.071	0.065	0.079	0.065
E200.8	T	Chromium	7440-47-3	0.7	0.56	1.16	1.76	0.63	1.2	0.67
E200.8	T	Cobalt	7440-48-4	0.171 J	0.139 J	0.206	0.233	0.154	0.19	0.144 J
E200.8	T	Copper	7440-50-8	2.29	2.14	2.82	2.73	2.23	2.9	2.08
E200.8	T	Lead	7439-92-1	0.888	0.709	1.45	1.53	0.729	1.62	0.783
E200.8	T	Nickel	7440-02-0	1.23	1.12	1.4	1.65	1.11	1.34	1.17
E200.8	T	Silver	7440-22-4	0.016 J	0.014 J	0.025 J	0.03 J	0.02 U	0.033 J	0.02 U
E200.8	T	Thallium	7440-28-0	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	T	Zinc	7440-66-6	6.79	6.23	8.47	7.28	6.26	7.76	6.3
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	101	105	111	95	122	207 J	124
SW6010	T	Aluminum	7429-90-5	93.1 J	68.8 J	117 J	91.9 J	69.3 J	170 J	93.6 J
SW6010	T	Barium	7440-39-3	23.3	21.8	26.9 J	21.1 J	20.6 J	23.7	21.8
SW6010	T	Calcium	7440-70-2	227000	268000	249000	264000	272000	238000	250000
SW6010	T	Iron	7439-89-6	204 J	154	316	241	189	416	209 J
SW6010	T	Magnesium	7439-95-4	711000	776000	679000	799000	804000	678000	734000
SW6010	T	Manganese	7439-96-5	52.1	49.1	64.2	50.9	48.4	60.2	49.7
SW6010	T	Potassium	7440-09-7	214000	245000	202000	257000	259000	205000 J	221000
SW6010	T	Sodium	7440-23-5	6e+06	6110000	4910000	6140000	6120000	5700000	5650000
SW6010	T	Titanium	7440-32-6	7.7 J	5.7 J	4.4 J	3.3 J	2 J	10 J	5 J
SW6010	T	Vanadium	7440-62-2	1.7 J	2	3.1	3.1	2.9	2.3	2.6
SW6020	T	Antimony	7440-36-0	1 U	1.35	1 U	1 U	1 U	1 U	1 U
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	0.2 J	1 U	1 U	1 U	1 U	0.2 J	1 U

Notes:
J - Estimated Concentration
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				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	R	R	R	0.18	0.17	0.105	0.13
E1630	T	Methyl Mercury	22967-92-6	5e-05 U	5.2e-05 U	2.2e-05 J	6e-05	3.5e-05 J	5e-05 U	4.1e-05 J
E1631E	T	Mercury	7439-97-6	0.00693	0.00629	0.00483	0.018	0.0125	0.00878	0.0148
E200.8	T	Arsenic	7440-38-2	0.96	0.97	1.01	1.02	1.12	1.06	1.13
E200.8	T	Beryllium	7440-41-7	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	T	Cadmium	7440-43-9	0.062	0.071	0.055	0.072	0.074	0.068	0.072
E200.8	T	Chromium	7440-47-3	0.53	0.53	0.43	1.16	0.83	0.57	1.01
E200.8	T	Cobalt	7440-48-4	0.133 J	0.131 J	0.126 J	0.216	0.167	0.145	0.183
E200.8	T	Copper	7440-50-8	2.01	2.11	1.86	2.72	2.51	2.18	2.45
E200.8	T	Lead	7439-92-1	0.679	0.617	0.533	1.52	0.971	0.723	1.16
E200.8	T	Nickel	7440-02-0	1.13	1.15	1.05	1.35	1.24	1.12	1.25
E200.8	T	Silver	7440-22-4	0.02 U	0.02 U	0.02 U	0.023 J	0.021 J	0.02 U	0.023 J
E200.8	T	Thallium	7440-28-0	0.02 U	0.02 U	0.02 U	0.008 J	0.014 J	0.008 J	0.02 U
E200.8	T	Zinc	7440-66-6	5.98	6.25	5.53	7.85	7.26	6.18	7.21
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	103	97	79	134	114	82	104
SW6010	T	Aluminum	7429-90-5	82.1 J	61 J	58.8 J	144 J	78.2 J	41.6 J	102 J
SW6010	T	Barium	7440-39-3	21.6	21.6	19.8	25.2	23.8	21.5	22.5 J
SW6010	T	Calcium	7440-70-2	258000	251000	261000	233000	261000	266000	269000
SW6010	T	Iron	7439-89-6	174 J	138 J	144 J	342 J	214 J	130 J	281 J
SW6010	T	Magnesium	7439-95-4	754000	739000	764000	677000	705000	726000	724000
SW6010	T	Manganese	7439-96-5	49.5	50.5	45.8	58.2	53.3	48.9	54.3
SW6010	T	Potassium	7440-09-7	227000	223000	227000	219000	213000	216000	215000
SW6010	T	Sodium	7440-23-5	5880000	5720000	5900000	5310000	5100000	5240000	5130000
SW6010	T	Titanium	7440-32-6	4.1 J	3 J	3.5 J	10.1	3.9	1.5	3.8
SW6010	T	Vanadium	7440-62-2	2.6	2.7	3.1	2.9	2.8	2.6	3.5
SW6020	T	Antimony	7440-36-0	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	1 U	1 U	0.3 J	1 U	1 U	1 U	1 U

Notes:
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				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	0.073	0.02 U	0.02 U	0.02 U			
E1630	T	Methyl Mercury	22967-92-6	4.9e-05 J	2.6e-05 J	3.2e-05 J	5.7e-05			
E1631E	T	Mercury	7439-97-6	0.0182	0.0106	0.0084	0.0233	0.00786	0.0468	0.0221
E200.8	T	Arsenic	7440-38-2	1.07	1.02	1.02	1.13			
E200.8	T	Beryllium	7440-41-7	0.02 U	0.02 U	0.02 U	0.02 U			
E200.8	T	Cadmium	7440-43-9	0.075	0.067	0.066	0.083	0.065	0.083	0.077
E200.8	T	Chromium	7440-47-3	1.12	0.69	0.57	1.54			
E200.8	T	Cobalt	7440-48-4	0.166	0.149	0.131	0.225			
E200.8	T	Copper	7440-50-8	2.88	2.22	2.08	3.31	2.35	3.83	3.06
E200.8	T	Lead	7439-92-1	1.55	0.875	0.719	2.13	0.878	2.88	1.58
E200.8	T	Nickel	7440-02-0	1.32	1.1	1.06	1.38			
E200.8	T	Silver	7440-22-4	0.03	0.02 U	0.02 U	0.039			
E200.8	T	Thallium	7440-28-0	0.02 U	0.02 U	0.02 U	0.009 J			
E200.8	T	Zinc	7440-66-6	7.64	6.1	5.78	8.86			
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U			
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	115	100	95	155			
SW6010	T	Aluminum	7429-90-5	150 J	106 J	82.7 J	213 J			
SW6010	T	Barium	7440-39-3	25.3	20.1	19.8	23.4			
SW6010	T	Calcium	7440-70-2	227000	242000	243000	245000			
SW6010	T	Iron	7439-89-6	362	258	199	517			
SW6010	T	Magnesium	7439-95-4	656000	688000	692000	718000			
SW6010	T	Manganese	7439-96-5	61.6	49.9	46.9	62.3			
SW6010	T	Potassium	7440-09-7	2e+05 J	211000 J	212000 J	225000			
SW6010	T	Sodium	7440-23-5	5510000	5780000	5810000	6090000			
SW6010	T	Titanium	7440-32-6	8.6 J	6.9 J	5.5 J	7.7 J			
SW6010	T	Vanadium	7440-62-2	3.1	3.1	3.4	2.4			
SW6020	T	Antimony	7440-36-0	1 U	1 U	1 U	1 U			
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	1 U	1 U	1 U	1 U			

Notes:
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R - Rejected data
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				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9							
E1630	T	Methyl Mercury	22967-92-6							
E1631E	T	Mercury	7439-97-6	0.0394	0.0236	0.0104	0.0438	0.0173	0.0122	0.0101
E200.8	T	Arsenic	7440-38-2							
E200.8	T	Beryllium	7440-41-7							
E200.8	T	Cadmium	7440-43-9	0.084	0.075	0.068	0.093	0.071	0.067	0.066
E200.8	T	Chromium	7440-47-3							
E200.8	T	Cobalt	7440-48-4							
E200.8	T	Copper	7440-50-8	3.75	3.23	3.12	4.05	2.87	2.63	2.52
E200.8	T	Lead	7439-92-1	2.7	1.74	1.02	3.13	1.57	0.999	0.962
E200.8	T	Nickel	7440-02-0							
E200.8	T	Silver	7440-22-4							
E200.8	T	Thallium	7440-28-0							
E200.8	T	Zinc	7440-66-6							
E335.4	T	Cyanide	57-12-5							
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0							
SW6010	T	Aluminum	7429-90-5							
SW6010	T	Barium	7440-39-3							
SW6010	T	Calcium	7440-70-2							
SW6010	T	Iron	7439-89-6							
SW6010	T	Magnesium	7439-95-4							
SW6010	T	Manganese	7439-96-5							
SW6010	T	Potassium	7440-09-7							
SW6010	T	Sodium	7440-23-5							
SW6010	T	Titanium	7440-32-6							
SW6010	T	Vanadium	7440-62-2							
SW6020	T	Antimony	7440-36-0							
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2							

Notes:
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				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9							
E1630	T	Methyl Mercury	22967-92-6							
E1631E	T	Mercury	7439-97-6	0.00671	0.0549	0.0316	0.0164	0.0178	0.0609	0.0282
E200.8	T	Arsenic	7440-38-2							
E200.8	T	Beryllium	7440-41-7							
E200.8	T	Cadmium	7440-43-9	0.064	0.091	0.078	0.072	0.077	0.111	0.076
E200.8	T	Chromium	7440-47-3							
E200.8	T	Cobalt	7440-48-4							
E200.8	T	Copper	7440-50-8	2.41	4.45	3.36	2.84	2.89	5.19	3.08
E200.8	T	Lead	7439-92-1	0.751	3.18	2.41	1.61	1.57	4.45	1.77
E200.8	T	Nickel	7440-02-0							
E200.8	T	Silver	7440-22-4							
E200.8	T	Thallium	7440-28-0							
E200.8	T	Zinc	7440-66-6							
E335.4	T	Cyanide	57-12-5							
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0							
SW6010	T	Aluminum	7429-90-5							
SW6010	T	Barium	7440-39-3							
SW6010	T	Calcium	7440-70-2							
SW6010	T	Iron	7439-89-6							
SW6010	T	Magnesium	7439-95-4							
SW6010	T	Manganese	7439-96-5							
SW6010	T	Potassium	7440-09-7							
SW6010	T	Sodium	7440-23-5							
SW6010	T	Titanium	7440-32-6							
SW6010	T	Vanadium	7440-62-2							
SW6020	T	Antimony	7440-36-0							
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2							

Notes:
J - Estimated Concentration
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				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9			0.09 J	0.2	0.1	0.08 J	0.16 J
E1630	T	Methyl Mercury	22967-92-6			5.1e-05 U	4.6e-05 J	2.3e-05 J	3.8e-05 J	9.1e-05
E1631E	T	Mercury	7439-97-6	0.0125	0.0039	0.0104	0.0114	0.00849	0.0108	0.0312
E200.8	T	Arsenic	7440-38-2			1.2	1.3	1.3	1.2	1.2
E200.8	T	Beryllium	7440-41-7			0.02 U	0.02 U	0.02 U	0.02 U	0.012 J
E200.8	T	Cadmium	7440-43-9	0.069	0.097	0.077	0.08	0.07	0.074	0.108
E200.8	T	Chromium	7440-47-3			0.81	0.89	0.73	0.76	2
E200.8	T	Cobalt	7440-48-4			0.13	0.14	0.13	0.13	0.24
E200.8	T	Copper	7440-50-8	2.49	4.81	2.31	2.36	2.41	2.44	3.42
E200.8	T	Lead	7439-92-1	1.01	4.14	1.1	1.22	1.03	1.13	2.53
E200.8	T	Nickel	7440-02-0			1.3	1.39	1.29	1.31	2.03
E200.8	T	Silver	7440-22-4			0.018 J	0.034	0.017 J	0.018 J	0.045
E200.8	T	Thallium	7440-28-0			0.011 J	0.048	0.01 J	0.012 J	0.016 J
E200.8	T	Zinc	7440-66-6			8.9	9.2	9.4	8.9	15.4
E335.4	T	Cyanide	57-12-5			10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0			135	140	132	137	184
SW6010	T	Aluminum	7429-90-5			154	160	102	105	235
SW6010	T	Barium	7440-39-3			25.4	26.4	21.8	22.5	37
SW6010	T	Calcium	7440-70-2			257000	258000	263000	263000	233000
SW6010	T	Iron	7439-89-6			287	313	230	244	589
SW6010	T	Magnesium	7439-95-4			739000	759000	723000	761000	601000
SW6010	T	Manganese	7439-96-5			35.5 J	39.5 J	34 J	33.9 J	78.9
SW6010	T	Potassium	7440-09-7			232000	238000	235000	247000	189000
SW6010	T	Sodium	7440-23-5			6180000	6410000	6330000	6660000	5180000
SW6010	T	Titanium	7440-32-6			30 U	30 U	30 U	30 U	11.1 J
SW6010	T	Vanadium	7440-62-2			3.6	3.8	3.3	2.8	3.6
SW6020	T	Antimony	7440-36-0			1 U	0.71 J	1 U	0.48 J	0.55 J
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2			1 U	1 U	1 U	1 U	0.3 J

Notes:
J - Estimated Concentration
R - Rejected data
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				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	0.1 U	0.1 J	0.1 U	0.1 U	0.1 U	0.1 U	0.11
E1630	T	Methyl Mercury	22967-92-6	4.5e-05 J	2.9e-05 J	0.000165	4.1e-05 J	4.9e-05 J	3.4e-05 J	2.7e-05 J
E1631E	T	Mercury	7439-97-6	0.0193	0.0126	0.0685	0.016	0.0181	0.0131	0.00964
E200.8	T	Arsenic	7440-38-2	1.3	1.27	1.43	1.3	1.5	1.3	1.2
E200.8	T	Beryllium	7440-41-7	0.013 J	0.02 U	0.02 U	0.02 U	0.024 J	0.02 U	0.02 U
E200.8	T	Cadmium	7440-43-9	0.085	0.076	0.102	0.082	0.082	0.057	0.072
E200.8	T	Chromium	7440-47-3	1.5	0.86	2.51	1.2	1.7	0.75	0.6
E200.8	T	Cobalt	7440-48-4	0.19	0.14	0.262	0.16	0.31	0.15	0.12
E200.8	T	Copper	7440-50-8	3.07	2.5	4.26	2.72	4.08	2.47	2.1
E200.8	T	Lead	7439-92-1	2.12	1.15	3.62	1.56	3.1	1.26	0.88
E200.8	T	Nickel	7440-02-0	1.62	1.24	1.69	1.54	1.77	1.12	1.26
E200.8	T	Silver	7440-22-4	0.034	0.021	0.055	0.023	0.05	0.023	0.016 J
E200.8	T	Thallium	7440-28-0	0.01 J	0.02 U	0.02 U	0.012 J	0.016 J	0.01 J	0.014 J
E200.8	T	Zinc	7440-66-6	11.1	9.9	13.1	10.5	10.7	5.9	8
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	152	135	167	148	149	137	135
SW6010	T	Aluminum	7429-90-5	237	179	393	197	478	186	90.4
SW6010	T	Barium	7440-39-3	24.7	24.8	30.2	28.8	23.8	16.5	22.2
SW6010	T	Calcium	7440-70-2	264000	271000	263000	245000	277000	261000	261000
SW6010	T	Iron	7439-89-6	552	341	992	371	1020	401	190
SW6010	T	Magnesium	7439-95-4	770000	724000	770000	702000	763000	744000	751000
SW6010	T	Manganese	7439-96-5	49.6	37.5	64.7	45.3 J	58.8 J	28.9 J	32.4 J
SW6010	T	Potassium	7440-09-7	246000	238000	252000	220000	239000	242000	243000
SW6010	T	Sodium	7440-23-5	6670000	6880000	6750000	5910000	6440000	6590000	6600000
SW6010	T	Titanium	7440-32-6	11 J	30 U	30 U	30 U	30 U	30 U	30 U
SW6010	T	Vanadium	7440-62-2	3.3	2.6 J	3.7 J	3.6	5.5	3.6	3.2
SW6020	T	Antimony	7440-36-0	1 U	1 U	1 U	1 U	0.59 J	1 U	0.68 J
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	0.3 J	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
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				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	0.21 J	0.17	0.1 U	0.1 U	0.2 J	0.16 J	0.1 U
E1630	T	Methyl Mercury	22967-92-6	5.8e-05	7e-05	5.1e-05 U	0.000131	8.8e-05	6.6e-05	3.6e-05 J
E1631E	T	Mercury	7439-97-6	0.0266	0.0236	0.00929	0.0437	0.0365	0.0222	0.0136
E200.8	T	Arsenic	7440-38-2	1.2	1.3	1.23	1.51	1.3	1.4	1.27
E200.8	T	Beryllium	7440-41-7	0.01 J	0.011 J	0.02 U	0.0287	0.015 J	0.014 J	0.02 U
E200.8	T	Cadmium	7440-43-9	0.102	0.094	0.079	0.101	0.106	0.095	0.075
E200.8	T	Chromium	7440-47-3	1.6	1.9	0.75	2.69 J	2.1	1.9	0.95
E200.8	T	Cobalt	7440-48-4	0.2	0.2	0.12	0.251	0.24	0.23	0.14
E200.8	T	Copper	7440-50-8	2.93	3.17	2.06	4.21	3.63	3.75	2.53
E200.8	T	Lead	7439-92-1	1.94	2.42	0.956	3.37	2.87	2.83	1.25
E200.8	T	Nickel	7440-02-0	1.81	1.78	1.28	1.63	1.89	1.73	1.29
E200.8	T	Silver	7440-22-4	0.034	0.034	0.018 J	0.053	0.044	0.043	0.022
E200.8	T	Thallium	7440-28-0	0.013 J	0.011 J	0.02 U	0.02 U	0.015 J	0.017 J	0.02 U
E200.8	T	Zinc	7440-66-6	13.9	14	8.75	12.8	14.7	12.6	8.56
E335.4	T	Cyanide	57-12-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	164	172	138	167	188	147	136
SW6010	T	Aluminum	7429-90-5	195	210	126	383	254	295	422
SW6010	T	Barium	7440-39-3	33.7	32.9	28.3	28.4	32.2	25.5	24.8
SW6010	T	Calcium	7440-70-2	248000	235000	265000	262000	239000	260000	270000
SW6010	T	Iron	7439-89-6	476	511	258	870	619	684	890
SW6010	T	Magnesium	7439-95-4	666000	684000	744000	704000	661000	752000	750000
SW6010	T	Manganese	7439-96-5	67.4	61.8	39.3	59.6	66.2	54.5	56.6
SW6010	T	Potassium	7440-09-7	211000	212000	255000	241000	209000	233000	256000
SW6010	T	Sodium	7440-23-5	5760000	5770000	6750000	6690000	5700000	6300000	6830000
SW6010	T	Titanium	7440-32-6	9.8 J	9.6 J	30 U	30 U	11.7 J	15.1 J	30 U
SW6010	T	Vanadium	7440-62-2	3.4	3.2	3.1 J	4.3 J	3.4	3.5	4.8 J
SW6020	T	Antimony	7440-36-0	1.19	0.71 J	1 U	1 U	0.42 J	0.81 J	1 U
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	0.3 J	1 U	1 U	1 U	0.4 J	0.2 J	1 U

Notes:
J - Estimated Concentration
R - Rejected data
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				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9	0.09 J						
E1630	T	Methyl Mercury	22967-92-6	0.000294						
E1631E	T	Mercury	7439-97-6	0.0763	0.0466	0.0278	0.0123	0.0553	0.0384	0.0132
E200.8	T	Arsenic	7440-38-2	1.84						
E200.8	T	Beryllium	7440-41-7	0.0715 J						
E200.8	T	Cadmium	7440-43-9	0.154	0.057	0.047	0.037	0.057	0.058	0.044
E200.8	T	Chromium	7440-47-3	5.61						
E200.8	T	Cobalt	7440-48-4	0.473						
E200.8	T	Copper	7440-50-8	8.09	4.12	2.84	2.08	4.58	3.38	2.53
E200.8	T	Lead	7439-92-1	8.5	4.11	2	0.965	4.69	2.57	1.62
E200.8	T	Nickel	7440-02-0	2.41						
E200.8	T	Silver	7440-22-4	0.14						
E200.8	T	Thallium	7440-28-0	0.023						
E200.8	T	Zinc	7440-66-6	20.6						
E335.4	T	Cyanide	57-12-5	10 U						
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0	263						
SW6010	T	Aluminum	7429-90-5	974						
SW6010	T	Barium	7440-39-3	34.6						
SW6010	T	Calcium	7440-70-2	257000						
SW6010	T	Iron	7439-89-6	2320						
SW6010	T	Magnesium	7439-95-4	722000						
SW6010	T	Manganese	7439-96-5	108						
SW6010	T	Potassium	7440-09-7	243000						
SW6010	T	Sodium	7440-23-5	6460000						
SW6010	T	Titanium	7440-32-6	43.3 J						
SW6010	T	Vanadium	7440-62-2	5.6 J						
SW6020	T	Antimony	7440-36-0	0.6 J						
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2	0.2 J						

Notes:
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				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
218.6	D	Chromium, Hexavalent	18540-29-9							
E1630	T	Methyl Mercury	22967-92-6							
E1631E	T	Mercury	7439-97-6	0.0267	0.0345	0.0154	0.0119	0.00823	0.0206	0.054
E200.8	T	Arsenic	7440-38-2							
E200.8	T	Beryllium	7440-41-7							
E200.8	T	Cadmium	7440-43-9	0.053	0.053	0.044	0.044	0.038	0.04	0.065
E200.8	T	Chromium	7440-47-3							
E200.8	T	Cobalt	7440-48-4							
E200.8	T	Copper	7440-50-8	3.32	3.54	3.36	2.76	2.13	2.66	4.04
E200.8	T	Lead	7439-92-1	2.42	3.18	2.05	1.42	0.995	1.97	3.68
E200.8	T	Nickel	7440-02-0							
E200.8	T	Silver	7440-22-4							
E200.8	T	Thallium	7440-28-0							
E200.8	T	Zinc	7440-66-6							
E335.4	T	Cyanide	57-12-5							
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0							
SW6010	T	Aluminum	7429-90-5							
SW6010	T	Barium	7440-39-3							
SW6010	T	Calcium	7440-70-2							
SW6010	T	Iron	7439-89-6							
SW6010	T	Magnesium	7439-95-4							
SW6010	T	Manganese	7439-96-5							
SW6010	T	Potassium	7440-09-7							
SW6010	T	Sodium	7440-23-5							
SW6010	T	Titanium	7440-32-6							
SW6010	T	Vanadium	7440-62-2							
SW6020	T	Antimony	7440-36-0							
SW6020	T	Arsenic	7440-38-2							
SW6020	T	Beryllium	7440-41-7							
SW6020	T	Cadmium	7440-43-9							
SW6020	T	Chromium	7440-47-3							
SW6020	T	Cobalt	7440-48-4							
SW6020	T	Copper	7440-50-8							
SW6020	T	Lead	7439-92-1							
SW6020	T	Nickel	7440-02-0							
SW6020	T	Silver	7440-22-4							
SW6020	T	Thallium	7440-28-0							
SW6020	T	Zinc	7440-66-6							
SW7742	T	Selenium	7782-49-2							

Notes:
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Table A-14
Analytical Data for Metals and Inorganics
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
218.6	D	Chromium, Hexavalent	18540-29-9						
E1630	T	Methyl Mercury	22967-92-6						
E1631E	T	Mercury	7439-97-6	0.0158	0.0388	0.0622	0.011	0.0155	0.0318
E200.8	T	Arsenic	7440-38-2						
E200.8	T	Beryllium	7440-41-7						
E200.8	T	Cadmium	7440-43-9	0.036	0.05	0.066	0.043	0.041	0.054
E200.8	T	Chromium	7440-47-3						
E200.8	T	Cobalt	7440-48-4						
E200.8	T	Copper	7440-50-8	2.38	3.96	3.9	2.48	2.69	3.54
E200.8	T	Lead	7439-92-1	1.46	3.98	3.4	1.53	1.73	3.3
E200.8	T	Nickel	7440-02-0						
E200.8	T	Silver	7440-22-4						
E200.8	T	Thallium	7440-28-0						
E200.8	T	Zinc	7440-66-6						
E335.4	T	Cyanide	57-12-5						
E365.3	T	Phosphorus, Dissolved (as P)	7723-14-0						
SW6010	T	Aluminum	7429-90-5						
SW6010	T	Barium	7440-39-3						
SW6010	T	Calcium	7440-70-2						
SW6010	T	Iron	7439-89-6						
SW6010	T	Magnesium	7439-95-4						
SW6010	T	Manganese	7439-96-5						
SW6010	T	Potassium	7440-09-7						
SW6010	T	Sodium	7440-23-5						
SW6010	T	Titanium	7440-32-6						
SW6010	T	Vanadium	7440-62-2						
SW6020	T	Antimony	7440-36-0						
SW6020	T	Arsenic	7440-38-2						
SW6020	T	Beryllium	7440-41-7						
SW6020	T	Cadmium	7440-43-9						
SW6020	T	Chromium	7440-47-3						
SW6020	T	Cobalt	7440-48-4						
SW6020	T	Copper	7440-50-8						
SW6020	T	Lead	7439-92-1						
SW6020	T	Nickel	7440-02-0						
SW6020	T	Silver	7440-22-4						
SW6020	T	Thallium	7440-28-0						
SW6020	T	Zinc	7440-66-6						
SW7742	T	Selenium	7782-49-2						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylnaphthalene	90-12-0	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9	ug/l	0.00139 J	0.000936 J	0.001 J	0.000947 J	0.00191 J	0.00125 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.00279 J	0.00229 J
ID-0016	N	2-Methylnaphthalene	91-57-6	ug/l	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9	ug/l	0.0175	0.01	0.0127	0.0107	0.0394	0.0136 J
ID-0016	N	Acenaphthylene	208-96-8	ug/l	0.00129 J	0.00107 J	0.00116 J	0.00125 J	0.00214 J	0.00127 J
ID-0016	N	Anthracene	120-12-7	ug/l	0.00231 J	0.0019 J	0.0016 J	0.00188 J	0.00395 J	0.00218 J
ID-0016	N	Benzanthracene	56-55-3	ug/l	0.00566 J	0.00361 J	0.00338 J	0.00439 J	0.00842 J	0.00441 J
ID-0016	N	Benzo(a)pyrene	50-32-8	ug/l	0.0106 U	0.01 U	0.01 U	0.01 U	0.02	0.00817 J
ID-0016	N	Benzo(b)fluoranthene	205-99-2	ug/l	0.0151 U	0.0112 U	0.0105 U	0.0133 U	0.0257	0.0116 J
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	ug/l	0.0125 J	0.0115 J	0.01 U	0.01 U	0.0226 J	0.00834 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.0109	0.00619 J
ID-0016	N	Benzo[e]pyrene	192-97-2	ug/l	0.0114 U	0.01 U	0.01 U	0.01 U	0.0178	0.00917 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.014 J	0.01 U
ID-0016	N	C1-Dibenzothiophenes	DBTC1	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1	ug/l	0.0189 J	0.0138 J	0.0156 J	0.0163 J	0.0244 J	0.017 J
ID-0016	N	C1-Fluorenes	FLRC1	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1	ug/l						
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	ug/l	0.00824 J	0.0122 J	0.0117 J	0.013 J	0.0126	0.0139 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.00902 J	0.00193 J
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	ug/l	0.000956 J	0.01 U	0.000812 J	0.01 U	0.00122 J	0.000893 J
ID-0016	N	Fluoranthene	206-44-0	ug/l	0.0235	0.0145	0.0179	0.0176	0.0338	0.0189 J
ID-0016	N	Fluorene	86-73-7	ug/l	0.01 U	0.01 U	0.00214 J	0.01 U	0.01 U	0.00235 J
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	ug/l	0.011	0.011	0.01 U	0.01 U	0.0186	0.0064 J
ID-0016	N	Naphthalene	91-20-3	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.0162 J	0.0185 J
ID-0016	N	Perylene	198-55-0	ug/l	0.01 U	0.01 U	0.01 U	0.01 U	0.00684 J	0.0037 J

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
ID-0016	N	Phenanthrene	85-01-8	ug/l	0.02 U	0.02 U	0.02 U	0.02 U	0.0139 J	0.02 U
ID-0016	N	Pyrene	129-00-0	ug/l	0.0303	0.0216	0.0268	0.0265	0.0314	0.0277 J
SW8270 LL	N	2-Methylnaphthalene	91-57-6	ug/l						
SW8270 LL	N	Acenaphthene	83-32-9	ug/l						
SW8270 LL	N	Acenaphthylene	208-96-8	ug/l						
SW8270 LL	N	Anthracene	120-12-7	ug/l						
SW8270 LL	N	Benzanthracene	56-55-3	ug/l						
SW8270 LL	N	Benzo(a)pyrene	50-32-8	ug/l						
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2	ug/l						
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2	ug/l						
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9	ug/l						
SW8270 LL	N	Chrysene	218-01-9	ug/l						
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3	ug/l						
SW8270 LL	N	Fluoranthene	206-44-0	ug/l						
SW8270 LL	N	Fluorene	86-73-7	ug/l						
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5	ug/l						
SW8270 LL	N	Naphthalene	91-20-3	ug/l						
SW8270 LL	N	Phenanthrene	85-01-8	ug/l						
SW8270 LL	N	Pyrene	129-00-0	ug/l						

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylnaphthalene	90-12-0		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9		0.00168 J	0.00159 J	0.01 U	0.000721 J	0.000814 J	0.00217 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00249 J
ID-0016	N	2-Methylnaphthalene	91-57-6		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9		0.0183	0.00521 J	0.00689 J	0.00801 J	0.00921 J	0.0396
ID-0016	N	Acenaphthylene	208-96-8		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00182 J
ID-0016	N	Anthracene	120-12-7		0.00259 J	0.002 J	0.00116 J	0.00124 J	0.00151 J	0.00366 J
ID-0016	N	Benzanthracene	56-55-3		0.00688 J	0.00433 J	0.00244 J	0.00254 J	0.003 J	0.0107
ID-0016	N	Benzo(a)pyrene	50-32-8		0.0147	0.0101	0.00455 J	0.0046 J	0.00559 J	0.0213
ID-0016	N	Benzo(b)fluoranthene	205-99-2		0.0228	0.0128	0.00742 J	0.00775 J	0.00948 J	0.0288
ID-0016	N	Benzo(g,h,i)perylene	191-24-2		0.0139 J	0.00985 J	0.00462 J	0.00464 J	0.00572 J	0.0252 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9		0.0104	0.00634 J	0.00268 J	0.00315 J	0.00413 J	0.0145
ID-0016	N	Benzo[e]pyrene	192-97-2		0.014	0.0107	0.00538 J	0.0051 J	0.0066 J	0.0188
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1		0.0144 J	0.01 U	0.01 U	0.01 U	0.01 U	0.0157 J
ID-0016	N	C1-Dibenzothiophenes	DBTC1		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1		0.0233 J	0.0156 J	0.0117 J	0.0116 J	0.0113 J	0.0273 J
ID-0016	N	C1-Fluorenes	FLRC1		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9		0.0122	0.0125 J	0.00866 J	0.00855 J	0.00962 J	0.0157
ID-0016	N	Dibenz(a,h)anthracene	53-70-3		0.00289 J	0.00345 J	0.00108 J	0.00105 J	0.00141 J	0.0105
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0		0.000872 J	0.000991 J	0.01 U	0.01 U	0.01 U	0.00133 J
ID-0016	N	Fluoranthene	206-44-0		0.029	0.015	0.0114	0.0115	0.0129	0.0419
ID-0016	N	Fluorene	86-73-7		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5		0.0118	0.00863 J	0.0032 J	0.0035 J	0.00462 J	0.0213
ID-0016	N	Naphthalene	91-20-3		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ID-0016	N	Perylene	198-55-0		0.00549 J	0.00462 J	0.00221 J	0.00221 J	0.00256 J	0.00686 J

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8		0.02 U	0.0116 J	0.02 U	0.02 U	0.02 U	0.0149 J
ID-0016	N	Pyrene	129-00-0		0.0327	0.0245	0.0228	0.0214	0.0191	0.0412
SW8270 LL	N	2-Methylnaphthalene	91-57-6	0.2 U						
SW8270 LL	N	Acenaphthene	83-32-9	0.2 U						
SW8270 LL	N	Acenaphthylene	208-96-8	0.2 U						
SW8270 LL	N	Anthracene	120-12-7	0.2 U						
SW8270 LL	N	Benzanthracene	56-55-3	0.2 U						
SW8270 LL	N	Benzo(a)pyrene	50-32-8	0.2 U						
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2	0.2 U						
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2	0.2 U						
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9	0.2 U						
SW8270 LL	N	Chrysene	218-01-9	0.2 U						
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3	0.2 U						
SW8270 LL	N	Fluoranthene	206-44-0	0.2 U						
SW8270 LL	N	Fluorene	86-73-7	0.2 U						
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.2 U						
SW8270 LL	N	Naphthalene	91-20-3	0.2 U						
SW8270 LL	N	Phenanthrene	85-01-8	0.2 U						
SW8270 LL	N	Pyrene	129-00-0	0.2 U						

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.01 U	0.01 U	0.01 U				
ID-0016	N	1-Methylnaphthalene	90-12-0	0.01 U	0.01 U	0.01 U				
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00212 J	0.00183 J	0.00202 J				
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.01 U	0.01 U	0.00242 J				
ID-0016	N	2-Methylnaphthalene	91-57-6	0.02 U	0.02 U	0.02 U				
ID-0016	N	Acenaphthene	83-32-9	0.0196	0.014	0.0102				
ID-0016	N	Acenaphthylene	208-96-8	0.00159 J	0.00135 J	0.01 U				
ID-0016	N	Anthracene	120-12-7	0.00281 J	0.00277 J	0.00334 J				
ID-0016	N	Benzanthracene	56-55-3	0.00636 J	0.0076 J	0.00696 J				
ID-0016	N	Benzo(a)pyrene	50-32-8	0.0147	0.0162	0.0152				
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.0204	0.0202	0.0219				
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.0137	0.0151	0.0146 J				
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.00899 J	0.0147	0.0106				
ID-0016	N	Benzo[e]pyrene	192-97-2	0.0149	0.0169	0.0148				
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.0142 J	0.0114 J	0.0144 J				
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U				
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1	0.025 J	0.021 J	0.0231 J				
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U				
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.01 U	0.01 U	0.01 U				
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.01 U				
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U				
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.01 U	0.01 U				
ID-0016	N	C2-Naphthalenes	NPHC2	0.01 U	0.01 U	0.01 U				
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.01 U	0.01 U	0.01 U				
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U				
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U				
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U				
ID-0016	N	C3-Naphthalenes	NPHC3	0.01 U	0.01 U	0.01 U				
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 U	0.01 U	0.01 U				
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U				
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U				
ID-0016	N	C4-Naphthalenes	NPHC4	0.01 U	0.01 U	0.01 U				
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U				
ID-0016	N	Chrysene	218-01-9	0.0105 J	0.0108 J	0.0124				
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.00319 J	0.00449 J	0.00305 J				
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.00123 J	0.0012 J	0.00115 J				
ID-0016	N	Fluoranthene	206-44-0	0.0324	0.0267	0.0259				
ID-0016	N	Fluorene	86-73-7	0.00283 J	0.0025 J	0.01 U				
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.011	0.0118	0.012				
ID-0016	N	Naphthalene	91-20-3	0.05 U	0.05 U	0.05 U				
ID-0016	N	Perylene	198-55-0	0.00532 J	0.00809 J	0.00578 J				

				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0145 J	0.0116 J	0.0119 J				
ID-0016	N	Pyrene	129-00-0	0.0382	0.0332	0.0332				
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7							
ID-0016	N	1-Methylnaphthalene	90-12-0							
ID-0016	N	1-Methylphenanthrene	832-69-9							
ID-0016	N	2,6-Dimethylnapthalene	581-42-0							
ID-0016	N	2-Methylnaphthalene	91-57-6							
ID-0016	N	Acenaphthene	83-32-9							
ID-0016	N	Acenaphthylene	208-96-8							
ID-0016	N	Anthracene	120-12-7							
ID-0016	N	Benzanthracene	56-55-3							
ID-0016	N	Benzo(a)pyrene	50-32-8							
ID-0016	N	Benzo(b)fluoranthene	205-99-2							
ID-0016	N	Benzo(g,h,i)perylene	191-24-2							
ID-0016	N	Benzo(k)fluoranthene	207-08-9							
ID-0016	N	Benzo[e]pyrene	192-97-2							
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1							
ID-0016	N	C1-Dibenzothiophenes	DBTC1							
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1							
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1							
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2							
ID-0016	N	C2-Dibenzothiophenes	DBTC2							
ID-0016	N	C2-Fluorenes	FLRC2							
ID-0016	N	C2-Naphthalenes	NPHC2							
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2							
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3							
ID-0016	N	C3-Dibenzothiophenes	DBTC3							
ID-0016	N	C3-Fluorenes	FLRC3							
ID-0016	N	C3-Naphthalenes	NPHC3							
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3							
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4							
ID-0016	N	C4-Dibenzothiophenes	DBTC4							
ID-0016	N	C4-Naphthalenes	NPHC4							
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4							
ID-0016	N	Chrysene	218-01-9							
ID-0016	N	Dibenz(a,h)anthracene	53-70-3							
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0							
ID-0016	N	Fluoranthene	206-44-0							
ID-0016	N	Fluorene	86-73-7							
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
ID-0016	N	Naphthalene	91-20-3							
ID-0016	N	Perylene	198-55-0							

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8							
ID-0016	N	Pyrene	129-00-0							
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7							
ID-0016	N	1-Methylnaphthalene	90-12-0							
ID-0016	N	1-Methylphenanthrene	832-69-9							
ID-0016	N	2,6-Dimethylnapthalene	581-42-0							
ID-0016	N	2-Methylnaphthalene	91-57-6							
ID-0016	N	Acenaphthene	83-32-9							
ID-0016	N	Acenaphthylene	208-96-8							
ID-0016	N	Anthracene	120-12-7							
ID-0016	N	Benzanthracene	56-55-3							
ID-0016	N	Benzo(a)pyrene	50-32-8							
ID-0016	N	Benzo(b)fluoranthene	205-99-2							
ID-0016	N	Benzo(g,h,i)perylene	191-24-2							
ID-0016	N	Benzo(k)fluoranthene	207-08-9							
ID-0016	N	Benzo[e]pyrene	192-97-2							
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1							
ID-0016	N	C1-Dibenzothiophenes	DBTC1							
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1							
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1							
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2							
ID-0016	N	C2-Dibenzothiophenes	DBTC2							
ID-0016	N	C2-Fluorenes	FLRC2							
ID-0016	N	C2-Naphthalenes	NPHC2							
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2							
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3							
ID-0016	N	C3-Dibenzothiophenes	DBTC3							
ID-0016	N	C3-Fluorenes	FLRC3							
ID-0016	N	C3-Naphthalenes	NPHC3							
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3							
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4							
ID-0016	N	C4-Dibenzothiophenes	DBTC4							
ID-0016	N	C4-Naphthalenes	NPHC4							
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4							
ID-0016	N	Chrysene	218-01-9							
ID-0016	N	Dibenz(a,h)anthracene	53-70-3							
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0							
ID-0016	N	Fluoranthene	206-44-0							
ID-0016	N	Fluorene	86-73-7							
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
ID-0016	N	Naphthalene	91-20-3							
ID-0016	N	Perylene	198-55-0							

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8							
ID-0016	N	Pyrene	129-00-0							
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7		0.00307 J	0.00704 J	0.00533 J	0.00457 J	0.00406 J	0.00496 J
ID-0016	N	1-Methylnaphthalene	90-12-0		0.0207	0.0349	0.0177	0.0116	0.0144	0.0223
ID-0016	N	1-Methylphenanthrene	832-69-9		0.00323 J	0.00426 J	0.00416 J	0.00308 J	0.00454 J	0.00416 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0		0.00548 J	0.0206	0.00767 J	0.00479 J	0.00641 J	0.00845 J
ID-0016	N	2-Methylnaphthalene	91-57-6		0.0319	0.043	0.0216	0.0122 J	0.0166 J	0.0312
ID-0016	N	Acenaphthene	83-32-9		0.0155	0.0223	0.0236	0.0221	0.0222	0.0167
ID-0016	N	Acenaphthylene	208-96-8		0.00196 J	0.00301 J	0.00275 J	0.00223 J	0.00373 J	0.00221 J
ID-0016	N	Anthracene	120-12-7		0.00386 J	0.00525 J	0.00484 J	0.01 U	0.00919 J	0.00445 J
ID-0016	N	Benzanthracene	56-55-3		0.00365 J	0.00627 J	0.00532 J	0.01 U	0.0114	0.00458 J
ID-0016	N	Benzo(a)pyrene	50-32-8		0.00389 J	0.00924 J	0.00658 J	0.01 U	0.0152 J	0.0059 J
ID-0016	N	Benzo(b)fluoranthene	205-99-2		0.00569 J	0.0155	0.0102	0.01 U	0.0229	0.00809 J
ID-0016	N	Benzo(g,h,i)perylene	191-24-2		0.01 U	0.00861 J	0.00518 J	0.01 U	0.0117	0.00505 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9		0.00198 J	0.00605 J	0.00346 J	0.01 U	0.00786 J	0.00391 J
ID-0016	N	Benzo[e]pyrene	192-97-2		0.00322 J	0.00964 J	0.00566 J	0.01 U	0.012	0.00529 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1		0.01 U	0.01 U	0.01 U	0.01 U	0.0143 J	0.01 U
ID-0016	N	C1-Dibenzothiophenes	DBTC1		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1		0.0112 J	0.0147 J	0.015 J	0.011 J	0.0155 J	0.0141 J
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1		0.01 U	0.0121 J	0.011 J	0.01 U	0.0195 J	0.01 U
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2		0.01 U	0.01 U	0.0106 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2		0.0144 J	0.0508 J	0.0203 J	0.0138 J	0.0166 J	0.0219 J
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2		0.0109 J	0.0131 J	0.0131 J	0.01 U	0.0155 J	0.0135 J
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3		0.01 U	0.0227 J	0.0142 J	0.01 J	0.0111 J	0.0137 J
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3		0.01 U	0.01 U	0.01 U	0.01 U	0.0109 J	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4		0.01 U	0.0163 J	0.0138 J	0.01 U	0.0121 J	0.0126 J
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9		0.00637 J	0.0181 J	0.0116 J	0.00834 J	0.0226 J	0.00912 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3		0.01 U	0.00158 J	0.001 J	0.01 U	0.00202 J	0.00124 J
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0		0.0019 J	0.00349 J	0.00268 J	0.01 U	0.00303 J	0.00232 J
ID-0016	N	Fluoranthene	206-44-0		0.0196	0.045	0.0329	0.0278 J	0.0448	0.0255
ID-0016	N	Fluorene	86-73-7		0.00868 J	0.0126 J	0.0126	0.0105 U	0.0113 J	0.00998 J
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5		0.0026 J	0.00781 J	0.00394 J	0.01 U	0.00994 J	0.00419 J
ID-0016	N	Naphthalene	91-20-3		0.0424 J	0.0574	0.0404 J	0.0301 J	0.0433 J	0.0387 J
ID-0016	N	Perylene	198-55-0		0.00204 J	0.00333 J	0.0024 J	0.01 U	0.00692 J	0.00262 J

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8		0.0197 J	0.0387	0.0289	0.0217 U	0.0314	0.0239
ID-0016	N	Pyrene	129-00-0		0.0179	0.0358	0.0278	0.0244 J	0.0416	0.0222
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.00515 J	0.00447 J	0.00392 J	0.00423 J	0.0054 J	0.00536 J	0.00489 J
ID-0016	N	1-Methylnaphthalene	90-12-0	0.0183	0.0127	0.0143	0.0207	0.018	0.014	0.0176
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00594 J	0.00347 J	0.00351 J	0.00376 J	0.00402 J	0.00571 J	0.00469 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.00797 J	0.00583 J	0.00491 J	0.00744 J	0.00785 J	0.00809 J	0.0086 J
ID-0016	N	2-Methylnaphthalene	91-57-6	0.0197 J	0.014 J	0.0196 J	0.0286	0.0225	0.017 J	0.0194 J
ID-0016	N	Acenaphthene	83-32-9	0.0371	0.0228	0.0177	0.018	0.0237	0.0153	0.0257
ID-0016	N	Acenaphthylene	208-96-8	0.00423 J	0.00306 J	0.00228 J	0.00224 J	0.00276 J	0.00295 J	0.00308 J
ID-0016	N	Anthracene	120-12-7	0.00982 J	0.01 U	0.00497 J	0.00486 J	0.00504 J	0.01 U	0.00607 J
ID-0016	N	Benzanthracene	56-55-3	0.0167	0.01 U	0.0048 J	0.00464 J	0.0055 J	0.00997 J	0.00671 J
ID-0016	N	Benzo(a)pyrene	50-32-8	0.0152 J	0.01 U	0.00514 J	0.00518 J	0.00679 J	0.0116 U	0.00792 J
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.0232	0.01 U	0.00783 J	0.00789 J	0.0105	0.015 U	0.0134
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.0122 J	0.01 U	0.00415 J	0.00459 J	0.00578 J	0.01 U	0.00635 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.00993 J	0.01 U	0.00263 J	0.00268 J	0.00358 J	0.01 U	0.00439 J
ID-0016	N	Benzo[e]pyrene	192-97-2	0.0128	0.01 U	0.00426 J	0.00466 J	0.0059 J	0.0102 U	0.0071 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.013 J	0.01 U	0.01 U	0.01 U	0.01 U	0.0133 J	0.01 U
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.0197 J	0.0129 J	0.0117 J	0.0129 J	0.0151 J	0.0201 J	0.0155 J
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1	0.0248 J	0.0112 J	0.01 U	0.01 U	0.0114 J	0.0186 J	0.0128 J
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	0.0109 J	0.01 U	0.01 U	0.01 U	0.0107 J	0.011 J	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	0.0209 J	0.0164 J	0.013 J	0.0194 J	0.0203 J	0.0199 J	0.0224 J
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.016 J	0.0116 J	0.011 J	0.0108 J	0.0133 J	0.02 J	0.0142 J
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	0.0145 J	0.0126 J	0.01 U	0.0116 J	0.0149 J	0.0151 J	0.0145 J
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0147 J	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4	0.0136 J	0.0118 J	0.0105 J	0.0118 J	0.0151 J	0.0146 J	0.0146 J
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	0.0314 J	0.0105 J	0.00825 J	0.00828 J	0.0121 J	0.0164 J	0.014 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.00215 J	0.01 U	0.00084 J	0.0011 J	0.00102 J	0.01 U	0.00109 J
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.00356 J	0.01 U	0.00179 J	0.00251 J	0.00289 J	0.01 U	0.0033 J
ID-0016	N	Fluoranthene	206-44-0	0.0572	0.027 J	0.025	0.0242	0.0343	0.033 J	0.0358
ID-0016	N	Fluorene	86-73-7	0.0174	0.0114 U	0.00961 J	0.00977 J	0.0125	0.0106 U	0.0122 J
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.00977 J	0.01 U	0.00323 J	0.00342 J	0.00431 J	0.01 U	0.0053 J
ID-0016	N	Naphthalene	91-20-3	0.0539	0.0333 J	0.0319 J	0.049 J	0.0401 J	0.035 J	0.0521
ID-0016	N	Perylene	198-55-0	0.00515 J	0.01 U	0.00232 J	0.00263 J	0.00252 J	0.01 U	0.00322 J

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0389	0.0225 U	0.0212	0.0254	0.0283	0.0304 U	0.032
ID-0016	N	Pyrene	129-00-0	0.0483	0.0238 J	0.0223	0.0219	0.0289	0.0319 J	0.0314
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.00474 J	0.00354 J	0.00384 J	0.00473 J	0.00549 J	0.00398 J	0.01 U
ID-0016	N	1-Methylnaphthalene	90-12-0	0.0167	0.0126	0.0149	0.0228	0.0152	0.0134	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00481 J	0.00351 J	0.01 U	0.01 U	0.00697 J	0.00399 J	0.00178 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.00702 J	0.00501 J	0.00596 J	0.00792 J	0.0082 J	0.00536 J	0.01 U
ID-0016	N	2-Methylnaphthalene	91-57-6	0.0178 J	0.0125 J	0.0156 J	0.0329	0.0195 J	0.0137 J	0.02 U
ID-0016	N	Acenaphthene	83-32-9	0.0421	0.0239	0.0215	0.0172	0.03	0.0297	0.00479 J
ID-0016	N	Acenaphthylene	208-96-8	0.00427 J	0.00252 J	0.00274 J	0.00239 J	0.00473 J	0.00295 J	0.01 U
ID-0016	N	Anthracene	120-12-7	0.00845 J	0.01 U	0.00586 J	0.00534 J	0.0112	0.01 U	0.00231 J
ID-0016	N	Benzanthracene	56-55-3	0.0098 J	0.01 U	0.00629 J	0.00544 J	0.0186	0.01 U	0.00583 J
ID-0016	N	Benzo(a)pyrene	50-32-8	0.0112 J	0.01 U	0.00792 J	0.007 J	0.0247 J	0.01 U	0.01 U
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.0152	0.01 U	0.0111	0.0102	0.0319	0.0119 U	0.01 U
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.00902 J	0.01 U	0.00611 J	0.00563 J	0.0193 J	0.01 U	0.00507 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.00718 J	0.01 U	0.00391 J	0.00372 J	0.0133	0.01 U	0.01 U
ID-0016	N	Benzo[e]pyrene	192-97-2	0.00982 J	0.01 U	0.00628 J	0.00591 J	0.02	0.01 U	0.00503 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.01 U	0.01 U	0.01 U	0.01 U	0.0214 J	0.01 U	0.01 U
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							0.0112 J
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U	0.01 U	0.0103 J	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.0171 J	0.0114 J	0.0134 J	0.0129 J	0.0247 J	0.0134 J	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1	0.0187 J	0.0104 J	0.0122 J	0.01 U	0.0324 J	0.0122 J	
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.01 U	0.01 U	0.011 J	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.01 U	0.01 U	0.01 U	0.0124 J	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	0.0187 J	0.0145 J	0.0161 J	0.0203 J	0.0203 J	0.015 J	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.0152 J	0.0104 J	0.0119 J	0.0115 J	0.0227 J	0.0112 J	0.01 U
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	0.0129 J	0.0104 J	0.0109 J	0.0127 J	0.0149 J	0.0114 J	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 J	0.01 U	0.01 U	0.01 U	0.0148 J	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4	0.0121 J	0.01 U	0.0118 J	0.0129 J	0.0159 J	0.0103 J	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	0.0164 J	0.00976 J	0.0124 J	0.00963 J	0.0337 J	0.0115 J	0.0102 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.00158 J	0.01 U	0.00161 J	0.00146 J	0.00376 J	0.01 U	0.0014 J
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.00334 J	0.01 U	0.00285 J	0.00276 J	0.00409 J	0.01 U	0.000819 J
ID-0016	N	Fluoranthene	206-44-0	0.0519	0.0289 J	0.0335	0.0252	0.0778	0.0349 J	0.0246
ID-0016	N	Fluorene	86-73-7	0.0173	0.0113 U	0.0112 J	0.01 J	0.016	0.0137 U	0.00233 J
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.00676 J	0.01 U	0.00473 J	0.00467 J	0.0146	0.01 U	0.00384 J
ID-0016	N	Naphthalene	91-20-3	0.0554	0.0338 J	0.0436 J	0.0515	0.0426 J	0.0398 J	0.05 U
ID-0016	N	Perylene	198-55-0	0.00447 J	0.01 U	0.00344 J	0.00414 J	0.00928 J	0.01 U	0.0035 J

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0322	0.0228 U	0.0277	0.0256	0.042	0.0269 U	0.02 U
ID-0016	N	Pyrene	129-00-0	0.0442	0.0249 J	0.0305	0.0228	0.0733	0.0304 J	0.0269
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.01 U	0.01 U	0.00244 J	0.01 U	0.00179 J	0.00188 J	0.01 U
ID-0016	N	1-Methylnaphthalene	90-12-0	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00147 J	0.00152 J	0.00198 J	0.00167 J	0.00149 J	0.0025 J	0.00165 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.01 U	0.01 U	0.00357 J	0.00237 J	0.00253 J	0.00328 J	0.01 U
ID-0016	N	2-Methylnaphthalene	91-57-6	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9	0.00606 J	0.00525 J	0.012	0.00547 J	0.00481 J	0.00788 J	0.00468 J
ID-0016	N	Acenaphthylene	208-96-8	0.01 U	0.01 U	0.00176 J	0.000916 J	0.00091 J	0.00166 J	0.000936 J
ID-0016	N	Anthracene	120-12-7	0.00214 J	0.00153 J	0.01 U	0.01 U	0.01 U	0.00347 J	0.00154 J
ID-0016	N	Benzanthracene	56-55-3	0.00524 J	0.00353 J	0.01 U	0.01 U	0.01 U	0.00942 J	0.0044 J
ID-0016	N	Benzo(a)pyrene	50-32-8	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0115 J	0.00488 J
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.01 U	0.01 U	0.0127 U	0.01 U	0.01 U	0.0156 J	0.00713 J
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.00414 J	0.01 U	0.00703 J	0.00387 J	0.00377 J	0.0079 J	0.00376 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.01 U	0.01 U	0.01 U	0.00294 J	0.00318 J	0.00686 J	0.00344 J
ID-0016	N	Benzo[e]pyrene	192-97-2	0.00435 J	0.00309 J	0.01 U	0.00387 J	0.00378 J	0.00894 J	0.0039 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.01 U	0.01 U	0.0102 J	0.01 U	0.01 U	0.0123 J	0.0126 J
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1	0.0117 J	0.01 U	0.0172 J	0.01 U	0.01 U	0.0178 J	0.0148 J
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0117 J	0.0117 J
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	0.01 U	0.01 U	0.0127 J	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0503 J
ID-0016	N	C4-Naphthalenes	NPHC4	0.01 U	0.01 U	0.0144 J	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	0.0096 J	0.00694 J	0.0134 J	0.00778 J	0.00768 J	0.0164 J	0.00791 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.00107 J	0.000916 J	0.00149 J	0.00085 J	0.00087 J	0.00211 J	0.000918 J
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.000787 J	0.01 U	0.00136 J	0.000893 J	0.000843 J	0.00124 J	0.000693 J
ID-0016	N	Fluoranthene	206-44-0	0.0251	0.0217	0.036 J	0.0224 J	0.0216 J	0.0342 J	0.0223
ID-0016	N	Fluorene	86-73-7	0.00248 J	0.00262 J	0.00432 J	0.01 U	0.01 U	0.01 U	0.00229 J
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.0033 J	0.00233 J	0.00629 J	0.00293 J	0.00286 J	0.00733 J	0.00307 J
ID-0016	N	Naphthalene	91-20-3	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ID-0016	N	Perylene	198-55-0	0.00287 J	0.00215 J	0.01 U	0.00345 J	0.00343 J	0.00632 J	0.00301 J

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ID-0016	N	Pyrene	129-00-0	0.0265	0.02	0.0381 J	0.0225 J	0.0215 J	0.0378 J	0.0226
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.01 U	0.01 U	0.01 U	0.00243 J	0.00167 J	0.00206 J	0.00192 J
ID-0016	N	1-Methylnaphthalene	90-12-0	0.01 U	0.01 U	0.01 U	0.00455 J	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9	0.0013 J	0.00141 J	0.00123 J	0.00357 J	0.0023 J	0.00174 J	0.00285 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.01 U	0.01 U	0.00261 J	0.00336 J	0.00232 J	0.00281 J	0.00308 J
ID-0016	N	2-Methylnaphthalene	91-57-6	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9	0.00392 J	0.00425 J	0.00499 J	0.0156	0.00685 J	0.00663 J	0.00782 J
ID-0016	N	Acenaphthylene	208-96-8	0.000856 J	0.01 U	0.01 U	0.00157 J	0.00159 J	0.01 U	0.00163 J
ID-0016	N	Anthracene	120-12-7	0.00168 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Benzanthracene	56-55-3	0.00364 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Benzo(a)pyrene	50-32-8	0.00379 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0124 U
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.00622 J	0.01 U	0.01 U	0.0133 U	0.0117 J	0.01 U	0.0156 U
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.00319 J	0.01 U	0.01 U	0.01 U	0.00687 J	0.01 U	0.00835 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.00234 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Benzo[e]pyrene	192-97-2	0.0031 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0113 J
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1	0.01 U	0.01 U	0.01 U	0.0157 J	0.011 J	0.01 U	0.0157 J
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.01 U	0.01 U	0.01 U	0.0104 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.01 U	0.01 U	0.01 U	0.0125 J	0.0102 J	0.01 U	0.0125 J
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	0.01 U	0.01 U	0.01 U	0.0112 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4	0.01 U	0.01 U	0.01 U	0.0116 J	0.01 U	0.0124 J	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	0.00687 J	0.01 U	0.01 U	0.014 J	0.01 U	0.01 U	0.0152 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.00079 J	0.000788 J	0.01 U	0.00145 J	0.00157 J	0.01 U	0.00181 J
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.01 U	0.000738 J	0.000755 J	0.00157 J	0.00107 J	0.000969 J	0.0012 J
ID-0016	N	Fluoranthene	206-44-0	0.0206	0.0182 J	0.0176 J	0.04 J	0.0245 J	0.0206 J	0.0299 J
ID-0016	N	Fluorene	86-73-7	0.00221 J	0.01 U	0.01 U	0.0039 J	0.00335 J	0.00254 J	0.00385 J
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.0025 J	0.00213 J	0.00233 J	0.00624 J	0.00587 J	0.00264 J	0.0076 J
ID-0016	N	Naphthalene	91-20-3	0.05 U	0.05 U	0.05 U	0.016 J	0.0217 J	0.05 U	0.05 U
ID-0016	N	Perylene	198-55-0	0.00258 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.02 U	0.02 U	0.02 U	0.0115 J	0.02 U	0.02 U	0.02 U
ID-0016	N	Pyrene	129-00-0	0.02	0.0168 J	0.0172 J	0.0431 J	0.0252 J	0.02 J	0.0315 J
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.00271 J	0.00333 J	0.00178 J	0.00258 J			
ID-0016	N	1-Methylnaphthalene	90-12-0	0.01 U	0.0145 J	0.01 U	0.00465 J			
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00226 J	0.00325 J	0.00164 J	0.00431 J			
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.0032 J	0.00765 J	0.00248 J	0.00406 J			
ID-0016	N	2-Methylnaphthalene	91-57-6	0.02 U	0.0263 J	0.02 U	0.02 U			
ID-0016	N	Acenaphthene	83-32-9	0.012	0.0117 J	0.00543 J	0.0101			
ID-0016	N	Acenaphthylene	208-96-8	0.00196 J	0.00166 J	0.01 U	0.00199 J			
ID-0016	N	Anthracene	120-12-7	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	Benzanthracene	56-55-3	0.0108 U	0.01 U	0.01 U	0.013 U			
ID-0016	N	Benzo(a)pyrene	50-32-8	0.014 U	0.0113 U	0.01 U	0.0181 U			
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.0183 U	0.014 U	0.01 U	0.0237 U			
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.00989 J	0.00964 J	0.01 U	0.0144 J			
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.01 U	0.011 U	0.00279 J	0.0119 U			
ID-0016	N	Benzo[e]pyrene	192-97-2	0.0104 U	0.0112 U	0.00381 J	0.014 J			
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.0134 J	0.01 U	0.01 U	0.0177 J			
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1	0.0205 J	0.0152 J	0.01 U	0.0251 J			
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.01 U	0.0112 J	0.01 U	0.0141 J			
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C2-Naphthalenes	NPHC2	0.01 U	0.0169 J	0.01 U	0.0119 J			
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.0101 J	0.0152 J	0.01 U	0.0145 J			
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C3-Naphthalenes	NPHC3	0.0122 J	0.0158 J	0.01 U	0.0148 J			
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	C4-Naphthalenes	NPHC4	0.0124 J	0.016 J	0.01 U	0.0146 J			
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U	0.01 U			
ID-0016	N	Chrysene	218-01-9	0.0185 J	0.0148 J	0.00689 J	0.0244 J			
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.00215 J	0.0038 J	0.000822 J	0.00269 J			
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.0014 J	0.00173 J	0.000852 J	0.00184 J			
ID-0016	N	Fluoranthene	206-44-0	0.0403 J	0.0294 J	0.0204 J	0.0486 J			
ID-0016	N	Fluorene	86-73-7	0.00492 J	0.00543 J	0.01 U	0.00507 J			
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.00923 J	0.00952 J	0.00245 J	0.012			
ID-0016	N	Naphthalene	91-20-3	0.05 U	0.0642 U	0.05 U	0.05 U			
ID-0016	N	Perylene	198-55-0	0.00692 J	0.00804 J	0.00251 J	0.00901 J			

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
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Newark Bay Study Area

				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0124 J	0.0196 J	0.02 U	0.0164 J			
ID-0016	N	Pyrene	129-00-0	0.0418 J	0.0323 J	0.0204 J	0.0514 J			
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7							
ID-0016	N	1-Methylnaphthalene	90-12-0							
ID-0016	N	1-Methylphenanthrene	832-69-9							
ID-0016	N	2,6-Dimethylnapthalene	581-42-0							
ID-0016	N	2-Methylnaphthalene	91-57-6							
ID-0016	N	Acenaphthene	83-32-9							
ID-0016	N	Acenaphthylene	208-96-8							
ID-0016	N	Anthracene	120-12-7							
ID-0016	N	Benzanthracene	56-55-3							
ID-0016	N	Benzo(a)pyrene	50-32-8							
ID-0016	N	Benzo(b)fluoranthene	205-99-2							
ID-0016	N	Benzo(g,h,i)perylene	191-24-2							
ID-0016	N	Benzo(k)fluoranthene	207-08-9							
ID-0016	N	Benzo[e]pyrene	192-97-2							
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1							
ID-0016	N	C1-Dibenzothiophenes	DBTC1							
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1							
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1							
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2							
ID-0016	N	C2-Dibenzothiophenes	DBTC2							
ID-0016	N	C2-Fluorenes	FLRC2							
ID-0016	N	C2-Naphthalenes	NPHC2							
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2							
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3							
ID-0016	N	C3-Dibenzothiophenes	DBTC3							
ID-0016	N	C3-Fluorenes	FLRC3							
ID-0016	N	C3-Naphthalenes	NPHC3							
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3							
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4							
ID-0016	N	C4-Dibenzothiophenes	DBTC4							
ID-0016	N	C4-Naphthalenes	NPHC4							
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4							
ID-0016	N	Chrysene	218-01-9							
ID-0016	N	Dibenz(a,h)anthracene	53-70-3							
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0							
ID-0016	N	Fluoranthene	206-44-0							
ID-0016	N	Fluorene	86-73-7							
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
ID-0016	N	Naphthalene	91-20-3							
ID-0016	N	Perylene	198-55-0							

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
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				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8							
ID-0016	N	Pyrene	129-00-0							
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7							
ID-0016	N	1-Methylnaphthalene	90-12-0							
ID-0016	N	1-Methylphenanthrene	832-69-9							
ID-0016	N	2,6-Dimethylnapthalene	581-42-0							
ID-0016	N	2-Methylnaphthalene	91-57-6							
ID-0016	N	Acenaphthene	83-32-9							
ID-0016	N	Acenaphthylene	208-96-8							
ID-0016	N	Anthracene	120-12-7							
ID-0016	N	Benzanthracene	56-55-3							
ID-0016	N	Benzo(a)pyrene	50-32-8							
ID-0016	N	Benzo(b)fluoranthene	205-99-2							
ID-0016	N	Benzo(g,h,i)perylene	191-24-2							
ID-0016	N	Benzo(k)fluoranthene	207-08-9							
ID-0016	N	Benzo[e]pyrene	192-97-2							
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1							
ID-0016	N	C1-Dibenzothiophenes	DBTC1							
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1							
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1							
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2							
ID-0016	N	C2-Dibenzothiophenes	DBTC2							
ID-0016	N	C2-Fluorenes	FLRC2							
ID-0016	N	C2-Naphthalenes	NPHC2							
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2							
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3							
ID-0016	N	C3-Dibenzothiophenes	DBTC3							
ID-0016	N	C3-Fluorenes	FLRC3							
ID-0016	N	C3-Naphthalenes	NPHC3							
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3							
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4							
ID-0016	N	C4-Dibenzothiophenes	DBTC4							
ID-0016	N	C4-Naphthalenes	NPHC4							
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4							
ID-0016	N	Chrysene	218-01-9							
ID-0016	N	Dibenz(a,h)anthracene	53-70-3							
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0							
ID-0016	N	Fluoranthene	206-44-0							
ID-0016	N	Fluorene	86-73-7							
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
ID-0016	N	Naphthalene	91-20-3							
ID-0016	N	Perylene	198-55-0							

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
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				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8							
ID-0016	N	Pyrene	129-00-0							
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7			0.01 U	0.01 U	0.01 U	0.01 U	0.00185 J
ID-0016	N	1-Methylnaphthalene	90-12-0			0.01 U	0.0048 J	0.01 U	0.01 U	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9			0.00148 J	0.00213 J	0.00153 J	0.00163 J	0.00348 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0			0.01 U	0.01 U	0.00254 J	0.00272 J	0.00294 J
ID-0016	N	2-Methylnaphthalene	91-57-6			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9			0.00849 J	0.0118	0.00764 J	0.00688 J	0.0266
ID-0016	N	Acenaphthylene	208-96-8			0.01 U	0.01 U	0.01 U	0.00211 J	0.00467 J
ID-0016	N	Anthracene	120-12-7			0.01 U	0.01 U	0.01 U	0.00464 J	0.00756 J
ID-0016	N	Benzanthracene	56-55-3			0.0054 J	0.00554 J	0.00483 J	0.00638 J	0.0125
ID-0016	N	Benzo(a)pyrene	50-32-8			0.00636 J	0.00702 J	0.01 U	0.00771 J	0.0151 J
ID-0016	N	Benzo(b)fluoranthene	205-99-2			0.00895 J	0.0101	0.01 U	0.00979 J	0.0213 J
ID-0016	N	Benzo(g,h,i)perylene	191-24-2			0.01 U	0.01 U	0.01 U	0.01 U	0.0124 J
ID-0016	N	Benzo(k)fluoranthene	207-08-9			0.00382 J	0.00406 J	0.00384 J	0.00433 J	0.00838 J
ID-0016	N	Benzo[e]pyrene	192-97-2			0.00499 J	0.00561 J	0.00425 J	0.00537 J	0.0123
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1			0.01 U	0.01 U	0.01 U	0.01 U	0.0147 J
ID-0016	N	C1-Dibenzothiophenes	DBTC1			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1			0.01 U	0.01 U	0.01 U	0.01 U	0.0111 J
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1			0.0122 J	0.014 J	0.0112 J	0.0132 J	0.0262 J
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2			0.01 U	0.01 U	0.01 U	0.01 U	0.0133 J
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9			0.00925 J	0.00981 J	0.00811 J	0.011 J	0.0205 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0			0.00144 J	0.00136 J	0.01 U	0.01 U	0.00211 J
ID-0016	N	Fluoranthene	206-44-0			0.0252	0.0281	0.0242	0.0282	0.0585
ID-0016	N	Fluorene	86-73-7			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5			0.01 U	0.01 U	0.01 U	0.01 U	0.0107 U
ID-0016	N	Naphthalene	91-20-3			0.05 U	0.05 U	0.05 U	0.05 U	0.0181 J
ID-0016	N	Perylene	198-55-0			0.01 U	0.01 U	0.01 U	0.01 U	0.00819 J

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8			0.02 U	0.02 U	0.02 U	0.0132 J	0.0117 J
ID-0016	N	Pyrene	129-00-0			0.0284 J	0.0324 J	0.0287 J	0.0323 J	0.0598
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.01 U	0.01 U	0.00198 J	0.00187 J	0.00177 J	0.01 U	0.00162 J
ID-0016	N	1-Methylnaphthalene	90-12-0	0.00485 J	0.01 U	0.00551 J	0.00554 J	0.00507 J	0.01 U	0.01 U
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00293 J	0.01 U	0.01 U	0.00255 J	0.00291 J	0.00238 J	0.00168 J
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.00348 J	0.00275 J	0.00422 J	0.01 U	0.01 U	0.00257 J	0.00261 J
ID-0016	N	2-Methylnaphthalene	91-57-6	0.02 U	0.02 U	0.00944 J	0.00836 J	0.00982 J	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9	0.00919 J	0.00519 J	0.00954 J	0.0174	0.0054 J	0.00401 J	0.0077 J
ID-0016	N	Acenaphthylene	208-96-8	0.01 U	0.01 U	0.00362 J	0.00292 J	0.00242 J	0.00151 J	0.01 U
ID-0016	N	Anthracene	120-12-7	0.00553 J	0.01 U	0.00833 J	0.00554 J	0.00644 J	0.00327 J	0.01 U
ID-0016	N	Benzanthracene	56-55-3	0.00933 J	0.00536 J	0.0205	0.00742 J	0.0224	0.0058 J	0.00442 J
ID-0016	N	Benzo(a)pyrene	50-32-8	0.0124 J	0.00676 J	0.0254 J	0.00884 J	0.0191 J	0.00714 J	0.01 U
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.0169 J	0.00917 J	0.0354	0.0127	0.0299	0.00926 J	0.01 U
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.0109 U	0.01 U	0.0196 J	0.00739 J	0.0113 J	0.01 U	0.01 U
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.00633 J	0.00439 J	0.0151	0.0055 J	0.0128	0.00332 J	0.00318 J
ID-0016	N	Benzo[e]pyrene	192-97-2	0.00964 J	0.00562 J	0.0194	0.00661 J	0.0132	0.00507 J	0.00382 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.0126 J	0.01 U	0.0231 J	0.0104 J	0.0173 J	0.01 U	0.01 U
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.01 U	0.01 U	0.0138 J	0.01 U	0.0104 J	0.01 U	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1	0.0198 J	0.0119 J	0.0313 J	0.0176 J	0.0249 J	0.0106 J	0.0104 J
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.01 U	0.0108 J	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	0.01 U	0.01 U	0.0105 J	0.0115 J	0.0106 J	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.0119 J	0.01 U	0.0171 J	0.0115 J	0.0128 J	0.01 U	0.01 U
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.01 U	0.01 U	0.0138 J	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4	0.01 U	0.01 U	0.0109 J	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	0.0156 J	0.00912 J	0.0307 J	0.0125 J	0.0265 J	0.00886 J	0.00695 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.00188 J	0.01 U	0.01 U	0.0018 J	0.00169 J	0.00128 J	0.01 U
ID-0016	N	Fluoranthene	206-44-0	0.0371	0.0229 J	0.0565 J	0.0377	0.0435	0.0178	0.0221
ID-0016	N	Fluorene	86-73-7	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.003 J	0.01 U
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.01 U	0.01 U	0.017 J	0.00594 J	0.00875 J	0.01 U	0.01 U
ID-0016	N	Naphthalene	91-20-3	0.0171 J	0.0174 J	0.0248 J	0.0542	0.05 U	0.05 U	0.05 U
ID-0016	N	Perylene	198-55-0	0.00623 J	0.00389 J	0.0111	0.01 U	0.0098 J	0.00519 J	0.01 U

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0117 J	0.02 U	0.0185 J	0.0129 J	0.0124 J	0.02 U	0.02 U
ID-0016	N	Pyrene	129-00-0	0.0444	0.0275 J	0.0624 J	0.0416 J	0.0393 J	0.0223	0.0255 J
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.00288 J	0.00531 J	0.01 U	0.00255 J	0.00279 J	0.00177 J	0.00168 J
ID-0016	N	1-Methylnaphthalene	90-12-0	0.00413 J	0.011	0.01 U	0.00542 J	0.00431 J	0.01 U	0.00428 J
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00378 J	0.011	0.01 U	0.00588 J	0.00444 J	0.0034 J	0.01 U
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.00318 J	0.0087 J	0.00278 J	0.00443 J	0.00356 J	0.00295 J	0.00305 J
ID-0016	N	2-Methylnaphthalene	91-57-6	0.02 U	0.0169 J	0.02 U	0.00919 J	0.02 U	0.02 U	0.02 U
ID-0016	N	Acenaphthene	83-32-9	0.0298	0.0456	0.00605 J	0.00898 J	0.0204	0.00997 J	0.00592 J
ID-0016	N	Acenaphthylene	208-96-8	0.00464 J	0.0106 J	0.01 U	0.00463 J	0.00403 J	0.00261 J	0.01 U
ID-0016	N	Anthracene	120-12-7	0.0136	0.0258	0.01 U	0.0101 J	0.00834 J	0.00604 J	0.01 U
ID-0016	N	Benzanthracene	56-55-3	0.0134	0.0365	0.00479 J	0.0289	0.0123	0.012	0.00597 J
ID-0016	N	Benzo(a)pyrene	50-32-8	0.0167 J	0.0426 J	0.00586 J	0.0346 J	0.014 J	0.0128 J	0.00726 J
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.0246 J	0.0679 J	0.00728 J	0.0425	0.022 J	0.0177 J	0.00908 J
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.0144 J	0.0359 J	0.01 U	0.0224 J	0.0127 J	0.0108 U	0.01 U
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.00885 J	0.0254	0.0039 J	0.0178	0.00771 J	0.0088 J	0.00428 J
ID-0016	N	Benzo[e]pyrene	192-97-2	0.0141	0.0346	0.00481 J	0.0234	0.0142	0.0123	0.00581 J
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.0163 J	0.0475 J	0.01 U	0.0303 J	0.0158 J	0.0141 J	0.01 U
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U	0.0154 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.013 J	0.0328 J	0.01 U	0.0194 J	0.0123 J	0.0102 J	0.01 U
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1	0.0276 J	0.0756 J	0.012 J	0.0459 J	0.0271 J	0.0221 J	0.0133 J
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.01 U	0.022 J	0.01 U	0.0134 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.01 U	0.0136 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Fluorenes	FLRC2	0.01 U	0.0199 J	0.01 U	0.0103 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Naphthalenes	NPHC2	0.01 U	0.0218 J	0.01 U	0.0109 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.0157 J	0.0387 J	0.0102 J	0.0224 J	0.0156 J	0.013 J	0.0115 J
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.01 U	0.0136 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Fluorenes	FLRC3	0.01 U	0.0207 J	0.01 U	0.0102 J	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Naphthalenes	NPHC3	0.01 U	0.0189 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.0112 J	0.028 J	0.01 U	0.016 J	0.0112 J	0.01 U	0.01 U
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	C4-Naphthalenes	NPHC4	0.0115 J	0.0243 J	0.01 U	0.0122 J	0.0119 J	0.01 U	0.01 U
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.01 U	0.0156 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Chrysene	218-01-9	0.0238 J	0.0639 J	0.00805 J	0.0401 J	0.0216 J	0.0187 J	0.0102 J
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.01 U	0.00871 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.00265 J	0.00584 J	0.01 U	0.01 U	0.00231 J	0.00175 J	0.01 U
ID-0016	N	Fluoranthene	206-44-0	0.0631	0.143	0.025 J	0.0828 J	0.0571	0.0427	0.0268 J
ID-0016	N	Fluorene	86-73-7	0.00968 J	0.0159	0.01 U	0.01 U	0.00711 J	0.00462 J	0.01 U
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.0126 J	0.0261 J	0.01 U	0.0195 J	0.0108 U	0.01 U	0.01 U
ID-0016	N	Naphthalene	91-20-3	0.0172 J	0.046 J	0.016 J	0.0224 J	0.0239 J	0.05 U	0.0189 J
ID-0016	N	Perylene	198-55-0	0.00663 J	0.0162 J	0.00331 J	0.0154	0.00552 J	0.00644 J	0.00416 J

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
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				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0169 J	0.0412	0.0122 J	0.0192 J	0.0141 J	0.0144 J	0.0137 J
ID-0016	N	Pyrene	129-00-0	0.0654	0.16	0.0291 J	0.0886 J	0.0616	0.0487	0.03 J
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7	0.00338 J						
ID-0016	N	1-Methylnaphthalene	90-12-0	0.0081 J						
ID-0016	N	1-Methylphenanthrene	832-69-9	0.00939 J						
ID-0016	N	2,6-Dimethylnapthalene	581-42-0	0.00686 J						
ID-0016	N	2-Methylnaphthalene	91-57-6	0.0147 J						
ID-0016	N	Acenaphthene	83-32-9	0.0137						
ID-0016	N	Acenaphthylene	208-96-8	0.00821 J						
ID-0016	N	Anthracene	120-12-7	0.0162 J						
ID-0016	N	Benzanthracene	56-55-3	0.042						
ID-0016	N	Benzo(a)pyrene	50-32-8	0.0574 J						
ID-0016	N	Benzo(b)fluoranthene	205-99-2	0.066						
ID-0016	N	Benzo(g,h,i)perylene	191-24-2	0.0422 J						
ID-0016	N	Benzo(k)fluoranthene	207-08-9	0.0293						
ID-0016	N	Benzo[e]pyrene	192-97-2	0.0395						
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1	0.0534 J						
ID-0016	N	C1-Dibenzothiophenes	DBTC1	0.01 U						
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1	0.01 U						
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1	0.0319 J						
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1	0.0702 J						
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2	0.0241 J						
ID-0016	N	C2-Dibenzothiophenes	DBTC2	0.0124 J						
ID-0016	N	C2-Fluorenes	FLRC2	0.0138 J						
ID-0016	N	C2-Naphthalenes	NPHC2	0.0161 J						
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2	0.0354 J						
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3	0.0105 J						
ID-0016	N	C3-Dibenzothiophenes	DBTC3	0.0117 J						
ID-0016	N	C3-Fluorenes	FLRC3	0.0136 J						
ID-0016	N	C3-Naphthalenes	NPHC3	0.0123 J						
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3	0.0246 J						
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4	0.01 U						
ID-0016	N	C4-Dibenzothiophenes	DBTC4	0.01 U						
ID-0016	N	C4-Naphthalenes	NPHC4	0.0154 J						
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4	0.0132 J						
ID-0016	N	Chrysene	218-01-9	0.0625 J						
ID-0016	N	Dibenz(a,h)anthracene	53-70-3	0.0097 J						
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0	0.00417 J						
ID-0016	N	Fluoranthene	206-44-0	0.109 J						
ID-0016	N	Fluorene	86-73-7	0.00949 J						
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5	0.0327 J						
ID-0016	N	Naphthalene	91-20-3	0.0349 J						
ID-0016	N	Perylene	198-55-0	0.0221						

Table A-15
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Newark Bay Study Area

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8	0.0389						
ID-0016	N	Pyrene	129-00-0	0.118 J						
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7							
ID-0016	N	1-Methylnaphthalene	90-12-0							
ID-0016	N	1-Methylphenanthrene	832-69-9							
ID-0016	N	2,6-Dimethylnapthalene	581-42-0							
ID-0016	N	2-Methylnaphthalene	91-57-6							
ID-0016	N	Acenaphthene	83-32-9							
ID-0016	N	Acenaphthylene	208-96-8							
ID-0016	N	Anthracene	120-12-7							
ID-0016	N	Benzanthracene	56-55-3							
ID-0016	N	Benzo(a)pyrene	50-32-8							
ID-0016	N	Benzo(b)fluoranthene	205-99-2							
ID-0016	N	Benzo(g,h,i)perylene	191-24-2							
ID-0016	N	Benzo(k)fluoranthene	207-08-9							
ID-0016	N	Benzo[e]pyrene	192-97-2							
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1							
ID-0016	N	C1-Dibenzothiophenes	DBTC1							
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1							
ID-0016	N	C1-Fluorenes	FLRC1							
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1							
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1							
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2							
ID-0016	N	C2-Dibenzothiophenes	DBTC2							
ID-0016	N	C2-Fluorenes	FLRC2							
ID-0016	N	C2-Naphthalenes	NPHC2							
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2							
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3							
ID-0016	N	C3-Dibenzothiophenes	DBTC3							
ID-0016	N	C3-Fluorenes	FLRC3							
ID-0016	N	C3-Naphthalenes	NPHC3							
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3							
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4							
ID-0016	N	C4-Dibenzothiophenes	DBTC4							
ID-0016	N	C4-Naphthalenes	NPHC4							
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4							
ID-0016	N	Chrysene	218-01-9							
ID-0016	N	Dibenz(a,h)anthracene	53-70-3							
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0							
ID-0016	N	Fluoranthene	206-44-0							
ID-0016	N	Fluorene	86-73-7							
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
ID-0016	N	Naphthalene	91-20-3							
ID-0016	N	Perylene	198-55-0							

Table A-15
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Newark Bay Study Area

				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
ID-0016	N	Phenanthrene	85-01-8							
ID-0016	N	Pyrene	129-00-0							
SW8270 LL	N	2-Methylnaphthalene	91-57-6							
SW8270 LL	N	Acenaphthene	83-32-9							
SW8270 LL	N	Acenaphthylene	208-96-8							
SW8270 LL	N	Anthracene	120-12-7							
SW8270 LL	N	Benzanthracene	56-55-3							
SW8270 LL	N	Benzo(a)pyrene	50-32-8							
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2							
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2							
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9							
SW8270 LL	N	Chrysene	218-01-9							
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3							
SW8270 LL	N	Fluoranthene	206-44-0							
SW8270 LL	N	Fluorene	86-73-7							
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5							
SW8270 LL	N	Naphthalene	91-20-3							
SW8270 LL	N	Phenanthrene	85-01-8							
SW8270 LL	N	Pyrene	129-00-0							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
ID-0016	N	1,6,7-Trimethylnapthalene	2245-38-7						
ID-0016	N	1-Methylnaphthalene	90-12-0						
ID-0016	N	1-Methylphenanthrene	832-69-9						
ID-0016	N	2,6-Dimethylnapthalene	581-42-0						
ID-0016	N	2-Methylnaphthalene	91-57-6						
ID-0016	N	Acenaphthene	83-32-9						
ID-0016	N	Acenaphthylene	208-96-8						
ID-0016	N	Anthracene	120-12-7						
ID-0016	N	Benzanthracene	56-55-3						
ID-0016	N	Benzo(a)pyrene	50-32-8						
ID-0016	N	Benzo(b)fluoranthene	205-99-2						
ID-0016	N	Benzo(g,h,i)perylene	191-24-2						
ID-0016	N	Benzo(k)fluoranthene	207-08-9						
ID-0016	N	Benzo[e]pyrene	192-97-2						
ID-0016	N	C1-Benzanthracenes/Chrysenes	BACC1						
ID-0016	N	C1-Dibenzothiophenes	DBTC1						
ID-0016	N	C1-Fluoranthenes/Pyrenes	FANT/PYRC1						
ID-0016	N	C1-Fluorenes	FLRC1						
ID-0016	N	C1-Phenanthrenes/Anthracenes	PATAC1						
ID-0016	N	C1-Pyrene/fluoranthenes	PFLAC1						
ID-0016	N	C2-Benzanthracenes/Chrysenes	BACC2						
ID-0016	N	C2-Dibenzothiophenes	DBTC2						
ID-0016	N	C2-Fluorenes	FLRC2						
ID-0016	N	C2-Naphthalenes	NPHC2						
ID-0016	N	C2-Phenanthrenes/Anthracenes	PATAC2						
ID-0016	N	C3-Benzanthracenes/Chrysenes	BACC3						
ID-0016	N	C3-Dibenzothiophenes	DBTC3						
ID-0016	N	C3-Fluorenes	FLRC3						
ID-0016	N	C3-Naphthalenes	NPHC3						
ID-0016	N	C3-Phenanthrenes/Anthracenes	PATAC3						
ID-0016	N	C4-Benzanthracenes/Chrysenes	BACC4						
ID-0016	N	C4-Dibenzothiophenes	DBTC4						
ID-0016	N	C4-Naphthalenes	NPHC4						
ID-0016	N	C4-Phenanthrenes/Anthracenes	PATAC4						
ID-0016	N	Chrysene	218-01-9						
ID-0016	N	Dibenz(a,h)anthracene	53-70-3						
ID-0016	N	Dibenzothiophene (Synfuel)	132-65-0						
ID-0016	N	Fluoranthene	206-44-0						
ID-0016	N	Fluorene	86-73-7						
ID-0016	N	Indeno(1,2,3-c,d)pyrene	193-39-5						
ID-0016	N	Naphthalene	91-20-3						
ID-0016	N	Perylene	198-55-0						

Table A-15
Analytical Data for Polycyclic Aromatic Hydrocarbons
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
ID-0016	N	Phenanthrene	85-01-8						
ID-0016	N	Pyrene	129-00-0						
SW8270 LL	N	2-Methylnaphthalene	91-57-6						
SW8270 LL	N	Acenaphthene	83-32-9						
SW8270 LL	N	Acenaphthylene	208-96-8						
SW8270 LL	N	Anthracene	120-12-7						
SW8270 LL	N	Benzanthracene	56-55-3						
SW8270 LL	N	Benzo(a)pyrene	50-32-8						
SW8270 LL	N	Benzo(b)fluoranthene	205-99-2						
SW8270 LL	N	Benzo(g,h,i)perylene	191-24-2						
SW8270 LL	N	Benzo(k)fluoranthene	207-08-9						
SW8270 LL	N	Chrysene	218-01-9						
SW8270 LL	N	Dibenz(a,h)anthracene	53-70-3						
SW8270 LL	N	Fluoranthene	206-44-0						
SW8270 LL	N	Fluorene	86-73-7						
SW8270 LL	N	Indeno(1,2,3-c,d)pyrene	193-39-5						
SW8270 LL	N	Naphthalene	91-20-3						
SW8270 LL	N	Phenanthrene	85-01-8						
SW8270 LL	N	Pyrene	129-00-0						

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95
				Stream Code	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit					
SW8260C	T	1,1-Dichloroethane	75-34-3	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	ug/l	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	ug/l	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	ug/l	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	ug/l	2 U	2 U	2 U	2 U	0.13 J
SW8260C	T	1,3-Dichlorobenzene	541-73-1	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J
SW8260C	T	2-Hexanone	591-78-6	ug/l	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	ug/l	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	ug/l	0.1 J	0.11 J	0.13 J	0.1 J	0.1 J
SW8260C	T	Chloromethane	74-87-3	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	ug/l	0.08 J	0.08 J	0.1 J	0.08 J	0.09 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	ug/l	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	ug/l	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	ug/l	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	ug/l	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	ug/l	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	ug/l	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	ug/l	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table A-16
Analytical Data for Volatile Organic Compounds
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95
				Stream Code	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit					
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Toluene	108-88-3	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNBN	N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS
				N02-CE02-TNBN	N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS
				3	3.14	3.3	2.98	2.91	3.15
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	0.97	0.99	0.99
				N02-CE02-TNBN-AS	N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.1 J	0.12 J	0.11 J	0.11 J	0.12 J	0.11 J
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.07 J	0.5 U	0.5 U	0.07 J	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.08 J	0.1 J	0.08 J	0.08 J	0.1 J	0.09 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N02-TNBN	N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS
				N02-CE02-TNBN	N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS
				3	3.14	3.3	2.98	2.91	3.15
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	0.97	0.99	0.99
				N02-CE02-TNBN-AS	N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNBS	N02-TNNE	N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE
				N02-CE04-TNBS	N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE
				3.09	2.07	2.77	2.78	3.28	3.14
				NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	2.68
				N02-CE04-TNBS-AS	N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Chloroform	67-66-3	0.1 J	0.11 J	0.1 J	0.1 J	0.1 J	
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.13 J	0.07 J	0.08 J	0.08 J	
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.09 J	0.11 J	0.11 J	0.09 J	0.09 J	
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	

				N02-TNBS	N02-TNNE	N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE
				N02-CE04-TNBS	N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE
				3.09	2.07	2.77	2.78	3.28	3.14
				NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	2.68
				N02-CE04-TNBS-AS	N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Toluene	108-88-3	0.07 J	0.53 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.5 U	0.12 J	0.1 J	0.5 U	0.5 U	
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	

Notes:
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				N03-TNBE	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS
				N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS
				3.04	2.94	3.09	3.02	2.99	2.96
				NB	NB	NB	NB	NB	NB
				2.68	3.87	3.87	3.87	3.87	0.97
				N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS
				02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N03-TNBE	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS
				N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS
				3.04	2.94	3.09	3.02	2.99	2.96
				NB	NB	NB	NB	NB	NB
				2.68	3.87	3.87	3.87	3.87	0.97
				N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS
				02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
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				N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE
				3.05	3.1	3.04	2.63	1.1	2.75
				NB	NB	NB	NB	NB	NB
				0.98	0.98	0.98	2.68	4.57	4.57
				N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE
				3.05	3.1	3.04	2.63	1.1	2.75
				NB	NB	NB	NB	NB	NB
				0.98	0.98	0.98	2.68	4.57	4.57
				N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

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				N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW
				3.1	2.9	2.6	2.7	3.14	2.97
				NB	NB	NB	NB	NB	NB
				4.57	4.57	3.77	3.77	3.77	3.77
				N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW
				3.1	2.9	2.6	2.7	3.14	2.97
				NB	NB	NB	NB	NB	NB
				4.57	4.57	3.77	3.77	3.77	3.77
				N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
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				N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB
				N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.11 J	0.13 J	0.12 J	0.1 J	0.14 J	0.13 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.19 J	0.5 U	0.14 J	0.5 U	0.5 U	0.16 J
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB
				N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Toluene	108-88-3	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.5 U	0.5 U	0.1 J	0.5 U	0.11 J	0.5 U
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS
				2.76	2.95	3	3	3	3
				NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.12 J	0.5 U	0.09 J	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.15 J	0.13 J	0.11 J	0.11 J	0.13 J	0.18 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.15 J	0.11 J	0.13 J	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS
				2.76	2.95	3	3	3	3
				NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.15 J	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J
SW8260C	T	Toluene	108-88-3	0.16 J	0.5 U	0.18 J	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.1 J	0.5 U	0.11 J	0.1 J	0.1 J	0.5 U
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNNE	N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW
				N04-CE12-TNNE	N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW
				3.26	1.75	2.65	2.97	3.01	2.95
				NB	NB	NB	NB	NB	NB
				N04-CE12-TNNE-AS	N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.5 U	0.07 J	0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.12 J	0.13 J	0.09 J	0.11 J	0.12 J	0.13 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.15 J	0.11 J	0.12 J
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N04-TNNE	N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW
				N04-CE12-TNNE	N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW
				3.26	1.75	2.65	2.97	3.01	2.95
				NB	NB	NB	NB	NB	NB
				N04-CE12-TNNE-AS	N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.13 J	0.13 J	0.11 J	0.5 U	0.5 U	0.5 U
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.11 J	0.5 U	0.1 J	0.5 U	0.5 U	0.12 J
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNNW	N05-TNBE	N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN
				N04-CE21-TNNW	N05-CE01-TNBE	N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN
				2.8	2.32	3.46	3.34	3.12	3.13
				NB	NB	NB	NB	NB	NB
					2.68	2.68	2.68	3.87	3.87
				N04-CE21-TNNW-AS	N05-CE01-TNBE-AS	N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS
				03/04/2013	03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.09 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.12 J	0.09 J	0.08 J	0.07 J	0.1 J	0.14 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N04-TNNW	N05-TNBE	N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN
				N04-CE21-TNNW	N05-CE01-TNBE	N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN
				2.8	2.32	3.46	3.34	3.12	3.13
				NB	NB	NB	NB	NB	NB
					2.68	2.68	2.68	3.87	3.87
				N04-CE21-TNNW-AS	N05-CE01-TNBE-AS	N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS
				03/04/2013	03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.5 U	0.16 J	0.17 J	0.16 J	0.19 J	0.23 J
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.5 U	0.1 J	0.12 J	0.5 U	0.12 J	0.18 J
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNBN	N05-TNBN	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNBS
				N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS
				3.02	3.18	2.91	3.11	3.07	2.93
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.98	0.98	0.97	0.97
				N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS
				03/28/2012	03/28/2012	03/29/2012	03/29/2012	03/29/2012	03/29/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.09 J	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.13 J	0.11 J	0.1 J	0.1 J	0.07 J	0.11 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N05-TNBN	N05-TNBN	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNBS
				N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS
				3.02	3.18	2.91	3.11	3.07	2.93
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.98	0.98	0.97	0.97
				N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS
				03/28/2012	03/28/2012	03/29/2012	03/29/2012	03/29/2012	03/29/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.25 J	0.19 J	0.18 J	0.22 J	0.13 J	0.19 J
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.17 J	0.15 J	0.15 J	0.14 J	0.5 U	0.12 J
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW
				N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW
				1.28	2.94	2.81	2.58	2.5	2.92
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77
				N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.08 J	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.14 J	0.09 J	0.12 J	0.13 J	0.11 J	0.12 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW
				N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW
				1.28	2.94	2.81	2.58	2.5	2.92
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77
				N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.22 J	0.16 J	0.24 J	0.2 J	0.21 J	0.25 J
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.17 J	0.11 J	0.16 J	0.15 J	0.16 J	0.16 J
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN
				N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN
				2.96	3.07	2.93	2.7	3.11	3
				NB	NB	NB	NB	NB	NB
				3.77	3.77	2.68	2.68	2.68	3.87
				N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS
				03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U				
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U				
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U				
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U				
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U				
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U				
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U				
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U				
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U				
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U				
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U				
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U				
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U				
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U				
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U				
SW8260C	T	Acetone	67-64-1	20 U	20 U				
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U				
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U				
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U				
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U				
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U				
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U				
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U				
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U				
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U				
SW8260C	T	Chloroform	67-66-3	0.5 U	0.5 U				
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.5 U				
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.13 J	0.11 J				
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U				
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U				
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U				
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U				
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U				
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U				
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U				
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U				
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U				
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U				
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U				
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U				
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U				
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U				

				N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN
				N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN
				2.96	3.07	2.93	2.7	3.11	3
				NB	NB	NB	NB	NB	NB
				3.77	3.77	2.68	2.68	2.68	3.87
				N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS
				03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U				
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.25 J	0.2 J				
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U				
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U				
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U				
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.16 J	0.14 J				
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U				
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U				
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U				

Notes:
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				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
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				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63
				NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63
				NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNNW	N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE02-TNNW	N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE
				3	3	3	2.05	2.95	3.1
				NB	NB	NB	NB	NB	NB
				3.78	3.77	3.77			
				N06-CE02-TNNW-AS	N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS
				06/06/2012	06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3				0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4				0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6				0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5				0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5				0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8				2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4				2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1				0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2				0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5				0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6				2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1				2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1				0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7				0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6				20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1				20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2				0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5				0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4				0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2				0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9				0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0				0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5				0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7				0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3				0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3				0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3				0.5 U	0.5 U	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2				0.12 J	0.15 J	0.11 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5				0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7				1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1				0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8				0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4				0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8				2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1				0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9				1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3				20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1				20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2				1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2				2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6				0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5				0.5 U	0.5 U	0.5 U

				N06-TNNW	N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE02-TNNW	N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE
				3	3	3	2.05	2.95	3.1
				NB	NB	NB	NB	NB	NB
				3.78	3.77	3.77			
				N06-CE02-TNNW-AS	N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS
				06/06/2012	06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4				0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4				0.5 U	0.5 U	0.5 U
SW8260C	T	Toluene	108-88-3				0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5				0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6				0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6				0.11 J	0.11 J	0.5 U
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4				0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8				0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4				0.5 U	0.5 U	0.5 U

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNBE	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS
				N07-CE04-TNBE	N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS
				3.05	3	3	3.05	2.97	3
				NB	NB	NB	NB	NB	NB
				N07-CE04-TNBE-AS	N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.5 U	0.14 J	0.13 J	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.08 J	0.07 J	0.08 J	0.5 U	0.08 J
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.1 J	0.15 J	0.17 J	0.13 J	0.12 J	0.13 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	0.12 J
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N07-TNBE	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS
				N07-CE04-TNBE	N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS
				3.05	3	3	3.05	2.97	3
				NB	NB	NB	NB	NB	NB
				N07-CE04-TNBE-AS	N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.5 U	0.14 J	0.14 J	0.1 J	0.1 J	0.14 J
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.5 U	0.12 J	0.12 J	0.5 U	0.1 J	0.1 J
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
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				N07-TNBS	N07-TNBS	N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE
				N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE
				3.03	3.12	3.05	0.55	1.62	3
				NB	NB	NB	NB	NB	NB
				N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS
				12/13/2012	12/13/2012	12/13/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Benzene	71-43-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Chloroform	67-66-3	0.12 J	0.12 J	0.1 J	0.12 J	0.14 J	0.5 U
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.18 J	0.5 U	0.09 J	0.07 J	0.5 U
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.19 J	0.07 J	0.13 J	0.14 J	0.16 J	0.16 J
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	20 U
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	1 U
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	0.25 J	2 U	2 U	2 U	2 U	2 U
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Styrene	100-42-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

				N07-TNBS	N07-TNBS	N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE
				N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE
				3.03	3.12	3.05	0.55	1.62	3
				NB	NB	NB	NB	NB	NB
				N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS
				12/13/2012	12/13/2012	12/13/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.22 J	0.5 U	0.12 J	0.11 J	0.13 J	0.11 J
SW8260C	T	Toluene	108-88-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.12 J	0.5 U	0.5 U	0.11 J	0.14 J	0.1 J
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
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				N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW	N07-TNNW	N09-TNBE
				N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW	N07-CE04-TNNW	N09-CE11-TNBE
				2.6	3.09	3.1	3.1	3.01	2.1
				NB	NB	NB	NB	NB	NB
				N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS	N07-CE04-TNNW-AS	N09-CE11-TNBE-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	06/08/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1-Dichloroethene	75-35-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1,1-Trichloroethane	71-55-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1,2-Trichloroethane	79-00-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	1,2-Dichlorobenzene	95-50-1	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2-Dichloroethane	107-06-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2-Dichloropropane	78-87-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6	2 U	R	2 U	2 U	2 U	
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1	2 U	R	2 U	2 U	2 U	
SW8260C	T	1,3-Dichlorobenzene	541-73-1	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	1,4-Dichlorobenzene	106-46-7	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	2-Hexanone	591-78-6	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Acetone	67-64-1	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Benzene	71-43-2	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromochloromethane	74-97-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromodichloromethane	75-27-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromoform	75-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Bromomethane	74-83-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Carbon disulfide	75-15-0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Carbon tetrachloride	56-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Chlorobenzene	108-90-7	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	Chloroethane	75-00-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Chloroform	67-66-3	0.5 U	0.16 J	0.13 J	0.5 U	0.5 U	
SW8260C	T	Chloromethane	74-87-3	0.5 U	0.5 U	0.5 U	0.07 J	0.5 U	
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2	0.13 J	0.16 J	0.14 J	0.13 J	0.12 J	
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Cyclohexane	110-82-7	1 U	1 U	1 U	1 U	1 U	
SW8260C	T	Dibromochloromethane	124-48-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Ethylbenzene	100-41-4	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8	2 U	R	2 U	2 U	2 U	
SW8260C	T	m,p-Xylenes	179601-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Methyl acetate	79-20-9	1 U	1 U	1 U	1 U	1 U	
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1	20 U	20 U	20 U	20 U	20 U	
SW8260C	T	Methylcyclohexane	108-87-2	1 U	1 U	1 U	1 U	1 U	
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2	2 U	2 U	2 U	2 U	2 U	
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Styrene	100-42-5	0.5 U	R	0.5 U	0.5 U	0.5 U	

				N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW	N07-TNNW	N09-TNBE
				N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW	N07-CE04-TNNW	N09-CE11-TNBE
				2.6	3.09	3.1	3.1	3.01	2.1
				NB	NB	NB	NB	NB	NB
				N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS	N07-CE04-TNNW-AS	N09-CE11-TNBE-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	06/08/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4	0.13 J	0.14 J	0.11 J	0.5 U	0.13 J	
SW8260C	T	Toluene	108-88-3	0.5 U	R	0.5 U	0.5 U	0.5 U	
SW8260C	T	trans-1,2-Dichloroethene	156-60-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Trichloroethylene (TCE)	79-01-6	0.5 U	0.12 J	0.11 J	0.5 U	0.5 U	
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Trichlorotrifluoroethane	26523-64-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
SW8260C	T	Vinyl chloride	75-01-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	

Notes:
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				N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN
				N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN
				3	3	3.1	3.1	3	3
							NB		
				N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS
				06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN
				N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN
				3	3	3.1	3.1	3	3
							NB		
				N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS
				06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
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				N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3.2	3	2.9	3	3.06	3
					NB				NB
				N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3.2	3	2.9	3	3.06	3
					NB				NB
				N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
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				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	1,1-Dichloroethane	75-34-3						
SW8260C	T	1,1-Dichloroethene	75-35-4						
SW8260C	T	1,1,1-Trichloroethane	71-55-6						
SW8260C	T	1,1,2-Trichloroethane	79-00-5						
SW8260C	T	1,1,2,2-Tetrachloroethane	79-34-5						
SW8260C	T	1,2-Dibromo-3-chloropropane	96-12-8						
SW8260C	T	1,2-Dibromoethane (Ethylene dibromide)	106-93-4						
SW8260C	T	1,2-Dichlorobenzene	95-50-1						
SW8260C	T	1,2-Dichloroethane	107-06-2						
SW8260C	T	1,2-Dichloropropane	78-87-5						
SW8260C	T	1,2,3-Trichlorobenzene	87-61-6						
SW8260C	T	1,2,4-Trichlorobenzene	120-82-1						
SW8260C	T	1,3-Dichlorobenzene	541-73-1						
SW8260C	T	1,4-Dichlorobenzene	106-46-7						
SW8260C	T	2-Hexanone	591-78-6						
SW8260C	T	Acetone	67-64-1						
SW8260C	T	Benzene	71-43-2						
SW8260C	T	Bromochloromethane	74-97-5						
SW8260C	T	Bromodichloromethane	75-27-4						
SW8260C	T	Bromoform	75-25-2						
SW8260C	T	Bromomethane	74-83-9						
SW8260C	T	Carbon disulfide	75-15-0						
SW8260C	T	Carbon tetrachloride	56-23-5						
SW8260C	T	Chlorobenzene	108-90-7						
SW8260C	T	Chloroethane	75-00-3						
SW8260C	T	Chloroform	67-66-3						
SW8260C	T	Chloromethane	74-87-3						
SW8260C	T	cis-1,2-Dichloroethylene	156-59-2						
SW8260C	T	cis-1,3-Dichloropropene	10061-01-5						
SW8260C	T	Cyclohexane	110-82-7						
SW8260C	T	Dibromochloromethane	124-48-1						
SW8260C	T	Dichlorodifluoromethane (Freon 12)	75-71-8						
SW8260C	T	Ethylbenzene	100-41-4						
SW8260C	T	Isopropylbenzene (Cumene)	98-82-8						
SW8260C	T	m,p-Xylenes	179601-23-1						
SW8260C	T	Methyl acetate	79-20-9						
SW8260C	T	Methyl ethyl ketone (2-Butanone)	78-93-3						
SW8260C	T	Methyl isobutyl ketone (4-Methyl-2-pentanone)	108-10-1						
SW8260C	T	Methylcyclohexane	108-87-2						
SW8260C	T	Methylene chloride (Dichloromethane)	75-09-2						
SW8260C	T	o-Xylene (1,2-Dimethylbenzene)	95-47-6						
SW8260C	T	Styrene	100-42-5						

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8260C	T	tert-Butyl methyl ether (MTBE)	1634-04-4						
SW8260C	T	Tetrachloroethylene (PCE)	127-18-4						
SW8260C	T	Toluene	108-88-3						
SW8260C	T	trans-1,2-Dichloroethene	156-60-5						
SW8260C	T	trans-1,3-Dichloropropene	10061-02-6						
SW8260C	T	Trichloroethylene (TCE)	79-01-6						
SW8260C	T	Trichlorofluoromethane (Freon 11)	75-69-4						
SW8260C	T	Trichlorotrifluoroethane	26523-64-8						
SW8260C	T	Vinyl chloride	75-01-4						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	ug/l	2 U	2.1 U	2 U	2.1 U	2 U	2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U
SW8270 LL	N	2-Chlorophenol	95-57-8	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2-Nitroaniline	88-74-4	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	2-Nitrophenol	88-75-5	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	3-Nitroaniline	99-09-2	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	ug/l	0.98 U	1 U	1 U	R	0.98 U	0.98 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	4-Chloroaniline	106-47-8	ug/l	0.98 U	1 U	1 U	R	0.98 U	0.98 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	4-Nitroaniline	100-01-6	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	4-Nitrophenol	100-02-7	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	Acetophenone	98-86-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Atrazine	1912-24-9	ug/l	0.98 U	1 U	1 U	R	0.98 U	0.98 U
SW8270 LL	N	Benzaldehyde	100-52-7	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	ug/l	0.98 U	1 U	1 U	1 U	0.19 J	0.47 J
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	2.7	2.1 U	2 U	2.1 U	2 U	2 U
SW8270 LL	N	Caprolactam	105-60-2	ug/l	4.9 U	5.2 U	5.1 U	5.2 U	4.9 U	4.9 U
SW8270 LL	N	Carbazole	86-74-8	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Dibenzofuran	132-64-9	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Diethyl phthalate	84-66-2	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	ug/l	0.98 U	1 U	1 U	R	0.98 U	0.98 U
SW8270 LL	N	Hexachloroethane	67-72-1	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Isophorone	78-59-1	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Nitrobenzene	98-95-3	ug/l	2 U	2.1 U	2 U	2.1 U	2 U	2 U
SW8270 LL	N	Pentachlorophenol	87-86-5	ug/l	0.98 U	1 U	1 U	1 U	0.98 U	0.98 U
SW8270 LL	N	Phenol	108-95-2	ug/l	0.2 U	0.21 U	0.2 U	0.21 U	0.2 U	0.2 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS
				3.14	3.3	2.98	2.91	3.15	3.09
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2-Nitroaniline	88-74-4	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	3-Nitroaniline	99-09-2	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.98 U	R	0.98 U	0.95 U	R	R
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.98 U	R	0.98 U	0.95 U	R	R
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	4-Nitroaniline	100-01-6	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	4-Nitrophenol	100-02-7	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	Acetophenone	98-86-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Atrazine	1912-24-9	0.98 U	R	0.98 U	0.95 U	R	R
SW8270 LL	N	Benzaldehyde	100-52-7	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.98 U	0.2 J	0.98 U	0.35 J	0.22 J	0.19 J
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	2 U	2 U	2.7	1.9 U	1.9 U	1.9 U
SW8270 LL	N	Caprolactam	105-60-2	4.9 U	4.9 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	Carbazole	86-74-8	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS
				3.14	3.3	2.98	2.91	3.15	3.09
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.98 U	R	0.98 U	0.95 U	R	R
SW8270 LL	N	Hexachloroethane	67-72-1	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Isophorone	78-59-1	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Nitrobenzene	98-95-3	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.98 U	0.98 U	0.98 U	0.95 U	0.97 U	0.97 U
SW8270 LL	N	Phenol	108-95-2	0.2 U	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N02-TNNE	N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE
				N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE
				2.07	2.77	2.78	3.28	3.14	3.04
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	2.68	2.68
				N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	1.9 U	1.9 U	1.9 U			
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.19 U	0.19 U	0.19 U			
SW8270 LL	N	2-Chlorophenol	95-57-8	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2-Nitroaniline	88-74-4	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	2-Nitrophenol	88-75-5	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.19 U	0.19 U	0.19 U			
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	3-Nitroaniline	99-09-2	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	4-Chloroaniline	106-47-8	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	4-Nitroaniline	100-01-6	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	4-Nitrophenol	100-02-7	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	Acetophenone	98-86-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Atrazine	1912-24-9	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Benzaldehyde	100-52-7	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.19 J	0.18 J	0.28 J			
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.19 U	0.19 U	0.19 U			
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.19 U	0.19 U	0.19 U			
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	1.9 U	1.9 U	1.9 U			
SW8270 LL	N	Caprolactam	105-60-2	4.8 U	4.7 U	4.8 U			
SW8270 LL	N	Carbazole	86-74-8	0.19 U	0.19 U	0.19 U			
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Dibenzofuran	132-64-9	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Diethyl phthalate	84-66-2	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.19 U	0.19 U	0.19 U			

				N02-TNNE	N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE
				N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE
				2.07	2.77	2.78	3.28	3.14	3.04
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	2.68	2.68
				N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Hexachloroethane	67-72-1	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Isophorone	78-59-1	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.19 U	0.19 U	0.19 U			
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Nitrobenzene	98-95-3	1.9 U	1.9 U	1.9 U			
SW8270 LL	N	Pentachlorophenol	87-86-5	0.95 U	0.94 U	0.95 U			
SW8270 LL	N	Phenol	108-95-2	0.19 U	0.19 U	0.19 U			

Notes:
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				N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS
				N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS
				2.94	3.09	3.02	2.99	2.96	3.05
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98
				N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						
SW8270 LL	N	2-Chloronaphthalene	91-58-7						
SW8270 LL	N	2-Chlorophenol	95-57-8						
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						
SW8270 LL	N	2-Nitroaniline	88-74-4						
SW8270 LL	N	2-Nitrophenol	88-75-5						
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						
SW8270 LL	N	3-Nitroaniline	99-09-2						
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						
SW8270 LL	N	4-Chloroaniline	106-47-8						
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						
SW8270 LL	N	4-Nitroaniline	100-01-6						
SW8270 LL	N	4-Nitrophenol	100-02-7						
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						
SW8270 LL	N	Acetophenone	98-86-2						
SW8270 LL	N	Atrazine	1912-24-9						
SW8270 LL	N	Benzaldehyde	100-52-7						
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						
SW8270 LL	N	Caprolactam	105-60-2						
SW8270 LL	N	Carbazole	86-74-8						
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						
SW8270 LL	N	Di-n-octylphthalate	117-84-0						
SW8270 LL	N	Dibenzofuran	132-64-9						
SW8270 LL	N	Diethyl phthalate	84-66-2						
SW8270 LL	N	Dimethyl phthalate	131-11-3						
SW8270 LL	N	Hexachlorobutadiene	87-68-3						

				N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS
				N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS
				2.94	3.09	3.02	2.99	2.96	3.05
				NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98
				N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						
SW8270 LL	N	Hexachloroethane	67-72-1						
SW8270 LL	N	Isophorone	78-59-1						
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						
SW8270 LL	N	Nitrobenzene	98-95-3						
SW8270 LL	N	Pentachlorophenol	87-86-5						
SW8270 LL	N	Phenol	108-95-2						

Notes:
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				N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE
				3.1	3.04	2.63	1.1	2.75	3.1
				NB	NB	NB	NB	NB	NB
				0.98	0.98	2.68	4.57	4.57	4.57
				N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						
SW8270 LL	N	2-Chloronaphthalene	91-58-7						
SW8270 LL	N	2-Chlorophenol	95-57-8						
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						
SW8270 LL	N	2-Nitroaniline	88-74-4						
SW8270 LL	N	2-Nitrophenol	88-75-5						
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						
SW8270 LL	N	3-Nitroaniline	99-09-2						
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						
SW8270 LL	N	4-Chloroaniline	106-47-8						
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						
SW8270 LL	N	4-Nitroaniline	100-01-6						
SW8270 LL	N	4-Nitrophenol	100-02-7						
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						
SW8270 LL	N	Acetophenone	98-86-2						
SW8270 LL	N	Atrazine	1912-24-9						
SW8270 LL	N	Benzaldehyde	100-52-7						
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						
SW8270 LL	N	Caprolactam	105-60-2						
SW8270 LL	N	Carbazole	86-74-8						
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						
SW8270 LL	N	Di-n-octylphthalate	117-84-0						
SW8270 LL	N	Dibenzofuran	132-64-9						
SW8270 LL	N	Diethyl phthalate	84-66-2						
SW8270 LL	N	Dimethyl phthalate	131-11-3						
SW8270 LL	N	Hexachlorobutadiene	87-68-3						

				N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE
				3.1	3.04	2.63	1.1	2.75	3.1
				NB	NB	NB	NB	NB	NB
				0.98	0.98	2.68	4.57	4.57	4.57
				N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						
SW8270 LL	N	Hexachloroethane	67-72-1						
SW8270 LL	N	Isophorone	78-59-1						
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						
SW8270 LL	N	Nitrobenzene	98-95-3						
SW8270 LL	N	Pentachlorophenol	87-86-5						
SW8270 LL	N	Phenol	108-95-2						

Notes:
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				N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW	N04-TNBE
				N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW	N04-CE11-TNBE
				2.9	2.6	2.7	3.14	2.97	3
				NB	NB	NB	NB	NB	NB
				4.57	3.77	3.77	3.77	3.77	
				N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS	N04-CE11-TNBE-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						0.97 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						0.97 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						1.9 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7						0.19 U
SW8270 LL	N	2-Chlorophenol	95-57-8						0.97 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						0.97 U
SW8270 LL	N	2-Nitroaniline	88-74-4						4.9 U
SW8270 LL	N	2-Nitrophenol	88-75-5						0.97 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						0.97 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						0.19 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						0.97 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						4.9 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						0.97 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						0.97 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						0.97 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						0.97 U
SW8270 LL	N	3-Nitroaniline	99-09-2						4.9 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						0.97 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						0.97 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						0.97 U
SW8270 LL	N	4-Chloroaniline	106-47-8						0.97 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						0.97 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						0.97 U
SW8270 LL	N	4-Nitroaniline	100-01-6						4.9 U
SW8270 LL	N	4-Nitrophenol	100-02-7						4.9 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						4.9 U
SW8270 LL	N	Acetophenone	98-86-2						0.97 U
SW8270 LL	N	Atrazine	1912-24-9						0.97 U
SW8270 LL	N	Benzaldehyde	100-52-7						0.97 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						0.97 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						0.19 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						0.97 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						0.19 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						1.9 U
SW8270 LL	N	Caprolactam	105-60-2						4.9 U
SW8270 LL	N	Carbazole	86-74-8						0.19 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						0.97 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0						0.97 U
SW8270 LL	N	Dibenzofuran	132-64-9						0.97 U
SW8270 LL	N	Diethyl phthalate	84-66-2						0.97 U
SW8270 LL	N	Dimethyl phthalate	131-11-3						0.97 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3						0.19 U

				N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW	N04-TNBE
				N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW	N04-CE11-TNBE
				2.9	2.6	2.7	3.14	2.97	3
				NB	NB	NB	NB	NB	NB
				4.57	3.77	3.77	3.77	3.77	
				N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS	N04-CE11-TNBE-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						0.97 U
SW8270 LL	N	Hexachloroethane	67-72-1						0.97 U
SW8270 LL	N	Isophorone	78-59-1						0.97 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						0.19 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						0.97 U
SW8270 LL	N	Nitrobenzene	98-95-3						1.9 U
SW8270 LL	N	Pentachlorophenol	87-86-5						0.97 U
SW8270 LL	N	Phenol	108-95-2						0.19 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN	N04-TNBN
				N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN	N04-CE20-TNBN
				3	3	3	3.2	3.13	2.76
				NB	NB	NB	NB	NB	NB
				N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS	N04-CE20-TNBN-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2-Nitroaniline	88-74-4	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	3-Nitroaniline	99-09-2	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	4-Nitroaniline	100-01-6	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	4-Nitrophenol	100-02-7	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	Acetophenone	98-86-2	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Atrazine	1912-24-9	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Benzaldehyde	100-52-7	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.21 J	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U
SW8270 LL	N	Caprolactam	105-60-2	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U
SW8270 LL	N	Carbazole	86-74-8	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.94 U	0.96 U	0.23 J	0.96 U	0.96 U	0.18 J
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U

				N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN	N04-TNBN
				N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN	N04-CE20-TNBN
				3	3	3	3.2	3.13	2.76
				NB	NB	NB	NB	NB	NB
				N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS	N04-CE20-TNBN-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Hexachloroethane	67-72-1	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Isophorone	78-59-1	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Nitrobenzene	98-95-3	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.94 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U
SW8270 LL	N	Phenol	108-95-2	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB
				N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2-Nitroaniline	88-74-4	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	3-Nitroaniline	99-09-2	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	4-Nitroaniline	100-01-6	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	4-Nitrophenol	100-02-7	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	Acetophenone	98-86-2	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Atrazine	1912-24-9	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Benzaldehyde	100-52-7	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.97 U	0.61 J	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U
SW8270 LL	N	Caprolactam	105-60-2	4.9 U	4.9 U	4.9 U	4.8 U	4.8 U	5.1 U
SW8270 LL	N	Carbazole	86-74-8	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.97 U	0.97 U	0.13 J	0.95 U	0.95 U	1 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.14 J	0.97 U	0.97 U	0.16 J	0.95 U	0.18 J
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U

				N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB
				N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Hexachloroethane	67-72-1	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Isophorone	78-59-1	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Nitrobenzene	98-95-3	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.97 U	0.97 U	0.97 U	0.95 U	0.95 U	1 U
SW8270 LL	N	Phenol	108-95-2	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW
				1.75	2.65	2.97	3.01	2.95	2.8
				NB	NB	NB	NB	NB	NB
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2-Nitroaniline	88-74-4	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	3-Nitroaniline	99-09-2	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	4-Nitroaniline	100-01-6	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	4-Nitrophenol	100-02-7	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	Acetophenone	98-86-2	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Atrazine	1912-24-9	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Benzaldehyde	100-52-7	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.94 U	0.99 U	0.24 J	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2 U
SW8270 LL	N	Caprolactam	105-60-2	4.7 U	5 U	4.9 U	4.8 U	4.9 U	4.9 U
SW8270 LL	N	Carbazole	86-74-8	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.94 U	0.99 U	0.97 U	0.17 J	0.97 U	0.36 J
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.15 J	0.19 J	0.97 U	0.96 U	0.14 J	0.2 J
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW
				1.75	2.65	2.97	3.01	2.95	2.8
				NB	NB	NB	NB	NB	NB
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Hexachloroethane	67-72-1	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Isophorone	78-59-1	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Nitrobenzene	98-95-3	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.94 U	0.99 U	0.97 U	0.96 U	0.97 U	0.98 U
SW8270 LL	N	Phenol	108-95-2	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.2 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNBE	N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN
				N05-CE01-TNBE	N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN
				2.32	3.46	3.34	3.12	3.13	3.02
				NB	NB	NB	NB	NB	NB
				2.68	2.68	2.68	3.87	3.87	3.87
				N05-CE01-TNBE-AS	N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.19 U	0.2 U	0.19 U	0.19 U	0.043 J	0.22 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2-Nitroaniline	88-74-4	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.19 U	0.2 U	0.19 U	0.19 U	0.038 J	0.22 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.96 U	1 U	0.94 U	0.94 U	0.21 J	1.1 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	3-Nitroaniline	99-09-2	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.96 U	1 U	0.94 U	R	R	R
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.96 U	1 U	0.94 U	R	R	R
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.96 U	1 U	0.94 U	0.94 U	0.089 J	1.1 U
SW8270 LL	N	4-Nitroaniline	100-01-6	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	4-Nitrophenol	100-02-7	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	Acetophenone	98-86-2	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Atrazine	1912-24-9	0.96 U	1 U	0.94 U	R	R	R
SW8270 LL	N	Benzaldehyde	100-52-7	0.96 U	1 U	0.94 U	0.56 J	0.58 J	1.1 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.96 U	0.19 J	0.16 J	0.94 U	0.97 U	0.18 J
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.19 U	0.2 U	0.19 U	0.19 U	0.045 J	0.22 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.22 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.2 U
SW8270 LL	N	Caprolactam	105-60-2	4.8 U	5.1 U	4.7 U	4.7 U	4.9 U	5.4 U
SW8270 LL	N	Carbazole	86-74-8	0.19 U	0.2 U	0.19 U	0.19 U	0.047 J	0.22 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.96 U	0.17 J	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.22 U

				N05-TNBE	N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN
				N05-CE01-TNBE	N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN
				2.32	3.46	3.34	3.12	3.13	3.02
				NB	NB	NB	NB	NB	NB
				2.68	2.68	2.68	3.87	3.87	3.87
				N05-CE01-TNBE-AS	N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.96 U	1 U	0.94 U	R	R	R
SW8270 LL	N	Hexachloroethane	67-72-1	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Isophorone	78-59-1	0.96 U	1 U	0.94 U	0.94 U	0.065 J	1.1 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U	0.22 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Nitrobenzene	98-95-3	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.2 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.96 U	1 U	0.94 U	0.94 U	0.97 U	1.1 U
SW8270 LL	N	Phenol	108-95-2	0.19 U	0.2 U	0.19 U	0.19 U	0.062 J	0.22 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNBN	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE
				N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE
				3.18	2.91	3.11	3.07	2.93	1.28
				NB	NB	NB	NB	NB	NB
				3.87	0.98	0.98	0.97	0.97	4.57
				N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS
				03/28/2012	03/29/2012	03/29/2012	03/29/2012	03/29/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	2 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2-Nitroaniline	88-74-4	5 U	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	5 U	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	3-Nitroaniline	99-09-2	5 U	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	R
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	R
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	4-Nitroaniline	100-01-6	5 U	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U
SW8270 LL	N	4-Nitrophenol	100-02-7	5 U	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	5 U	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U
SW8270 LL	N	Acetophenone	98-86-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Atrazine	1912-24-9	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	R
SW8270 LL	N	Benzaldehyde	100-52-7	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.99 U	0.24 J	0.25 J	0.24 J	0.96 U	0.14 J
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	2.4	1.9 U	1.9 U	2 U	1.9 U	1.9 U
SW8270 LL	N	Caprolactam	105-60-2	5 U	4.8 U	4.8 U	4.9 U	4.8 U	1.4 J
SW8270 LL	N	Carbazole	86-74-8	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U

				N05-TNBN	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE
				N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE
				3.18	2.91	3.11	3.07	2.93	1.28
				NB	NB	NB	NB	NB	NB
				3.87	0.98	0.98	0.97	0.97	4.57
				N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS
				03/28/2012	03/29/2012	03/29/2012	03/29/2012	03/29/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	R
SW8270 LL	N	Hexachloroethane	67-72-1	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Isophorone	78-59-1	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Nitrobenzene	98-95-3	2 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.99 U	0.95 U	0.96 U	0.98 U	0.96 U	0.95 U
SW8270 LL	N	Phenol	108-95-2	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW	N05-TNNW
				N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW
				2.94	2.81	2.58	2.5	2.92	2.96
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	3.77	3.77	3.77
				N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	1.9 U	2 U	1.9 U	1.9 U	2 U	2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2-Nitroaniline	88-74-4	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	3-Nitroaniline	99-09-2	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.97 U	R	0.97 U	0.97 U	R	R
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.97 U	R	0.97 U	0.97 U	R	R
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	4-Nitroaniline	100-01-6	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	4-Nitrophenol	100-02-7	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	Acetophenone	98-86-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Atrazine	1912-24-9	0.97 U	R	0.97 U	0.97 U	R	R
SW8270 LL	N	Benzaldehyde	100-52-7	0.57 J	0.98 U	0.97 U	0.97 U	0.99 U	0.58 J
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.28 J
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	1.9 U	2 U	1.9 U	1.9 U	2 U	2 U
SW8270 LL	N	Caprolactam	105-60-2	4.9 U	4.9 U	4.9 U	4.9 U	5 U	5 U
SW8270 LL	N	Carbazole	86-74-8	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U

				N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW	N05-TNNW
				N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW
				2.94	2.81	2.58	2.5	2.92	2.96
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	3.77	3.77	3.77
				N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.97 U	R	0.97 U	0.97 U	R	R
SW8270 LL	N	Hexachloroethane	67-72-1	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Isophorone	78-59-1	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Nitrobenzene	98-95-3	1.9 U	2 U	1.9 U	1.9 U	2 U	2 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.97 U	0.98 U	0.97 U	0.97 U	0.99 U	0.99 U
SW8270 LL	N	Phenol	108-95-2	0.19 U	0.2 U	0.19 U	0.19 U	0.2 U	0.2 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN	N06-TNBN
				N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN	N06-CE02-TNBN
				3.07	2.93	2.7	3.11	3	3.16
				NB	NB	NB	NB	NB	NB
				3.77	2.68	2.68	2.68	3.87	3.87
				N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS	N06-CE02-TNBN-AS
				03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.98 U					
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.98 U					
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	2 U					
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.2 U					
SW8270 LL	N	2-Chlorophenol	95-57-8	0.98 U					
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.98 U					
SW8270 LL	N	2-Nitroaniline	88-74-4	4.9 U					
SW8270 LL	N	2-Nitrophenol	88-75-5	0.98 U					
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.98 U					
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.2 U					
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.98 U					
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	4.9 U					
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.98 U					
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.98 U					
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.98 U					
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.98 U					
SW8270 LL	N	3-Nitroaniline	99-09-2	4.9 U					
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.98 U					
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.98 U					
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.98 U					
SW8270 LL	N	4-Chloroaniline	106-47-8	0.98 U					
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.98 U					
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.98 U					
SW8270 LL	N	4-Nitroaniline	100-01-6	4.9 U					
SW8270 LL	N	4-Nitrophenol	100-02-7	4.9 U					
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	4.9 U					
SW8270 LL	N	Acetophenone	98-86-2	0.98 U					
SW8270 LL	N	Atrazine	1912-24-9	0.98 U					
SW8270 LL	N	Benzaldehyde	100-52-7	0.98 U					
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.14 J					
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.2 U					
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.98 U					
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.2 U					
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	2 U					
SW8270 LL	N	Caprolactam	105-60-2	4.9 U					
SW8270 LL	N	Carbazole	86-74-8	0.2 U					
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.98 U					
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.98 U					
SW8270 LL	N	Dibenzofuran	132-64-9	0.98 U					
SW8270 LL	N	Diethyl phthalate	84-66-2	0.98 U					
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.98 U					
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.2 U					

				N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN	N06-TNBN
				N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN	N06-CE02-TNBN
				3.07	2.93	2.7	3.11	3	3.16
				NB	NB	NB	NB	NB	NB
				3.77	2.68	2.68	2.68	3.87	3.87
				N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS	N06-CE02-TNBN-AS
				03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.98 U					
SW8270 LL	N	Hexachloroethane	67-72-1	0.98 U					
SW8270 LL	N	Isophorone	78-59-1	0.98 U					
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.2 U					
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.98 U					
SW8270 LL	N	Nitrobenzene	98-95-3	2 U					
SW8270 LL	N	Pentachlorophenol	87-86-5	0.98 U					
SW8270 LL	N	Phenol	108-95-2	0.2 U					

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS	N06-CE04-TNBS
				2.98	3.02	3	3.02	2.98	3.1
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.97
				N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS	N06-CE04-TNBS-AS
				06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						
SW8270 LL	N	2-Chloronaphthalene	91-58-7						
SW8270 LL	N	2-Chlorophenol	95-57-8						
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						
SW8270 LL	N	2-Nitroaniline	88-74-4						
SW8270 LL	N	2-Nitrophenol	88-75-5						
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						
SW8270 LL	N	3-Nitroaniline	99-09-2						
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						
SW8270 LL	N	4-Chloroaniline	106-47-8						
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						
SW8270 LL	N	4-Nitroaniline	100-01-6						
SW8270 LL	N	4-Nitrophenol	100-02-7						
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						
SW8270 LL	N	Acetophenone	98-86-2						
SW8270 LL	N	Atrazine	1912-24-9						
SW8270 LL	N	Benzaldehyde	100-52-7						
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						
SW8270 LL	N	Caprolactam	105-60-2						
SW8270 LL	N	Carbazole	86-74-8						
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						
SW8270 LL	N	Di-n-octylphthalate	117-84-0						
SW8270 LL	N	Dibenzofuran	132-64-9						
SW8270 LL	N	Diethyl phthalate	84-66-2						
SW8270 LL	N	Dimethyl phthalate	131-11-3						
SW8270 LL	N	Hexachlorobutadiene	87-68-3						

				N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS	N06-CE04-TNBS
				2.98	3.02	3	3.02	2.98	3.1
				NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.97
				N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS	N06-CE04-TNBS-AS
				06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						
SW8270 LL	N	Hexachloroethane	67-72-1						
SW8270 LL	N	Isophorone	78-59-1						
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						
SW8270 LL	N	Nitrobenzene	98-95-3						
SW8270 LL	N	Pentachlorophenol	87-86-5						
SW8270 LL	N	Phenol	108-95-2						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						
SW8270 LL	N	2-Chloronaphthalene	91-58-7						
SW8270 LL	N	2-Chlorophenol	95-57-8						
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						
SW8270 LL	N	2-Nitroaniline	88-74-4						
SW8270 LL	N	2-Nitrophenol	88-75-5						
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						
SW8270 LL	N	3-Nitroaniline	99-09-2						
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						
SW8270 LL	N	4-Chloroaniline	106-47-8						
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						
SW8270 LL	N	4-Nitroaniline	100-01-6						
SW8270 LL	N	4-Nitrophenol	100-02-7						
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						
SW8270 LL	N	Acetophenone	98-86-2						
SW8270 LL	N	Atrazine	1912-24-9						
SW8270 LL	N	Benzaldehyde	100-52-7						
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						
SW8270 LL	N	Caprolactam	105-60-2						
SW8270 LL	N	Carbazole	86-74-8						
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						
SW8270 LL	N	Di-n-octylphthalate	117-84-0						
SW8270 LL	N	Dibenzofuran	132-64-9						
SW8270 LL	N	Diethyl phthalate	84-66-2						
SW8270 LL	N	Dimethyl phthalate	131-11-3						
SW8270 LL	N	Hexachlorobutadiene	87-68-3						

				N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						
SW8270 LL	N	Hexachloroethane	67-72-1						
SW8270 LL	N	Isophorone	78-59-1						
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						
SW8270 LL	N	Nitrobenzene	98-95-3						
SW8270 LL	N	Pentachlorophenol	87-86-5						
SW8270 LL	N	Phenol	108-95-2						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE
				3	3	2.05	2.95	3.1	3.05
				NB	NB	NB	NB	NB	NB
				3.77	3.77				
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1			2 U	2 U	2 U	2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7			0.2 U	0.2 U	0.2 U	0.2 U
SW8270 LL	N	2-Chlorophenol	95-57-8			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2-Nitroaniline	88-74-4			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	2-Nitrophenol	88-75-5			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2			0.2 U	0.2 U	0.2 U	0.2 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	3-Nitroaniline	99-09-2			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1			R	1 U	1 U	0.98 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	4-Chloroaniline	106-47-8			R	1 U	1 U	0.98 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	4-Nitroaniline	100-01-6			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	4-Nitrophenol	100-02-7			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	Acetophenone	98-86-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Atrazine	1912-24-9			R	1 U	1 U	0.98 U
SW8270 LL	N	Benzaldehyde	100-52-7			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1			0.2 U	0.2 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4			0.2 U	0.2 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7			2 U	2 U	2 U	2 U
SW8270 LL	N	Caprolactam	105-60-2			4.9 U	5.1 U	5 U	4.9 U
SW8270 LL	N	Carbazole	86-74-8			0.2 U	0.2 U	0.2 U	0.2 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Dibenzofuran	132-64-9			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Diethyl phthalate	84-66-2			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Dimethyl phthalate	131-11-3			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3			0.2 U	0.2 U	0.2 U	0.2 U

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE
				3	3	2.05	2.95	3.1	3.05
				NB	NB	NB	NB	NB	NB
				3.77	3.77				
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4			R	1 U	1 U	0.98 U
SW8270 LL	N	Hexachloroethane	67-72-1			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Isophorone	78-59-1			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7			0.2 U	0.2 U	0.2 U	0.2 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Nitrobenzene	98-95-3			2 U	2 U	2 U	2 U
SW8270 LL	N	Pentachlorophenol	87-86-5			0.98 U	1 U	1 U	0.98 U
SW8270 LL	N	Phenol	108-95-2			0.2 U	0.2 U	0.2 U	0.2 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS
				N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS
				3	3	3.05	2.97	3	3.03
				NB	NB	NB	NB	NB	NB
				N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	2 U	1.9 U	2 U	1.9 U	2 U	2 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	2-Chlorophenol	95-57-8	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2-Nitroaniline	88-74-4	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	2-Nitrophenol	88-75-5	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	3-Nitroaniline	99-09-2	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	4-Chloroaniline	106-47-8	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	4-Nitroaniline	100-01-6	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	4-Nitrophenol	100-02-7	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	Acetophenone	98-86-2	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Atrazine	1912-24-9	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Benzaldehyde	100-52-7	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	1 U	0.94 U	0.18 J	0.97 U	0.99 U	1 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	2 U	1.9 U	2 U	1.9 U	2 U	2 U
SW8270 LL	N	Caprolactam	105-60-2	5.1 U	4.7 U	5 U	4.9 U	5 U	5 U
SW8270 LL	N	Carbazole	86-74-8	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Dibenzofuran	132-64-9	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Diethyl phthalate	84-66-2	1 U	0.94 U	0.99 U	0.15 J	0.99 U	1 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS
				N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS
				3	3	3.05	2.97	3	3.03
				NB	NB	NB	NB	NB	NB
				N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Hexachloroethane	67-72-1	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Isophorone	78-59-1	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Nitrobenzene	98-95-3	2 U	1.9 U	2 U	1.9 U	2 U	2 U
SW8270 LL	N	Pentachlorophenol	87-86-5	1 U	0.94 U	0.99 U	0.97 U	0.99 U	1 U
SW8270 LL	N	Phenol	108-95-2	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.2 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNBS	N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE
				N07-CE03-TNBS	N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE
				3.12	3.05	0.55	1.62	3	2.6
				NB	NB	NB	NB	NB	NB
				N07-CE03-TNBS-AS	N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS
				12/13/2012	12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	2 U	2 U	2 U	1.9 U	2 U	2.1 U
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U
SW8270 LL	N	2-Chlorophenol	95-57-8	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2-Nitroaniline	88-74-4	5 U	5 U	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	2-Nitrophenol	88-75-5	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	5 U	5 U	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	3-Nitroaniline	99-09-2	5 U	5 U	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	4-Chloroaniline	106-47-8	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	4-Nitroaniline	100-01-6	5 U	5 U	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	4-Nitrophenol	100-02-7	5 U	5 U	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	5 U	5 U	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	Acetophenone	98-86-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Atrazine	1912-24-9	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Benzaldehyde	100-52-7	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	2 U	2 U	2 U	1.9 U	2 U	2.1 U
SW8270 LL	N	Caprolactam	105-60-2	5 U	1.4 J	4.9 U	4.8 U	4.9 U	5.3 U
SW8270 LL	N	Carbazole	86-74-8	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Di-n-octylphthalate	117-84-0	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Dibenzofuran	132-64-9	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Diethyl phthalate	84-66-2	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Dimethyl phthalate	131-11-3	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U

				N07-TNBS	N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE
				N07-CE03-TNBS	N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE
				3.12	3.05	0.55	1.62	3	2.6
				NB	NB	NB	NB	NB	NB
				N07-CE03-TNBS-AS	N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS
				12/13/2012	12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Hexachloroethane	67-72-1	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Isophorone	78-59-1	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Nitrobenzene	98-95-3	2 U	2 U	2 U	1.9 U	2 U	2.1 U
SW8270 LL	N	Pentachlorophenol	87-86-5	0.99 U	1 U	0.98 U	0.95 U	0.98 U	1.1 U
SW8270 LL	N	Phenol	108-95-2	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.21 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N07-TNNW	N07-TNNW	N07-TNNW	N07-TNNW	N09-TNBE	N09-TNBE
				N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW	N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE
				3.09	3.1	3.1	3.01	2.1	3
				NB	NB	NB	NB	NB	
				N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS	N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	06/08/2013	06/09/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4	1 U	1 U	1 U	1 U		
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3	1 U	1 U	1 U	1 U		
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1	2.1 U	2 U	2 U	2 U		
SW8270 LL	N	2-Chloronaphthalene	91-58-7	0.21 U	0.2 U	0.2 U	0.2 U		
SW8270 LL	N	2-Chlorophenol	95-57-8	1 U	1 U	1 U	1 U		
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7	1 U	1 U	1 U	1 U		
SW8270 LL	N	2-Nitroaniline	88-74-4	5.2 U	5.1 U	5 U	5 U		
SW8270 LL	N	2-Nitrophenol	88-75-5	1 U	1 U	1 U	1 U		
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2	1 U	1 U	1 U	1 U		
SW8270 LL	N	2,4-Dichlorophenol	120-83-2	0.21 U	0.2 U	0.2 U	0.2 U		
SW8270 LL	N	2,4-Dimethylphenol	105-67-9	1 U	1 U	1 U	1 U		
SW8270 LL	N	2,4-Dinitrophenol	51-28-5	5.2 U	5.1 U	5 U	5 U		
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2	1 U	1 U	1 U	1 U		
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4	1 U	1 U	1 U	1 U		
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2	1 U	1 U	1 U	1 U		
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2	1 U	1 U	1 U	1 U		
SW8270 LL	N	3-Nitroaniline	99-09-2	5.2 U	5.1 U	5 U	5 U		
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1	1 U	1 U	1 U	1 U		
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3	1 U	1 U	1 U	1 U		
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7	1 U	1 U	1 U	1 U		
SW8270 LL	N	4-Chloroaniline	106-47-8	1 U	1 U	1 U	1 U		
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3	1 U	1 U	1 U	1 U		
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5	1 U	1 U	1 U	1 U		
SW8270 LL	N	4-Nitroaniline	100-01-6	5.2 U	5.1 U	5 U	5 U		
SW8270 LL	N	4-Nitrophenol	100-02-7	5.2 U	5.1 U	5 U	5 U		
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1	5.2 U	5.1 U	5 U	5 U		
SW8270 LL	N	Acetophenone	98-86-2	1 U	1 U	1 U	1 U		
SW8270 LL	N	Atrazine	1912-24-9	1 U	1 U	1 U	1 U		
SW8270 LL	N	Benzaldehyde	100-52-7	1 U	1 U	0.24 J	1 U		
SW8270 LL	N	Benzyl butyl phthalate	85-68-7	1 U	1 U	1 U	0.15 J		
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1	0.21 U	0.2 U	0.2 U	0.2 U		
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1	1 U	1 U	1 U	1 U		
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4	0.21 U	0.2 U	0.2 U	0.2 U		
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7	2.1 U	2 U	2 U	2 U		
SW8270 LL	N	Caprolactam	105-60-2	5.2 U	5.1 U	2.2 J	5 U		
SW8270 LL	N	Carbazole	86-74-8	0.21 U	0.2 U	0.2 U	0.2 U		
SW8270 LL	N	Di-n-butyl phthalate	84-74-2	1 U	1 U	1 U	1 U		
SW8270 LL	N	Di-n-octylphthalate	117-84-0	1 U	1 U	1 U	1 U		
SW8270 LL	N	Dibenzofuran	132-64-9	1 U	1 U	1 U	1 U		
SW8270 LL	N	Diethyl phthalate	84-66-2	1 U	1 U	0.22 J	1 U		
SW8270 LL	N	Dimethyl phthalate	131-11-3	1 U	1 U	1 U	1 U		
SW8270 LL	N	Hexachlorobutadiene	87-68-3	0.21 U	0.2 U	0.2 U	0.2 U		

				N07-TNNW	N07-TNNW	N07-TNNW	N07-TNNW	N09-TNBE	N09-TNBE
				N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW	N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE
				3.09	3.1	3.1	3.01	2.1	3
				NB	NB	NB	NB	NB	
				N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS	N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	06/08/2013	06/09/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4	1 U	1 U	1 U	1 U		
SW8270 LL	N	Hexachloroethane	67-72-1	1 U	1 U	1 U	1 U		
SW8270 LL	N	Isophorone	78-59-1	1 U	1 U	1 U	1 U		
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7	0.21 U	0.2 U	0.2 U	0.2 U		
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6	1 U	1 U	1 U	1 U		
SW8270 LL	N	Nitrobenzene	98-95-3	2.1 U	2 U	2 U	2 U		
SW8270 LL	N	Pentachlorophenol	87-86-5	1 U	1 U	1 U	1 U		
SW8270 LL	N	Phenol	108-95-2	0.21 U	0.2 U	0.2 U	0.2 U		

Notes:
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				N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN	N09-TNBN
				N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN	N09-CE21-TNBN
				3	3.1	3.1	3	3	3.2
						NB			
				N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS	N09-CE21-TNBN-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						
SW8270 LL	N	2-Chloronaphthalene	91-58-7						
SW8270 LL	N	2-Chlorophenol	95-57-8						
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						
SW8270 LL	N	2-Nitroaniline	88-74-4						
SW8270 LL	N	2-Nitrophenol	88-75-5						
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						
SW8270 LL	N	3-Nitroaniline	99-09-2						
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						
SW8270 LL	N	4-Chloroaniline	106-47-8						
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						
SW8270 LL	N	4-Nitroaniline	100-01-6						
SW8270 LL	N	4-Nitrophenol	100-02-7						
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						
SW8270 LL	N	Acetophenone	98-86-2						
SW8270 LL	N	Atrazine	1912-24-9						
SW8270 LL	N	Benzaldehyde	100-52-7						
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						
SW8270 LL	N	Caprolactam	105-60-2						
SW8270 LL	N	Carbazole	86-74-8						
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						
SW8270 LL	N	Di-n-octylphthalate	117-84-0						
SW8270 LL	N	Dibenzofuran	132-64-9						
SW8270 LL	N	Diethyl phthalate	84-66-2						
SW8270 LL	N	Dimethyl phthalate	131-11-3						
SW8270 LL	N	Hexachlorobutadiene	87-68-3						

				N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN	N09-TNBN
				N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN	N09-CE21-TNBN
				3	3.1	3.1	3	3	3.2
						NB			
				N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS	N09-CE21-TNBN-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						
SW8270 LL	N	Hexachloroethane	67-72-1						
SW8270 LL	N	Isophorone	78-59-1						
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						
SW8270 LL	N	Nitrobenzene	98-95-3						
SW8270 LL	N	Pentachlorophenol	87-86-5						
SW8270 LL	N	Phenol	108-95-2						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE	N09-TNNE
				N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE	N09-CE20-TNNE
				3	2.9	3	3.06	3	3
				NB				NB	
				N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS	N09-CE20-TNNE-AS
				06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/10/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	1,1'-Biphenyl	92-52-4						
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3						
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1						
SW8270 LL	N	2-Chloronaphthalene	91-58-7						
SW8270 LL	N	2-Chlorophenol	95-57-8						
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7						
SW8270 LL	N	2-Nitroaniline	88-74-4						
SW8270 LL	N	2-Nitrophenol	88-75-5						
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2						
SW8270 LL	N	2,4-Dichlorophenol	120-83-2						
SW8270 LL	N	2,4-Dimethylphenol	105-67-9						
SW8270 LL	N	2,4-Dinitrophenol	51-28-5						
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2						
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4						
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2						
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2						
SW8270 LL	N	3-Nitroaniline	99-09-2						
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1						
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3						
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7						
SW8270 LL	N	4-Chloroaniline	106-47-8						
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3						
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5						
SW8270 LL	N	4-Nitroaniline	100-01-6						
SW8270 LL	N	4-Nitrophenol	100-02-7						
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1						
SW8270 LL	N	Acetophenone	98-86-2						
SW8270 LL	N	Atrazine	1912-24-9						
SW8270 LL	N	Benzaldehyde	100-52-7						
SW8270 LL	N	Benzyl butyl phthalate	85-68-7						
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1						
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1						
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4						
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7						
SW8270 LL	N	Caprolactam	105-60-2						
SW8270 LL	N	Carbazole	86-74-8						
SW8270 LL	N	Di-n-butyl phthalate	84-74-2						
SW8270 LL	N	Di-n-octylphthalate	117-84-0						
SW8270 LL	N	Dibenzofuran	132-64-9						
SW8270 LL	N	Diethyl phthalate	84-66-2						
SW8270 LL	N	Dimethyl phthalate	131-11-3						
SW8270 LL	N	Hexachlorobutadiene	87-68-3						

				N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE	N09-TNNE
				N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE	N09-CE20-TNNE
				3	2.9	3	3.06	3	3
				NB				NB	
				N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS	N09-CE20-TNNE-AS
				06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/10/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4						
SW8270 LL	N	Hexachloroethane	67-72-1						
SW8270 LL	N	Isophorone	78-59-1						
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7						
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6						
SW8270 LL	N	Nitrobenzene	98-95-3						
SW8270 LL	N	Pentachlorophenol	87-86-5						
SW8270 LL	N	Phenol	108-95-2						

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3.1	3.3	3.1	3	3
					NB			
				N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N
Method	Fraction	Analyte	CAS					
SW8270 LL	N	1,1'-Biphenyl	92-52-4					
SW8270 LL	N	1,2,4,5-Tetrachlorobenzene	95-94-3					
SW8270 LL	N	1,4-Dioxane (p-Dioxane)	123-91-1					
SW8270 LL	N	2-Chloronaphthalene	91-58-7					
SW8270 LL	N	2-Chlorophenol	95-57-8					
SW8270 LL	N	2-Methylphenol (o-Cresol)	95-48-7					
SW8270 LL	N	2-Nitroaniline	88-74-4					
SW8270 LL	N	2-Nitrophenol	88-75-5					
SW8270 LL	N	2,3,4,6-Tetrachlorophenol	58-90-2					
SW8270 LL	N	2,4-Dichlorophenol	120-83-2					
SW8270 LL	N	2,4-Dimethylphenol	105-67-9					
SW8270 LL	N	2,4-Dinitrophenol	51-28-5					
SW8270 LL	N	2,4-Dinitrotoluene	121-14-2					
SW8270 LL	N	2,4,5-Trichlorophenol	95-95-4					
SW8270 LL	N	2,4,6-Trichlorophenol	88-06-2					
SW8270 LL	N	2,6-Dinitrotoluene	606-20-2					
SW8270 LL	N	3-Nitroaniline	99-09-2					
SW8270 LL	N	3,3'-Dichlorobenzidine	91-94-1					
SW8270 LL	N	4-Bromophenyl phenyl ether	101-55-3					
SW8270 LL	N	4-Chloro-3-methylphenol	59-50-7					
SW8270 LL	N	4-Chloroaniline	106-47-8					
SW8270 LL	N	4-Chlorophenyl phenyl ether	7005-72-3					
SW8270 LL	N	4-Methylphenol (p-Cresol)	106-44-5					
SW8270 LL	N	4-Nitroaniline	100-01-6					
SW8270 LL	N	4-Nitrophenol	100-02-7					
SW8270 LL	N	4,6-Dinitro-2-methylphenol	534-52-1					
SW8270 LL	N	Acetophenone	98-86-2					
SW8270 LL	N	Atrazine	1912-24-9					
SW8270 LL	N	Benzaldehyde	100-52-7					
SW8270 LL	N	Benzyl butyl phthalate	85-68-7					
SW8270 LL	N	Bis(2-chloro-1-methylethyl) ether	108-60-1					
SW8270 LL	N	Bis(2-chloroethoxy) methane	111-91-1					
SW8270 LL	N	Bis(2-chloroethyl) ether (2-Chloroethyl ether)	111-44-4					
SW8270 LL	N	Bis(2-ethylhexyl) phthalate	117-81-7					
SW8270 LL	N	Caprolactam	105-60-2					
SW8270 LL	N	Carbazole	86-74-8					
SW8270 LL	N	Di-n-butyl phthalate	84-74-2					
SW8270 LL	N	Di-n-octylphthalate	117-84-0					
SW8270 LL	N	Dibenzofuran	132-64-9					
SW8270 LL	N	Diethyl phthalate	84-66-2					
SW8270 LL	N	Dimethyl phthalate	131-11-3					
SW8270 LL	N	Hexachlorobutadiene	87-68-3					

				N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3.1	3.3	3.1	3	3
					NB			
				N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N
Method	Fraction	Analyte	CAS					
SW8270 LL	N	Hexachlorocyclopentadiene	77-47-4					
SW8270 LL	N	Hexachloroethane	67-72-1					
SW8270 LL	N	Isophorone	78-59-1					
SW8270 LL	N	n-Nitrosodi-n-propylamine	621-64-7					
SW8270 LL	N	n-Nitrosodiphenylamine	86-30-6					
SW8270 LL	N	Nitrobenzene	98-95-3					
SW8270 LL	N	Pentachlorophenol	87-86-5					
SW8270 LL	N	Phenol	108-95-2					

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
E1668A	N	PCB-1	2051-60-7	ug/l	5.89e-06 U	5.79e-06 U	6.89e-06 U	5.66e-06 U	9.41e-06 J	6.35e-06 U
E1668A	N	PCB-2	2051-61-8	ug/l	5.95e-06 U	2.74e-06 U	2.29e-06 U	5e-06 U	6.2e-06 U	2.63e-06 U
E1668A	N	PCB-3	2051-62-9	ug/l	6e-06 U	2.94e-06 U	3.26e-06 U	5.79e-06 U	4.41e-06 U	3.36e-06 U
E1668A	N	PCB-4	13029-08-8	ug/l	0.000229 J	0.00014 J	0.000173 J	0.00017	0.000195	0.000157 J
E1668A	N	PCB-5	16605-91-7	ug/l	3.97e-05 U	1.49e-06 U	1.5e-06 U	5.42e-07 J	8.31e-07 J	7.96e-07 J
E1668A	N	PCB-6	25569-80-6	ug/l	3.74e-05 U	6.9e-06 J	1.07e-05 J	8.14e-06 J	9.23e-06 J	6.53e-06 U
E1668A	N	PCB-7	33284-50-3	ug/l	3.84e-05 U	2.19e-06 U	1.78e-06 J	1.19e-06 J	1.82e-06 J	1.77e-06 U
E1668A	N	PCB-8	34883-43-7	ug/l	4.51e-05 J	1.91e-05 U	2.43e-05 J	2.35e-05 J	2.45e-05 J	2.39e-05 J
E1668A	N	PCB-9	34883-39-1	ug/l	3.86e-05 U	2.29e-06 J	1.88e-06 J	2.57e-06 J	3.17e-06 J	9.52e-07 J
E1668A	N	PCB-10	33146-45-1	ug/l	4.15e-05 U	1.84e-05 J	2.5e-05 J	1.71e-05 J	1.82e-05 J	2.21e-05 J
E1668A	N	PCB-11	2050-67-1	ug/l	0.000111 J	5.64e-05 U	5.72e-05 U	7.07e-05 J	6.72e-05 J	4.14e-05 U
E1668A	N	PCB-12/13	PCB-12/13	ug/l	3.77e-05 U	7.64e-06 U	1.01e-05 J	1.22e-05 J	1.59e-05 J	1.18e-05 J
E1668A	N	PCB-14	34883-41-5	ug/l	3.25e-05 U	1.22e-06 U	1.23e-06 U	1.07e-06 U	7.83e-07 U	9.85e-07 U
E1668A	N	PCB-15	2050-68-2	ug/l	8.97e-05 J	7.15e-05 J	7.66e-05 J	9.57e-05	0.000115	8.87e-05 J
E1668A	N	PCB-16	38444-78-9	ug/l	0.000148 J	0.000104	9.96e-05	0.000119	0.00014	0.000107
E1668A	N	PCB-17	37680-66-3	ug/l	0.000135 J	0.000113	0.00013	0.000136	0.000175	0.000133
E1668A	N	PCB-18/30	PCB-18/30	ug/l	0.000342	0.00027	0.000301	0.000328	0.000421	0.000315
E1668A	N	PCB-19	38444-73-4	ug/l	2.89e-05 U	7.42e-05	7.69e-05	8.37e-05	9.78e-05	8.25e-05
E1668A	N	PCB-20/28	PCB-20/28	ug/l	0.000421	0.000335	0.000369	0.000346	0.00047	0.000393
E1668A	N	PCB-21/33	PCB-21/33	ug/l	3.41e-05 J	2.54e-05	2.81e-05 J	2.28e-05	3.06e-05	2.92e-05 J
E1668A	N	PCB-22	38444-85-8	ug/l	0.000126 J	6.81e-05	7.55e-05 J	8.08e-05	9.35e-05	8.03e-05
E1668A	N	PCB-23	55720-44-0	ug/l	1.21e-05 U	1.04e-06 U	9.23e-07 U	4e-07 U	3.15e-07 U	8.96e-07 U
E1668A	N	PCB-24	55702-45-9	ug/l	1.98e-05 U	3.95e-06 J	4.8e-06 J	5.13e-06 J	7.36e-06 J	6.15e-06 J
E1668A	N	PCB-25	55712-37-3	ug/l	4.14e-05 J	2.38e-05 J	2.64e-05 J	2.43e-05 J	3.41e-05 J	2.84e-05 J
E1668A	N	PCB-26/29	PCB-26/29	ug/l	0.000106	5.84e-05	6.23e-05	5.9e-05	8.62e-05	6.51e-05
E1668A	N	PCB-27	38444-76-7	ug/l	5.65e-05 J	3.8e-05 J	3.95e-05 J	4.75e-05	6.09e-05	4.23e-05
E1668A	N	PCB-31	16606-02-3	ug/l	0.000341 J	0.000244 J	0.000264 J	0.00026 J	0.000357 J	0.000284 J
E1668A	N	PCB-32	38444-77-8	ug/l	0.000137 J	0.000107	0.000126	0.000132	0.000166	0.000123
E1668A	N	PCB-34	37680-68-5	ug/l	1.19e-05 U	1.02e-06 U	9.09e-07 U	8.91e-07 J	1.21e-06 J	8.82e-07 U
E1668A	N	PCB-35	37680-69-6	ug/l	1.22e-05 U	3.68e-06 J	4.98e-06 J	4.33e-06 J	5.78e-06 J	4.98e-06 J
E1668A	N	PCB-36	38444-87-0	ug/l	1.18e-05 U	1.02e-06 U	9.02e-07 U	7.88e-07 J	7.85e-07 J	8.76e-07 U
E1668A	N	PCB-37	38444-90-5	ug/l	7.48e-05 J	5.35e-05	6.03e-05	6.29e-05	7.91e-05	6.76e-05
E1668A	N	PCB-38	53555-66-1	ug/l	1.24e-05 U	1.07e-06 U	9.52e-07 U	4.12e-07 U	3.25e-07 U	9.24e-07 U
E1668A	N	PCB-39	38444-88-1	ug/l	1.11e-05 U	1.35e-06 J	8.46e-07 U	1.17e-06 J	2.23e-06 J	1.56e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	ug/l	0.000165 J	0.000161	0.000179	0.00019	0.000249	0.000184
E1668A	N	PCB-42	36559-22-5	ug/l	9.1e-05 J	8.18e-05	9.74e-05	9.69e-05	0.000133	9.64e-05
E1668A	N	PCB-43/73	PCB-43/73	ug/l	1.73e-05 U	1.42e-05	1.45e-05	1.14e-05	1.57e-05	1.55e-05
E1668A	N	PCB-44/47/65	PCB-44/47/65	ug/l	0.000474	0.000364	0.000378	0.000426	0.000558	0.000402
E1668A	N	PCB-45/51	PCB-45/51	ug/l	0.000162	0.000108	0.00011	0.000124 J	0.000154	0.000119
E1668A	N	PCB-46	41464-47-5	ug/l	2.26e-05 U	2.53e-05 J	3.15e-05 J	2.83e-05 J	3.76e-05 J	3.05e-05 J
E1668A	N	PCB-48	70362-47-9	ug/l	5.02e-05 J	4.68e-05	5.02e-05 J	4.85e-05	6.28e-05	5.23e-05
E1668A	N	PCB-49/69	PCB-49/69	ug/l	0.000269	0.000222	0.000242	0.000248	0.000358	0.000243
E1668A	N	PCB-50/53	PCB-50/53	ug/l	0.00012	7.91e-05	8.55e-05	8.86e-05	0.000113	8.73e-05
E1668A	N	PCB-52	35693-99-3	ug/l	0.000546 J	0.000388 J	0.000422 J	0.000436 J	0.000597 J	0.00042 J
E1668A	N	PCB-54	15968-05-5	ug/l	3.06e-05 U	8e-06 J	7.28e-06 J	9.85e-06 J	1.1e-05 J	1.01e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
E1668A	N	PCB-55	74338-24-2	ug/l	1.43e-05 U	4.88e-06 J	8.59e-06 J	2.04e-06 J	4.66e-06 J	8.14e-06 J
E1668A	N	PCB-56	41464-43-1	ug/l	9.35e-05 J	7.92e-05	8.66e-05 J	9.31e-05	0.000139	9.06e-05
E1668A	N	PCB-57	70424-67-8	ug/l	1.36e-05 U	9.76e-07 J	1.8e-06 J	1.6e-06 J	1.87e-06 J	1.19e-06 J
E1668A	N	PCB-58	41464-49-7	ug/l	1.36e-05 U	1.97e-06 J	1.35e-06 J	1.41e-06 J	2.23e-06 J	1.82e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	ug/l	3.75e-05	3.04e-05	3.13e-05	3.24e-05	4.34e-05	3.28e-05
E1668A	N	PCB-60	33025-41-1	ug/l	2.31e-05 J	2.62e-05 J	3.33e-05 J	3.24e-05 J	4.5e-05	3.33e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	ug/l	0.00038	0.000269	0.000292	0.000326	0.000452	0.000304
E1668A	N	PCB-63	74472-34-7	ug/l	1.26e-05 U	6.74e-06 J	9.6e-06 J	8.67e-06 J	1.12e-05 J	8.33e-06 J
E1668A	N	PCB-64	52663-58-8	ug/l	0.000133 J	0.000113	0.000125 J	0.00013	0.00018	0.000124
E1668A	N	PCB-66	32598-10-0	ug/l	0.000239 J	0.000163 J	0.000178 J	0.000202	0.000287	0.000187 J
E1668A	N	PCB-67	73575-53-8	ug/l	1.23e-05 U	4.3e-06 J	4.72e-06 J	5.86e-06 J	7.76e-06 J	5e-06 J
E1668A	N	PCB-68	73575-52-7	ug/l	1.24e-05 U	3.37e-06 J	2.14e-06 J	5.43e-06 U	5.03e-06 U	3.8e-06 J
E1668A	N	PCB-72	41464-42-0	ug/l	1.33e-05 U	3.23e-06 J	3.21e-06 J	3.8e-06 J	5.47e-06 J	4.08e-06 J
E1668A	N	PCB-77	32598-13-3	ug/l	1.25e-05 U	1.39e-05 J	1.47e-05 J	1.73e-05 J	2.57e-05 J	1.7e-05 J
E1668A	N	PCB-78	70362-49-1	ug/l	1.41e-05 U	9.78e-07 U	1.09e-06 U	5.46e-07 U	5.37e-07 U	9.31e-07 U
E1668A	N	PCB-79	41464-48-6	ug/l	1.24e-05 U	1.4e-06 J	1.23e-06 J	1.78e-06 J	2.4e-06 J	2.5e-06 J
E1668A	N	PCB-80	33284-52-5	ug/l	1.21e-05 U	8.38e-07 U	9.31e-07 U	4.67e-07 U	4.6e-07 U	7.98e-07 U
E1668A	N	PCB-81	70362-50-4	ug/l	1.31e-05 U	8.89e-07 U	9.91e-07 U	4.88e-07 U	6.23e-07 J	9.58e-07 J
E1668A	N	PCB-82	52663-62-4	ug/l	2.59e-05 U	2.27e-05 J	1.85e-05 J	2.73e-05 J	4.03e-05 J	2.57e-05 J
E1668A	N	PCB-83/99	PCB-83/99	ug/l	0.000163	0.000109	0.000122	0.000141	0.000215	0.000121
E1668A	N	PCB-84	52663-60-2	ug/l	7.36e-05 J	5.49e-05	6.41e-05	7.09e-05	9.5e-05	6.45e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	ug/l	1.79e-05 U	2.33e-05	2.98e-05	3.82e-05	5.67e-05	3.14e-05
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	ug/l	0.000146 J	0.000103 J	0.000118	0.000139	2e-04 J	0.00012
E1668A	N	PCB-88/91	PCB-88/91	ug/l	2.2e-05 U	3.18e-05	3.71e-05	4.24e-05	7.11e-05	4.1e-05
E1668A	N	PCB-89	73575-57-2	ug/l	2.39e-05 U	1.11e-06 U	1.3e-06 U	8.97e-07 U	4.19e-06 J	3.06e-06 J
E1668A	N	PCB-90/101/113	PCB-90/101/113	ug/l	0.000275	0.000163	0.00019	0.00022	0.000319	0.00019
E1668A	N	PCB-92	52663-61-3	ug/l	4.82e-05 J	2.93e-05 J	3.48e-05 J	3.74e-05 J	5.74e-05	3.49e-05 J
E1668A	N	PCB-93/100	PCB-93/100	ug/l	2.12e-05 U	1.05e-05	9.23e-06 J	6.91e-06 J	2.07e-05	1.06e-05
E1668A	N	PCB-94	73575-55-0	ug/l	2.39e-05 U	3.22e-06 J	2.35e-06 J	3.58e-06 J	5.44e-06 J	2.28e-06 J
E1668A	N	PCB-95	38379-99-6	ug/l	0.000238 J	0.000158 J	0.000184 J	0.00021	0.000285	0.000183 J
E1668A	N	PCB-96	73575-54-9	ug/l	1.79e-05 U	3.37e-06 J	9.74e-07 U	4.11e-06 J	4.12e-06 J	3.46e-06 J
E1668A	N	PCB-98/102	PCB-98/102	ug/l	2.06e-05 U	9.85e-06 J	1.01e-05	1.08e-05 J	2.07e-05	1.31e-05
E1668A	N	PCB-103	60145-21-3	ug/l	2.1e-05 U	4.78e-06 J	5.23e-06 J	4.51e-06 J	8.66e-06 J	4.09e-06 J
E1668A	N	PCB-104	56558-16-8	ug/l	1.59e-05 U	7.43e-07 U	8.68e-07 U	5.98e-07 U	1.79e-06 J	8.01e-07 U
E1668A	N	PCB-105	32598-14-4	ug/l	6.35e-05 J	4.89e-05	5.18e-05	5.52e-05	8.02e-05	5.52e-05
E1668A	N	PCB-106	70424-69-0	ug/l	1.22e-05 U	7.59e-07 U	8.6e-07 U	4.55e-07 U	4.34e-07 U	7.66e-07 U
E1668A	N	PCB-107	70424-68-9	ug/l	1.19e-05 U	9.69e-06 J	9.55e-06 J	9.8e-06 J	1.77e-05 J	1.17e-05 J
E1668A	N	PCB-108/124	PCB-108/124	ug/l	1.25e-05 U	3.58e-06 J	3.39e-06 J	5.02e-06	7.57e-06	4.3e-06 J
E1668A	N	PCB-110/115	PCB-110/115	ug/l	0.000295	0.000183	2e-04	0.00024	0.000355	0.000219
E1668A	N	PCB-111	39635-32-0	ug/l	1.5e-05 U	6.98e-07 U	8.16e-07 U	5.62e-07 U	6.4e-07 U	7.53e-07 U
E1668A	N	PCB-112	74472-36-9	ug/l	1.63e-05 U	7.58e-07 U	8.86e-07 U	6.1e-07 U	6.95e-07 U	8.17e-07 U
E1668A	N	PCB-114	74472-37-0	ug/l	1.12e-05 U	1.53e-06 J	1.94e-06 J	2.71e-06 J	4.66e-06 J	2.76e-06 J
E1668A	N	PCB-118	31508-00-6	ug/l	0.000136 J	0.000116 J	0.000122 J	0.000136 J	0.000201 J	0.000133 J
E1668A	N	PCB-120	68194-12-7	ug/l	1.54e-05 U	7.18e-07 U	8.4e-07 U	5.78e-07 U	1.35e-06 J	7.74e-07 U
E1668A	N	PCB-121	56558-18-0	ug/l	1.55e-05 U	7.24e-07 U	8.46e-07 U	5.83e-07 U	6.63e-07 U	7.8e-07 U

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
E1668A	N	PCB-122	76842-07-4	ug/l	1.33e-05 U	8.27e-07 U	2.66e-06 J	2.71e-06 J	3.49e-06 J	4.05e-06 J
E1668A	N	PCB-123	65510-44-3	ug/l	1.24e-05 U	1.3e-06 J	2.3e-06 J	2.45e-06 J	2.93e-06 J	2.7e-06 J
E1668A	N	PCB-126	57465-28-8	ug/l	1.13e-05 U	8.5e-07 U	9.63e-07 U	8.23e-07 J	9.67e-07 J	7.19e-07 J
E1668A	N	PCB-127	39635-33-1	ug/l	1.21e-05 U	7.51e-07 U	8.5e-07 U	4.5e-07 U	4.29e-07 U	7.57e-07 U
E1668A	N	PCB-128/166	PCB-128/166	ug/l	1.97e-05 U	1.68e-05	1.5e-05	1.78e-05 J	2.28e-05 J	1.71e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	ug/l	0.000162	0.000131	0.000134	0.000161	0.000238	0.000144
E1668A	N	PCB-130	52663-66-8	ug/l	2.62e-05 U	7.21e-06 J	9.22e-06 J	9.12e-06 J	1.25e-05 J	8.15e-06 J
E1668A	N	PCB-131	61798-70-7	ug/l	2.69e-05 U	1.49e-06 U	1.47e-06 U	1.9e-06 J	4.75e-06 J	1.28e-06 U
E1668A	N	PCB-132	38380-05-1	ug/l	5.2e-05 J	4.18e-05	4.42e-05	5.18e-05	7.3e-05	4.66e-05
E1668A	N	PCB-133	35694-04-3	ug/l	2.47e-05 U	2.32e-06 J	2.88e-06 J	2.74e-06 J	3.77e-06 J	2.85e-06 J
E1668A	N	PCB-134/143	PCB-134/143	ug/l	2.63e-05 U	5.68e-06 J	9.05e-06	9.44e-06	1.69e-05	1.01e-05
E1668A	N	PCB-135/151	PCB-135/151	ug/l	3.16e-05 U	4.27e-05	5.15e-05	6.04e-05	9.73e-05	5.13e-05
E1668A	N	PCB-136	38411-22-2	ug/l	2.32e-05 U	1.75e-05 J	2.02e-05 J	2.34e-05 J	3.65e-05 J	1.98e-05 J
E1668A	N	PCB-137	35694-06-5	ug/l	2.26e-05 U	4.43e-06 J	6.23e-06 J	4.66e-06 J	8.73e-06 J	5.8e-06 J
E1668A	N	PCB-139/140	PCB-139/140	ug/l	2.25e-05 U	2.16e-06 J	2.57e-06 J	3.13e-06	6.03e-06	2.37e-06 J
E1668A	N	PCB-141	52712-04-6	ug/l	2.34e-05 U	2.13e-05 J	2.28e-05 J	2.6e-05 J	3.81e-05 J	2.45e-05 J
E1668A	N	PCB-142	41411-61-4	ug/l	2.58e-05 U	1.43e-06 U	1.41e-06 U	9.44e-07 U	9.26e-07 U	1.23e-06 U
E1668A	N	PCB-144	68194-14-9	ug/l	2.93e-05 U	4e-06 J	6.5e-06 J	6.47e-06 J	9.51e-06 J	5.41e-06 J
E1668A	N	PCB-145	74472-40-5	ug/l	2.22e-05 U	7.74e-07 U	8.47e-07 U	7.4e-07 U	8.26e-07 U	7.65e-07 U
E1668A	N	PCB-146	51908-16-8	ug/l	2.14e-05 U	1.83e-05 J	2.05e-05 J	2.45e-05 J	3.97e-05 J	2.35e-05 J
E1668A	N	PCB-147/149	PCB-147/149	ug/l	0.000136 J	0.000117	0.000116	0.000141	0.000242	0.000128
E1668A	N	PCB-148	74472-41-6	ug/l	3.1e-05 U	1.08e-06 U	1.18e-06 U	1.04e-06 U	1.16e-06 U	1.07e-06 U
E1668A	N	PCB-150	68194-08-1	ug/l	2.16e-05 U	7.55e-07 U	8.25e-07 U	7.21e-07 U	3.19e-06 J	7.46e-07 U
E1668A	N	PCB-152	68194-09-2	ug/l	2.2e-05 U	7.7e-07 U	8.42e-07 U	7.36e-07 U	8.21e-07 U	7.61e-07 U
E1668A	N	PCB-153/168	PCB-153/168	ug/l	0.00013 J	0.000115	0.000117	0.00014	0.00023	0.000126
E1668A	N	PCB-154	60145-22-4	ug/l	2.57e-05 U	3.15e-06 J	2.72e-06 J	4.48e-06 J	1.66e-05 J	5.36e-06 J
E1668A	N	PCB-155	33979-03-2	ug/l	2.1e-05 U	7.34e-07 U	8.03e-07 U	7.01e-07 U	1.64e-06 J	7.25e-07 U
E1668A	N	PCB-156/157	PCB-156/157	ug/l	2.17e-05 U	8.63e-06 J	1.16e-05	1.24e-05	2.07e-05	1.12e-05
E1668A	N	PCB-158	74472-42-7	ug/l	1.6e-05 U	1.11e-05 J	1e-05 J	1.32e-05 J	2.03e-05 J	1.3e-05 J
E1668A	N	PCB-159	39635-35-3	ug/l	1.72e-05 U	9.51e-07 U	9.41e-07 U	6.28e-07 U	1.57e-06 J	8.21e-07 U
E1668A	N	PCB-161	74472-43-8	ug/l	1.71e-05 U	9.46e-07 U	9.36e-07 U	6.25e-07 U	6.13e-07 U	8.17e-07 U
E1668A	N	PCB-162	39635-34-2	ug/l	1.7e-05 U	9.39e-07 U	9.29e-07 U	6.2e-07 U	1.83e-06 J	1.47e-06 J
E1668A	N	PCB-164	74472-45-0	ug/l	1.79e-05 U	8.45e-06 J	8.56e-06 J	1.03e-05 J	1.51e-05 J	9.45e-06 J
E1668A	N	PCB-165	74472-46-1	ug/l	1.88e-05 U	1.04e-06 U	1.03e-06 U	6.87e-07 U	6.74e-07 U	8.99e-07 U
E1668A	N	PCB-167	52663-72-6	ug/l	1.34e-05 U	3.78e-06 J	2.9e-06 J	4.64e-06 J	7.41e-06 J	3.47e-06 J
E1668A	N	PCB-169	32774-16-6	ug/l	1.24e-05 U	8.68e-07 U	7.68e-07 U	5.2e-07 U	5.04e-07 U	7.05e-07 U
E1668A	N	PCB-170	35065-30-6	ug/l	3.06e-05 U	2.24e-05 J	2.4e-05 J	2.92e-05 J	4.8e-05	2.85e-05 J
E1668A	N	PCB-171/173	PCB-171/173	ug/l	3.02e-05 U	6.15e-06 J	8e-06	9.46e-06	1.54e-05	9.42e-06
E1668A	N	PCB-172	52663-74-8	ug/l	2.99e-05 U	4.44e-06 J	4.56e-06 J	4.51e-06 J	9.01e-06 J	4.59e-06 J
E1668A	N	PCB-174	38411-25-5	ug/l	2.8e-05 U	2.39e-05 J	2.7e-05 J	2.98e-05 J	4.87e-05	2.92e-05 J
E1668A	N	PCB-175	40186-70-7	ug/l	2.69e-05 U	8.32e-07 U	9.84e-07 U	7.44e-07 U	7.61e-07 U	8.42e-07 U
E1668A	N	PCB-176	52663-65-7	ug/l	2.05e-05 U	3.26e-06 J	3.14e-06 J	4.56e-06 J	6.91e-06 J	3.87e-06 J
E1668A	N	PCB-177	52663-70-4	ug/l	2.87e-05 U	1.31e-05 J	1.43e-05 J	1.89e-05 J	2.9e-05 J	1.73e-05 J
E1668A	N	PCB-178	52663-67-9	ug/l	2.91e-05 U	7.41e-06 J	6.8e-06 J	9.21e-06 J	1.59e-05 J	6.27e-06 J
E1668A	N	PCB-179	52663-64-6	ug/l	2.16e-05 U	1.55e-05 J	1.44e-05 J	1.82e-05 J	3.17e-05 J	1.46e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3
				Stream Code	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit						
E1668A	N	PCB-180/193	PCB-180/193	ug/l	0.00013 J	5.29e-05	5.99e-05	7.14e-05	0.000117	6.55e-05
E1668A	N	PCB-181	74472-47-2	ug/l	2.69e-05 U	8.31e-07 U	9.83e-07 U	7.43e-07 U	7.61e-07 U	8.42e-07 U
E1668A	N	PCB-182	60145-23-5	ug/l	2.61e-05 U	8.08e-07 U	9.55e-07 U	7.22e-07 U	7.4e-07 U	8.18e-07 U
E1668A	N	PCB-183/185	PCB-183/185	ug/l	2.67e-05 U	1.68e-05	1.81e-05	2.53e-05	4.01e-05	1.9e-05 J
E1668A	N	PCB-184	74472-48-3	ug/l	2.22e-05 U	6.86e-07 U	8.11e-07 U	6.13e-07 U	6.28e-07 U	6.95e-07 U
E1668A	N	PCB-186	74472-49-4	ug/l	2.16e-05 U	6.66e-07 U	7.88e-07 U	5.95e-07 U	6.1e-07 U	6.75e-07 U
E1668A	N	PCB-187	52663-68-0	ug/l	2.5e-05 U	4.18e-05	4.06e-05 J	5.1e-05 J	8.77e-05 J	4.73e-05
E1668A	N	PCB-188	74487-85-7	ug/l	1.95e-05 U	5.76e-07 U	7.04e-07 U	5.13e-07 U	5.53e-07 U	6.11e-07 U
E1668A	N	PCB-189	39635-31-9	ug/l	1.56e-05 U	6.66e-07 U	7.22e-07 U	9.25e-07 J	1.86e-06 J	1.04e-06 J
E1668A	N	PCB-190	41411-64-7	ug/l	2.08e-05 U	3.14e-06 J	5.06e-06 J	5.38e-06 J	9.34e-06 J	5.24e-06 J
E1668A	N	PCB-191	74472-50-7	ug/l	2.05e-05 U	6.33e-07 U	7.49e-07 U	5.66e-07 U	1.92e-06 J	1.4e-06 J
E1668A	N	PCB-192	74472-51-8	ug/l	2.29e-05 U	7.07e-07 U	8.36e-07 U	6.32e-07 U	6.47e-07 U	7.16e-07 U
E1668A	N	PCB-194	35694-08-7	ug/l	1.36e-05 U	1.41e-05 J	1.52e-05 J	1.65e-05 J	2.69e-05 J	1.96e-05 J
E1668A	N	PCB-195	52663-78-2	ug/l	1.48e-05 U	5.57e-06 J	4.62e-06 J	6.68e-06 J	9.81e-06 J	6.67e-06 J
E1668A	N	PCB-196	42740-50-1	ug/l	1.9e-05 U	5.54e-06 J	6.65e-06 J	7.23e-06 J	1.43e-05 J	8.81e-06 J
E1668A	N	PCB-197	33091-17-7	ug/l	1.42e-05 U	5.75e-07 U	7.06e-07 U	5.62e-07 U	9.34e-07 J	5.95e-07 U
E1668A	N	PCB-198/199	PCB-198/199	ug/l	1.96e-05 U	1.6e-05	1.73e-05	1.32e-05 J	2.72e-05 J	1.95e-05
E1668A	N	PCB-200	52663-73-7	ug/l	1.39e-05 U	1.39e-06 J	1.27e-06 J	2.02e-06 J	3.4e-06 J	1.88e-06 J
E1668A	N	PCB-201	40186-71-8	ug/l	1.34e-05 U	1.96e-06 J	2.25e-06 J	2.97e-06 J	3.84e-06 J	2.97e-06 J
E1668A	N	PCB-202	2136-99-4	ug/l	1.51e-05 U	4.63e-06 J	5.54e-06 J	7.22e-06 J	1.07e-05 J	6.06e-06 J
E1668A	N	PCB-203	52663-76-0	ug/l	1.75e-05 U	9.99e-06 J	1e-05 J	1.05e-05 J	2.24e-05 J	1.21e-05 J
E1668A	N	PCB-204	74472-52-9	ug/l	1.47e-05 U	5.97e-07 U	7.33e-07 U	5.84e-07 U	5.27e-07 U	6.19e-07 U
E1668A	N	PCB-205	74472-53-0	ug/l	1.15e-05 U	6.7e-07 U	7.38e-07 U	1.22e-06 J	1.2e-06 J	8.62e-07 U
E1668A	N	PCB-206	40186-72-9	ug/l	3.56e-05 U	1.59e-05 J	1.55e-05 J	2e-05 J	2.8e-05 J	1.92e-05 J
E1668A	N	PCB-207	52663-79-3	ug/l	2.7e-05 U	1.48e-06 J	8.46e-07 U	2.31e-06 J	2.86e-06 J	7.02e-07 U
E1668A	N	PCB-208	52663-77-1	ug/l	2.95e-05 U	6.03e-06 J	5.61e-06 J	6.59e-06 J	1.11e-05 J	6.34e-06 J
E1668A	N	PCB-209	2051-24-3	ug/l	1.93e-05 U	1.12e-05 J	1.09e-05 J	2.08e-05 J	4.6e-05	1.56e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	ug/l	0.00934 J	0.0059 J	0.00646 J	0.00703 J	0.00979 J	0.00673 J
E1668A	N	Total PCB (a)	PCB-Total	ug/l	0.00966 J	0.00609 J	0.00667 J	0.00726 J	0.0101 J	0.00696 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	ug/l	Not calculated	8.49e-08J	9.57e-08J	9.15e-08J	1.1e-07J	8.11e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	7.14e-06 U	1.18e-05 J	5.23e-06 U	6.9e-06 U	7.26e-06 U	7.17e-06 U	9.41e-06 U
E1668A	N	PCB-2	2051-61-8	3.52e-06 U	6.56e-06 U	3.09e-06 U	7.24e-07 U	6.72e-07 U	4.75e-06 U	3.48e-06 U
E1668A	N	PCB-3	2051-62-9	2.57e-06 U	6.82e-06 U	4.01e-06 U	9.04e-07 U	8.36e-07 U	5.29e-06 U	3.48e-06 U
E1668A	N	PCB-4	13029-08-8	0.000168 J	0.000208	0.000151 J	0.000156 J	0.000158 J	0.000162	0.000183 J
E1668A	N	PCB-5	16605-91-7	1.78e-06 U	7.97e-07 U	1.36e-06 U	2.45e-06 U	2.68e-06 U	1.29e-06 U	1.19e-06 J
E1668A	N	PCB-6	25569-80-6	9.54e-06 J	1.43e-05 J	5.75e-06 U	7.4e-06 U	6.94e-06 U	7.43e-06 J	1.53e-05 J
E1668A	N	PCB-7	33284-50-3	1.72e-06 U	2.07e-06 J	1.32e-06 U	2.37e-06 U	2.59e-06 U	1.44e-06 J	5.39e-06 U
E1668A	N	PCB-8	34883-43-7	2.41e-05 J	3.89e-05 J	1.69e-05 J	1.62e-05 J	1.85e-05 J	1.96e-05 J	3.59e-05 J
E1668A	N	PCB-9	34883-39-1	1.87e-06 J	3.37e-06 J	7.79e-07 J	2.38e-06 U	2.61e-06 U	1.9e-06 J	4.44e-06 J
E1668A	N	PCB-10	33146-45-1	2.17e-05 J	1.95e-05 J	2e-05 J	2.47e-05 J	2.13e-05 J	1.92e-05 J	2.17e-05 J
E1668A	N	PCB-11	2050-67-1	6.45e-05 J	8.27e-05 J	4.59e-05 U	4.44e-05 U	4.8e-05 U	6.91e-05 J	7.7e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.21e-05 J	1.69e-05 J	8.04e-06 J	7.88e-06 J	6.53e-06 J	1.08e-05 J	1.7e-05 J
E1668A	N	PCB-14	34883-41-5	1.46e-06 U	6.52e-07 U	1.12e-06 U	2.01e-06 U	2.2e-06 U	1.06e-06 U	1.1e-06 U
E1668A	N	PCB-15	2050-68-2	7.59e-05 J	0.000116	7.39e-05 J	7.52e-05 J	6.73e-05 J	8.1e-05	0.000107 J
E1668A	N	PCB-16	38444-78-9	0.000105	0.000158	1e-04	9.75e-05	8.59e-05	0.000106	0.00014
E1668A	N	PCB-17	37680-66-3	0.000126	0.000189	0.000123	0.000119	0.000108	0.000119	0.000186
E1668A	N	PCB-18/30	PCB-18/30	0.000292	0.000459	0.000302	0.000271	0.000263	0.000288	0.000426
E1668A	N	PCB-19	38444-73-4	8.24e-05	9.91e-05	8.05e-05	8.45e-05	7.1e-05	7.47e-05	9.86e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000357	5e-04	0.00035	0.000383	0.000349	0.000301	0.000574
E1668A	N	PCB-21/33	PCB-21/33	2.55e-05 J	4.9e-05	2.56e-05	3.31e-05	2.65e-05	1.87e-05	7.1e-05
E1668A	N	PCB-22	38444-85-8	6.97e-05 J	0.000117	6.69e-05 J	7.83e-05 J	7.84e-05 J	6.29e-05	0.000128
E1668A	N	PCB-23	55720-44-0	8.75e-07 U	2.45e-07 U	8.46e-07 U	2.1e-06 U	1.83e-06 U	3.71e-07 U	1.12e-06 U
E1668A	N	PCB-24	55702-45-9	3.05e-06 J	8.38e-06 J	5.18e-06 J	5.12e-06 J	3.5e-06 J	5.45e-06 J	8.11e-06 J
E1668A	N	PCB-25	55712-37-3	2.77e-05 J	3.81e-05 J	2.41e-05 J	2.88e-05 J	2.68e-05 J	2.22e-05 J	5.12e-05
E1668A	N	PCB-26/29	PCB-26/29	6.08e-05	8.88e-05	5.4e-05	6.45e-05	6.28e-05	5.09e-05	0.000104
E1668A	N	PCB-27	38444-76-7	4.35e-05	6.14e-05	3.95e-05 J	3.43e-05 J	3.81e-05 J	4.45e-05	5.47e-05
E1668A	N	PCB-31	16606-02-3	0.000264 J	0.000394 J	0.00025 J	0.000276 J	0.000262 J	0.000224 J	0.00044 J
E1668A	N	PCB-32	38444-77-8	0.00012	0.000184	0.00013	0.000118	0.000107	0.000114	0.000167
E1668A	N	PCB-34	37680-68-5	8.62e-07 U	1.42e-06 J	8.33e-07 U	2.07e-06 U	1.8e-06 U	3.65e-07 U	2.72e-06 J
E1668A	N	PCB-35	37680-69-6	4.73e-06 J	7.27e-06 J	4.76e-06 J	4.21e-06 J	3.86e-06 J	3.73e-06 J	7.08e-06 J
E1668A	N	PCB-36	38444-87-0	8.56e-07 U	5.05e-07 J	8.27e-07 U	2.06e-06 U	1.79e-06 U	3.63e-07 U	1.09e-06 U
E1668A	N	PCB-37	38444-90-5	5.41e-05	8.57e-05	5.97e-05	5.55e-05	5.19e-05	5.19e-05	9.14e-05
E1668A	N	PCB-38	53555-66-1	9.03e-07 U	2.53e-07 U	8.73e-07 U	2.17e-06 U	1.89e-06 U	3.83e-07 U	1.15e-06 U
E1668A	N	PCB-39	38444-88-1	8.03e-07 U	2.61e-06 J	1.52e-06 J	1.93e-06 U	1.68e-06 U	1.56e-06 J	2.71e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000161	0.000262	0.000176	0.000192	0.000172	0.000155	0.000258
E1668A	N	PCB-42	36559-22-5	7.91e-05	0.00013	9.39e-05	0.000106	9.06e-05	8e-05	0.00013
E1668A	N	PCB-43/73	PCB-43/73	1.25e-05	1.55e-05	1.4e-05 J	1.71e-05	1.62e-05	8.73e-06	1.94e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000346	0.000581	0.000384	0.000409	0.000361	0.000347	6e-04
E1668A	N	PCB-45/51	PCB-45/51	0.000102	0.000175	0.000119	0.000122	0.000108 J	0.000101	0.000203
E1668A	N	PCB-46	41464-47-5	2.69e-05 J	3.81e-05 J	2.93e-05 J	3.26e-05 J	2.83e-05 J	2.51e-05 J	4.27e-05
E1668A	N	PCB-48	70362-47-9	4.64e-05 J	7.22e-05	4.97e-05 J	5.75e-05	4.95e-05	3.95e-05	7.67e-05
E1668A	N	PCB-49/69	PCB-49/69	0.000223	0.000344	0.000243	0.00027	0.000231	0.000207	0.000357
E1668A	N	PCB-50/53	PCB-50/53	8.03e-05	0.000118	9.07e-05	9.85e-05	8.52e-05	7.45e-05	0.000135
E1668A	N	PCB-52	35693-99-3	0.000387 J	0.00059 J	0.000431 J	0.000461	0.000414	0.000367 J	0.000605 J
E1668A	N	PCB-54	15968-05-5	6.98e-06 J	1.5e-05 J	9.91e-06 J	6.01e-06 J	5.35e-06 J	7.27e-06 J	1.91e-05 J

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	4.96e-06 J	5.15e-06 J	5.51e-06 J	7.35e-06 J	7.26e-06 J	2.62e-06 J	1.22e-05 J
E1668A	N	PCB-56	41464-43-1	8.18e-05 J	0.00014	8.72e-05 J	9.79e-05	8.54e-05	7.65e-05	0.000136
E1668A	N	PCB-57	70424-67-8	9.83e-07 U	1.86e-06 J	1.41e-06 J	2.1e-06 U	1.97e-06 U	1.32e-06 J	1.1e-06 U
E1668A	N	PCB-58	41464-49-7	9.79e-07 U	1.24e-06 J	1.35e-06 J	2.09e-06 U	1.96e-06 U	5e-07 J	1.52e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	3.06e-05	4.47e-05	3.28e-05	3.74e-05	3.16e-05	2.72e-05	4.53e-05
E1668A	N	PCB-60	33025-41-1	2.78e-05 J	5.11e-05	3.03e-05 J	3.82e-05	3.44e-05 J	2.74e-05 J	5.4e-05
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.00027	0.000489	0.000282	0.000314	0.000283	0.00025	0.000489
E1668A	N	PCB-63	74472-34-7	7.53e-06 J	1.34e-05 J	7.77e-06 J	9.11e-06 J	8.9e-06 J	7.01e-06 J	1.14e-05 J
E1668A	N	PCB-64	52663-58-8	0.000117 J	0.000181	0.000127 J	0.000143	0.000128	0.000109	0.000191
E1668A	N	PCB-66	32598-10-0	0.00016 J	0.000296	0.000169 J	0.000191	0.000174	0.000156	0.000296 J
E1668A	N	PCB-67	73575-53-8	4.53e-06 J	9.97e-06 J	4.45e-06 J	4.52e-06 J	6.64e-06 J	5.08e-06 J	9.23e-06 J
E1668A	N	PCB-68	73575-52-7	2.81e-06 J	6.24e-06 U	2.63e-06 U	5.21e-06 U	1.79e-06 U	5.06e-06 U	5.13e-06 U
E1668A	N	PCB-72	41464-42-0	3.67e-06 J	4.49e-06 J	3.06e-06 J	2.05e-06 U	3.05e-06 J	3.32e-06 J	5.81e-06 J
E1668A	N	PCB-77	32598-13-3	1.21e-05 J	2.47e-05 J	1.55e-05 J	1.4e-05 J	1.18e-05 J	1.55e-05 J	2.49e-05 J
E1668A	N	PCB-78	70362-49-1	1.02e-06 U	3.68e-07 U	8.93e-07 U	2.17e-06 U	2.04e-06 U	5.22e-07 U	1.14e-06 U
E1668A	N	PCB-79	41464-48-6	8.92e-07 U	2.67e-06 J	1.03e-06 J	1.91e-06 U	1.79e-06 U	1.64e-06 J	2.4e-06 J
E1668A	N	PCB-80	33284-52-5	8.71e-07 U	3.15e-07 U	7.65e-07 U	1.86e-06 U	1.74e-06 U	4.47e-07 U	9.76e-07 U
E1668A	N	PCB-81	70362-50-4	9.15e-07 U	9.99e-07 J	8.06e-07 U	1.93e-06 U	1.83e-06 U	4.89e-07 U	1.04e-06 U
E1668A	N	PCB-82	52663-62-4	1.89e-05 J	4.04e-05	2.65e-05 J	2.43e-05 J	2.23e-05 J	1.97e-05 J	4.16e-05
E1668A	N	PCB-83/99	PCB-83/99	0.00011	0.000197	0.000122	0.000114	0.000106	0.000104	0.000194
E1668A	N	PCB-84	52663-60-2	6.23e-05	9.27e-05	6.23e-05	5.57e-05	4.87e-05 J	5.46e-05	8.99e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	3e-05	5.52e-05	2.93e-05	3.03e-05	2.67e-05	2.83e-05	4.81e-05
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000108 J	0.000196	0.000117 J	0.000109 J	0.000103 J	0.000106 J	0.00018
E1668A	N	PCB-88/91	PCB-88/91	3.81e-05	5.96e-05	3.49e-05	3.5e-05	3.24e-05	3.07e-05 J	6.01e-05
E1668A	N	PCB-89	73575-57-2	2.92e-06 J	4.78e-06 J	3.41e-06 J	2.34e-06 U	2.33e-06 U	3.43e-06 J	6.62e-06 J
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000173	0.000314	0.000183	0.000179	0.000158	0.000166	0.000294
E1668A	N	PCB-92	52663-61-3	3.26e-05 J	5.66e-05	3.16e-05 J	2.82e-05 J	2.85e-05 J	3.04e-05 J	5.06e-05
E1668A	N	PCB-93/100	PCB-93/100	8.35e-06	1.76e-05	8.74e-06 J	7.59e-06 J	6.92e-06 J	6.83e-06 J	1.97e-05
E1668A	N	PCB-94	73575-55-0	1.27e-06 U	6.06e-06 J	1.19e-06 U	2.34e-06 U	2.33e-06 U	2.47e-06 J	5.76e-06 J
E1668A	N	PCB-95	38379-99-6	0.000176 J	0.000283	0.000174 J	0.000178	0.000164	0.000166	0.000265 J
E1668A	N	PCB-96	73575-54-9	2.06e-06 J	5.11e-06 J	2.69e-06 J	1.75e-06 U	1.75e-06 U	2.92e-06 J	5.35e-06 J
E1668A	N	PCB-98/102	PCB-98/102	1.14e-05	1.83e-05 J	1.21e-05	9.28e-06 J	9.92e-06	9.76e-06 J	2.26e-05
E1668A	N	PCB-103	60145-21-3	3.91e-06 J	8.17e-06 J	4.25e-06 J	5.71e-06 J	2.05e-06 U	4.15e-06 J	9.41e-06 J
E1668A	N	PCB-104	56558-16-8	8.44e-07 U	1.86e-06 J	7.95e-07 U	1.56e-06 U	1.56e-06 U	6.35e-07 U	1.94e-06 J
E1668A	N	PCB-105	32598-14-4	4.83e-05	8.52e-05	5.05e-05	4.89e-05 J	4.46e-05	4.15e-05	9.46e-05
E1668A	N	PCB-106	70424-69-0	7.92e-07 U	2.89e-07 U	7.71e-07 U	1.62e-06 U	1.57e-06 U	4.47e-07 U	9.93e-07 U
E1668A	N	PCB-107	70424-68-9	9.06e-06 J	1.48e-05 J	9.7e-06 J	9.05e-06 J	8.6e-06 J	7.82e-06 J	1.63e-05 J
E1668A	N	PCB-108/124	PCB-108/124	4.77e-06	7.44e-06	4.92e-06	1.65e-06 U	1.6e-06 U	4.25e-06	7.25e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000196	0.000355	0.000201	0.00019	0.000177	0.000181	0.000319
E1668A	N	PCB-111	39635-32-0	7.93e-07 U	3.76e-07 U	7.47e-07 U	1.46e-06 U	1.46e-06 U	5.97e-07 U	9.16e-07 U
E1668A	N	PCB-112	74472-36-9	8.61e-07 U	4.09e-07 U	8.11e-07 U	1.59e-06 U	1.59e-06 U	6.48e-07 U	9.95e-07 U
E1668A	N	PCB-114	74472-37-0	3.32e-06 J	4.42e-06 J	3.3e-06 J	1.38e-06 U	1.37e-06 U	1.88e-06 J	4.73e-06 J
E1668A	N	PCB-118	31508-00-6	0.000118 J	0.000203 J	0.000123 J	0.000123	0.000107	0.000101 J	0.000225 J
E1668A	N	PCB-120	68194-12-7	8.16e-07 U	9.66e-07 J	7.68e-07 U	1.51e-06 U	1.5e-06 U	6.14e-07 U	9.43e-07 U
E1668A	N	PCB-121	56558-18-0	8.22e-07 U	3.9e-07 U	7.74e-07 U	1.52e-06 U	1.52e-06 U	6.19e-07 U	9.5e-07 U

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	3.04e-06 J	3.87e-06 J	8.4e-07 U	1.76e-06 U	1.71e-06 U	1.53e-06 J	5.11e-06 J
E1668A	N	PCB-123	65510-44-3	3.53e-06 J	4.67e-06 J	2.47e-06 J	1.59e-06 U	1.52e-06 U	1.59e-06 J	3.91e-06 J
E1668A	N	PCB-126	57465-28-8	9.37e-07 U	8.29e-07 J	8.65e-07 U	1.84e-06 U	1.72e-06 U	5.52e-07 J	1.14e-06 U
E1668A	N	PCB-127	39635-33-1	7.83e-07 U	2.86e-07 U	7.62e-07 U	1.6e-06 U	1.55e-06 U	4.42e-07 U	9.82e-07 U
E1668A	N	PCB-128/166	PCB-128/166	1.68e-05	1.99e-05 J	1.67e-05	1.97e-05	1.55e-05 J	1.44e-05 J	3.39e-05
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000127	0.000251	0.000134	0.000151	0.000132	0.000115	0.000262
E1668A	N	PCB-130	52663-66-8	8.46e-06 J	1.41e-05 J	5.09e-06 J	9.7e-06 J	7.33e-06 J	6.33e-06 J	1.38e-05 J
E1668A	N	PCB-131	61798-70-7	1.49e-06 U	2.78e-06 J	1.34e-06 U	2.78e-06 U	2.85e-06 U	9.62e-07 U	1.7e-06 U
E1668A	N	PCB-132	38380-05-1	4.3e-05	7.88e-05	3.87e-05 J	4.57e-05	3.42e-05 J	3.81e-05 J	8.29e-05
E1668A	N	PCB-133	35694-04-3	1.94e-06 J	3.67e-06 J	2e-06 J	2.55e-06 U	2.61e-06 U	1.81e-06 J	4.47e-06 J
E1668A	N	PCB-134/143	PCB-134/143	8.45e-06	1.49e-05	7.57e-06	8.99e-06	7.53e-06	7.05e-06	1.52e-05 J
E1668A	N	PCB-135/151	PCB-135/151	5.02e-05	9.52e-05	4.71e-05	3.81e-05 J	4.23e-05	4.37e-05	9.41e-05
E1668A	N	PCB-136	38411-22-2	1.54e-05 J	3.69e-05 J	1.9e-05 J	2.11e-05 J	1.59e-05 J	1.54e-05 J	3.33e-05 J
E1668A	N	PCB-137	35694-06-5	3.63e-06 J	9.2e-06 J	4.24e-06 J	4.81e-06 J	4.05e-06 J	3.92e-06 J	8.31e-06 J
E1668A	N	PCB-139/140	PCB-139/140	1.25e-06 U	4.51e-06	1.12e-06 U	2.33e-06 U	2.38e-06 U	1.82e-06 J	4.66e-06 J
E1668A	N	PCB-141	52712-04-6	2.17e-05 J	4.21e-05	2.12e-05 J	2.51e-05 J	2.09e-05 J	1.94e-05 J	4.36e-05
E1668A	N	PCB-142	41411-61-4	1.43e-06 U	6.26e-07 U	1.29e-06 U	2.67e-06 U	2.74e-06 U	9.25e-07 U	1.63e-06 U
E1668A	N	PCB-144	68194-14-9	6.21e-06 J	9.86e-06 J	4.19e-06 J	5.69e-06 J	4.38e-06 J	4.9e-06 J	9.63e-06 J
E1668A	N	PCB-145	74472-40-5	8.86e-07 U	4.88e-07 U	7.64e-07 U	1.41e-06 U	1.58e-06 U	7.17e-07 U	9.4e-07 U
E1668A	N	PCB-146	51908-16-8	1.89e-05 J	3.93e-05 J	2.13e-05 J	2.13e-05 J	1.49e-05 J	1.77e-05 J	4.17e-05
E1668A	N	PCB-147/149	PCB-147/149	0.000118	0.000218	0.000124	0.00013	0.000109	0.000103	0.00023
E1668A	N	PCB-148	74472-41-6	1.24e-06 U	6.83e-07 U	1.07e-06 U	1.97e-06 U	2.21e-06 U	1e-06 U	1.31e-06 U
E1668A	N	PCB-150	68194-08-1	8.64e-07 U	8.53e-07 J	7.44e-07 U	1.38e-06 U	1.54e-06 U	6.99e-07 U	9.16e-07 U
E1668A	N	PCB-152	68194-09-2	8.81e-07 U	4.86e-07 U	7.59e-07 U	1.4e-06 U	1.57e-06 U	7.13e-07 U	9.34e-07 U
E1668A	N	PCB-153/168	PCB-153/168	0.000113	0.000225	0.000115	0.000125	0.000112	0.000104	0.000233
E1668A	N	PCB-154	60145-22-4	2.57e-06 J	6.74e-06 J	3.4e-06 J	1.64e-06 U	1.83e-06 U	2.05e-06 J	6.71e-06 J
E1668A	N	PCB-155	33979-03-2	8.4e-07 U	1.84e-06 J	7.24e-07 U	1.34e-06 U	1.49e-06 U	6.8e-07 U	8.91e-07 U
E1668A	N	PCB-156/157	PCB-156/157	9.76e-06 J	2.23e-05	1.11e-05	1.07e-05	7.64e-06 J	9.46e-06	2.28e-05
E1668A	N	PCB-158	74472-42-7	9.09e-06 J	2.25e-05 J	1.12e-05 J	1.18e-05 J	9.48e-06 J	9.61e-06 J	2.27e-05 J
E1668A	N	PCB-159	39635-35-3	9.51e-07 U	2.15e-06 J	8.57e-07 U	1.78e-06 U	1.82e-06 U	6.15e-07 U	1.88e-06 J
E1668A	N	PCB-161	74472-43-8	9.47e-07 U	4.14e-07 U	8.53e-07 U	1.77e-06 U	1.81e-06 U	6.12e-07 U	1.08e-06 U
E1668A	N	PCB-162	39635-34-2	9.4e-07 U	1.46e-06 J	8.47e-07 U	1.76e-06 U	1.8e-06 U	6.08e-07 U	2.21e-06 J
E1668A	N	PCB-164	74472-45-0	8.32e-06 J	1.66e-05 J	8.63e-06 J	8.34e-06 J	8.12e-06 J	7.59e-06 J	1.78e-05 J
E1668A	N	PCB-165	74472-46-1	1.04e-06 U	4.55e-07 U	9.38e-07 U	1.95e-06 U	1.99e-06 U	6.73e-07 U	1.19e-06 U
E1668A	N	PCB-167	52663-72-6	2.94e-06 J	7.34e-06 J	3.47e-06 J	4.56e-06 J	4.19e-06 J	3.39e-06 J	7.46e-06 J
E1668A	N	PCB-169	32774-16-6	8.15e-07 U	3.34e-07 U	7.01e-07 U	1.59e-06 U	1.64e-06 U	5.02e-07 U	9.5e-07 U
E1668A	N	PCB-170	35065-30-6	2.28e-05 J	5.24e-05	2.43e-05 J	2.24e-05 J	1.92e-05 J	1.98e-05 J	5.75e-05
E1668A	N	PCB-171/173	PCB-171/173	6.4e-06 J	1.62e-05	6.29e-06 J	7.55e-06	6.43e-06 J	6.37e-06	1.86e-05
E1668A	N	PCB-172	52663-74-8	4.74e-06 J	8.89e-06 J	4.06e-06 J	1.71e-06 U	2.63e-06 J	3.37e-06 J	9.54e-06 J
E1668A	N	PCB-174	38411-25-5	2.25e-05 J	5.39e-05	2.27e-05 J	2.66e-05 J	1.86e-05 J	2.31e-05 J	6.19e-05
E1668A	N	PCB-175	40186-70-7	9.64e-07 U	2.29e-06 J	7.74e-07 U	1.54e-06 U	1.6e-06 U	7.13e-07 U	1.84e-06 J
E1668A	N	PCB-176	52663-65-7	2.97e-06 J	7.6e-06 J	3.45e-06 J	3.37e-06 J	1.22e-06 U	3.24e-06 J	6.43e-06 J
E1668A	N	PCB-177	52663-70-4	1.54e-05 J	3.31e-05 J	1.62e-05 J	1.62e-05 J	1.33e-05 J	1.39e-05 J	3.64e-05 J
E1668A	N	PCB-178	52663-67-9	6.62e-06 J	1.34e-05 J	6.41e-06 J	5e-06 J	4.59e-06 J	7.01e-06 J	1.34e-05 J
E1668A	N	PCB-179	52663-64-6	1.21e-05 J	2.9e-05 J	1.4e-05 J	1.29e-05 J	1.4e-05 J	1.36e-05 J	3.11e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N02-TNBN	N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE
				N02-CE03-TNBN	N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE
				3.14	3.3	2.98	2.91	3.15	3.09	2.07
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.99	0.99	0.97	4.57
				N02-CE03-TNBN-AS	N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	5.39e-05	0.000125	5.96e-05	5.51e-05	5.1e-05	5.05e-05	0.000144
E1668A	N	PCB-181	74472-47-2	9.63e-07 U	4.59e-07 U	7.73e-07 U	1.54e-06 U	1.6e-06 U	7.13e-07 U	9.49e-07 U
E1668A	N	PCB-182	60145-23-5	9.36e-07 U	4.46e-07 U	7.52e-07 U	1.49e-06 U	1.55e-06 U	6.93e-07 U	9.23e-07 U
E1668A	N	PCB-183/185	PCB-183/185	1.86e-05	4.24e-05	1.73e-05 J	1.7e-05 J	1.64e-05	1.73e-05	4.58e-05
E1668A	N	PCB-184	74472-48-3	7.95e-07 U	3.79e-07 U	6.38e-07 U	1.27e-06 U	1.32e-06 U	5.88e-07 U	7.84e-07 U
E1668A	N	PCB-186	74472-49-4	7.72e-07 U	3.68e-07 U	6.2e-07 U	1.23e-06 U	1.28e-06 U	5.71e-07 U	7.61e-07 U
E1668A	N	PCB-187	52663-68-0	3.71e-05 J	6.96e-05 J	3.86e-05	4.22e-05	3.15e-05 J	3.68e-05 J	9.42e-05
E1668A	N	PCB-188	74487-85-7	6.87e-07 U	3.25e-07 U	5.46e-07 U	1.03e-06 U	1.09e-06 U	4.91e-07 U	6.83e-07 U
E1668A	N	PCB-189	39635-31-9	6.89e-07 U	1.66e-06 J	5.65e-07 U	1.29e-06 U	1.34e-06 U	1.45e-06 J	2.24e-06 J
E1668A	N	PCB-190	41411-64-7	3.98e-06 J	8.64e-06 J	4.45e-06 J	4.18e-06 J	3.27e-06 J	4.05e-06 J	1.16e-05 J
E1668A	N	PCB-191	74472-50-7	7.33e-07 U	2.25e-06 J	5.89e-07 U	1.17e-06 U	1.22e-06 U	5.43e-07 U	2.88e-06 J
E1668A	N	PCB-192	74472-51-8	8.19e-07 U	3.91e-07 U	6.58e-07 U	1.31e-06 U	1.36e-06 U	6.06e-07 U	8.08e-07 U
E1668A	N	PCB-194	35694-08-7	1.42e-05 J	3.04e-05 J	1.65e-05 J	1.67e-05 J	1.03e-05 J	1.12e-05 J	3.48e-05 J
E1668A	N	PCB-195	52663-78-2	4.16e-06 J	1.2e-05 J	5.53e-06 J	4.87e-06 J	2.05e-06 U	4.7e-06 J	1.47e-05 J
E1668A	N	PCB-196	42740-50-1	5.48e-06 J	1.54e-05 J	5.51e-06 J	4.76e-06 J	5.31e-06 J	5.19e-06 J	1.67e-05 J
E1668A	N	PCB-197	33091-17-7	6.97e-07 U	6.99e-07 J	5.72e-07 U	1.14e-06 U	1.24e-06 U	4.9e-07 U	1.51e-06 J
E1668A	N	PCB-198/199	PCB-198/199	1.55e-05	2.69e-05	1.71e-05	1.89e-05	1.47e-05	1.09e-05 J	3.89e-05
E1668A	N	PCB-200	52663-73-7	1.29e-06 J	3.38e-06 J	1.92e-06 J	1.12e-06 U	1.22e-06 U	1.28e-06 J	4.05e-06 J
E1668A	N	PCB-201	40186-71-8	1.86e-06 J	4.51e-06 J	1.39e-06 J	3.18e-06 J	1.17e-06 U	2.19e-06 J	4.85e-06 J
E1668A	N	PCB-202	2136-99-4	5.58e-06 J	1.11e-05 J	5.58e-06 J	8.15e-06 J	5.64e-06 J	5.33e-06 J	1.33e-05 J
E1668A	N	PCB-203	52663-76-0	7.36e-06 J	2.35e-05 J	1.12e-05 J	1.3e-05 J	8.57e-06 J	9.42e-06 J	2.64e-05 J
E1668A	N	PCB-204	74472-52-9	7.24e-07 U	3.34e-07 U	5.95e-07 U	1.18e-06 U	1.29e-06 U	5.1e-07 U	7.11e-07 U
E1668A	N	PCB-205	74472-53-0	7.81e-07 U	1.79e-06 J	5.63e-07 U	1.47e-06 U	1.59e-06 U	4.77e-07 U	7.3e-07 U
E1668A	N	PCB-206	40186-72-9	1.28e-05 J	2.95e-05 J	1.41e-05 J	2.04e-05 J	1.17e-05 J	1.3e-05 J	3.01e-05 J
E1668A	N	PCB-207	52663-79-3	1.05e-06 J	3.06e-06 J	1.39e-06 J	1.74e-06 U	1.92e-06 U	9.33e-07 U	2.75e-06 J
E1668A	N	PCB-208	52663-77-1	4.11e-06 J	1.02e-05 J	5.2e-06 J	7.9e-06 J	6.9e-06 J	5.2e-06 J	1.11e-05 J
E1668A	N	PCB-209	2051-24-3	1.69e-05 J	2.32e-05 J	1.41e-05 J	1.98e-05 J	1.63e-05 J	1.11e-05 J	3.15e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00611 J	0.0101 J	0.00631 J	0.00664 J	0.00599 J	0.00571 J	0.0103 J
E1668A	N	Total PCB (a)	PCB-Total	0.00631 J	0.0104 J	0.00652 J	0.00685 J	0.00617 J	0.00589 J	0.0107 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	9.28e-08J	9.69e-08J	8.68e-08J	1.76e-07J	1.64e-07J	6.23e-08J	1.29e-07J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	7.53e-06 U	6.3e-06 U	8.86e-06 U	2.58e-05 J	1.88e-05 J	2.66e-05 J	3.2e-05 J
E1668A	N	PCB-2	2051-61-8	2.66e-06 U	8.62e-07 U	5.45e-06 U	1.58e-06 J	3.54e-07 U	2.71e-06 J	2.26e-06 J
E1668A	N	PCB-3	2051-62-9	3.86e-06 U	1.09e-06 U	4.94e-06 U	3.76e-06 U	4.08e-06 U	5.59e-06 J	5.2e-06 J
E1668A	N	PCB-4	13029-08-8	0.000171 J	0.000162 J	0.00018	0.00016 J	0.000143 J	0.000172	0.000181
E1668A	N	PCB-5	16605-91-7	1.74e-06 J	3.25e-06 U	1.1e-06 U	1.14e-06 J	2.59e-06 U	1.2e-06 J	2.28e-06 U
E1668A	N	PCB-6	25569-80-6	1.16e-05 J	1.15e-05 J	1.3e-05 J	1.53e-05 J	1.4e-05 J	1.88e-05 J	2.06e-05 J
E1668A	N	PCB-7	33284-50-3	2.65e-06 U	3.14e-06 U	1.6e-06 J	2.22e-06 J	2.51e-06 U	3.61e-06 J	3.82e-06 J
E1668A	N	PCB-8	34883-43-7	3.62e-05 J	3e-05 J	3.11e-05 J	5.88e-05 J	5.92e-05 J	7.17e-05 J	6.7e-05 J
E1668A	N	PCB-9	34883-39-1	2.64e-06 U	3.15e-06 U	2.08e-06 J	4.69e-06 U	3.84e-06 J	5.52e-06 J	5.45e-06 J
E1668A	N	PCB-10	33146-45-1	1.94e-05 J	1.88e-05 J	1.94e-05 J	2.82e-05 J	2.29e-05 J	2.12e-05 J	2.61e-05 J
E1668A	N	PCB-11	2050-67-1	6.11e-05 U	6.32e-05 U	6.09e-05 J	4.63e-05 U	4.95e-05 J	5.66e-05 U	5.02e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.29e-05 J	1.28e-05 J	1.53e-05 J	1.24e-05 J	1.18e-05 J	1.78e-05 J	1.59e-05 J
E1668A	N	PCB-14	34883-41-5	2.24e-06 U	2.65e-06 U	9e-07 U	1.45e-06 U	2.12e-06 U	1.28e-06 U	1.86e-06 U
E1668A	N	PCB-15	2050-68-2	0.000106	0.000101	0.000115	7.62e-05 J	7.51e-05 J	0.00011	0.000107
E1668A	N	PCB-16	38444-78-9	0.000128	0.00012	0.000121	5.88e-05	5.53e-05	9.39e-05	8.12e-05
E1668A	N	PCB-17	37680-66-3	0.000159	0.00015	0.000153	0.000116	0.000107	0.000161	0.000149
E1668A	N	PCB-18/30	PCB-18/30	0.000353	0.000337	0.000359	0.000195	0.000183	0.000287	0.000254
E1668A	N	PCB-19	38444-73-4	9.99e-05	8.69e-05	9.12e-05	6.47e-05	5.76e-05	7.62e-05	6.74e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000542	0.000526	0.000399	0.000265	0.000262	0.000438	0.000389
E1668A	N	PCB-21/33	PCB-21/33	5.34e-05	5.94e-05	2.68e-05	4.47e-05	5.01e-05	6.3e-05	5.71e-05
E1668A	N	PCB-22	38444-85-8	0.000118 J	0.000113 J	7.93e-05	5.4e-05 J	5.55e-05	8.37e-05 J	7.51e-05 J
E1668A	N	PCB-23	55720-44-0	2.13e-06 U	2.54e-06 U	3.87e-07 U	6.46e-07 U	9.89e-07 U	5.44e-07 U	7.31e-07 U
E1668A	N	PCB-24	55702-45-9	7.5e-06 J	5.81e-06 J	7.09e-06 J	2e-06 J	2.58e-06 J	3.8e-06 J	2.93e-06 J
E1668A	N	PCB-25	55712-37-3	4.13e-05	4.21e-05	3.05e-05 J	3.63e-05 J	3.89e-05	6.11e-05	5.47e-05
E1668A	N	PCB-26/29	PCB-26/29	9.52e-05	9.38e-05	6.9e-05	6.41e-05	6.46e-05	9.17e-05	8.53e-05
E1668A	N	PCB-27	38444-76-7	4.89e-05	4.3e-05	5.35e-05	3.73e-05 J	3.62e-05 J	5.06e-05	5.06e-05
E1668A	N	PCB-31	16606-02-3	0.000401 J	0.000391 J	0.000302 J	0.000212 J	0.000219 J	0.000329 J	0.000303 J
E1668A	N	PCB-32	38444-77-8	0.000147	0.000146	0.00015	9.1e-05	8.92e-05	0.000138	0.000122
E1668A	N	PCB-34	37680-68-5	2.1e-06 U	2.5e-06 U	1.01e-06 J	2.1e-06 J	1.85e-06 J	2.64e-06 J	1.79e-06 J
E1668A	N	PCB-35	37680-69-6	7.25e-06 J	6.93e-06 J	5.79e-06 J	2.79e-06 J	2.73e-06 J	5.78e-06 J	5.45e-06 J
E1668A	N	PCB-36	38444-87-0	2.09e-06 U	2.48e-06 U	3.79e-07 U	6.31e-07 U	9.67e-07 U	5.31e-07 U	7.14e-07 U
E1668A	N	PCB-37	38444-90-5	8.09e-05	7.94e-05	7.31e-05	4.44e-05	4.35e-05	7.76e-05	6.96e-05
E1668A	N	PCB-38	53555-66-1	2.2e-06 U	2.62e-06 U	4e-07 U	6.66e-07 U	1.02e-06 U	5.61e-07 U	7.54e-07 U
E1668A	N	PCB-39	38444-88-1	1.96e-06 U	3.37e-06 J	1.86e-06 J	5.92e-07 U	9.07e-07 U	1.77e-06 J	6.7e-07 U
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000279	0.000263	0.000215	0.000135	0.000144	0.000238	0.000179
E1668A	N	PCB-42	36559-22-5	0.000146	0.000139	0.000105	6.27e-05	6.46e-05	0.000111	7.99e-05
E1668A	N	PCB-43/73	PCB-43/73	2.48e-05 J	1.74e-05 J	1.23e-05	9.96e-06 J	6.41e-06 J	1.29e-05 J	1.16e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000571	0.000561	0.000466	0.000268	0.000273	0.000483	0.000361
E1668A	N	PCB-45/51	PCB-45/51	0.000188	0.000182	0.000128	9.06e-05	9.36e-05	0.000162	0.000123
E1668A	N	PCB-46	41464-47-5	4.48e-05	4.58e-05	3.2e-05 J	2.08e-05 J	1.8e-05 J	3.38e-05 J	2.3e-05 J
E1668A	N	PCB-48	70362-47-9	8.4e-05	7.92e-05	5.45e-05	3.52e-05 J	3.83e-05	6.34e-05	4.8e-05
E1668A	N	PCB-49/69	PCB-49/69	0.00037	0.000361	0.000289	0.000179	0.000192	0.000318	0.000242
E1668A	N	PCB-50/53	PCB-50/53	0.000141	0.000135	9.4e-05	6.75e-05	7.31e-05	0.000109	8.39e-05
E1668A	N	PCB-52	35693-99-3	0.000626	0.000605	0.000487 J	0.000271 J	0.000295 J	0.00048 J	0.000364 J
E1668A	N	PCB-54	15968-05-5	1.26e-05 J	1.06e-05 J	8.75e-06 J	6.18e-06 J	7.06e-06 J	1.29e-05 J	8.37e-06 J

				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	1.17e-05 J	1.06e-05 J	4.29e-06 J	1.73e-06 J	1.33e-06 U	8.68e-06 J	4.15e-06 J
E1668A	N	PCB-56	41464-43-1	0.000145	0.000134	0.000115	5.74e-05	6.58e-05	0.000127	8.9e-05
E1668A	N	PCB-57	70424-67-8	2.27e-06 U	2.89e-06 U	2.01e-06 J	9.32e-07 U	1.27e-06 U	1.6e-06 J	9.74e-07 U
E1668A	N	PCB-58	41464-49-7	2.26e-06 U	2.87e-06 U	9.82e-07 J	9.28e-07 U	1.26e-06 U	1.14e-06 J	8.37e-07 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	4.76e-05	5.22e-05	3.58e-05	2.28e-05 J	2.29e-05 J	3.89e-05	3.03e-05 J
E1668A	N	PCB-60	33025-41-1	6e-05	4.86e-05	3.95e-05	1.62e-05 J	2.08e-05 J	4.09e-05	3.25e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000487	0.000464	0.000397	0.000223	0.000232	0.000452	0.000318
E1668A	N	PCB-63	74472-34-7	1.23e-05 J	1.27e-05 J	1.03e-05 J	5.31e-06 J	5.86e-06 J	1.14e-05 J	8.18e-06 J
E1668A	N	PCB-64	52663-58-8	0.000195	0.000193	0.000149	7.46e-05 J	7.73e-05	0.000138 J	0.000102 J
E1668A	N	PCB-66	32598-10-0	0.000296	0.000287	0.000251	0.000138 J	0.000149	0.000286	0.00021
E1668A	N	PCB-67	73575-53-8	7.03e-06 J	5.55e-06 J	6.51e-06 J	4.9e-06 J	4.06e-06 J	1e-05 J	5.53e-06 J
E1668A	N	PCB-68	73575-52-7	5.03e-06 U	2.61e-06 U	4.87e-06 U	3.67e-06 J	1.15e-06 U	3.99e-06 J	2.54e-06 J
E1668A	N	PCB-72	41464-42-0	2.21e-06 U	6.44e-06 J	4.75e-06 J	3.4e-06 J	4.07e-06 J	5.24e-06 J	3.82e-06 J
E1668A	N	PCB-77	32598-13-3	2.25e-05 J	2.17e-05 J	2.49e-05 J	1.22e-05 J	1.11e-05 J	2.31e-05 J	1.82e-05 J
E1668A	N	PCB-78	70362-49-1	2.35e-06 U	2.98e-06 U	4.92e-07 U	9.64e-07 U	1.31e-06 U	8.56e-07 U	1.01e-06 U
E1668A	N	PCB-79	41464-48-6	2.93e-06 J	2.62e-06 U	2.66e-06 J	8.46e-07 U	1.15e-06 U	1.94e-06 J	8.84e-07 U
E1668A	N	PCB-80	33284-52-5	2.01e-06 U	2.55e-06 U	4.22e-07 U	8.25e-07 U	1.13e-06 U	7.34e-07 U	8.63e-07 U
E1668A	N	PCB-81	70362-50-4	2.06e-06 U	2.61e-06 U	1.16e-06 J	8.7e-07 U	1.21e-06 U	7.73e-07 U	9.31e-07 U
E1668A	N	PCB-82	52663-62-4	3.51e-05 J	4.14e-05	3.73e-05 J	1.62e-05 J	9.14e-06 J	2.94e-05 J	2.14e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000178	0.00017	0.000193	8.84e-05	7.01e-05 J	0.000175	0.00012
E1668A	N	PCB-84	52663-60-2	7.83e-05	8.25e-05	8.41e-05	3.9e-05	3.34e-05 J	7.84e-05	5.57e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	4.59e-05	4.07e-05	5.14e-05	2.11e-05 J	1.21e-05 J	3.59e-05 J	3.1e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000165 J	0.000156 J	0.000177	7.52e-05	6.09e-05 J	0.000159	0.000108
E1668A	N	PCB-88/91	PCB-88/91	5.56e-05	4.96e-05	5.94e-05	2.75e-05 J	1.59e-05 J	5.42e-05	3.84e-05 J
E1668A	N	PCB-89	73575-57-2	2.52e-06 U	3.11e-06 U	4.31e-06 J	1.48e-06 U	1.65e-06 U	3.75e-06 J	1.66e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000272	0.000256	0.000296	0.00013	0.000115	0.000248	0.00018
E1668A	N	PCB-92	52663-61-3	4.65e-05	4.35e-05	5.3e-05	2.58e-05 J	2.04e-05 J	4.98e-05	3.4e-05 J
E1668A	N	PCB-93/100	PCB-93/100	1.67e-05	1.53e-05	1.42e-05	5.83e-06 J	4.55e-06 J	1.83e-05 J	1.25e-05 J
E1668A	N	PCB-94	73575-55-0	2.52e-06 U	3.11e-06 U	4.12e-06 J	1.48e-06 U	1.65e-06 U	4.64e-06 J	1.66e-06 U
E1668A	N	PCB-95	38379-99-6	0.000244	0.00024	0.000259	0.000119 J	0.000111	0.000214	0.000156
E1668A	N	PCB-96	73575-54-9	3.82e-06 J	4.25e-06 J	3.43e-06 J	1.1e-06 U	1.23e-06 U	3.62e-06 J	1.24e-06 U
E1668A	N	PCB-98/102	PCB-98/102	2e-05	1.71e-05	1.8e-05	8.95e-06 J	1.02e-05 J	1.6e-05 J	1.36e-05 J
E1668A	N	PCB-103	60145-21-3	7.31e-06 J	6.03e-06 J	7.22e-06 J	1.29e-06 U	1.45e-06 U	7.05e-06 J	1.46e-06 U
E1668A	N	PCB-104	56558-16-8	1.68e-06 U	2.07e-06 U	5.51e-07 U	9.84e-07 U	1.1e-06 U	8.29e-07 U	1.11e-06 U
E1668A	N	PCB-105	32598-14-4	8.45e-05	7.14e-05 J	7.76e-05	3.36e-05 J	3.15e-05 J	7.01e-05 J	4.98e-05 J
E1668A	N	PCB-106	70424-69-0	1.73e-06 U	2.13e-06 U	4.87e-07 U	7.1e-07 U	9.67e-07 U	6.74e-07 U	8.07e-07 U
E1668A	N	PCB-107	70424-68-9	1.82e-05 J	1.37e-05 J	1.41e-05 J	7.98e-06 J	5.86e-06 J	1.78e-05 J	1.04e-05 J
E1668A	N	PCB-108/124	PCB-108/124	7.11e-06 J	4.91e-06 J	5.85e-06 J	3.01e-06 J	9.86e-07 U	7.19e-06 J	4.33e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000295	0.000284	0.000325	0.000138	0.00012	0.000281	0.000201
E1668A	N	PCB-111	39635-32-0	1.58e-06 U	1.95e-06 U	5.18e-07 U	9.25e-07 U	1.03e-06 U	7.79e-07 U	1.04e-06 U
E1668A	N	PCB-112	74472-36-9	1.71e-06 U	2.12e-06 U	5.63e-07 U	1e-06 U	1.12e-06 U	8.46e-07 U	1.13e-06 U
E1668A	N	PCB-114	74472-37-0	5.33e-06 J	4.79e-06 J	3.67e-06 J	1.37e-06 J	1.62e-06 J	4.41e-06 J	3.11e-06 J
E1668A	N	PCB-118	31508-00-6	0.000205	0.000197	0.000194 J	9.05e-05 J	8.47e-05 J	0.000197 J	0.000143 J
E1668A	N	PCB-120	68194-12-7	1.62e-06 U	2.01e-06 U	5.33e-07 U	9.51e-07 U	1.06e-06 U	8.02e-07 U	1.07e-06 U
E1668A	N	PCB-121	56558-18-0	1.63e-06 U	2.02e-06 U	5.37e-07 U	9.59e-07 U	1.07e-06 U	8.08e-07 U	1.08e-06 U

				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	1.88e-06 U	5.42e-06 J	3.24e-06 J	7.73e-07 U	1.05e-06 U	2.91e-06 J	1.8e-06 J
E1668A	N	PCB-123	65510-44-3	4.67e-06 J	3.77e-06 J	3.55e-06 J	8.45e-07 J	9.1e-07 U	3.01e-06 J	2.5e-06 J
E1668A	N	PCB-126	57465-28-8	1.9e-06 U	2.32e-06 U	7.94e-07 J	7.83e-07 U	1.12e-06 U	7.36e-07 U	8.25e-07 U
E1668A	N	PCB-127	39635-33-1	1.71e-06 U	2.1e-06 U	4.82e-07 U	7.02e-07 U	9.56e-07 U	6.66e-07 U	7.98e-07 U
E1668A	N	PCB-128/166	PCB-128/166	3.09e-05	3.13e-05	2.13e-05	1.32e-05 J	1.19e-05 J	3.61e-05 J	2.49e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.00026	0.00024	0.000212	0.000121	0.000124	0.000286	0.000183
E1668A	N	PCB-130	52663-66-8	1.28e-05 J	1.17e-05 J	1.08e-05 J	5.03e-06 J	7.58e-06 J	1.54e-05 J	1.14e-05 J
E1668A	N	PCB-131	61798-70-7	3.5e-06 U	4.01e-06 U	2.19e-06 J	1.55e-06 U	2.49e-06 U	2.75e-06 J	1.71e-06 U
E1668A	N	PCB-132	38380-05-1	8.43e-05	7.82e-05	6.53e-05	3.65e-05 J	3.85e-05	9.77e-05	5.85e-05
E1668A	N	PCB-133	35694-04-3	4.05e-06 J	3.67e-06 U	2.4e-06 J	1.42e-06 U	2.29e-06 U	4.3e-06 J	1.57e-06 U
E1668A	N	PCB-134/143	PCB-134/143	1.62e-05	1.42e-05 J	1.14e-05	6.51e-06 J	5.22e-06 J	1.81e-05 J	9.29e-06 J
E1668A	N	PCB-135/151	PCB-135/151	8.5e-05	8e-05	8.7e-05	3.82e-05	3.37e-05 J	8.2e-05	5.63e-05 J
E1668A	N	PCB-136	38411-22-2	3.18e-05 J	3.12e-05 J	3.12e-05 J	1.52e-05 J	1.23e-05 J	2.73e-05 J	2.16e-05 J
E1668A	N	PCB-137	35694-06-5	6.23e-06 J	8.52e-06 J	7.71e-06 J	3.97e-06 J	2.1e-06 U	8.98e-06 J	6.26e-06 J
E1668A	N	PCB-139/140	PCB-139/140	2.93e-06 U	3.35e-06 U	3.27e-06	1.3e-06 U	2.09e-06 U	4.8e-06 J	1.43e-06 U
E1668A	N	PCB-141	52712-04-6	4.38e-05	4.09e-05	3.2e-05 J	1.85e-05 J	1.72e-05 J	4.7e-05	3.06e-05 J
E1668A	N	PCB-142	41411-61-4	3.36e-06 U	3.85e-06 U	8.82e-07 U	1.49e-06 U	2.4e-06 U	1.75e-06 U	1.65e-06 U
E1668A	N	PCB-144	68194-14-9	9.07e-06 J	8.58e-06 J	8.88e-06 J	1.64e-06 U	1.57e-06 U	8.58e-06 J	4.11e-06 J
E1668A	N	PCB-145	74472-40-5	1.77e-06 U	1.91e-06 U	7.14e-07 U	1.24e-06 U	1.19e-06 U	9.35e-07 U	1.18e-06 U
E1668A	N	PCB-146	51908-16-8	4.02e-05	3.65e-05 J	3.24e-05 J	1.82e-05 J	2.05e-05 J	5.07e-05	2.95e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000225	0.000214	0.000181	0.000116	0.000131	0.000186	0.000181
E1668A	N	PCB-148	74472-41-6	2.48e-06 U	2.68e-06 U	9.98e-07 U	1.74e-06 U	1.66e-06 U	1.31e-06 U	1.65e-06 U
E1668A	N	PCB-150	68194-08-1	1.73e-06 U	1.87e-06 U	6.96e-07 U	1.21e-06 U	1.16e-06 U	9.11e-07 U	1.15e-06 U
E1668A	N	PCB-152	68194-09-2	1.76e-06 U	1.9e-06 U	7.1e-07 U	1.23e-06 U	1.18e-06 U	9.29e-07 U	1.17e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.000228	0.000219	0.00019	0.000107	0.000115	0.000263	0.00016
E1668A	N	PCB-154	60145-22-4	6.51e-06 J	5.07e-06 J	7.06e-06 J	2.25e-06 J	1.37e-06 U	4.57e-06 J	4.52e-06 J
E1668A	N	PCB-155	33979-03-2	1.68e-06 U	1.81e-06 U	1.13e-06 J	1.18e-06 U	1.12e-06 U	1.84e-06 J	1.11e-06 U
E1668A	N	PCB-156/157	PCB-156/157	2.18e-05	1.66e-05 J	2.01e-05	7.25e-06 J	8.01e-06 J	2.12e-05 J	1.25e-05 J
E1668A	N	PCB-158	74472-42-7	2.26e-05 J	1.88e-05 J	1.87e-05 J	9.8e-06 J	5.82e-06 J	2.24e-05 J	1.32e-05 J
E1668A	N	PCB-159	39635-35-3	2.24e-06 U	2.56e-06 U	5.87e-07 U	9.9e-07 U	1.59e-06 U	1.16e-06 U	1.1e-06 U
E1668A	N	PCB-161	74472-43-8	2.23e-06 U	2.55e-06 U	5.84e-07 U	9.85e-07 U	1.59e-06 U	1.16e-06 U	1.09e-06 U
E1668A	N	PCB-162	39635-34-2	2.21e-06 U	2.53e-06 U	1.14e-06 J	9.78e-07 U	1.57e-06 U	1.15e-06 U	1.08e-06 U
E1668A	N	PCB-164	74472-45-0	1.77e-05 J	1.48e-05 J	1.31e-05 J	7.59e-06 J	6.52e-06 J	1.97e-05 J	8.63e-06 J
E1668A	N	PCB-165	74472-46-1	2.45e-06 U	2.8e-06 U	6.42e-07 U	1.08e-06 U	1.74e-06 U	1.27e-06 U	1.2e-06 U
E1668A	N	PCB-167	52663-72-6	7.69e-06 J	5.67e-06 J	6.52e-06 J	1.88e-06 J	2.59e-06 J	7.99e-06 J	4.64e-06 J
E1668A	N	PCB-169	32774-16-6	2.16e-06 U	2.51e-06 U	4.55e-07 U	9.21e-07 U	1.49e-06 U	1.2e-06 U	9.97e-07 U
E1668A	N	PCB-170	35065-30-6	4.37e-05	4.3e-05	4.88e-05	2.18e-05 J	1.66e-05 J	5.45e-05	3.62e-05 J
E1668A	N	PCB-171/173	PCB-171/173	1.56e-05	1.4e-05 J	1.54e-05	7.07e-06 J	1.47e-06 U	1.72e-05 J	1.17e-05 J
E1668A	N	PCB-172	52663-74-8	7.76e-06 J	2.65e-06 U	7.66e-06 J	3.74e-06 J	1.45e-06 U	8.19e-06 J	6.36e-06 J
E1668A	N	PCB-174	38411-25-5	4.76e-05	5.13e-05	4.48e-05	2.18e-05 J	1.9e-05 J	6e-05	3.8e-05 J
E1668A	N	PCB-175	40186-70-7	1.98e-06 U	2.38e-06 U	1.51e-06 J	9.07e-07 U	1.3e-06 U	2.09e-06 J	1.15e-06 U
E1668A	N	PCB-176	52663-65-7	7.43e-06 J	6.41e-06 J	6.58e-06 J	2.61e-06 J	9.94e-07 U	6.49e-06 J	4.38e-06 J
E1668A	N	PCB-177	52663-70-4	3.38e-05 J	2.56e-05 J	3.05e-05 J	1.43e-05 J	8.02e-06 J	3.32e-05 J	2.34e-05 J
E1668A	N	PCB-178	52663-67-9	1.31e-05 J	1.31e-05 J	1.1e-05 J	5.46e-06 J	4.26e-06 J	1.44e-05 J	1.06e-05 J
E1668A	N	PCB-179	52663-64-6	2.98e-05 J	2.41e-05 J	2.71e-05 J	9.43e-06 J	1.18e-05 J	3.17e-05 J	2.11e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N02-TNNE	N02-TNNE	N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN
				N02-CE02-TNNE	N02-CE03-TNNE	N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN
				2.77	2.78	3.28	3.14	3.04	2.94	3.09
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	2.68	2.68	3.87	3.87
				N02-CE02-TNNE-AS	N02-CE03-TNNE-AS	N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS
				08/18/2011	08/18/2011	08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.00011	0.000107	0.000113	5.05e-05	3.85e-05 J	0.000115	8.24e-05
E1668A	N	PCB-181	74472-47-2	1.98e-06 U	2.38e-06 U	6.25e-07 U	9.06e-07 U	1.3e-06 U	9.71e-07 U	1.15e-06 U
E1668A	N	PCB-182	60145-23-5	1.92e-06 U	2.31e-06 U	6.07e-07 U	8.81e-07 U	1.27e-06 U	9.43e-07 U	1.12e-06 U
E1668A	N	PCB-183/185	PCB-183/185	3.82e-05	3.77e-05	3.73e-05	1.39e-05 J	1.44e-05 J	4.19e-05	2.29e-05 J
E1668A	N	PCB-184	74472-48-3	1.63e-06 U	1.96e-06 U	5.16e-07 U	7.48e-07 U	1.08e-06 U	8.01e-07 U	9.47e-07 U
E1668A	N	PCB-186	74472-49-4	1.59e-06 U	1.9e-06 U	5.01e-07 U	7.26e-07 U	1.04e-06 U	7.78e-07 U	9.2e-07 U
E1668A	N	PCB-187	52663-68-0	8.46e-05	8.01e-05	7.16e-05	3.76e-05 J	3.31e-05 J	9.07e-05	5.53e-05
E1668A	N	PCB-188	74487-85-7	1.35e-06 U	1.62e-06 U	4.49e-07 U	6.28e-07 U	7.98e-07 U	6.31e-07 U	7.78e-07 U
E1668A	N	PCB-189	39635-31-9	1.75e-06 U	2.11e-06 U	1.62e-06 J	5.62e-07 U	1.19e-06 U	1.19e-06 J	6.92e-07 U
E1668A	N	PCB-190	41411-64-7	8.62e-06 J	6.73e-06 J	8.72e-06 J	2.12e-06 J	2.07e-06 J	7.6e-06 J	5.58e-06 J
E1668A	N	PCB-191	74472-50-7	1.51e-06 U	1.81e-06 U	1.77e-06 J	6.9e-07 U	9.93e-07 U	7.39e-07 U	8.74e-07 U
E1668A	N	PCB-192	74472-51-8	1.68e-06 U	2.02e-06 U	5.32e-07 U	7.71e-07 U	1.11e-06 U	8.26e-07 U	9.76e-07 U
E1668A	N	PCB-194	35694-08-7	1.92e-05 J	2.65e-05 J	2.53e-05 J	1.23e-05 J	8.22e-06 J	3.11e-05 J	1.82e-05 J
E1668A	N	PCB-195	52663-78-2	1.06e-05 J	1.27e-05 J	1.07e-05 J	3.41e-06 J	1.49e-06 U	1.17e-05 J	4.75e-06 J
E1668A	N	PCB-196	42740-50-1	1.26e-05 J	1.3e-05 J	1.43e-05 J	5.34e-06 J	3.29e-06 J	1.21e-05 J	9.66e-06 J
E1668A	N	PCB-197	33091-17-7	1.39e-06 U	1.79e-06 U	8.37e-07 J	6.6e-07 U	8.62e-07 U	6.1e-07 U	7.24e-07 U
E1668A	N	PCB-198/199	PCB-198/199	3.5e-05	3.31e-05 J	2.95e-05 J	9.95e-06 J	1.25e-05 J	3.44e-05 J	2.07e-05 J
E1668A	N	PCB-200	52663-73-7	1.37e-06 U	1.75e-06 U	2.65e-06 J	6.48e-07 U	8.46e-07 U	2.83e-06 J	1.56e-06 J
E1668A	N	PCB-201	40186-71-8	5.1e-06 J	1.69e-06 U	4.45e-06 J	1.82e-06 J	8.17e-07 U	4.07e-06 J	3.31e-06 J
E1668A	N	PCB-202	2136-99-4	1.04e-05 J	1.23e-05 J	1.05e-05 J	3.07e-06 J	3e-06 J	1.03e-05 J	6.83e-06 J
E1668A	N	PCB-203	52663-76-0	1.59e-05 J	1.81e-05 J	2.43e-05 J	9.37e-06 J	8.28e-06 J	1.9e-05 J	1.59e-05 J
E1668A	N	PCB-204	74472-52-9	1.45e-06 U	1.86e-06 U	4.22e-07 U	6.86e-07 U	8.96e-07 U	6.34e-07 U	7.53e-07 U
E1668A	N	PCB-205	74472-53-0	1.8e-06 U	2.46e-06 U	1.24e-06 J	5.48e-07 U	1.16e-06 U	6.8e-07 U	5.99e-07 U
E1668A	N	PCB-206	40186-72-9	2.67e-05 J	2.27e-05 J	2.83e-05 J	1.44e-05 J	1.12e-05 J	3.23e-05 J	1.93e-05 J
E1668A	N	PCB-207	52663-79-3	2.66e-06 J	2.52e-06 U	3.3e-06 J	8.99e-07 J	1.27e-06 U	2.7e-06 J	7.78e-07 U
E1668A	N	PCB-208	52663-77-1	9.6e-06 J	1.15e-05 J	1.03e-05 J	4.71e-06 J	4.11e-06 J	1.07e-05 J	7.62e-06 J
E1668A	N	PCB-209	2051-24-3	2.51e-05 J	2.05e-05 J	3.07e-05 J	1.24e-05 J	6.38e-06 J	2.69e-05 J	1.77e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00979 J	0.00941 J	0.00848 J	0.00496 J	0.00486 J	0.00893 J	0.0069 J
E1668A	N	Total PCB (a)	PCB-Total	0.0102 J	0.00974 J	0.00882 J	0.00511 J	0.00501 J	0.00926 J	0.00714 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.87e-07J	2.24e-07J	9.28e-08J	7.72e-08J	1.08e-07J	8.64e-08J	8.41e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	3.38e-05 J	3.72e-05 J	2.82e-05 J	4.61e-05	2.34e-05 J	2.9e-05 J	2.51e-05 J
E1668A	N	PCB-2	2051-61-8	2.25e-06 J	3.3e-06 J	2.25e-06 J	2.49e-06 J	3.1e-06 J	3.64e-07 U	3.49e-07 U
E1668A	N	PCB-3	2051-62-9	6.34e-06 J	6.09e-06 J	6.34e-06 U	5.98e-06 U	6.58e-06 U	5.31e-06 U	3.92e-06 U
E1668A	N	PCB-4	13029-08-8	0.000186 J	0.000191	0.000176 J	0.000197	0.000149	0.00016 J	0.000164 J
E1668A	N	PCB-5	16605-91-7	1.59e-06 U	2.22e-06 J	1.69e-06 U	8.35e-07 J	2.15e-06 U	2.61e-06 U	1.94e-06 U
E1668A	N	PCB-6	25569-80-6	2.31e-05 J	2.79e-05 J	1.77e-05 J	2.49e-05 J	1.78e-05 J	2.02e-05 J	1.64e-05 J
E1668A	N	PCB-7	33284-50-3	2.64e-06 J	4.06e-06 J	2.68e-06 J	1.93e-06 J	2.27e-06 J	3.65e-06 U	1.87e-06 U
E1668A	N	PCB-8	34883-43-7	7.81e-05 J	0.000101 J	6.87e-05 J	8.45e-05 J	5.82e-05 J	7.65e-05 J	5.85e-05 J
E1668A	N	PCB-9	34883-39-1	4.19e-06 J	7.62e-06 J	4.52e-06 U	6.04e-06 J	5.46e-06 J	5.64e-06 J	3.77e-06 U
E1668A	N	PCB-10	33146-45-1	2.99e-05 J	2.87e-05 J	2.96e-05 J	3.16e-05 J	2.74e-05 J	2.3e-05 J	2.65e-05 J
E1668A	N	PCB-11	2050-67-1	8.33e-05 U	7.98e-05 J	5.61e-05 U	9.44e-05 J	4.76e-05 J	0.00011 J	4.11e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.47e-05 J	2.19e-05 J	1.39e-05 J	1.89e-05 J	1.25e-05 J	1.53e-05 J	1.34e-05 J
E1668A	N	PCB-14	34883-41-5	1.3e-06 U	1.65e-06 U	1.39e-06 U	2.25e-06 U	1.76e-06 U	2.14e-06 U	1.58e-06 U
E1668A	N	PCB-15	2050-68-2	9.26e-05 J	0.000118 J	0.000105 J	0.000108	8.31e-05	7.38e-05 J	9.12e-05 J
E1668A	N	PCB-16	38444-78-9	5.8e-05	8.93e-05	6.92e-05	4.53e-05	6.25e-05	6.03e-05	7.8e-05
E1668A	N	PCB-17	37680-66-3	0.000125	0.000164	0.000133	0.000116	0.000113	0.00011	0.000126
E1668A	N	PCB-18/30	PCB-18/30	0.000199	0.000276	0.000217	0.000168	0.000195	0.00018	0.000225
E1668A	N	PCB-19	38444-73-4	6.59e-05	7.72e-05	7.33e-05	6.63e-05	6.66e-05	5.94e-05	6.91e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000288	0.000495	0.000318	0.000282	0.000284	0.000252	0.000306
E1668A	N	PCB-21/33	PCB-21/33	5.44e-05	0.000105	5.6e-05	5.17e-05	5.17e-05	5.18e-05	4.17e-05
E1668A	N	PCB-22	38444-85-8	5.89e-05 J	9.65e-05 J	6.63e-05 J	4.97e-05	5.75e-05	5.2e-05 J	5.85e-05 J
E1668A	N	PCB-23	55720-44-0	5.43e-07 U	7.12e-07 U	6.7e-07 U	1.05e-06 U	8.07e-07 U	9.28e-07 U	6.74e-07 U
E1668A	N	PCB-24	55702-45-9	3.12e-06 J	1.32e-06 J	2.91e-06 J	1.8e-06 U	2.08e-06 J	1.83e-06 U	4.17e-06 J
E1668A	N	PCB-25	55712-37-3	4.11e-05	6.87e-05	4.38e-05	4.22e-05	3.81e-05 J	3.28e-05 J	4.11e-05
E1668A	N	PCB-26/29	PCB-26/29	7.21e-05	0.000105	7.53e-05	7.56e-05	6.75e-05	5.9e-05	6.6e-05
E1668A	N	PCB-27	38444-76-7	4.4e-05	5.36e-05	4.42e-05	4.22e-05	3.54e-05 J	3.48e-05 J	4.18e-05 J
E1668A	N	PCB-31	16606-02-3	0.000243 J	0.000378 J	0.000255 J	0.000239 J	0.000232 J	0.000205 J	0.00024 J
E1668A	N	PCB-32	38444-77-8	9.6e-05	0.000136	0.000102	9.54e-05	9.13e-05	8.79e-05	0.000106
E1668A	N	PCB-34	37680-68-5	1.65e-06 J	2.78e-06 J	1.61e-06 J	1.94e-06 J	2.28e-06 J	1.98e-06 J	2.12e-06 J
E1668A	N	PCB-35	37680-69-6	3.23e-06 J	5.9e-06 J	4.34e-06 J	2.54e-06 J	3.92e-06 J	3.08e-06 J	3.57e-06 J
E1668A	N	PCB-36	38444-87-0	5.31e-07 U	6.96e-07 U	6.55e-07 U	1.02e-06 U	7.89e-07 U	9.07e-07 U	6.59e-07 U
E1668A	N	PCB-37	38444-90-5	5.09e-05 J	8.54e-05	6.01e-05	5.51e-05	4.71e-05	4.05e-05 J	5.39e-05
E1668A	N	PCB-38	53555-66-1	5.6e-07 U	7.34e-07 U	6.91e-07 U	1.08e-06 U	8.32e-07 U	9.57e-07 U	6.95e-07 U
E1668A	N	PCB-39	38444-88-1	8.8e-07 J	2.15e-06 J	8.92e-07 J	9.6e-07 U	1.18e-06 J	8.51e-07 U	6.18e-07 U
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000132	0.000256	0.000153	0.000122	0.000149	0.000122	0.000171
E1668A	N	PCB-42	36559-22-5	5.97e-05	0.000119	6.79e-05	4.69e-05	6.39e-05	5.46e-05	8e-05
E1668A	N	PCB-43/73	PCB-43/73	8.2e-06 J	1.38e-05 J	8.48e-06 J	9.63e-06 J	6.09e-06 J	7.55e-06 J	1.11e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000255	0.000592	0.000304	0.000224	0.000279	0.000246	0.000352
E1668A	N	PCB-45/51	PCB-45/51	7.63e-05	0.00023	0.000101	5.54e-05	9.33e-05	7.14e-05	0.000116
E1668A	N	PCB-46	41464-47-5	1.73e-05 J	3.5e-05 J	2.2e-05 J	1.23e-05 J	2.08e-05 J	1.72e-05 J	2.43e-05 J
E1668A	N	PCB-48	70362-47-9	3.23e-05 J	7.64e-05	4.01e-05	2.48e-05 J	3.88e-05 J	3.02e-05 J	4.58e-05
E1668A	N	PCB-49/69	PCB-49/69	0.000174	0.000354	0.000203	0.000163	0.000193	0.00016	0.000227
E1668A	N	PCB-50/53	PCB-50/53	6.08e-05	0.000128	7.7e-05	5.14e-05	6.68e-05	5.53e-05	7.95e-05
E1668A	N	PCB-52	35693-99-3	0.000272 J	0.00051 J	0.000309 J	0.000232 J	0.000296 J	0.000252 J	0.00034 J
E1668A	N	PCB-54	15968-05-5	4.22e-06 J	1.68e-05 J	4.66e-06 J	3.02e-06 J	6.31e-06 J	6.7e-06 J	6.69e-06 J

				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	3.49e-06 J	8.88e-06 J	2.73e-06 J	5.2e-06 J	3.3e-06 J	1.28e-06 U	3.06e-06 J
E1668A	N	PCB-56	41464-43-1	6.47e-05	0.000135	7.08e-05	5.63e-05	6.92e-05 J	5.66e-05	8.22e-05
E1668A	N	PCB-57	70424-67-8	8.26e-07 U	2.5e-06 J	9.74e-07 U	1.26e-06 U	1.1e-06 U	1.22e-06 U	1.07e-06 U
E1668A	N	PCB-58	41464-49-7	9.87e-07 J	7.06e-06 J	9.69e-07 U	1.25e-06 U	1.1e-06 U	1.21e-06 U	1.07e-06 U
E1668A	N	PCB-59/62/75	PCB-59/62/75	2.17e-05 J	4.31e-05	2.45e-05 J	2e-05 J	2.26e-05 J	1.89e-05 J	2.89e-05 J
E1668A	N	PCB-60	33025-41-1	2.07e-05 J	4.77e-05	2.39e-05 J	1.94e-05 J	2.27e-05 J	2.12e-05 J	2.4e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000226	0.000503	0.000264	0.000199	0.000246	0.000202	0.000284
E1668A	N	PCB-63	74472-34-7	6.07e-06 J	1.47e-05 J	6.69e-06 J	5.25e-06 J	7.59e-06 J	4.53e-06 J	6.5e-06 J
E1668A	N	PCB-64	52663-58-8	7.53e-05	0.000151	8.72e-05 J	6.54e-05	8.05e-05	6.93e-05	9.06e-05 J
E1668A	N	PCB-66	32598-10-0	0.000142 J	0.000319 J	0.000177 J	0.000132	0.000154	0.000125 J	0.000194 J
E1668A	N	PCB-67	73575-53-8	4.56e-06 J	1.01e-05 J	5.02e-06 J	3.8e-06 J	5.61e-06 J	4.36e-06 J	4.75e-06 J
E1668A	N	PCB-68	73575-52-7	3.37e-06 J	5.35e-06 J	2.12e-06 J	2.3e-06 J	2.51e-06 J	2.92e-06 J	4.83e-06 J
E1668A	N	PCB-72	41464-42-0	3.27e-06 J	4.91e-06 J	9.47e-07 U	2.91e-06 J	1.07e-06 U	3.22e-06 J	3.16e-06 J
E1668A	N	PCB-77	32598-13-3	1.17e-05 J	2.53e-05 J	1.57e-05 J	1.14e-05 J	1.12e-05 J	6.8e-06 J	1.42e-05 J
E1668A	N	PCB-78	70362-49-1	8.54e-07 U	1.14e-06 U	1.01e-06 U	1.3e-06 U	1.14e-06 U	1.26e-06 U	1.11e-06 U
E1668A	N	PCB-79	41464-48-6	7.49e-07 U	2.69e-06 J	8.83e-07 U	1.14e-06 U	1e-06 U	1.1e-06 U	9.72e-07 U
E1668A	N	PCB-80	33284-52-5	7.31e-07 U	9.76e-07 U	8.62e-07 U	1.11e-06 U	9.78e-07 U	1.08e-06 U	9.48e-07 U
E1668A	N	PCB-81	70362-50-4	7.77e-07 U	1.02e-06 U	9.12e-07 U	1.19e-06 U	1.04e-06 U	1.16e-06 U	9.95e-07 U
E1668A	N	PCB-82	52663-62-4	1.11e-05 J	3.12e-05 J	1.65e-05 J	1.27e-05 J	1.26e-05 J	1.46e-05 J	1.55e-05 J
E1668A	N	PCB-83/99	PCB-83/99	8.26e-05	0.00018	0.000105	7.72e-05	7.77e-05	7.1e-05 J	0.000109
E1668A	N	PCB-84	52663-60-2	3.62e-05 J	8.06e-05	4.31e-05 J	2.93e-05 J	3.39e-05 J	3.32e-05 J	5.13e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	1.91e-05 J	3.98e-05 J	2.15e-05 J	1.05e-05 J	1.74e-05 J	1.59e-05 J	2.67e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	7e-05	0.00016	9.11e-05	6.87e-05 J	6.78e-05	6.89e-05	9.81e-05
E1668A	N	PCB-88/91	PCB-88/91	2.67e-05 J	5.41e-05	2.91e-05 J	2.4e-05 J	2.54e-05 J	1.79e-05 J	3.21e-05 J
E1668A	N	PCB-89	73575-57-2	1.27e-06 U	1.61e-06 U	1.52e-06 U	1.88e-06 U	1.47e-06 U	1.77e-06 U	1.54e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000123	0.000263	0.000155	0.000113	0.000117	0.000117	0.000161
E1668A	N	PCB-92	52663-61-3	2.32e-05 J	5.06e-05	2.91e-05 J	1.35e-05 J	2.16e-05 J	1.82e-05 J	2.74e-05 J
E1668A	N	PCB-93/100	PCB-93/100	3.08e-06 J	2.45e-05 J	8.2e-06 J	5.05e-06 J	4.39e-06 J	7e-06 J	6.67e-06 J
E1668A	N	PCB-94	73575-55-0	1.27e-06 U	5.14e-06 J	1.52e-06 U	1.88e-06 U	1.47e-06 U	1.77e-06 U	1.54e-06 U
E1668A	N	PCB-95	38379-99-6	0.000117 J	0.000221	0.000138 J	0.000109	0.000116	0.00011 J	0.000155 J
E1668A	N	PCB-96	73575-54-9	9.46e-07 U	4.63e-06 J	1.14e-06 U	1.41e-06 U	1.1e-06 U	1.32e-06 U	2.74e-06 J
E1668A	N	PCB-98/102	PCB-98/102	8.01e-06 J	1.95e-05 J	7.41e-06 J	4.61e-06 J	6.73e-06 J	9.81e-06 J	1.22e-05 J
E1668A	N	PCB-103	60145-21-3	3.44e-06 J	8.37e-06 J	5.29e-06 J	1.65e-06 U	1.29e-06 U	1.55e-06 U	3.58e-06 J
E1668A	N	PCB-104	56558-16-8	8.43e-07 U	3.38e-06 J	1.02e-06 U	1.25e-06 U	9.82e-07 U	1.18e-06 U	1.03e-06 U
E1668A	N	PCB-105	32598-14-4	3.25e-05 J	8.59e-05	4.09e-05	2.81e-05 J	3.33e-05 J	2.87e-05 J	4.26e-05
E1668A	N	PCB-106	70424-69-0	6e-07 U	8.39e-07 U	6.86e-07 U	8.5e-07 U	8.28e-07 U	8.27e-07 U	8.3e-07 U
E1668A	N	PCB-107	70424-68-9	7.63e-06 J	1.94e-05 J	8.86e-06 J	6.24e-06 J	7.93e-06 J	4.9e-06 J	8.62e-06 J
E1668A	N	PCB-108/124	PCB-108/124	2.8e-06 J	7.21e-06 J	3.67e-06 J	8.67e-07 U	3.14e-06 J	3.33e-06 J	4.45e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000133	0.000281	0.000165	0.00013	0.000127	0.000132	0.000174
E1668A	N	PCB-111	39635-32-0	7.92e-07 U	1.01e-06 U	9.55e-07 U	1.18e-06 U	9.23e-07 U	1.11e-06 U	9.67e-07 U
E1668A	N	PCB-112	74472-36-9	8.61e-07 U	1.1e-06 U	1.04e-06 U	1.28e-06 U	1e-06 U	1.2e-06 U	1.05e-06 U
E1668A	N	PCB-114	74472-37-0	1.1e-06 J	4.03e-06 J	2.21e-06 J	2.02e-06 J	1.51e-06 J	7.47e-07 U	1.6e-06 J
E1668A	N	PCB-118	31508-00-6	9.02e-05 J	0.000218 J	0.00011 J	7.61e-05 J	8.9e-05 J	7.91e-05 J	0.000112 J
E1668A	N	PCB-120	68194-12-7	8.15e-07 U	1.04e-06 U	9.82e-07 U	1.21e-06 U	9.5e-07 U	1.14e-06 U	9.95e-07 U
E1668A	N	PCB-121	56558-18-0	8.22e-07 U	1.05e-06 U	9.9e-07 U	1.22e-06 U	9.57e-07 U	1.15e-06 U	1e-06 U

				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	6.54e-07 U	1.75e-06 J	2.1e-06 J	9.25e-07 U	9.02e-07 U	9.01e-07 U	9.04e-07 U
E1668A	N	PCB-123	65510-44-3	9.47e-07 J	4.88e-06 J	1.27e-06 J	7.78e-07 J	1.9e-06 J	1.14e-06 J	2.28e-06 J
E1668A	N	PCB-126	57465-28-8	7.96e-07 U	9.26e-07 U	6.73e-07 U	8.83e-07 U	9.51e-07 U	9.28e-07 U	9.48e-07 U
E1668A	N	PCB-127	39635-33-1	5.93e-07 U	8.29e-07 U	6.78e-07 U	8.4e-07 U	8.19e-07 U	8.17e-07 U	8.2e-07 U
E1668A	N	PCB-128/166	PCB-128/166	1.15e-05 J	3.9e-05	1.92e-05 J	1.08e-05 J	1.6e-05 J	1.2e-05 J	2.09e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000108	0.000313	0.000141	9.66e-05	0.000123	0.000107	0.000175
E1668A	N	PCB-130	52663-66-8	4.68e-06 J	1.53e-05 J	7.76e-06 J	5.89e-06 J	8.18e-06 J	5.3e-06 J	8.19e-06 J
E1668A	N	PCB-131	61798-70-7	1.36e-06 U	2.33e-06 U	1.61e-06 U	1.83e-06 U	2.14e-06 U	2.14e-06 U	2.21e-06 U
E1668A	N	PCB-132	38380-05-1	3.54e-05 J	0.000104	4.31e-05	2.87e-05 J	4.37e-05	3.3e-05 J	5.11e-05 J
E1668A	N	PCB-133	35694-04-3	1.25e-06 U	4.84e-06 J	1.48e-06 U	1.68e-06 U	1.96e-06 U	3.61e-06 J	2.85e-06 J
E1668A	N	PCB-134/143	PCB-134/143	5.69e-06 J	1.63e-05 J	6.41e-06 J	3.33e-06 J	6.02e-06 J	6.14e-06 J	1.18e-05 J
E1668A	N	PCB-135/151	PCB-135/151	3.19e-05 J	9.03e-05	4.28e-05	3.33e-05 J	3.63e-05 J	2.84e-05 J	4.51e-05 J
E1668A	N	PCB-136	38411-22-2	1.13e-05 J	3.1e-05 J	1.56e-05 J	1.37e-05 J	1.28e-05 J	1.34e-05 J	1.86e-05 J
E1668A	N	PCB-137	35694-06-5	2.78e-06 J	9.03e-06 J	4.65e-06 J	2.72e-06 J	2.8e-06 J	2.82e-06 J	4.08e-06 J
E1668A	N	PCB-139/140	PCB-139/140	1.14e-06 U	6.39e-06 J	1.35e-06 U	1.53e-06 U	1.79e-06 U	1.79e-06 U	1.85e-06 U
E1668A	N	PCB-141	52712-04-6	1.5e-05 J	5.09e-05 J	2.02e-05 J	1.26e-05 J	1.96e-05 J	1.75e-05 J	2.35e-05 J
E1668A	N	PCB-142	41411-61-4	1.31e-06 U	2.24e-06 U	1.55e-06 U	1.76e-06 U	2.06e-06 U	2.06e-06 U	2.12e-06 U
E1668A	N	PCB-144	68194-14-9	1.28e-06 U	1.06e-05 J	1.68e-06 U	1.76e-06 U	1.34e-06 U	1.71e-06 U	4.44e-06 J
E1668A	N	PCB-145	74472-40-5	9.68e-07 U	1.36e-06 U	1.27e-06 U	1.33e-06 U	1.01e-06 U	1.3e-06 U	1.19e-06 U
E1668A	N	PCB-146	51908-16-8	1.71e-05 J	4.85e-05	2.26e-05 J	1.6e-05 J	1.76e-05 J	1.64e-05 J	2.7e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000111	0.000294	0.000117	7.11e-05	0.000118	9.95e-05	0.000177
E1668A	N	PCB-148	74472-41-6	1.35e-06 U	1.9e-06 U	1.78e-06 U	1.86e-06 U	1.42e-06 U	1.81e-06 U	1.67e-06 U
E1668A	N	PCB-150	68194-08-1	9.43e-07 U	1.32e-06 U	1.24e-06 U	1.3e-06 U	9.86e-07 U	1.26e-06 U	1.16e-06 U
E1668A	N	PCB-152	68194-09-2	9.62e-07 U	1.35e-06 U	1.27e-06 U	1.32e-06 U	1.01e-06 U	1.29e-06 U	1.19e-06 U
E1668A	N	PCB-153/168	PCB-153/168	9.74e-05	0.000287	0.000123	8.13e-05	0.000114	8.37e-05 J	0.000157
E1668A	N	PCB-154	60145-22-4	2.38e-06 J	6.08e-06 J	1.48e-06 U	1.54e-06 U	2.5e-06 J	1.5e-06 U	1.38e-06 U
E1668A	N	PCB-155	33979-03-2	9.17e-07 U	3.57e-06 J	1.21e-06 U	1.26e-06 U	9.59e-07 U	1.23e-06 U	1.13e-06 U
E1668A	N	PCB-156/157	PCB-156/157	9.04e-06 J	2.18e-05 J	9.21e-06 J	7.2e-06 J	7.59e-06 J	5.83e-06 J	9.74e-06 J
E1668A	N	PCB-158	74472-42-7	8.61e-06 J	2.75e-05 J	1.15e-05 J	5.41e-06 J	1.04e-05 J	7.3e-06 J	1.29e-05 J
E1668A	N	PCB-159	39635-35-3	8.7e-07 U	1.49e-06 U	1.03e-06 U	1.17e-06 U	1.37e-06 U	1.37e-06 U	1.41e-06 U
E1668A	N	PCB-161	74472-43-8	8.66e-07 U	1.48e-06 U	1.03e-06 U	1.17e-06 U	1.36e-06 U	1.36e-06 U	1.41e-06 U
E1668A	N	PCB-162	39635-34-2	8.59e-07 U	1.47e-06 U	1.02e-06 U	1.16e-06 U	1.35e-06 U	1.35e-06 U	1.4e-06 U
E1668A	N	PCB-164	74472-45-0	6.66e-06 J	1.81e-05 J	8.82e-06 J	4.76e-06 J	7.32e-06 J	5.41e-06 J	1.14e-05 J
E1668A	N	PCB-165	74472-46-1	9.52e-07 U	1.63e-06 U	1.13e-06 U	1.28e-06 U	1.5e-06 U	1.5e-06 U	1.55e-06 U
E1668A	N	PCB-167	52663-72-6	3.34e-06 J	7.54e-06 J	3.99e-06 J	2.97e-06 J	3.14e-06 J	1.51e-06 J	3.57e-06 J
E1668A	N	PCB-169	32774-16-6	8.04e-07 U	1.48e-06 U	9.19e-07 U	1.02e-06 U	1.31e-06 U	1.31e-06 U	1.39e-06 U
E1668A	N	PCB-170	35065-30-6	1.78e-05 J	5.99e-05	2.63e-05 J	1.45e-05 J	1.39e-05 J	1.75e-05 J	2.92e-05 J
E1668A	N	PCB-171/173	PCB-171/173	4.5e-06 J	1.1e-05 J	6.89e-06 J	1.42e-06 U	4.33e-06 J	4.86e-06 J	7.52e-06 J
E1668A	N	PCB-172	52663-74-8	3.08e-06 J	9.55e-06 J	4.2e-06 J	1.4e-06 U	1.17e-06 U	1.24e-06 U	1.39e-06 U
E1668A	N	PCB-174	38411-25-5	1.76e-05 J	5.7e-05	2.81e-05 J	1.94e-05 J	1.98e-05 J	1.83e-05 J	2.25e-05 J
E1668A	N	PCB-175	40186-70-7	8.53e-07 U	1.29e-06 U	1e-06 U	1.26e-06 U	1.05e-06 U	1.12e-06 U	1.25e-06 U
E1668A	N	PCB-176	52663-65-7	1.62e-06 J	8.29e-06 J	3.17e-06 J	1.27e-06 J	2.16e-06 J	8.51e-07 U	4.14e-06 J
E1668A	N	PCB-177	52663-70-4	1.26e-05 J	3.31e-05 J	1.38e-05 J	1.18e-05 J	1.08e-05 J	1.18e-05 J	1.53e-05 J
E1668A	N	PCB-178	52663-67-9	4.73e-06 J	1.34e-05 J	7.41e-06 J	5.05e-06 J	4.69e-06 J	5.19e-06 J	7.41e-06 J
E1668A	N	PCB-179	52663-64-6	9.31e-06 J	3.4e-05 J	1.63e-05 J	8.71e-06 J	1.19e-05 J	1.01e-05 J	1.96e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNBN	N03-TNBN	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE
				N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS	N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE
				3.02	2.99	2.96	3.05	3.1	3.04	2.63
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	0.97	0.98	0.98	0.98	2.68
				N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS	N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS
				02/22/2012	02/22/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/23/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	4.52e-05	0.000128	6.17e-05	3.8e-05 J	3.69e-05 J	3.98e-05	5.37e-05 J
E1668A	N	PCB-181	74472-47-2	8.52e-07 U	1.29e-06 U	1e-06 U	1.26e-06 U	1.05e-06 U	1.12e-06 U	1.25e-06 U
E1668A	N	PCB-182	60145-23-5	8.28e-07 U	1.26e-06 U	9.76e-07 U	1.23e-06 U	1.02e-06 U	1.09e-06 U	1.22e-06 U
E1668A	N	PCB-183/185	PCB-183/185	1.43e-05 J	4.46e-05	1.9e-05 J	1.31e-05 J	1.56e-05 J	1.33e-05 J	2.36e-05 J
E1668A	N	PCB-184	74472-48-3	7.03e-07 U	1.07e-06 U	8.29e-07 U	1.04e-06 U	8.68e-07 U	9.22e-07 U	1.03e-06 U
E1668A	N	PCB-186	74472-49-4	6.83e-07 U	1.04e-06 U	8.05e-07 U	1.01e-06 U	8.43e-07 U	8.95e-07 U	1e-06 U
E1668A	N	PCB-187	52663-68-0	3.33e-05 J	9.17e-05	4.44e-05	3.23e-05 J	3.62e-05 J	3.02e-05 J	4.68e-05 J
E1668A	N	PCB-188	74487-85-7	5.8e-07 U	8.27e-07 U	6.97e-07 U	9.34e-07 U	6.58e-07 U	7.32e-07 U	7.64e-07 U
E1668A	N	PCB-189	39635-31-9	5.05e-07 U	9.67e-07 U	6.28e-07 U	7.19e-07 U	9.29e-07 U	8.89e-07 U	1.21e-06 U
E1668A	N	PCB-190	41411-64-7	1.69e-06 J	8.56e-06 J	4.49e-06 J	2.78e-06 J	8.15e-07 U	8.65e-07 U	3.88e-06 J
E1668A	N	PCB-191	74472-50-7	6.49e-07 U	9.85e-07 U	7.65e-07 U	9.61e-07 U	8.01e-07 U	8.51e-07 U	9.53e-07 U
E1668A	N	PCB-192	74472-51-8	7.25e-07 U	1.1e-06 U	8.54e-07 U	1.07e-06 U	8.95e-07 U	9.5e-07 U	1.06e-06 U
E1668A	N	PCB-194	35694-08-7	1.05e-05 J	3.19e-05 J	1.44e-05 J	9.24e-06 J	7.71e-06 J	1.1e-05 J	1.05e-05 J
E1668A	N	PCB-195	52663-78-2	3.16e-06 J	1.02e-05 J	4.91e-06 J	7.3e-07 U	1.17e-06 U	2.63e-06 J	6.09e-06 J
E1668A	N	PCB-196	42740-50-1	5.89e-06 J	9.19e-06 J	7.62e-06 J	2.1e-06 J	4.88e-06 J	4.13e-06 J	4.88e-06 J
E1668A	N	PCB-197	33091-17-7	6.15e-07 U	9.98e-07 U	6.43e-07 U	6.85e-07 U	6.92e-07 U	8.47e-07 U	7.26e-07 U
E1668A	N	PCB-198/199	PCB-198/199	1.21e-05 J	3.92e-05	1.89e-05 J	1.19e-05 J	1.1e-05 J	1.35e-05 J	1.66e-05 J
E1668A	N	PCB-200	52663-73-7	6.04e-07 U	3.67e-06 J	6.31e-07 U	6.73e-07 U	6.79e-07 U	8.31e-07 U	7.13e-07 U
E1668A	N	PCB-201	40186-71-8	2.09e-06 J	5.35e-06 J	6.09e-07 U	1.02e-06 J	1.13e-06 J	1.02e-06 J	6.88e-07 U
E1668A	N	PCB-202	2136-99-4	5.96e-06 J	1.36e-05 J	5.36e-06 J	4.8e-06 J	4.83e-06 J	4.21e-06 J	4.76e-06 J
E1668A	N	PCB-203	52663-76-0	8.29e-06 J	2.35e-05 J	1.29e-05 J	9.8e-06 J	5.63e-06 J	4.77e-06 J	9.43e-06 J
E1668A	N	PCB-204	74472-52-9	6.39e-07 U	1.04e-06 U	6.68e-07 U	7.12e-07 U	7.19e-07 U	8.8e-07 U	7.55e-07 U
E1668A	N	PCB-205	74472-53-0	5.1e-07 U	1.05e-06 U	4.76e-07 U	5.66e-07 U	9.06e-07 U	1.08e-06 U	9.58e-07 U
E1668A	N	PCB-206	40186-72-9	1.2e-05 J	2.93e-05 J	1.41e-05 J	1.31e-05 J	1.44e-05 J	1.02e-05 J	1.12e-05 J
E1668A	N	PCB-207	52663-79-3	7.35e-07 U	1.39e-06 U	1.71e-06 J	2.16e-06 J	1.2e-06 U	1.22e-06 U	1.4e-06 U
E1668A	N	PCB-208	52663-77-1	4.98e-06 J	1.23e-05 J	7.87e-06 J	4.51e-06 J	4.34e-06 J	4.11e-06 J	5.01e-06 J
E1668A	N	PCB-209	2051-24-3	1.5e-05 J	2.11e-05 J	2.61e-05 J	9.15e-06 J	1.37e-05 J	1.22e-05 J	2.02e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00505 J	0.00993 J	0.0058 J	0.00468 J	0.00508 J	0.00464 J	0.00611 J
E1668A	N	Total PCB (a)	PCB-Total	0.0052 J	0.0103 J	0.00599 J	0.00482 J	0.00523 J	0.00477 J	0.0063 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	7.83e-08J	9.79e-08J	6.84e-08J	8.57e-08J	9.25e-08J	8.94e-08J	9.37e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	2.99e-05 J	3.11e-05 J	2.26e-05 J	3.01e-05 J	3.11e-05 J	3.84e-05 J	3.55e-05 J
E1668A	N	PCB-2	2051-61-8	2.49e-06 J	3.7e-06 J	2.06e-06 J	2.37e-06 U	3.72e-06 U	2.96e-06 U	2.39e-06 U
E1668A	N	PCB-3	2051-62-9	6.39e-06 J	5.7e-06 J	5e-06 J	6.03e-06 U	6.44e-06 U	7.87e-06 U	5.51e-06 U
E1668A	N	PCB-4	13029-08-8	0.000177	0.000184	0.000162	0.000181 J	0.000183	0.000183	0.000183 J
E1668A	N	PCB-5	16605-91-7	1.88e-06 U	2.4e-06 U	1.09e-06 J	1.3e-06 J	2.29e-06 U	1.55e-06 J	1.63e-06 U
E1668A	N	PCB-6	25569-80-6	2.41e-05 J	2.65e-05 J	1.72e-05 J	2.87e-05 J	2.38e-05 J	2.77e-05 J	2.11e-05 J
E1668A	N	PCB-7	33284-50-3	4.65e-06 J	5.07e-06 J	4.6e-06 J	4.89e-06 U	5.73e-06 U	4.59e-06 U	2.7e-06 U
E1668A	N	PCB-8	34883-43-7	7.77e-05 J	8.56e-05 J	6.62e-05 J	9.18e-05 J	9.77e-05 J	9.71e-05 J	7.19e-05 J
E1668A	N	PCB-9	34883-39-1	5.17e-06 J	7.05e-06 J	4.68e-06 J	5.71e-06 J	5.85e-06 J	6.2e-06 U	4.67e-06 U
E1668A	N	PCB-10	33146-45-1	2.57e-05 J	2.15e-05 J	2.24e-05 J	2.99e-05 J	2.17e-05 J	2.97e-05 J	3.01e-05 J
E1668A	N	PCB-11	2050-67-1	5.53e-05 U	6.59e-05 U	6.96e-05 U	8.09e-05 U	7.24e-05 U	7.71e-05 U	7.75e-05 U
E1668A	N	PCB-12/13	PCB-12/13	2.33e-05 J	2.12e-05 J	1.48e-05 J	2.26e-05 J	2.09e-05 J	2.3e-05 J	1.46e-05 J
E1668A	N	PCB-14	34883-41-5	1.54e-06 U	1.96e-06 U	1.52e-06 U	2.14e-06 U	1.87e-06 U	1.39e-06 U	1.34e-06 U
E1668A	N	PCB-15	2050-68-2	0.000119	0.000118	7.47e-05 J	0.00012 J	0.000124	0.00012	9.12e-05 J
E1668A	N	PCB-16	38444-78-9	9.18e-05	0.000104	7.75e-05	7.81e-05	0.000107	9.12e-05	5.77e-05 J
E1668A	N	PCB-17	37680-66-3	0.000156	0.000198	0.000141	0.00015	0.00019	0.000185	0.000125
E1668A	N	PCB-18/30	PCB-18/30	0.000279	0.00034	0.000241	0.000252	0.00035	0.000304	0.000197
E1668A	N	PCB-19	38444-73-4	7.61e-05	7.4e-05	7.07e-05	7.57e-05	8.16e-05	7.84e-05	6.87e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000467	0.000428	0.000302	0.000447	0.000492	0.000497	0.000303
E1668A	N	PCB-21/33	PCB-21/33	7.29e-05	6.58e-05	5.42e-05	8.28e-05	7.62e-05	9.25e-05	5.62e-05
E1668A	N	PCB-22	38444-85-8	8.78e-05 J	8.08e-05 J	6.22e-05 J	8.69e-05 J	9.63e-05 J	9.44e-05 J	5.81e-05 J
E1668A	N	PCB-23	55720-44-0	6.3e-07 U	7.43e-07 U	7.14e-07 U	8.5e-07 U	8.29e-07 U	6.51e-07 U	6.13e-07 U
E1668A	N	PCB-24	55702-45-9	2.02e-06 J	4.73e-06 J	3.73e-06 J	2.83e-06 J	4.04e-06 J	4.21e-06 J	2.07e-06 J
E1668A	N	PCB-25	55712-37-3	6.83e-05	5.86e-05	4.1e-05	6.33e-05	6.96e-05	6.47e-05	4.42e-05
E1668A	N	PCB-26/29	PCB-26/29	9.75e-05	9.26e-05	6.49e-05	9.99e-05	0.000104	0.000105	7.68e-05
E1668A	N	PCB-27	38444-76-7	4.76e-05 J	6.19e-05	4.21e-05	5.07e-05	5.77e-05	5.81e-05	4.02e-05
E1668A	N	PCB-31	16606-02-3	0.000352 J	0.000325 J	0.000231 J	0.00035 J	0.000374 J	0.000378 J	0.000247 J
E1668A	N	PCB-32	38444-77-8	0.000137	0.00016	0.000116	0.000125	0.00016	0.000152	9.76e-05
E1668A	N	PCB-34	37680-68-5	2.85e-06 J	2.41e-06 J	1.58e-06 J	2.88e-06 J	2.81e-06 J	2.92e-06 J	3.06e-06 J
E1668A	N	PCB-35	37680-69-6	5.9e-06 J	6.28e-06 J	4.1e-06 J	6.41e-06 J	6.94e-06 J	7.54e-06 J	3.72e-06 J
E1668A	N	PCB-36	38444-87-0	6.16e-07 U	7.26e-07 U	7.08e-07 J	8.31e-07 U	8.1e-07 U	6.83e-07 J	5.99e-07 U
E1668A	N	PCB-37	38444-90-5	8.8e-05	7.82e-05	5.18e-05	7.87e-05 J	8.05e-05	9.14e-05	5.3e-05 J
E1668A	N	PCB-38	53555-66-1	6.5e-07 U	7.66e-07 U	7.36e-07 U	8.77e-07 U	8.55e-07 U	6.72e-07 U	6.32e-07 U
E1668A	N	PCB-39	38444-88-1	2.67e-06 J	1.79e-06 J	1.71e-06 J	1.76e-06 J	2.64e-06 J	1.76e-06 J	1.11e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.00026	0.000218	0.000147	0.000234	0.000247	0.000288	0.000141
E1668A	N	PCB-42	36559-22-5	0.000125	0.000106	7.26e-05	0.000107	0.000112	0.000134	6.27e-05
E1668A	N	PCB-43/73	PCB-43/73	1.42e-05 J	1.15e-05 J	7.61e-06 J	1.34e-05 J	1.53e-05 J	1.83e-05 J	9.14e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000541	0.000452	0.000296	0.000466	0.000535	0.000572	0.000269
E1668A	N	PCB-45/51	PCB-45/51	0.000165	0.000147	9.95e-05	0.00015	0.000185	0.000182	8.34e-05
E1668A	N	PCB-46	41464-47-5	3.1e-05 J	2.88e-05 J	2.04e-05 J	3.24e-05 J	3.28e-05 J	3.7e-05 J	1.65e-05 J
E1668A	N	PCB-48	70362-47-9	7.23e-05	6.17e-05	4.1e-05	6.4e-05	6.87e-05	7.9e-05	3.76e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000351	0.000291	0.000192	0.000315	0.000328	0.000374	0.000188
E1668A	N	PCB-50/53	PCB-50/53	0.00011	0.000103	6.89e-05	0.000108	0.00012	0.000122	6.15e-05
E1668A	N	PCB-52	35693-99-3	0.000564 J	0.000455 J	0.000292 J	0.000468 J	0.000507 J	0.000568 J	0.00028 J
E1668A	N	PCB-54	15968-05-5	1.13e-05 J	8.29e-06 J	9.07e-06 J	6.91e-06 J	1.43e-05 J	1.15e-05 J	5.22e-06 J

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	6.25e-06 J	6.15e-06 J	3.8e-06 J	4.16e-06 J	4.53e-06 J	1.11e-05 J	3.67e-06 J
E1668A	N	PCB-56	41464-43-1	0.000135	0.000116	7.11e-05	0.000119	0.000133	0.000142	6.86e-05
E1668A	N	PCB-57	70424-67-8	9.33e-07 U	1.54e-06 J	7.65e-07 J	1.97e-06 J	2.16e-06 J	2.34e-06 J	8.62e-07 U
E1668A	N	PCB-58	41464-49-7	6.25e-07 J	1.03e-06 J	1.03e-06 J	1.38e-06 U	1.01e-06 J	2.35e-06 J	8.58e-07 U
E1668A	N	PCB-59/62/75	PCB-59/62/75	4.18e-05	3.69e-05 J	2.49e-05 J	3.91e-05 J	4.18e-05	4.97e-05	2.28e-05 J
E1668A	N	PCB-60	33025-41-1	4.43e-05	3.94e-05	2.35e-05 J	4.16e-05	4.65e-05	5.46e-05	2.11e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000532	0.000414	0.000249	0.000413	0.000476	0.000558	0.000247
E1668A	N	PCB-63	74472-34-7	1.21e-05 J	1.11e-05 J	6.73e-06 J	1.21e-05 J	1.2e-05 J	1.47e-05 J	7.16e-06 J
E1668A	N	PCB-64	52663-58-8	0.000153 J	0.000125 J	8.15e-05 J	0.000138	0.000143 J	0.000163 J	8.07e-05
E1668A	N	PCB-66	32598-10-0	0.000335	0.00027	0.000157	0.000273 J	0.000307	0.000344	0.000156 J
E1668A	N	PCB-67	73575-53-8	1.15e-05 J	7.24e-06 J	5.16e-06 J	9.79e-06 J	9.86e-06 J	1.38e-05 J	5.66e-06 J
E1668A	N	PCB-68	73575-52-7	5.9e-06 J	3.51e-06 J	2.42e-06 J	5.87e-06 J	4.77e-06 J	5.05e-06 J	3.54e-06 J
E1668A	N	PCB-72	41464-42-0	6.89e-06 J	5.08e-06 J	3.71e-06 J	4.5e-06 J	4.83e-06 J	6.64e-06 J	3.78e-06 J
E1668A	N	PCB-77	32598-13-3	3.09e-05 J	2.87e-05 J	1.21e-05 J	2.06e-05 J	2.68e-05 J	2.88e-05 J	1.17e-05 J
E1668A	N	PCB-78	70362-49-1	9.65e-07 U	1.06e-06 U	1e-06 U	1.43e-06 U	1.18e-06 U	1.04e-06 U	8.91e-07 U
E1668A	N	PCB-79	41464-48-6	2.21e-06 J	2.27e-06 J	8.77e-07 U	1.25e-06 U	3.53e-06 J	3.33e-06 J	7.82e-07 U
E1668A	N	PCB-80	33284-52-5	8.26e-07 U	9.12e-07 U	8.56e-07 U	1.22e-06 U	1.01e-06 U	8.94e-07 U	7.63e-07 U
E1668A	N	PCB-81	70362-50-4	8.68e-07 U	9.48e-07 U	9.01e-07 U	1.3e-06 U	1.08e-06 U	9.39e-07 U	8.13e-07 U
E1668A	N	PCB-82	52663-62-4	3.95e-05	2.72e-05 J	1.94e-05 J	2.11e-05 J	3.1e-05 J	3.92e-05 J	1.22e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000214	0.000159	9.3e-05	0.000141	0.000193	0.000204	9.01e-05
E1668A	N	PCB-84	52663-60-2	0.000101	7.19e-05	4.4e-05	6.72e-05	7.65e-05	8.8e-05	4.17e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	5.29e-05	3.93e-05	2.33e-05 J	3.45e-05 J	4.06e-05 J	5.36e-05	2.07e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000202	0.000147 J	9.03e-05	0.000129	0.000179 J	0.000196	8.09e-05 J
E1668A	N	PCB-88/91	PCB-88/91	5.66e-05 J	4.66e-05 J	2.46e-05 J	4.58e-05	5.47e-05	6.36e-05	2.86e-05 J
E1668A	N	PCB-89	73575-57-2	1.51e-06 U	1.64e-06 U	1.47e-06 U	1.88e-06 U	1.85e-06 U	1.57e-06 U	1.32e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000335	0.000241	0.000142	2e-04	0.000276	0.000297	0.000134
E1668A	N	PCB-92	52663-61-3	6.05e-05	4.41e-05	2.55e-05 J	3.84e-05 J	5.3e-05	5.86e-05	2.39e-05 J
E1668A	N	PCB-93/100	PCB-93/100	1.63e-05 J	1.64e-05 J	8.52e-06 J	1.33e-05 J	2.07e-05 J	1.75e-05 J	6.55e-06 J
E1668A	N	PCB-94	73575-55-0	5.8e-06 J	5.01e-06 J	1.47e-06 U	4.69e-06 J	1.85e-06 U	5.31e-06 J	1.32e-06 U
E1668A	N	PCB-95	38379-99-6	0.000291	0.000203	0.000134	0.000178 J	0.000231	0.000272	0.000119 J
E1668A	N	PCB-96	73575-54-9	4.25e-06 J	2.92e-06 J	2.89e-06 J	1.4e-06 U	4.76e-06 J	4.08e-06 J	9.89e-07 U
E1668A	N	PCB-98/102	PCB-98/102	1.81e-05 J	1.75e-05 J	1.16e-05 J	1.56e-05 J	1.6e-05 J	2.01e-05 J	9.47e-06 J
E1668A	N	PCB-103	60145-21-3	6.96e-06 J	6.89e-06 J	1.29e-06 U	6.15e-06 J	8.78e-06 J	7.21e-06 J	3.56e-06 J
E1668A	N	PCB-104	56558-16-8	1e-06 U	1.09e-06 U	9.8e-07 U	1.25e-06 U	1.23e-06 U	1.04e-06 U	8.81e-07 U
E1668A	N	PCB-105	32598-14-4	0.000102	7.26e-05	4.02e-05	7e-05	8.51e-05	0.000103	3.48e-05 J
E1668A	N	PCB-106	70424-69-0	8.76e-07 U	8.95e-07 U	7.24e-07 U	1.1e-06 U	8.74e-07 U	8.59e-07 U	6.01e-07 U
E1668A	N	PCB-107	70424-68-9	2.37e-05 J	1.62e-05 J	9.48e-06 J	1.3e-05 J	1.63e-05 J	2.31e-05 J	7.02e-06 J
E1668A	N	PCB-108/124	PCB-108/124	9.8e-06 J	7.05e-06 J	2.72e-06 J	6.71e-06 J	8.05e-06 J	9.89e-06 J	2.67e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.00035	0.000254	0.000157	0.000224	0.000305	0.000333	0.000149
E1668A	N	PCB-111	39635-32-0	9.44e-07 U	1.03e-06 U	9.21e-07 U	1.17e-06 U	1.16e-06 U	9.81e-07 U	8.28e-07 U
E1668A	N	PCB-112	74472-36-9	1.03e-06 U	1.12e-06 U	1e-06 U	1.28e-06 U	1.26e-06 U	1.07e-06 U	9e-07 U
E1668A	N	PCB-114	74472-37-0	4.65e-06 J	3.8e-06 J	1.85e-06 J	3.04e-06 J	4.26e-06 J	4.95e-06 J	1.5e-06 J
E1668A	N	PCB-118	31508-00-6	0.000268 J	0.000176 J	0.000102 J	0.000175 J	0.000217 J	0.000245 J	9.61e-05 J
E1668A	N	PCB-120	68194-12-7	9.72e-07 U	1.06e-06 U	9.48e-07 U	1.21e-06 U	1.19e-06 U	1.01e-06 U	8.52e-07 U
E1668A	N	PCB-121	56558-18-0	9.79e-07 U	1.07e-06 U	9.55e-07 U	1.22e-06 U	1.2e-06 U	1.02e-06 U	8.59e-07 U

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	3.74e-06 J	9.75e-07 U	7.88e-07 U	2.51e-06 J	3.6e-06 J	4.01e-06 J	6.54e-07 U
E1668A	N	PCB-123	65510-44-3	4.79e-06 J	2.89e-06 J	1.63e-06 J	2.99e-06 J	4.27e-06 J	5.56e-06 J	1.39e-06 J
E1668A	N	PCB-126	57465-28-8	1.02e-06 U	9.78e-07 U	8.16e-07 U	1.27e-06 U	9.42e-07 U	1.28e-06 U	6.47e-07 U
E1668A	N	PCB-127	39635-33-1	8.66e-07 U	8.85e-07 U	7.16e-07 U	1.09e-06 U	8.64e-07 U	8.49e-07 U	5.94e-07 U
E1668A	N	PCB-128/166	PCB-128/166	5.14e-05	3.48e-05 J	1.78e-05 J	2.91e-05 J	4.28e-05	5.07e-05	1.29e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.00038	0.000285	0.000133	0.000266	0.000295	0.000394	0.000129
E1668A	N	PCB-130	52663-66-8	2.44e-05 J	1.3e-05 J	8.36e-06 J	1.4e-05 J	1.51e-05 J	2.38e-05 J	7.51e-06 J
E1668A	N	PCB-131	61798-70-7	4.88e-06 J	2.2e-06 U	1.52e-06 U	3.03e-06 U	1.99e-06 U	4.22e-06 J	1.51e-06 U
E1668A	N	PCB-132	38380-05-1	0.00014	9.33e-05	3.79e-05 J	9.19e-05	9.51e-05	0.000127	4.12e-05
E1668A	N	PCB-133	35694-04-3	5.81e-06 J	3.87e-06 J	2.89e-06 J	5.15e-06 J	6.64e-06 J	6.6e-06 J	1.34e-06 J
E1668A	N	PCB-134/143	PCB-134/143	1.98e-05 J	1.62e-05 J	5.38e-06 J	1.57e-05 J	1.78e-05 J	2.52e-05 J	6.4e-06 J
E1668A	N	PCB-135/151	PCB-135/151	1e-04	7.28e-05	4.34e-05	6.62e-05 J	9.51e-05	0.000111	4.05e-05 J
E1668A	N	PCB-136	38411-22-2	3.83e-05 J	2.7e-05 J	1.53e-05 J	2.77e-05 J	3.54e-05 J	3.5e-05 J	1.33e-05 J
E1668A	N	PCB-137	35694-06-5	1.62e-05 J	9.2e-06 J	4.78e-06 J	9.53e-06 J	8.66e-06 J	1.65e-05 J	4.67e-06 J
E1668A	N	PCB-139/140	PCB-139/140	7.22e-06 J	1.84e-06 U	1.28e-06 U	2.54e-06 U	5.44e-06 J	6.63e-06 J	1.27e-06 U
E1668A	N	PCB-141	52712-04-6	6.77e-05	4.8e-05	2.06e-05 J	3.54e-05 J	5.04e-05	7.09e-05	1.72e-05 J
E1668A	N	PCB-142	41411-61-4	2.21e-06 U	2.12e-06 U	1.47e-06 U	2.91e-06 U	1.91e-06 U	2.32e-06 U	1.45e-06 U
E1668A	N	PCB-144	68194-14-9	9.78e-06 J	5.78e-06 J	3.51e-06 J	6.72e-06 J	9.22e-06 J	1.04e-05 J	1.22e-06 U
E1668A	N	PCB-145	74472-40-5	1.12e-06 U	1.22e-06 U	1.04e-06 U	1.62e-06 U	1.44e-06 U	1.32e-06 U	9.25e-07 U
E1668A	N	PCB-146	51908-16-8	6.64e-05	4.77e-05	2.11e-05 J	4.27e-05	4.75e-05	6.68e-05	2.17e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000359	0.000274	0.000107	0.000254	0.000183 J	0.00031	0.000137
E1668A	N	PCB-148	74472-41-6	1.56e-06 U	1.7e-06 U	1.45e-06 U	2.26e-06 U	2.01e-06 U	1.85e-06 U	1.29e-06 U
E1668A	N	PCB-150	68194-08-1	1.09e-06 U	1.18e-06 U	1.01e-06 U	1.58e-06 U	1.4e-06 U	1.29e-06 U	9.02e-07 U
E1668A	N	PCB-152	68194-09-2	1.11e-06 U	1.21e-06 U	1.03e-06 U	1.61e-06 U	1.43e-06 U	1.32e-06 U	9.2e-07 U
E1668A	N	PCB-153/168	PCB-153/168	0.000335	0.000256	0.000117	0.000246	0.000259	0.000349	0.000116
E1668A	N	PCB-154	60145-22-4	6.37e-06 J	5.24e-06 J	2.98e-06 J	4.15e-06 J	5.96e-06 J	8.71e-06 J	1.07e-06 U
E1668A	N	PCB-155	33979-03-2	1.06e-06 U	1.15e-06 U	9.82e-07 U	1.53e-06 U	1.36e-06 U	1.25e-06 U	8.77e-07 U
E1668A	N	PCB-156/157	PCB-156/157	3.17e-05 J	1.84e-05 J	1.02e-05 J	1.84e-05 J	2.61e-05 J	3.23e-05 J	8.18e-06 J
E1668A	N	PCB-158	74472-42-7	3.13e-05 J	1.93e-05 J	1.03e-05 J	1.93e-05 J	2.69e-05 J	3.62e-05 J	9.01e-06 J
E1668A	N	PCB-159	39635-35-3	1.47e-06 U	1.41e-06 U	9.75e-07 U	1.94e-06 U	1.27e-06 U	1.55e-06 U	9.67e-07 U
E1668A	N	PCB-161	74472-43-8	1.46e-06 U	1.4e-06 U	9.7e-07 U	1.93e-06 U	1.27e-06 U	1.54e-06 U	9.62e-07 U
E1668A	N	PCB-162	39635-34-2	1.45e-06 U	1.39e-06 U	9.63e-07 U	1.91e-06 U	1.26e-06 U	3.08e-06 J	9.55e-07 U
E1668A	N	PCB-164	74472-45-0	2.38e-05 J	1.79e-05 J	7.61e-06 J	1.7e-05 J	1.89e-05 J	2.63e-05 J	5.58e-06 J
E1668A	N	PCB-165	74472-46-1	1.61e-06 U	1.54e-06 U	1.07e-06 U	2.12e-06 U	1.39e-06 U	1.69e-06 U	1.06e-06 U
E1668A	N	PCB-167	52663-72-6	9.98e-06 J	5.46e-06 J	3.4e-06 J	4.89e-06 J	7.01e-06 J	8.62e-06 J	2.35e-06 J
E1668A	N	PCB-169	32774-16-6	1.58e-06 U	1.5e-06 U	8.68e-07 U	2e-06 U	1.27e-06 U	1.67e-06 U	9.33e-07 U
E1668A	N	PCB-170	35065-30-6	5.63e-05 J	4.35e-05 J	2.26e-05 J	4.09e-05 J	6.54e-05	7.75e-05	2.14e-05 J
E1668A	N	PCB-171/173	PCB-171/173	1.53e-05 J	1.08e-05 J	7.5e-06 J	1.35e-05 J	1.63e-05 J	2.05e-05 J	4.96e-06 J
E1668A	N	PCB-172	52663-74-8	8.48e-06 J	7.91e-06 J	4.4e-06 J	5.78e-06 J	7.91e-06 J	1.22e-05 J	3.04e-06 J
E1668A	N	PCB-174	38411-25-5	6.36e-05	5.28e-05	2.6e-05 J	4.54e-05	6.54e-05	7.57e-05	2.41e-05 J
E1668A	N	PCB-175	40186-70-7	1.3e-06 U	1.38e-06 U	9.07e-07 U	2.18e-06 J	1.18e-06 U	1.33e-06 U	9.48e-07 U
E1668A	N	PCB-176	52663-65-7	7.58e-06 J	6.06e-06 J	3.23e-06 J	4.77e-06 J	7.89e-06 J	9.57e-06 J	2.7e-06 J
E1668A	N	PCB-177	52663-70-4	3.64e-05 J	2.89e-05 J	1.24e-05 J	2.66e-05 J	3.58e-05 J	4.6e-05	1.48e-05 J
E1668A	N	PCB-178	52663-67-9	1.85e-05 J	1.18e-05 J	5.22e-06 J	1.25e-05 J	1.48e-05 J	2.12e-05 J	5.57e-06 J
E1668A	N	PCB-179	52663-64-6	3.46e-05 J	2.96e-05 J	1.46e-05 J	2.43e-05 J	3.05e-05 J	4.26e-05	1.39e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNW	N03-TNNW	N03-TNNW
				N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE	N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW
				1.1	2.75	3.1	2.9	2.6	2.7	3.14
				NB	NB	NB	NB	NB	NB	NB
				4.57	4.57	4.57	4.57	3.77	3.77	3.77
				N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS	N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.000126	0.000101	6.19e-05	9.44e-05	0.00014	0.000154	4.9e-05
E1668A	N	PCB-181	74472-47-2	1.3e-06 U	1.38e-06 U	9.06e-07 U	1.67e-06 U	1.17e-06 U	1.33e-06 U	9.47e-07 U
E1668A	N	PCB-182	60145-23-5	1.26e-06 U	1.34e-06 U	8.81e-07 U	1.63e-06 U	1.14e-06 U	1.29e-06 U	9.2e-07 U
E1668A	N	PCB-183/185	PCB-183/185	4.74e-05	3.18e-05 J	1.99e-05 J	3.68e-05 J	5.18e-05	5.7e-05	1.59e-05 J
E1668A	N	PCB-184	74472-48-3	1.07e-06 U	1.14e-06 U	7.48e-07 U	1.38e-06 U	9.69e-07 U	1.09e-06 U	3.84e-06 J
E1668A	N	PCB-186	74472-49-4	1.04e-06 U	1.11e-06 U	7.26e-07 U	1.34e-06 U	9.41e-07 U	1.06e-06 U	7.59e-07 U
E1668A	N	PCB-187	52663-68-0	9.75e-05	8.39e-05	4.12e-05	7.98e-05	9.76e-05	0.000121	3.72e-05 J
E1668A	N	PCB-188	74487-85-7	8.4e-07 U	8.8e-07 U	6.21e-07 U	1.07e-06 U	8.22e-07 U	8.66e-07 U	6.24e-07 U
E1668A	N	PCB-189	39635-31-9	1.03e-06 U	1.05e-06 U	5.59e-07 U	1.3e-06 U	1.43e-06 J	2.1e-06 J	1.29e-06 J
E1668A	N	PCB-190	41411-64-7	7.1e-06 J	6.18e-06 J	3.31e-06 J	6.49e-06 J	9.62e-06 J	9.28e-06 J	2.95e-06 J
E1668A	N	PCB-191	74472-50-7	9.91e-07 U	1.05e-06 U	6.9e-07 U	1.28e-06 U	8.95e-07 U	2.49e-06 J	7.21e-07 U
E1668A	N	PCB-192	74472-51-8	1.11e-06 U	1.17e-06 U	7.71e-07 U	1.42e-06 U	9.99e-07 U	1.13e-06 U	8.06e-07 U
E1668A	N	PCB-194	35694-08-7	3.45e-05 J	2.93e-05 J	1.44e-05 J	2.63e-05 J	3.43e-05 J	4.78e-05	1.25e-05 J
E1668A	N	PCB-195	52663-78-2	1.31e-05 J	1e-05 J	4.62e-06 J	8.56e-06 J	9.99e-06 J	1.34e-05 J	3.55e-06 J
E1668A	N	PCB-196	42740-50-1	1.26e-05 J	9.84e-06 J	6.26e-06 J	9.98e-06 J	1.79e-05 J	1.95e-05 J	4.56e-06 J
E1668A	N	PCB-197	33091-17-7	9.17e-07 U	8.19e-07 U	6.69e-07 U	1.19e-06 U	8.63e-07 U	9.64e-07 U	5.45e-07 U
E1668A	N	PCB-198/199	PCB-198/199	3.86e-05 J	2.91e-05 J	1.51e-05 J	2.46e-05 J	3.6e-05 J	3.48e-05 J	1.61e-05 J
E1668A	N	PCB-200	52663-73-7	3.33e-06 J	2.07e-06 J	1.94e-06 J	2.91e-06 J	2.22e-06 J	4.1e-06 J	1.19e-06 J
E1668A	N	PCB-201	40186-71-8	4.73e-06 J	4.86e-06 J	2.4e-06 J	1.13e-06 U	4.24e-06 J	6.03e-06 J	2.52e-06 J
E1668A	N	PCB-202	2136-99-4	1.35e-05 J	8.78e-06 J	5.64e-06 J	9.79e-06 J	1.03e-05 J	1.78e-05 J	4.84e-06 J
E1668A	N	PCB-203	52663-76-0	2.46e-05 J	2.11e-05 J	1.31e-05 J	1.9e-05 J	2.51e-05 J	2.77e-05 J	7.29e-06 J
E1668A	N	PCB-204	74472-52-9	9.53e-07 U	8.51e-07 U	6.95e-07 U	1.24e-06 U	8.97e-07 U	1e-06 U	5.66e-07 U
E1668A	N	PCB-205	74472-53-0	9.99e-07 U	1.02e-06 U	5.58e-07 U	1.37e-06 U	6.34e-07 U	1.01e-06 U	6.13e-07 U
E1668A	N	PCB-206	40186-72-9	4.19e-05	2.72e-05 J	1.66e-05 J	2.46e-05 J	3.61e-05 J	3.88e-05 J	1.68e-05 J
E1668A	N	PCB-207	52663-79-3	3.02e-06 J	1.55e-06 U	1.56e-06 J	1.78e-06 U	3.2e-06 J	5.61e-06 J	1.43e-06 J
E1668A	N	PCB-208	52663-77-1	1.22e-05 J	1.06e-05 J	5.81e-06 J	9.73e-06 J	1.17e-05 J	1.49e-05 J	4.81e-06 J
E1668A	N	PCB-209	2051-24-3	3.17e-05 J	1.68e-05 J	1.52e-05 J	3.03e-05 J	3.18e-05 J	2.98e-05 J	2.17e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.0104 J	0.00875 J	0.00556 J	0.0085 J	0.00976 J	0.0109 J	0.00538 J
E1668A	N	Total PCB (a)	PCB-Total	0.0108 J	0.00906 J	0.00574 J	0.0088 J	0.0101 J	0.0113 J	0.00554 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.09e-07J	1.01e-07J	8.09e-08J	1.27e-07J	1.09e-07J	1.45e-07J	7.09e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	4.68e-05	8.04e-06 J	3.16e-05 J	1.46e-05 J	9.92e-06 J	2.25e-05 J	1.63e-05 J
E1668A	N	PCB-2	2051-61-8	2.75e-06 U	4.55e-07 U	3.56e-06 U	2.35e-07 U	1.91e-06 U	1.4e-06 U	1.42e-06 U
E1668A	N	PCB-3	2051-62-9	8.26e-06 U	5.36e-07 U	6.95e-06 U	1.77e-06 U	2.49e-06 U	5.27e-06 U	3.32e-06 U
E1668A	N	PCB-4	13029-08-8	0.000205 J	8.19e-05 J	9.46e-05 J	0.000103 J	9.33e-05 J	0.000109 J	9.3e-05 J
E1668A	N	PCB-5	16605-91-7	2.03e-06 J	2.71e-06 U	9.48e-07 U	1.31e-06 J	1.04e-06 J	1.68e-06 U	2.6e-06 U
E1668A	N	PCB-6	25569-80-6	3.5e-05 J	8.97e-06 J	2.12e-05 J	1.47e-05 J	1.07e-05 J	2.2e-05 J	1.68e-05 J
E1668A	N	PCB-7	33284-50-3	4.83e-06 U	2.15e-06 U	2.85e-06 U	2.35e-06 U	2.23e-06 U	2.98e-06 U	2.51e-06 U
E1668A	N	PCB-8	34883-43-7	0.000124 J	2.81e-05 J	6.33e-05 J	4.92e-05 J	3.98e-05 J	7.22e-05 J	5.7e-05 J
E1668A	N	PCB-9	34883-39-1	7.87e-06 U	2.63e-06 U	4.12e-06 J	4.1e-06 U	3.22e-06 J	3.68e-06 U	3.58e-06 U
E1668A	N	PCB-10	33146-45-1	3.3e-05 J	1.42e-05 J	1.29e-05 J	1.49e-05 J	1.27e-05 J	1.75e-05 J	1.3e-05 J
E1668A	N	PCB-11	2050-67-1	0.00011 J	2.31e-05 U	7.6e-05 U	5.89e-05 J	5.25e-05 U	6.89e-05 J	7.74e-05 J
E1668A	N	PCB-12/13	PCB-12/13	2.82e-05 J	6.45e-06 U	1.4e-05 U	1.17e-05 U	9.26e-06 U	2.17e-05 J	9.93e-06 J
E1668A	N	PCB-14	34883-41-5	1.65e-06 U	2.22e-06 U	6.08e-07 U	1.43e-06 U	1.05e-06 U	1.37e-06 U	2.13e-06 U
E1668A	N	PCB-15	2050-68-2	0.000146 J	4.9e-05 J	4.96e-05 J	5.55e-05	4.4e-05 J	1e-04	5.54e-05
E1668A	N	PCB-16	38444-78-9	0.000114	2.53e-05 J	4.58e-05	4.04e-05	3.99e-05	6.2e-05	3.98e-05
E1668A	N	PCB-17	37680-66-3	0.00021	6e-05	7.32e-05 J	7.13e-05	6.67e-05	0.000109	6.95e-05
E1668A	N	PCB-18/30	PCB-18/30	0.000358	0.000106	0.000134	0.000136	0.000118	0.000179	0.000128
E1668A	N	PCB-19	38444-73-4	8.6e-05	2.76e-05 J	3.63e-05 J	3.42e-05 J	3.27e-05 J	4.46e-05	3.22e-05 J
E1668A	N	PCB-20/28	PCB-20/28	0.000645	0.000147	0.000186	0.000199	0.000172	0.000353	0.000178
E1668A	N	PCB-21/33	PCB-21/33	0.000139	2.02e-05 J	5.31e-05	4.61e-05	3.72e-05 J	7.03e-05	4.31e-05
E1668A	N	PCB-22	38444-85-8	0.000137 J	2.83e-05 J	4.29e-05 J	4.36e-05	3.85e-05 J	6.82e-05	3.88e-05
E1668A	N	PCB-23	55720-44-0	7.58e-07 U	9.28e-07 U	2.81e-07 U	5.78e-07 U	4.78e-07 U	6.89e-07 U	8.78e-07 U
E1668A	N	PCB-24	55702-45-9	3.77e-06 J	1.4e-06 U	1.13e-06 J	1.41e-06 J	7.74e-07 U	2.59e-06 J	1.41e-06 U
E1668A	N	PCB-25	55712-37-3	8.4e-05	1.85e-05 J	2.28e-05 J	2.51e-05 J	2.36e-05 J	4.28e-05	2.07e-05 J
E1668A	N	PCB-26/29	PCB-26/29	0.00013	3.35e-05 J	4.04e-05	4.42e-05	3.7e-05 J	7e-05	4.02e-05
E1668A	N	PCB-27	38444-76-7	6.6e-05	1.8e-05 J	2.2e-05 J	2.14e-05 J	1.93e-05 J	3.18e-05 J	1.9e-05 J
E1668A	N	PCB-31	16606-02-3	0.000487 J	0.000116 J	0.000155 J	0.000162 J	0.000137 J	0.000261 J	0.000145 J
E1668A	N	PCB-32	38444-77-8	0.000163	4.81e-05	6.1e-05 J	5.96e-05	5.47e-05 J	8.83e-05	5.94e-05
E1668A	N	PCB-34	37680-68-5	4.28e-06 J	9.13e-07 U	1.32e-06 J	5.69e-07 U	4.71e-07 U	1.66e-06 J	8.65e-07 U
E1668A	N	PCB-35	37680-69-6	8.53e-06 J	9.39e-07 U	3.75e-06 U	3.44e-06 J	6.43e-06 J	5.16e-06 J	1.98e-06 J
E1668A	N	PCB-36	38444-87-0	7.41e-07 U	9.07e-07 U	5.13e-07 J	5.65e-07 U	4.67e-07 U	6.74e-07 U	8.59e-07 U
E1668A	N	PCB-37	38444-90-5	0.000115 J	3.16e-05 J	3.63e-05 J	3.97e-05	3.04e-05 J	7.37e-05	3.71e-05 J
E1668A	N	PCB-38	53555-66-1	7.82e-07 U	9.57e-07 U	2.9e-07 U	5.96e-07 U	4.93e-07 U	7.11e-07 U	9.06e-07 U
E1668A	N	PCB-39	38444-88-1	2.8e-06 J	8.51e-07 U	1.26e-06 J	1.37e-06 J	4.38e-07 U	1.9e-06 J	8.05e-07 U
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000349	6.42e-05	8.34e-05	9.12e-05	7.99e-05	0.000167	8.05e-05
E1668A	N	PCB-42	36559-22-5	0.000166	3.03e-05 J	3.85e-05	4.2e-05	3.71e-05 J	7.75e-05	3.65e-05 J
E1668A	N	PCB-43/73	PCB-43/73	1.74e-05 J	3.04e-06 J	4.09e-06 J	4.98e-06 J	4.31e-06 J	7.92e-06 J	3.69e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000725	0.000133	0.000165	0.000183	0.000156	0.00032	0.000153
E1668A	N	PCB-45/51	PCB-45/51	0.000222	2.79e-05 J	4.26e-05	4.81e-05	4.27e-05	7.73e-05	3.51e-05 J
E1668A	N	PCB-46	41464-47-5	4.52e-05	6.98e-06 J	1.16e-05 J	1.16e-05 J	1.01e-05 J	1.73e-05 J	6.29e-06 J
E1668A	N	PCB-48	70362-47-9	1e-04	1.79e-05 J	2.4e-05 J	2.23e-05 J	2.22e-05 J	4.62e-05	2.01e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000455	9.26e-05	0.000109	0.000121	0.000107	0.000218	0.000104
E1668A	N	PCB-50/53	PCB-50/53	0.000141	2.56e-05 J	3.11e-05 J	3.69e-05 J	3.21e-05 J	5.45e-05	2.83e-05 J
E1668A	N	PCB-52	35693-99-3	0.000671 J	0.00015	0.00018 J	0.000201	0.000172 J	0.000331	0.000168
E1668A	N	PCB-54	15968-05-5	1.4e-05 J	1.96e-06 U	2.7e-06 J	2.66e-06 J	2.81e-06 J	3.85e-06 J	1.9e-06 U

				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	1e-05 J	1.17e-06 U	3.13e-06 J	2.45e-06 J	7.18e-07 U	4.51e-06 J	1.09e-06 U
E1668A	N	PCB-56	41464-43-1	0.000187	3.86e-05	4.66e-05 J	5.19e-05	4.41e-05 J	0.000105	4.48e-05
E1668A	N	PCB-57	70424-67-8	2.71e-06 J	1.11e-06 U	1.02e-06 J	6.64e-07 U	6.84e-07 U	1.27e-06 J	1.04e-06 U
E1668A	N	PCB-58	41464-49-7	2.28e-06 J	1.1e-06 U	4.99e-07 J	6.61e-07 U	6.8e-07 U	1.78e-06 J	1.03e-06 U
E1668A	N	PCB-59/62/75	PCB-59/62/75	5.58e-05	1.06e-05 J	1.35e-05 J	1.51e-05 J	1.45e-05 J	2.65e-05 J	1.06e-05 J
E1668A	N	PCB-60	33025-41-1	7.27e-05	1.24e-05 J	1.73e-05 J	1.7e-05 J	1.49e-05 J	3.72e-05 J	1.59e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	7e-04	0.000135	0.00018	0.00019	0.000161	0.000381	0.000166
E1668A	N	PCB-63	74472-34-7	1.78e-05 J	3.05e-06 J	4.46e-06 J	4.96e-06 J	3.28e-06 J	9.43e-06 J	3.24e-06 J
E1668A	N	PCB-64	52663-58-8	0.000202	3.91e-05	5.47e-05 J	6.25e-05	5.19e-05 J	0.000109	4.98e-05
E1668A	N	PCB-66	32598-10-0	0.000436 J	9.2e-05	0.000107 J	0.000116	0.000101 J	0.000245	0.000104
E1668A	N	PCB-67	73575-53-8	1.57e-05 J	2.23e-06 J	3.8e-06 J	3.02e-06 J	2.47e-06 J	7.86e-06 J	2.52e-06 J
E1668A	N	PCB-68	73575-52-7	6.02e-06 J	1.69e-06 J	1.78e-06 J	1.29e-06 J	1.22e-06 J	3.16e-06 J	9.42e-07 U
E1668A	N	PCB-72	41464-42-0	6.79e-06 J	1.98e-06 J	1.73e-06 J	2.07e-06 J	1.79e-06 J	4.24e-06 J	1.01e-06 U
E1668A	N	PCB-77	32598-13-3	3.52e-05 J	6.59e-06 J	1.08e-05 J	1.05e-05 J	3.01e-05 J	2.29e-05 J	7.72e-06 J
E1668A	N	PCB-78	70362-49-1	1.14e-06 U	1.15e-06 U	3.44e-07 U	6.86e-07 U	7.06e-07 U	8.69e-07 U	1.07e-06 U
E1668A	N	PCB-79	41464-48-6	2.82e-06 J	1.01e-06 U	1.06e-06 J	1.31e-06 J	1.24e-06 J	2.29e-06 J	9.43e-07 U
E1668A	N	PCB-80	33284-52-5	9.77e-07 U	9.82e-07 U	2.95e-07 U	5.88e-07 U	6.05e-07 U	7.44e-07 U	9.2e-07 U
E1668A	N	PCB-81	70362-50-4	1.02e-06 U	1.07e-06 U	7.55e-07 J	6.27e-07 U	6.43e-07 U	7.83e-07 U	9.73e-07 U
E1668A	N	PCB-82	52663-62-4	3.53e-05 J	7.68e-06 J	1.7e-05 J	1.18e-05 J	8.36e-06 J	3.05e-05 J	1.04e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000243	5.76e-05	8.35e-05	8.01e-05	6.88e-05	0.000169	6.94e-05
E1668A	N	PCB-84	52663-60-2	0.000107	2.17e-05 J	3.49e-05 J	3.03e-05 J	2.85e-05 J	6.67e-05	2.38e-05 J
E1668A	N	PCB-85/116/117	PCB-85/116/117	6.4e-05	1.45e-05 J	2.3e-05 J	2.04e-05 J	1.49e-05 J	4.39e-05	1.68e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000224 J	5.46e-05 J	8.2e-05 J	7.99e-05 J	6.22e-05 J	0.000151 J	6.28e-05 J
E1668A	N	PCB-88/91	PCB-88/91	7.37e-05	1.35e-05 J	2.41e-05 J	2.19e-05 J	1.85e-05 J	4.17e-05 J	1.87e-05 J
E1668A	N	PCB-89	73575-57-2	1.78e-06 U	1.67e-06 U	5.84e-07 U	1.2e-06 U	9.67e-07 U	2.32e-06 J	1.72e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000356	9.06e-05	0.000132	0.000121	0.000103	0.000244	0.000112
E1668A	N	PCB-92	52663-61-3	6.23e-05 J	1.26e-05 J	2.29e-05 J	2.09e-05 J	1.51e-05 J	4.23e-05	1.12e-05 J
E1668A	N	PCB-93/100	PCB-93/100	2.71e-05 J	1.56e-06 J	1.1e-06 J	4.03e-06 J	1.93e-06 J	1.22e-05 J	1.37e-06 J
E1668A	N	PCB-94	73575-55-0	8.05e-06 J	1.67e-06 U	1.72e-06 J	1.2e-06 U	9.67e-07 U	1.4e-06 U	1.71e-06 U
E1668A	N	PCB-95	38379-99-6	0.000304 J	7.87e-05	0.000113	0.000104	8.64e-05	0.000193	9.6e-05
E1668A	N	PCB-96	73575-54-9	4.78e-06 J	1.25e-06 U	1.27e-06 J	8.99e-07 U	7.23e-07 U	2.11e-06 J	1.28e-06 U
E1668A	N	PCB-98/102	PCB-98/102	2.52e-05 J	5.2e-06 J	7.09e-06 J	5.48e-06 J	5.33e-06 J	1.42e-05 J	4.68e-06 J
E1668A	N	PCB-103	60145-21-3	7.77e-06 J	1.47e-06 U	2.28e-06 J	1.64e-06 J	8.48e-07 U	5.43e-06 J	1.5e-06 U
E1668A	N	PCB-104	56558-16-8	1.19e-06 U	1.11e-06 U	3.89e-07 U	8.01e-07 U	6.44e-07 U	9.35e-07 U	1.14e-06 U
E1668A	N	PCB-105	32598-14-4	0.000123	2.13e-05 J	4.28e-05	3.91e-05	3.18e-05 J	8.37e-05	2.72e-05 J
E1668A	N	PCB-106	70424-69-0	9.89e-07 U	9.75e-07 U	3.54e-07 U	6.68e-07 U	5.92e-07 U	8.38e-07 U	9.98e-07 U
E1668A	N	PCB-107	70424-68-9	2.5e-05 J	4.65e-06 J	8.03e-06 J	6.91e-06 J	6.26e-06 J	1.71e-05 J	5.31e-06 J
E1668A	N	PCB-108/124	PCB-108/124	1.11e-05 J	1.91e-06 J	4.07e-06 U	3.05e-06 J	2.57e-06 J	6.16e-06 J	2.29e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000375	0.000109	0.000153	0.000142	0.000113	0.000285	0.000122
E1668A	N	PCB-111	39635-32-0	1.11e-06 U	1.05e-06 U	3.66e-07 U	7.53e-07 U	6.06e-07 U	8.79e-07 U	1.07e-06 U
E1668A	N	PCB-112	74472-36-9	1.21e-06 U	1.14e-06 U	3.97e-07 U	8.18e-07 U	6.58e-07 U	9.55e-07 U	1.17e-06 U
E1668A	N	PCB-114	74472-37-0	7.08e-06 J	8.7e-07 U	2.5e-06 J	1.68e-06 J	1.7e-06 J	3.68e-06 J	9.05e-07 U
E1668A	N	PCB-118	31508-00-6	0.000317 J	6.88e-05	0.000106 J	9.82e-05	8e-05	0.000212	8.55e-05
E1668A	N	PCB-120	68194-12-7	1.15e-06 U	1.08e-06 U	3.77e-07 U	7.75e-07 U	6.23e-07 U	9.04e-07 U	1.11e-06 U
E1668A	N	PCB-121	56558-18-0	1.15e-06 U	1.09e-06 U	3.79e-07 U	7.81e-07 U	6.28e-07 U	9.12e-07 U	1.11e-06 U

				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	6.39e-06 J	1.06e-06 U	1.83e-06 J	1.51e-06 J	6.45e-07 U	3.11e-06 J	1.09e-06 U
E1668A	N	PCB-123	65510-44-3	5.46e-06 J	9.85e-07 U	2.58e-06 U	8.82e-07 J	6.37e-07 J	4.18e-06 J	1.03e-06 U
E1668A	N	PCB-126	57465-28-8	1.12e-06 J	9.72e-07 U	4.37e-07 U	6.83e-07 U	6.03e-07 U	8.54e-07 U	1.01e-06 U
E1668A	N	PCB-127	39635-33-1	9.77e-07 U	9.63e-07 U	3.5e-07 U	6.6e-07 U	5.85e-07 U	8.28e-07 U	9.87e-07 U
E1668A	N	PCB-128/166	PCB-128/166	5.9e-05	1.18e-05 J	1.84e-05 J	1.62e-05 J	1.27e-05 J	3.54e-05 J	1.27e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000447	8.61e-05	0.000132	0.000118	8.45e-05	0.000254	0.000104
E1668A	N	PCB-130	52663-66-8	2.21e-05 J	3.63e-06 J	7.15e-06 J	5.11e-06 J	5.29e-06 J	1.27e-05 J	1.9e-06 U
E1668A	N	PCB-131	61798-70-7	3.82e-06 J	1.96e-06 U	7.62e-07 U	1.38e-06 U	1.19e-06 U	1.61e-06 U	1.95e-06 U
E1668A	N	PCB-132	38380-05-1	0.000158	2.43e-05 J	4e-05	3.55e-05 J	2.46e-05 J	7.5e-05	2.57e-05 J
E1668A	N	PCB-133	35694-04-3	6.81e-06 J	1.79e-06 U	2.19e-06 J	1.27e-06 U	1.09e-06 U	3.1e-06 J	1.79e-06 U
E1668A	N	PCB-134/143	PCB-134/143	2.64e-05 J	1.91e-06 U	6.36e-06 J	5.84e-06 J	3.02e-06 J	9.66e-06 J	4.03e-06 J
E1668A	N	PCB-135/151	PCB-135/151	0.000126	2.32e-05 J	4.6e-05	3.69e-05 J	2.66e-05 J	8.39e-05	2.68e-05 J
E1668A	N	PCB-136	38411-22-2	4.46e-05	7.1e-06 J	1.48e-05 J	1.24e-05 J	8.8e-06 J	2.75e-05 J	8.36e-06 J
E1668A	N	PCB-137	35694-06-5	1.64e-05 J	2.83e-06 J	5.25e-06 J	4.06e-06 J	2.95e-06 J	7.55e-06 J	1.64e-06 U
E1668A	N	PCB-139/140	PCB-139/140	7.9e-06 J	1.64e-06 U	2.24e-06 J	1.56e-06 J	9.93e-07 U	3.18e-06 J	1.63e-06 U
E1668A	N	PCB-141	52712-04-6	7.94e-05	1.12e-05 J	2.22e-05 J	1.82e-05 J	1.15e-05 J	4.18e-05	1.11e-05 J
E1668A	N	PCB-142	41411-61-4	2.43e-06 U	1.88e-06 U	7.32e-07 U	1.33e-06 U	1.14e-06 U	1.55e-06 U	1.88e-06 U
E1668A	N	PCB-144	68194-14-9	1.14e-05 J	1.48e-06 U	5.1e-06 J	3.18e-06 J	3.2e-06 J	7.74e-06 J	1.49e-06 U
E1668A	N	PCB-145	74472-40-5	1.4e-06 U	1.12e-06 U	4.83e-07 U	8.01e-07 U	7.63e-07 U	9.45e-07 U	1.13e-06 U
E1668A	N	PCB-146	51908-16-8	7.57e-05	1.13e-05 J	1.98e-05 J	1.72e-05 J	1.28e-05 J	3.93e-05	1.39e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000411	7.06e-05	0.000101	9.84e-05	7.18e-05	0.000202	8.17e-05
E1668A	N	PCB-148	74472-41-6	1.96e-06 U	1.57e-06 U	6.75e-07 U	1.12e-06 U	1.07e-06 U	1.32e-06 U	1.58e-06 U
E1668A	N	PCB-150	68194-08-1	1.36e-06 U	1.09e-06 U	4.71e-07 U	7.81e-07 U	7.43e-07 U	9.21e-07 U	1.1e-06 U
E1668A	N	PCB-152	68194-09-2	1.39e-06 U	1.11e-06 U	4.8e-07 U	7.97e-07 U	7.58e-07 U	9.39e-07 U	1.12e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.000412	7.46e-05	0.000111	0.000103	7.86e-05	0.000218	9.03e-05
E1668A	N	PCB-154	60145-22-4	6.98e-06 J	1.3e-06 U	1.36e-06 J	1.33e-06 J	1.62e-06 J	4.46e-06 J	2.1e-06 J
E1668A	N	PCB-155	33979-03-2	1.33e-06 U	1.06e-06 U	4.58e-07 U	7.59e-07 U	7.23e-07 U	8.95e-07 U	1.07e-06 U
E1668A	N	PCB-156/157	PCB-156/157	3.73e-05 J	6.67e-06 J	1.27e-05 J	9.59e-06 J	7.73e-06 J	2.17e-05 J	8.27e-06 J
E1668A	N	PCB-158	74472-42-7	4.03e-05	6.04e-06 J	1.09e-05 J	8.49e-06 J	6.65e-06 J	2.17e-05 J	7.25e-06 J
E1668A	N	PCB-159	39635-35-3	1.61e-06 U	1.25e-06 U	1.21e-06 J	8.85e-07 U	7.59e-07 U	1.88e-06 J	1.25e-06 U
E1668A	N	PCB-161	74472-43-8	1.61e-06 U	1.25e-06 U	4.85e-07 U	8.81e-07 U	7.55e-07 U	1.02e-06 U	1.24e-06 U
E1668A	N	PCB-162	39635-34-2	1.6e-06 U	1.24e-06 U	4.81e-07 U	8.74e-07 U	7.49e-07 U	2.17e-06 J	1.23e-06 U
E1668A	N	PCB-164	74472-45-0	3.13e-05 J	3.86e-06 J	7.84e-06 J	5.77e-06 J	4.37e-06 J	1.58e-05 J	4.93e-06 J
E1668A	N	PCB-165	74472-46-1	1.77e-06 U	1.37e-06 U	5.33e-07 U	9.68e-07 U	8.3e-07 U	1.13e-06 U	1.36e-06 U
E1668A	N	PCB-167	52663-72-6	1.11e-05 J	2.15e-06 J	3.96e-06 J	2.36e-06 J	2.39e-06 J	7.02e-06 J	2.97e-06 J
E1668A	N	PCB-169	32774-16-6	1.52e-06 U	9.12e-07 U	3.32e-07 U	6.27e-07 U	5.38e-07 U	7.1e-07 U	8.96e-07 U
E1668A	N	PCB-170	35065-30-6	8.26e-05 J	1.29e-05 J	2.8e-05 J	2.14e-05 J	1.74e-05 J	5.48e-05	1.92e-05 J
E1668A	N	PCB-171/173	PCB-171/173	2.44e-05 J	5.01e-06 J	8.43e-06 J	5.04e-06 J	4.82e-06 J	1.44e-05 J	4.75e-06 J
E1668A	N	PCB-172	52663-74-8	1.02e-05 J	1.45e-06 U	4.87e-06 J	2.36e-06 J	2.76e-06 J	7.79e-06 J	2.95e-06 J
E1668A	N	PCB-174	38411-25-5	8.87e-05	1.33e-05 J	3e-05 J	2.23e-05 J	1.73e-05 J	5.61e-05	1.97e-05 J
E1668A	N	PCB-175	40186-70-7	1.52e-06 U	1.3e-06 U	1.13e-06 J	8.09e-07 U	7.45e-07 U	1e-06 U	1.27e-06 U
E1668A	N	PCB-176	52663-65-7	1.06e-05 J	9.93e-07 U	3.95e-06 J	2.61e-06 J	2.06e-06 J	6.02e-06 J	1.91e-06 J
E1668A	N	PCB-177	52663-70-4	4.7e-05 J	9.51e-06 J	1.82e-05 J	1.07e-05 J	1.12e-05 J	3.36e-05 J	1.21e-05 J
E1668A	N	PCB-178	52663-67-9	2.1e-05 J	3.03e-06 J	5.97e-06 J	5.47e-06 J	3.6e-06 J	1.26e-05 J	2.9e-06 J
E1668A	N	PCB-179	52663-64-6	4.85e-05	7.95e-06 J	1.54e-05 J	1.18e-05 J	9.41e-06 J	2.88e-05 J	1e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBN	N04-TNBN
				N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE	N04-CE11-TNBN	N04-CE12-TNBN
				2.97	3	3	3	3	3.2	3.13
				NB	NB	NB	NB	NB	NB	NB
				3.77						
				N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS	N04-CE11-TNBN-AS	N04-CE12-TNBN-AS
				02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.000166	3.39e-05 J	6.69e-05	5.31e-05	4.71e-05	0.000134	5.07e-05
E1668A	N	PCB-181	74472-47-2	1.52e-06 U	1.3e-06 U	4.66e-07 U	8.09e-07 U	7.44e-07 U	9.99e-07 U	1.27e-06 U
E1668A	N	PCB-182	60145-23-5	1.48e-06 U	1.27e-06 U	4.53e-07 U	7.86e-07 U	7.23e-07 U	9.71e-07 U	1.23e-06 U
E1668A	N	PCB-183/185	PCB-183/185	5.96e-05	1.02e-05 J	2.12e-05 J	1.74e-05 J	1.19e-05 J	4.33e-05	1.48e-05 J
E1668A	N	PCB-184	74472-48-3	1.26e-06 U	1.08e-06 U	3.85e-07 U	6.67e-07 U	6.14e-07 U	8.25e-07 U	1.04e-06 U
E1668A	N	PCB-186	74472-49-4	1.22e-06 U	1.04e-06 U	3.74e-07 U	6.48e-07 U	5.96e-07 U	8.01e-07 U	1.01e-06 U
E1668A	N	PCB-187	52663-68-0	0.000137	2.53e-05 J	4.29e-05 J	3.73e-05 J	2.9e-05 J	9.26e-05	3.46e-05 J
E1668A	N	PCB-188	74487-85-7	9.73e-07 U	9.4e-07 U	3.34e-07 U	5.81e-07 U	5.47e-07 U	7.31e-07 U	9.1e-07 U
E1668A	N	PCB-189	39635-31-9	2.77e-06 J	9.64e-07 U	8.21e-07 U	5.85e-07 U	4.74e-07 U	1.5e-06 J	9.15e-07 U
E1668A	N	PCB-190	41411-64-7	1.42e-05 J	1.01e-06 U	4.8e-06 J	3.28e-06 J	2.79e-06 J	8.35e-06 J	2.92e-06 J
E1668A	N	PCB-191	74472-50-7	1.16e-06 U	9.92e-07 U	1.37e-06 J	6.16e-07 U	5.67e-07 U	7.61e-07 U	9.64e-07 U
E1668A	N	PCB-192	74472-51-8	1.3e-06 U	1.11e-06 U	3.97e-07 U	6.88e-07 U	6.33e-07 U	8.5e-07 U	1.08e-06 U
E1668A	N	PCB-194	35694-08-7	5.35e-05	9.86e-06 J	1.68e-05 J	1.62e-05 J	1.18e-05 J	3.95e-05	1e-05 J
E1668A	N	PCB-195	52663-78-2	1.94e-05 J	2.15e-06 U	6.54e-06 J	5.14e-06 J	3.36e-06 J	1.19e-05 J	4.48e-06 J
E1668A	N	PCB-196	42740-50-1	2.13e-05 J	3.42e-06 J	7.97e-06 J	5.82e-06 J	3.5e-06 J	1.44e-05 J	4.5e-06 J
E1668A	N	PCB-197	33091-17-7	9.41e-07 U	1.26e-06 U	4.34e-07 U	5.72e-07 U	5.06e-07 U	6.11e-07 U	9.72e-07 U
E1668A	N	PCB-198/199	PCB-198/199	4.62e-05	1.2e-05 J	2.36e-05 J	2.04e-05 J	1.63e-05 J	5.09e-05	1.51e-05 J
E1668A	N	PCB-200	52663-73-7	5.88e-06 J	1.24e-06 U	1.99e-06 J	1.48e-06 J	4.97e-07 U	2.71e-06 J	9.54e-07 U
E1668A	N	PCB-201	40186-71-8	7.47e-06 J	1.2e-06 U	2.71e-06 J	2.42e-06 J	1.27e-06 J	5.1e-06 J	9.21e-07 U
E1668A	N	PCB-202	2136-99-4	1.86e-05 J	2.87e-06 J	5.33e-06 J	5.1e-06 J	3.7e-06 J	1.25e-05 J	3.2e-06 J
E1668A	N	PCB-203	52663-76-0	3.56e-05 J	6.38e-06 J	1.41e-05 J	1.04e-05 J	8.24e-06 J	3.13e-05 J	7.39e-06 J
E1668A	N	PCB-204	74472-52-9	9.78e-07 U	1.31e-06 U	4.51e-07 U	5.94e-07 U	5.26e-07 U	6.35e-07 U	1.01e-06 U
E1668A	N	PCB-205	74472-53-0	2.27e-06 J	1.67e-06 U	1.57e-06 J	7.07e-07 U	5.11e-07 U	1.5e-06 J	1.2e-06 U
E1668A	N	PCB-206	40186-72-9	4.78e-05	9.58e-06 J	1.37e-05 J	1.88e-05 J	1.06e-05 J	4.15e-05	1.11e-05 J
E1668A	N	PCB-207	52663-79-3	5.39e-06 J	1.49e-06 U	1.3e-06 J	1.6e-06 J	6.3e-07 U	3.41e-06 J	1.37e-06 U
E1668A	N	PCB-208	52663-77-1	1.99e-05 J	4.21e-06 J	5.11e-06 J	6.28e-06 J	4.7e-06 J	1.41e-05 J	3.73e-06 J
E1668A	N	PCB-209	2051-24-3	5.43e-05	7.09e-06 J	2.25e-05 J	1.48e-05 J	1.27e-05 J	3.27e-05 J	1.27e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.0132 J	0.00286 J	0.00408 J	0.00397 J	0.00332 J	0.00735 J	0.00351 J
E1668A	N	Total PCB (a)	PCB-Total	0.0137 J	0.00297 J	0.00427 J	0.00414 J	0.00348 J	0.00771 J	0.00364 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.33e-07J	9.29e-08J	4.65e-08J	6.83e-08J	6.21e-08J	9.92e-08J	9.72e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.39e-05 J	1.41e-05 J	9.91e-06 J	2.02e-05 J	9.39e-06 J	3.8e-05 J	2e-05 J
E1668A	N	PCB-2	2051-61-8	1.26e-06 U	2.47e-07 U	3.7e-07 U	2.15e-06 U	3.21e-07 U	2.82e-06 U	3.16e-06 U
E1668A	N	PCB-3	2051-62-9	2.32e-06 U	2.65e-06 U	1.78e-06 U	2.89e-06 U	2.33e-06 U	8.27e-06 U	5.75e-06 U
E1668A	N	PCB-4	13029-08-8	0.000112 J	0.000114 J	8.82e-05 J	8.27e-05 J	9.57e-05 J	0.000129 J	8.91e-05 J
E1668A	N	PCB-5	16605-91-7	1.28e-06 J	1.37e-06 J	2.48e-06 U	1.39e-06 U	2.07e-06 U	1.3e-06 U	8.89e-07 U
E1668A	N	PCB-6	25569-80-6	2.06e-05 J	1.42e-05 J	1.21e-05 J	1.71e-05 J	1.07e-05 J	2.71e-05 J	2.29e-05 J
E1668A	N	PCB-7	33284-50-3	2.78e-06 U	2.55e-06 U	3.35e-06 U	2.4e-06 U	2.56e-06 U	2.43e-06 U	3e-06 U
E1668A	N	PCB-8	34883-43-7	7.14e-05 J	4.99e-05 J	4.57e-05 J	5.42e-05 J	3.56e-05 J	7.98e-05 J	6.37e-05 J
E1668A	N	PCB-9	34883-39-1	5.41e-06 U	3.93e-06 U	3.45e-06 U	3.47e-06 J	3.72e-06 U	4.6e-06 J	3.68e-06 U
E1668A	N	PCB-10	33146-45-1	1.45e-05 J	1.66e-05 J	1.13e-05 J	1.33e-05 J	1.49e-05 J	2.3e-05 J	1.04e-05 J
E1668A	N	PCB-11	2050-67-1	7.21e-05 J	5.7e-05 U	4.84e-05 U	7.19e-05 U	3.57e-05 U	6.65e-05 J	7.14e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.7e-05 J	1.04e-05 J	9.67e-06 U	1.11e-05 U	7.59e-06 U	2.28e-05 J	1.34e-05 U
E1668A	N	PCB-14	34883-41-5	1.63e-06 U	1.05e-06 U	2.03e-06 U	1.3e-06 U	1.69e-06 U	1.07e-06 U	9.21e-07 U
E1668A	N	PCB-15	2050-68-2	7.9e-05	4.93e-05 J	5.48e-05	4.61e-05 J	5.15e-05	0.00011 J	5.27e-05 J
E1668A	N	PCB-16	38444-78-9	7.01e-05	4.15e-05	3.91e-05	4.12e-05	4.53e-05	3.94e-05	5.48e-05
E1668A	N	PCB-17	37680-66-3	0.000109	7.07e-05	7.61e-05	6.99e-05 J	7.44e-05	9.18e-05	8.69e-05 J
E1668A	N	PCB-18/30	PCB-18/30	0.000202	0.000126	0.000136	0.00012	0.000135	0.000138	0.000157
E1668A	N	PCB-19	38444-73-4	4.5e-05	3.71e-05 J	3.13e-05 J	3.26e-05 J	3.49e-05 J	4.62e-05	4.03e-05 J
E1668A	N	PCB-20/28	PCB-20/28	0.000321	0.000186	0.000197	0.000155	0.000183	0.000275	0.000195
E1668A	N	PCB-21/33	PCB-21/33	7.65e-05	3.79e-05 J	4.51e-05	3.97e-05	3.26e-05 J	4.75e-05	5.17e-05
E1668A	N	PCB-22	38444-85-8	7e-05	3.96e-05 J	4.28e-05	3.48e-05 J	4.17e-05	4.65e-05 J	4.6e-05 J
E1668A	N	PCB-23	55720-44-0	6.66e-07 U	5.57e-07 U	8.94e-07 U	4.08e-07 U	6.22e-07 U	6.06e-07 U	4.4e-07 U
E1668A	N	PCB-24	55702-45-9	2.98e-06 J	1.55e-06 J	1.4e-06 U	1.2e-06 J	1.18e-06 J	1.54e-06 J	2.64e-06 J
E1668A	N	PCB-25	55712-37-3	4.19e-05	2.47e-05 J	2.44e-05 J	1.91e-05 J	2.35e-05 J	3.5e-05 J	2.51e-05 J
E1668A	N	PCB-26/29	PCB-26/29	6.58e-05	4.21e-05	4.04e-05	3.52e-05 J	3.93e-05	6.9e-05	4.15e-05
E1668A	N	PCB-27	38444-76-7	2.96e-05 J	2.14e-05 J	2e-05 J	2.12e-05 J	2.26e-05 J	3.07e-05 J	2.27e-05 J
E1668A	N	PCB-31	16606-02-3	0.00025 J	0.00015 J	0.00016 J	0.00013 J	0.000145 J	0.000222 J	0.000159 J
E1668A	N	PCB-32	38444-77-8	8.96e-05	6.31e-05 J	6.08e-05	5.5e-05 J	6.14e-05	7.37e-05 J	7.22e-05 J
E1668A	N	PCB-34	37680-68-5	1.49e-06 J	5.49e-07 U	8.81e-07 U	8.79e-07 J	6.13e-07 U	1.64e-06 J	1.14e-06 J
E1668A	N	PCB-35	37680-69-6	5.03e-06 J	3.17e-06 J	2.54e-06 J	1.99e-06 U	1.95e-06 J	6.02e-06 J	3.44e-06 U
E1668A	N	PCB-36	38444-87-0	6.51e-07 U	5.45e-07 U	8.74e-07 U	5.67e-07 J	6.09e-07 U	9.61e-07 J	4.3e-07 U
E1668A	N	PCB-37	38444-90-5	6.42e-05	3.72e-05 J	4.1e-05	2.91e-05 J	3.6e-05 J	6.35e-05 J	3.9e-05 J
E1668A	N	PCB-38	53555-66-1	6.87e-07 U	5.75e-07 U	9.23e-07 U	4.21e-07 U	6.42e-07 U	6.25e-07 U	4.53e-07 U
E1668A	N	PCB-39	38444-88-1	1.16e-06 J	5.11e-07 U	8.2e-07 U	8.82e-07 J	5.71e-07 U	1.48e-06 J	4.03e-07 U
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000155	8.15e-05	8.78e-05	6.66e-05	8.68e-05	9.55e-05	9.61e-05
E1668A	N	PCB-42	36559-22-5	7.56e-05	3.8e-05 J	3.8e-05	3.11e-05 J	4.13e-05	4.19e-05	4.56e-05
E1668A	N	PCB-43/73	PCB-43/73	8.25e-06 J	3.44e-06 J	3.78e-06 J	4.35e-06 J	3.93e-06 J	5.27e-06 J	5.44e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000308	0.000156	0.000162	0.00013	0.000171	0.000169	0.000188
E1668A	N	PCB-45/51	PCB-45/51	7.44e-05	3.92e-05	4.1e-05	3.41e-05 J	4.43e-05	3.16e-05 J	4.98e-05
E1668A	N	PCB-46	41464-47-5	1.76e-05 J	1e-05 J	9.32e-06 J	7.76e-06 J	9.8e-06 J	9.93e-06 J	1.14e-05 J
E1668A	N	PCB-48	70362-47-9	4.43e-05	2.14e-05 J	2.08e-05 J	1.96e-05 J	2.27e-05 J	2.4e-05 J	2.66e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000203	0.000108	0.000109	8.6e-05	0.000113	0.00013	0.000124
E1668A	N	PCB-50/53	PCB-50/53	5.45e-05	3.21e-05 J	3.26e-05 J	2.8e-05 J	3.44e-05 J	2.9e-05 J	3.66e-05 J
E1668A	N	PCB-52	35693-99-3	0.000309	0.000172 J	0.000175	0.000143 J	0.000187	0.000188 J	0.000201 J
E1668A	N	PCB-54	15968-05-5	4.81e-06 J	1.2e-06 U	1.84e-06 U	1.04e-06 U	1.37e-06 U	1.49e-06 U	2.69e-06 J

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	3.72e-06 J	2e-06 J	1.38e-06 J	1.96e-06 J	7.94e-07 U	2.03e-06 J	3.16e-06 J
E1668A	N	PCB-56	41464-43-1	9.53e-05	4.32e-05 J	4.72e-05	3.41e-05 J	4.83e-05	5.4e-05 J	5.36e-05 J
E1668A	N	PCB-57	70424-67-8	8.22e-07 U	6.62e-07 U	1.03e-06 U	4.39e-07 J	7.56e-07 U	1.41e-06 J	5.25e-07 U
E1668A	N	PCB-58	41464-49-7	8.18e-07 U	6.59e-07 U	1.03e-06 U	5.76e-07 J	1e-06 J	1.35e-06 J	6.78e-07 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	2.61e-05 J	1.42e-05 J	1.21e-05 J	1.17e-05 J	1.39e-05 J	1.47e-05 J	1.67e-05 J
E1668A	N	PCB-60	33025-41-1	3.39e-05 J	1.41e-05 J	1.5e-05 J	1.28e-05 J	1.61e-05 J	1.97e-05 J	1.94e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000354	0.000163	0.000176	0.000127	0.000181	0.000204	0.000203
E1668A	N	PCB-63	74472-34-7	8.04e-06 J	3.78e-06 J	3.19e-06 J	3.09e-06 J	3.17e-06 J	5.07e-06 J	5.09e-06 J
E1668A	N	PCB-64	52663-58-8	0.000104	5.24e-05 J	5.28e-05	4.24e-05 J	5.54e-05	5.77e-05 J	6.21e-05 J
E1668A	N	PCB-66	32598-10-0	0.000226	0.000102 J	0.000109	7.88e-05 J	0.000112	0.000137 J	0.000123 J
E1668A	N	PCB-67	73575-53-8	6.41e-06 J	2.75e-06 J	2.17e-06 J	2.58e-06 J	2.86e-06 J	3.75e-06 J	3.7e-06 J
E1668A	N	PCB-68	73575-52-7	2.71e-06 J	1.2e-06 J	1.83e-06 J	1.48e-06 J	1.23e-06 J	2.1e-06 J	1.64e-06 J
E1668A	N	PCB-72	41464-42-0	2.48e-06 J	1.83e-06 J	1.01e-06 U	1.5e-06 J	2.14e-06 J	2.34e-06 J	2e-06 J
E1668A	N	PCB-77	32598-13-3	2e-05 J	9.05e-06 J	7.88e-06 J	6.58e-06 J	9.05e-06 J	1.67e-05 J	1.09e-05 J
E1668A	N	PCB-78	70362-49-1	8.5e-07 U	6.84e-07 U	1.07e-06 U	4.61e-07 U	7.81e-07 U	8.29e-07 U	5.42e-07 U
E1668A	N	PCB-79	41464-48-6	2.44e-06 J	6e-07 U	9.38e-07 U	9.89e-07 J	6.86e-07 U	7.27e-07 U	1.38e-06 J
E1668A	N	PCB-80	33284-52-5	7.28e-07 U	5.86e-07 U	9.16e-07 U	3.95e-07 U	6.69e-07 U	7.1e-07 U	4.65e-07 U
E1668A	N	PCB-81	70362-50-4	7.89e-07 U	6.14e-07 U	9.84e-07 U	4.14e-07 U	7.02e-07 U	7.6e-07 U	4.8e-07 U
E1668A	N	PCB-82	52663-62-4	3.13e-05 J	1.07e-05 J	1.09e-05 J	9.43e-06 J	1.31e-05 J	1.23e-05 J	2.03e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000165	6.39e-05	6.85e-05	5.57e-05	7.76e-05	8.72e-05	9.35e-05
E1668A	N	PCB-84	52663-60-2	6.96e-05	2.62e-05 J	2.65e-05 J	2.32e-05 J	3.28e-05 J	3.5e-05 J	3.62e-05 J
E1668A	N	PCB-85/116/117	PCB-85/116/117	4.43e-05	1.58e-05 J	1.79e-05 J	1.42e-05 J	1.99e-05 J	2e-05 J	2.26e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000157 J	6.34e-05	6.27e-05 J	4.99e-05 J	6.96e-05	7.28e-05 J	8.62e-05
E1668A	N	PCB-88/91	PCB-88/91	4.65e-05	1.87e-05 J	1.46e-05 J	1.39e-05 J	2.08e-05 J	2.27e-05 J	2.63e-05 J
E1668A	N	PCB-89	73575-57-2	1.43e-06 U	9.94e-07 U	1.58e-06 U	7.98e-07 U	1.21e-06 U	1.27e-06 U	1.85e-06 J
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000245	0.000101	0.000109	8.32e-05	0.00012	0.00012	0.00014
E1668A	N	PCB-92	52663-61-3	4.33e-05	1.59e-05 J	1.59e-05 J	1.48e-05 J	2.03e-05 J	1.94e-05 J	2.33e-05 J
E1668A	N	PCB-93/100	PCB-93/100	1.34e-05 J	2.41e-06 J	3.37e-06 J	1.37e-06 J	4.85e-06 J	2.97e-06 J	3.56e-06 J
E1668A	N	PCB-94	73575-55-0	1.43e-06 U	9.93e-07 U	1.58e-06 U	7.98e-07 U	1.21e-06 U	1.27e-06 U	8.51e-07 U
E1668A	N	PCB-95	38379-99-6	0.000196	8.64e-05	9.53e-05	7.42e-05	9.97e-05	1e-04	0.000116
E1668A	N	PCB-96	73575-54-9	1.07e-06 U	7.43e-07 U	1.18e-06 U	5.97e-07 U	9.04e-07 U	9.52e-07 U	1.98e-06 J
E1668A	N	PCB-98/102	PCB-98/102	1.14e-05 J	4.26e-06 J	4.74e-06 J	3.5e-06 J	6.36e-06 J	6.19e-06 J	8.25e-06 J
E1668A	N	PCB-103	60145-21-3	4.82e-06 J	8.71e-07 U	1.89e-06 J	6.99e-07 U	1.06e-06 U	1.12e-06 U	2.63e-06 J
E1668A	N	PCB-104	56558-16-8	9.53e-07 U	6.62e-07 U	1.06e-06 U	5.32e-07 U	8.06e-07 U	8.48e-07 U	5.67e-07 U
E1668A	N	PCB-105	32598-14-4	8.22e-05	3.04e-05 J	3.34e-05 J	2.48e-05 J	3.61e-05 J	3.89e-05	4.36e-05
E1668A	N	PCB-106	70424-69-0	8e-07 U	5.76e-07 U	9.21e-07 U	4.58e-07 U	6.78e-07 U	7.05e-07 U	5.04e-07 U
E1668A	N	PCB-107	70424-68-9	1.42e-05 J	6.67e-06 J	4.76e-06 J	4.8e-06 J	5.16e-06 J	8.72e-06 J	7.9e-06 J
E1668A	N	PCB-108/124	PCB-108/124	7.19e-06 J	1.72e-06 J	2.47e-06 J	1.96e-06 U	1.87e-06 J	2.38e-06 J	4.05e-06 U
E1668A	N	PCB-110/115	PCB-110/115	0.000289	0.000113	0.000123	9.46e-05	0.000134	0.000137	0.000158
E1668A	N	PCB-111	39635-32-0	8.96e-07 U	6.22e-07 U	9.92e-07 U	5e-07 U	7.57e-07 U	7.97e-07 U	5.33e-07 U
E1668A	N	PCB-112	74472-36-9	9.73e-07 U	6.76e-07 U	1.08e-06 U	5.43e-07 U	8.23e-07 U	8.65e-07 U	5.79e-07 U
E1668A	N	PCB-114	74472-37-0	3.6e-06 J	1.33e-06 J	1.56e-06 J	1.57e-06 J	1.7e-06 J	1.88e-06 J	1.47e-06 J
E1668A	N	PCB-118	31508-00-6	0.000207	8.24e-05	8.99e-05	6.27e-05 J	9.06e-05	0.000103	0.000107 J
E1668A	N	PCB-120	68194-12-7	9.22e-07 U	6.4e-07 U	1.02e-06 U	5.14e-07 U	7.79e-07 U	8.2e-07 U	5.48e-07 U
E1668A	N	PCB-121	56558-18-0	9.29e-07 U	6.45e-07 U	1.03e-06 U	5.18e-07 U	7.85e-07 U	8.26e-07 U	5.53e-07 U

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	2.19e-06 J	6.28e-07 U	1e-06 U	1.05e-06 J	7.38e-07 U	1.07e-06 J	1.44e-06 J
E1668A	N	PCB-123	65510-44-3	2.29e-06 J	1.36e-06 J	9.4e-07 U	1.1e-06 U	1.58e-06 J	1.28e-06 J	2.04e-06 U
E1668A	N	PCB-126	57465-28-8	8.06e-07 U	5.77e-07 U	9.37e-07 U	4.25e-07 U	6.83e-07 U	7.11e-07 U	4.9e-07 U
E1668A	N	PCB-127	39635-33-1	7.91e-07 U	5.7e-07 U	9.1e-07 U	4.53e-07 U	6.7e-07 U	6.97e-07 U	4.98e-07 U
E1668A	N	PCB-128/166	PCB-128/166	3.45e-05 J	1.1e-05 J	1.39e-05 J	8.44e-06 J	1.46e-05 J	1.54e-05 J	1.74e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000252	8.91e-05	0.000112	7.01e-05	0.00011	0.000123	0.000119
E1668A	N	PCB-130	52663-66-8	1.27e-05 J	4.1e-06 J	5.17e-06 J	3.57e-06 J	4.8e-06 J	6.4e-06 J	4.89e-06 J
E1668A	N	PCB-131	61798-70-7	1.56e-06 U	1.11e-06 U	1.76e-06 U	8.82e-07 U	1.35e-06 U	1.41e-06 U	9.97e-07 U
E1668A	N	PCB-132	38380-05-1	7.66e-05	2.37e-05 J	2.55e-05 J	2.04e-05 J	2.78e-05 J	3.28e-05 J	3.5e-05 J
E1668A	N	PCB-133	35694-04-3	3.14e-06 J	1.01e-06 U	1.61e-06 U	8.09e-07 U	1.37e-06 J	2.31e-06 J	1.79e-06 J
E1668A	N	PCB-134/143	PCB-134/143	1.16e-05 J	3.8e-06 J	3.73e-06 J	2.74e-06 J	4.91e-06 J	5.71e-06 J	5.34e-06 J
E1668A	N	PCB-135/151	PCB-135/151	8.52e-05	2.78e-05 J	2.48e-05 J	2.28e-05 J	3.32e-05 J	3.29e-05 J	4.66e-05
E1668A	N	PCB-136	38411-22-2	2.62e-05 J	9.65e-06 J	1.11e-05 J	7.17e-06 J	1.26e-05 J	1.11e-05 J	1.49e-05 J
E1668A	N	PCB-137	35694-06-5	7.49e-06 J	2.48e-06 J	2.31e-06 J	2.22e-06 J	3.01e-06 J	3.47e-06 J	3.89e-06 J
E1668A	N	PCB-139/140	PCB-139/140	1.3e-06 U	9.26e-07 U	1.47e-06 U	7.39e-07 U	1.36e-06 J	2.15e-06 J	8.35e-07 U
E1668A	N	PCB-141	52712-04-6	3.93e-05	1.38e-05 J	1.37e-05 J	1.06e-05 J	1.68e-05 J	1.29e-05 J	1.83e-05 J
E1668A	N	PCB-142	41411-61-4	1.5e-06 U	1.06e-06 U	1.69e-06 U	8.48e-07 U	1.29e-06 U	1.36e-06 U	9.59e-07 U
E1668A	N	PCB-144	68194-14-9	8.23e-06 J	1.64e-06 J	1.33e-06 U	2.02e-06 J	3.68e-06 J	2.96e-06 J	4.43e-06 J
E1668A	N	PCB-145	74472-40-5	8.99e-07 U	7.06e-07 U	1.01e-06 U	6.28e-07 U	8.26e-07 U	8.81e-07 U	7.28e-07 U
E1668A	N	PCB-146	51908-16-8	3.83e-05 J	1.3e-05 J	1.52e-05 J	1e-05 J	1.54e-05 J	2.1e-05 J	1.75e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000202	7.03e-05	9.16e-05	5.49e-05	8.82e-05	9.75e-05	9.52e-05
E1668A	N	PCB-148	74472-41-6	1.26e-06 U	9.87e-07 U	1.41e-06 U	8.78e-07 U	1.15e-06 U	1.23e-06 U	1.02e-06 U
E1668A	N	PCB-150	68194-08-1	8.77e-07 U	6.88e-07 U	9.8e-07 U	6.12e-07 U	8.05e-07 U	8.59e-07 U	7.1e-07 U
E1668A	N	PCB-152	68194-09-2	8.94e-07 U	7.02e-07 U	9.99e-07 U	6.24e-07 U	8.21e-07 U	8.76e-07 U	7.24e-07 U
E1668A	N	PCB-153/168	PCB-153/168	0.000221	7.56e-05	9.36e-05	6.18e-05	9.44e-05	0.000103	0.000104
E1668A	N	PCB-154	60145-22-4	3.31e-06 J	1.76e-06 J	1.25e-06 J	1.78e-06 J	1.49e-06 J	3.21e-06 J	9.48e-07 J
E1668A	N	PCB-155	33979-03-2	8.52e-07 U	6.69e-07 U	9.53e-07 U	5.95e-07 U	7.82e-07 U	8.35e-07 U	6.9e-07 U
E1668A	N	PCB-156/157	PCB-156/157	2.24e-05 J	6.62e-06 J	7.38e-06 J	6.07e-06 U	7.39e-06 J	9.91e-06 J	1.2e-05 J
E1668A	N	PCB-158	74472-42-7	1.98e-05 J	6.15e-06 J	8.02e-06 J	5.52e-06 J	8.48e-06 J	8.95e-06 J	1.05e-05 J
E1668A	N	PCB-159	39635-35-3	1.72e-06 J	7.07e-07 U	1.12e-06 U	5.64e-07 U	8.61e-07 U	9.03e-07 U	1.14e-06 J
E1668A	N	PCB-161	74472-43-8	9.91e-07 U	7.04e-07 U	1.12e-06 U	5.61e-07 U	8.57e-07 U	8.98e-07 U	6.35e-07 U
E1668A	N	PCB-162	39635-34-2	9.84e-07 U	6.99e-07 U	1.11e-06 U	5.57e-07 U	8.5e-07 U	8.92e-07 U	6.51e-07 J
E1668A	N	PCB-164	74472-45-0	1.52e-05 J	4.22e-06 J	5.77e-06 J	3.87e-06 J	5.15e-06 J	4.71e-06 J	6.99e-06 J
E1668A	N	PCB-165	74472-46-1	1.09e-06 U	7.74e-07 U	1.23e-06 U	6.17e-07 U	9.42e-07 U	9.88e-07 U	6.98e-07 U
E1668A	N	PCB-167	52663-72-6	6.76e-06 J	2.95e-06 J	2.69e-06 J	1.82e-06 J	3.18e-06 J	3.31e-06 J	3.89e-06 J
E1668A	N	PCB-169	32774-16-6	7.28e-07 U	4.81e-07 U	7.82e-07 U	3.83e-07 U	6.11e-07 U	6.45e-07 U	4.46e-07 U
E1668A	N	PCB-170	35065-30-6	5.46e-05	1.58e-05 J	1.61e-05 J	1.37e-05 J	1.9e-05 J	2.11e-05 J	2.61e-05 J
E1668A	N	PCB-171/173	PCB-171/173	1.38e-05 J	5.48e-06 J	5.19e-06 J	4.66e-06 J	5.17e-06 J	5.09e-06 J	7.34e-06 J
E1668A	N	PCB-172	52663-74-8	7.87e-06 J	2.09e-06 J	2.97e-06 J	2.21e-06 J	3.28e-06 J	3.36e-06 J	4.28e-06 J
E1668A	N	PCB-174	38411-25-5	5.9e-05	1.65e-05 J	1.85e-05 J	1.52e-05 J	2.01e-05 J	2.18e-05 J	2.86e-05 J
E1668A	N	PCB-175	40186-70-7	2.17e-06 J	7.21e-07 U	1.1e-06 U	5.78e-07 U	7.69e-07 U	8.84e-07 U	6.72e-07 U
E1668A	N	PCB-176	52663-65-7	7.18e-06 J	1.88e-06 J	2.04e-06 J	1.84e-06 J	2.34e-06 J	2.66e-06 J	3.44e-06 J
E1668A	N	PCB-177	52663-70-4	3.53e-05 J	1.07e-05 J	1.13e-05 J	8.43e-06 J	1.34e-05 J	1.35e-05 J	1.66e-05 J
E1668A	N	PCB-178	52663-67-9	1.2e-05 J	3.66e-06 J	4.99e-06 J	4.17e-06 J	4.47e-06 J	5.87e-06 J	6.07e-06 J
E1668A	N	PCB-179	52663-64-6	2.89e-05 J	7.22e-06 J	1.02e-05 J	7.56e-06 J	1.04e-05 J	1.05e-05 J	1.45e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNNE
				N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS	N04-CE12-TNNE
				2.76	2.95	3	3	3	3	3.26
				NB	NB	NB	NB	NB	NB	NB
				N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS	N04-CE12-TNNE-AS
				02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013	02/27/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.000132	4.27e-05	4.64e-05	3.53e-05 J	5.1e-05	5.42e-05	6.86e-05
E1668A	N	PCB-181	74472-47-2	9e-07 U	7.21e-07 U	1.1e-06 U	5.77e-07 U	7.68e-07 U	8.83e-07 U	6.71e-07 U
E1668A	N	PCB-182	60145-23-5	8.75e-07 U	7.01e-07 U	1.07e-06 U	5.61e-07 U	7.46e-07 U	8.58e-07 U	6.52e-07 U
E1668A	N	PCB-183/185	PCB-183/185	4.4e-05	1.12e-05 J	1.32e-05 J	1.1e-05 J	1.51e-05 J	1.67e-05 J	1.99e-05 J
E1668A	N	PCB-184	74472-48-3	7.43e-07 U	5.95e-07 U	9.11e-07 U	4.76e-07 U	6.34e-07 U	7.29e-07 U	5.54e-07 U
E1668A	N	PCB-186	74472-49-4	7.22e-07 U	5.78e-07 U	8.85e-07 U	4.63e-07 U	6.15e-07 U	7.08e-07 U	5.38e-07 U
E1668A	N	PCB-187	52663-68-0	9.13e-05	2.91e-05 J	3.33e-05 J	2.35e-05 J	3.54e-05 J	4.02e-05	4.26e-05 J
E1668A	N	PCB-188	74487-85-7	6.26e-07 U	5.4e-07 U	7.99e-07 U	4.25e-07 U	5.52e-07 U	6.54e-07 U	4.93e-07 U
E1668A	N	PCB-189	39635-31-9	1.91e-06 J	4.46e-07 U	8.56e-07 U	3.88e-07 U	5.45e-07 U	5.75e-07 U	1e-06 U
E1668A	N	PCB-190	41411-64-7	9.83e-06 J	2.31e-06 J	2.23e-06 J	2.19e-06 J	3.72e-06 J	3.03e-06 J	4.69e-06 J
E1668A	N	PCB-191	74472-50-7	1.37e-06 J	5.49e-07 U	8.41e-07 U	4.4e-07 U	5.85e-07 U	6.72e-07 U	5.11e-07 U
E1668A	N	PCB-192	74472-51-8	7.66e-07 U	6.13e-07 U	9.39e-07 U	4.91e-07 U	6.53e-07 U	7.51e-07 U	5.71e-07 U
E1668A	N	PCB-194	35694-08-7	3.69e-05 J	1.08e-05 J	9.46e-06 J	8.52e-06 J	1.15e-05 J	1.65e-05 J	1.55e-05 J
E1668A	N	PCB-195	52663-78-2	1.15e-05 J	2.86e-06 J	1.53e-06 U	2.48e-06 J	4.04e-06 J	3.96e-06 J	5.19e-06 J
E1668A	N	PCB-196	42740-50-1	1.35e-05 J	4.93e-06 J	4.51e-06 J	5.15e-06 J	5.76e-06 J	6.28e-06 J	8.61e-06 J
E1668A	N	PCB-197	33091-17-7	6.2e-07 U	5.96e-07 U	8.79e-07 U	4.98e-07 U	5.75e-07 U	7.03e-07 U	4.82e-07 U
E1668A	N	PCB-198/199	PCB-198/199	4.3e-05	1.61e-05 J	1.34e-05 J	1.41e-05 J	1.76e-05 J	2.46e-05 J	2.36e-05 J
E1668A	N	PCB-200	52663-73-7	3.58e-06 J	5.85e-07 U	8.63e-07 U	4.89e-07 U	5.64e-07 U	6.9e-07 U	1.94e-06 J
E1668A	N	PCB-201	40186-71-8	4.64e-06 J	9.8e-07 J	8.33e-07 U	1.05e-06 J	1.48e-06 J	2.21e-06 J	2.18e-06 J
E1668A	N	PCB-202	2136-99-4	1.1e-05 J	3.61e-06 J	3.31e-06 J	3.81e-06 J	4.22e-06 J	6.94e-06 J	5.78e-06 J
E1668A	N	PCB-203	52663-76-0	2.23e-05 J	7.58e-06 J	6.87e-06 J	7.92e-06 J	8.68e-06 J	1.2e-05 J	1.26e-05 J
E1668A	N	PCB-204	74472-52-9	6.44e-07 U	6.19e-07 U	9.13e-07 U	5.18e-07 U	5.97e-07 U	7.31e-07 U	5.01e-07 U
E1668A	N	PCB-205	74472-53-0	8.17e-07 U	6.12e-07 U	1.18e-06 U	4.29e-07 U	7.13e-07 U	7.81e-07 U	4.09e-07 U
E1668A	N	PCB-206	40186-72-9	2.8e-05 J	1e-05 J	1.31e-05 J	9.83e-06 J	1.2e-05 J	2.23e-05 J	1.51e-05 J
E1668A	N	PCB-207	52663-79-3	2.49e-06 J	6.3e-07 U	1.33e-06 U	4.9e-07 U	7.29e-07 U	8.64e-07 U	1.04e-06 J
E1668A	N	PCB-208	52663-77-1	9.17e-06 J	4.3e-06 J	3.94e-06 J	4.9e-06 J	3.87e-06 J	7.78e-06 J	5.28e-06 J
E1668A	N	PCB-209	2051-24-3	2.34e-05 J	9.06e-06 J	1.26e-05 J	8.85e-06 J	1.06e-05 J	2.19e-05 J	1.39e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00712 J	0.00342 J	0.00359 J	0.00294 J	0.00368 J	0.00443 J	0.00428 J
E1668A	N	Total PCB (a)	PCB-Total	0.00747 J	0.00356 J	0.00374 J	0.00305 J	0.00383 J	0.00461 J	0.00446 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	9.38e-08J	5.76e-08J	9.09e-08J	4.24e-08J	6.78e-08J	7.17e-08J	5.12e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.13e-05 J	8.11e-06 J	2.54e-05 J	2.12e-05 J	3.3e-05 J	8.57e-06 J	1.82e-05 J
E1668A	N	PCB-2	2051-61-8	2.43e-07 U	1.7e-06 U	4.03e-06 U	2.08e-06 U	5.15e-07 U	2.04e-06 U	3.2e-06 U
E1668A	N	PCB-3	2051-62-9	2.76e-06 U	2.93e-06 U	6.62e-06 U	3.6e-06 U	7.36e-06 U	2.02e-06 U	6.11e-06 U
E1668A	N	PCB-4	13029-08-8	0.000114 J	8.85e-05 J	9.65e-05 J	9.17e-05 J	0.00016 J	0.000102 J	0.000128 J
E1668A	N	PCB-5	16605-91-7	1.47e-06 U	8.21e-07 J	1.14e-06 U	9.09e-07 U	2.31e-06 U	8.33e-07 J	2.5e-06 U
E1668A	N	PCB-6	25569-80-6	1.42e-05 J	9.45e-06 J	2.48e-05 J	1.72e-05 J	3.47e-05 J	1.02e-05 J	1.51e-05 J
E1668A	N	PCB-7	33284-50-3	2.02e-06 U	2.25e-06 U	2.45e-06 U	2.99e-06 U	4.02e-06 U	1.73e-06 U	6.24e-06 U
E1668A	N	PCB-8	34883-43-7	5.46e-05 J	3.56e-05 J	7.34e-05 J	5.64e-05 J	0.000101 J	4.05e-05 J	4.82e-05 J
E1668A	N	PCB-9	34883-39-1	3.8e-06 U	3.01e-06 U	5.08e-06 J	5.23e-06 J	8.3e-06 J	3.94e-06 U	4.47e-06 U
E1668A	N	PCB-10	33146-45-1	1.44e-05 J	1.08e-05 J	1.67e-05 J	1.31e-05 J	2.16e-05 J	1.18e-05 J	2.32e-05 J
E1668A	N	PCB-11	2050-67-1	5.23e-05 J	4.36e-05 U	8.08e-05 J	7.36e-05 U	9.66e-05 J	4.15e-05 U	5.51e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.53e-05 J	7.21e-06 U	1.49e-05 U	1.19e-05 U	3.55e-05 J	1.04e-05 J	1.43e-05 J
E1668A	N	PCB-14	34883-41-5	1.2e-06 U	7.18e-07 U	7.97e-07 U	7.44e-07 U	1.89e-06 U	9.42e-07 U	2.17e-06 U
E1668A	N	PCB-15	2050-68-2	6.74e-05	3.95e-05 J	6.35e-05 J	5.16e-05 J	0.000175	5e-05 J	8.36e-05 J
E1668A	N	PCB-16	38444-78-9	5.34e-05	3.96e-05	5.15e-05	3.94e-05	9.22e-05	4.24e-05	6e-05
E1668A	N	PCB-17	37680-66-3	8.71e-05	6.43e-05	8.82e-05 J	6.98e-05 J	0.000171	7.25e-05	8.96e-05
E1668A	N	PCB-18/30	PCB-18/30	0.000156	0.000115	0.000159	0.000126	0.000286	0.00013	0.000162
E1668A	N	PCB-19	38444-73-4	3.9e-05	3.39e-05 J	3.85e-05 J	3.47e-05 J	6.17e-05	3.56e-05 J	4.98e-05 J
E1668A	N	PCB-20/28	PCB-20/28	0.000285	0.000156	0.000232	0.000171	0.000637	0.000195	0.000247
E1668A	N	PCB-21/33	PCB-21/33	5.24e-05	3.22e-05 J	6.07e-05	4.49e-05	0.000121	3.46e-05 J	4.45e-05
E1668A	N	PCB-22	38444-85-8	5.74e-05	3.67e-05 J	5.18e-05 J	3.81e-05 J	0.000122	4.15e-05 J	4.8e-05
E1668A	N	PCB-23	55720-44-0	5.95e-07 U	3.99e-07 U	4.02e-07 U	3.57e-07 U	1.18e-06 U	5.55e-07 U	7.29e-07 U
E1668A	N	PCB-24	55702-45-9	1.56e-06 J	1.92e-06 J	3.12e-06 J	1.88e-06 J	1.87e-06 J	1.23e-06 J	3.03e-06 J
E1668A	N	PCB-25	55712-37-3	4e-05	2.05e-05 J	2.97e-05 J	2.1e-05 J	8.13e-05	2.74e-05 J	3.23e-05 J
E1668A	N	PCB-26/29	PCB-26/29	6.15e-05	3.48e-05 J	5.04e-05	3.84e-05	0.000125	4.39e-05	5.36e-05
E1668A	N	PCB-27	38444-76-7	2.49e-05 J	1.82e-05 J	2.41e-05 J	2.07e-05 J	4.91e-05	2.11e-05 J	3.39e-05 J
E1668A	N	PCB-31	16606-02-3	0.000216 J	0.000126 J	0.000194 J	0.00014 J	0.000464 J	0.000155 J	0.00019 J
E1668A	N	PCB-32	38444-77-8	7.32e-05	5.63e-05 J	7.13e-05 J	5.51e-05 J	0.000142	5.79e-05 J	8.38e-05
E1668A	N	PCB-34	37680-68-5	1.29e-06 J	5.9e-07 J	1.72e-06 J	1.13e-06 J	2.93e-06 J	1.23e-06 J	7.18e-07 U
E1668A	N	PCB-35	37680-69-6	5.27e-06 J	2.31e-06 J	5.25e-06 U	2.82e-06 U	1.21e-05 J	2.72e-06 J	3.18e-06 J
E1668A	N	PCB-36	38444-87-0	5.81e-07 U	5.12e-07 J	7.45e-07 J	5.35e-07 J	1.15e-06 U	4.6e-07 J	7.13e-07 U
E1668A	N	PCB-37	38444-90-5	5.47e-05	2.94e-05 J	4.9e-05 J	3.33e-05 J	0.000142	3.54e-05 J	4.7e-05 J
E1668A	N	PCB-38	53555-66-1	6.13e-07 U	4.11e-07 U	4.14e-07 U	3.68e-07 U	1.21e-06 U	5.73e-07 U	7.52e-07 U
E1668A	N	PCB-39	38444-88-1	1.4e-06 J	6.98e-07 J	1.59e-06 J	8.98e-07 J	3.04e-06 J	1.24e-06 J	1.71e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.00014	7.59e-05	0.000102	7.32e-05	0.000302	9.32e-05	0.000142
E1668A	N	PCB-42	36559-22-5	7.38e-05	3.45e-05 J	4.75e-05	3.27e-05 J	0.000152	4.59e-05	6.82e-05
E1668A	N	PCB-43/73	PCB-43/73	7.98e-06 J	3.77e-06 J	4.65e-06 J	4.33e-06 J	1.66e-05 J	4.51e-06 J	6.72e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000289	0.000149	0.000196	0.000137	0.000612	0.000184	0.000279
E1668A	N	PCB-45/51	PCB-45/51	6.92e-05	4.23e-05	4.87e-05	3.34e-05 J	0.000146	4.71e-05	8.77e-05
E1668A	N	PCB-46	41464-47-5	1.77e-05 J	9.67e-06 J	1.24e-05 J	8.84e-06 J	3.44e-05 J	1.13e-05 J	1.97e-05 J
E1668A	N	PCB-48	70362-47-9	4.09e-05	2.14e-05 J	3.01e-05 J	2e-05 J	8.46e-05	2.62e-05 J	3.47e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000192	9.58e-05	0.000132	9.18e-05	0.000411	0.000126	0.000172
E1668A	N	PCB-50/53	PCB-50/53	5.11e-05	3.05e-05 J	3.68e-05 J	2.56e-05 J	9.81e-05	3.67e-05 J	6.53e-05
E1668A	N	PCB-52	35693-99-3	0.000308	0.000157 J	0.000205 J	0.000151 J	0.000617	0.000204 J	0.000282
E1668A	N	PCB-54	15968-05-5	2.79e-06 J	2.37e-06 J	3.45e-06 J	9.67e-07 U	7.56e-06 J	2.66e-06 J	7.51e-06 J

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	3.41e-06 J	3.98e-06 J	1.19e-06 J	2.53e-06 J	8.91e-06 J	3.54e-06 J	6.25e-06 J
E1668A	N	PCB-56	41464-43-1	8.87e-05	4.04e-05 J	5.97e-05 J	3.68e-05 J	0.000199	5.17e-05 J	7.34e-05
E1668A	N	PCB-57	70424-67-8	7.06e-07 U	4.84e-07 U	1.33e-06 J	5.63e-07 J	2.77e-06 J	7.54e-07 U	1.63e-06 J
E1668A	N	PCB-58	41464-49-7	7.03e-07 U	4.82e-07 U	4.63e-07 J	7.04e-07 J	1.44e-06 J	4.81e-07 J	2.38e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	2.41e-05 J	1.18e-05 J	1.66e-05 J	1.18e-05 J	4.74e-05	1.62e-05 J	2.49e-05 J
E1668A	N	PCB-60	33025-41-1	2.98e-05 J	1.27e-05 J	2.15e-05 J	1.4e-05 J	7.32e-05	1.79e-05 J	2.16e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000313	0.000147	0.000212	0.000141	0.000736	0.000193	0.000234
E1668A	N	PCB-63	74472-34-7	7.55e-06 J	3.5e-06 J	5.28e-06 J	3.55e-06 J	1.61e-05 J	3.64e-06 J	6.48e-06 J
E1668A	N	PCB-64	52663-58-8	9.58e-05	4.82e-05 J	6.54e-05 J	4.49e-05 J	2e-04	6.14e-05 J	8.14e-05 J
E1668A	N	PCB-66	32598-10-0	0.000202	9.31e-05 J	0.000134 J	8.8e-05 J	0.000479	0.000122 J	0.000155
E1668A	N	PCB-67	73575-53-8	7e-06 J	2.9e-06 J	3.81e-06 J	2.84e-06 J	1.42e-05 J	3.05e-06 J	5.37e-06 J
E1668A	N	PCB-68	73575-52-7	3.05e-06 J	9.37e-07 J	1.94e-06 J	1.29e-06 J	1.41e-06 U	1.15e-06 J	3.16e-06 U
E1668A	N	PCB-72	41464-42-0	2.98e-06 J	1.29e-06 J	2.2e-06 J	1.64e-06 J	1.51e-06 U	2.3e-06 J	3.24e-06 J
E1668A	N	PCB-77	32598-13-3	2.1e-05 J	8.86e-06 J	1.63e-05 J	8.39e-06 J	5.34e-05	1e-05 J	1.43e-05 J
E1668A	N	PCB-78	70362-49-1	7.3e-07 U	5e-07 U	5.11e-07 U	3.91e-07 U	1.61e-06 U	7.8e-07 U	1.07e-06 U
E1668A	N	PCB-79	41464-48-6	1.97e-06 J	1.02e-06 J	1.68e-06 J	1.23e-06 J	3.77e-06 J	6.84e-07 U	9.37e-07 U
E1668A	N	PCB-80	33284-52-5	6.25e-07 U	4.29e-07 U	4.37e-07 U	3.35e-07 U	1.38e-06 U	6.68e-07 U	9.15e-07 U
E1668A	N	PCB-81	70362-50-4	6.72e-07 U	4.52e-07 U	4.64e-07 U	3.5e-07 U	1.44e-06 U	7.15e-07 U	9.58e-07 U
E1668A	N	PCB-82	52663-62-4	2.22e-05 J	1.14e-05 J	1.74e-05 J	8.66e-06 J	5.26e-05	1.4e-05 J	2.07e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000145	6.5e-05	9.97e-05	6.31e-05	0.00033	8.65e-05	0.000108
E1668A	N	PCB-84	52663-60-2	5.55e-05	2.76e-05 J	4.02e-05	2.54e-05 J	0.000132	3.65e-05 J	5.33e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	3.51e-05 J	1.64e-05 J	2.56e-05 J	1.45e-05 J	8.66e-05	2.15e-05 J	2.79e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000129 J	6.38e-05	9.32e-05 J	5.44e-05	0.000302	8.54e-05	0.000108
E1668A	N	PCB-88/91	PCB-88/91	3.98e-05	1.86e-05 J	2.63e-05 J	1.78e-05 J	9.29e-05	2.3e-05 J	3.05e-05 J
E1668A	N	PCB-89	73575-57-2	1.81e-06 J	8.2e-07 U	8.46e-07 U	7.28e-07 U	4.08e-06 J	1.25e-06 U	1.8e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000208	9.99e-05	0.000145	9.11e-05	0.000482	0.000133	0.000165
E1668A	N	PCB-92	52663-61-3	3.46e-05 J	1.7e-05 J	2.73e-05 J	1.47e-05 J	8.01e-05	2.29e-05 J	3.09e-05 J
E1668A	N	PCB-93/100	PCB-93/100	2e-06 J	3.64e-06 J	3.43e-06 J	2.86e-06 J	1.09e-05 J	3.95e-06 J	1.03e-05 J
E1668A	N	PCB-94	73575-55-0	1.99e-06 J	8.2e-07 U	2.08e-06 J	7.28e-07 U	4.72e-06 J	1.25e-06 U	1.8e-06 U
E1668A	N	PCB-95	38379-99-6	0.000182	8.6e-05	0.000117	8.04e-05	0.000386	0.000115	0.000148
E1668A	N	PCB-96	73575-54-9	1.8e-06 J	6.13e-07 U	2.13e-06 J	5.45e-07 U	4.49e-06 J	9.33e-07 U	3.31e-06 J
E1668A	N	PCB-98/102	PCB-98/102	9.9e-06 J	4.56e-06 J	7.16e-06 J	5.03e-06 J	2.51e-05 J	7.24e-06 J	1.26e-05 J
E1668A	N	PCB-103	60145-21-3	3.83e-06 J	2.39e-06 J	3.15e-06 J	2.05e-06 J	8.9e-06 J	2.73e-06 J	2.94e-06 J
E1668A	N	PCB-104	56558-16-8	7.77e-07 U	5.47e-07 U	5.64e-07 U	4.85e-07 U	1.58e-06 U	8.31e-07 U	1.2e-06 U
E1668A	N	PCB-105	32598-14-4	6.62e-05	2.86e-05 J	4.41e-05	2.6e-05 J	0.00018	4.14e-05	3.94e-05 J
E1668A	N	PCB-106	70424-69-0	6.88e-07 U	4.63e-07 U	4.86e-07 U	4.17e-07 U	1.58e-06 U	7.05e-07 U	8.29e-07 U
E1668A	N	PCB-107	70424-68-9	1.12e-05 J	5.64e-06 J	7.21e-06 J	5.27e-06 J	3.61e-05 J	8.68e-06 J	7.73e-06 J
E1668A	N	PCB-108/124	PCB-108/124	6.05e-06 J	2.52e-06 J	3.4e-06 U	1.79e-06 U	1.45e-05 J	3.62e-06 J	3.27e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000235	0.000111	0.000169	0.000104	0.000557	0.000153	0.000177
E1668A	N	PCB-111	39635-32-0	7.31e-07 U	5.14e-07 U	5.3e-07 U	4.56e-07 U	1.49e-06 U	7.81e-07 U	1.13e-06 U
E1668A	N	PCB-112	74472-36-9	7.94e-07 U	5.58e-07 U	5.76e-07 U	4.95e-07 U	1.62e-06 U	8.49e-07 U	1.23e-06 U
E1668A	N	PCB-114	74472-37-0	2.65e-06 J	1.09e-06 J	2.24e-06 J	1.25e-06 J	9.41e-06 J	1.82e-06 J	7.76e-07 U
E1668A	N	PCB-118	31508-00-6	0.000165	7.45e-05	0.000112 J	6.96e-05 J	0.000428	0.000109	0.000107 J
E1668A	N	PCB-120	68194-12-7	7.52e-07 U	5.29e-07 U	5.45e-07 U	4.69e-07 U	1.53e-06 U	8.04e-07 U	1.16e-06 U
E1668A	N	PCB-121	56558-18-0	7.58e-07 U	5.33e-07 U	5.5e-07 U	4.73e-07 U	1.54e-06 U	8.1e-07 U	1.17e-06 U

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	2.2e-06 J	9.99e-07 J	1.85e-06 J	1.05e-06 J	5.37e-06 J	1.99e-06 J	9.02e-07 U
E1668A	N	PCB-123	65510-44-3	2.65e-06 J	1.1e-06 J	2.32e-06 U	1.66e-06 U	7.43e-06 J	1.04e-06 J	2.13e-06 J
E1668A	N	PCB-126	57465-28-8	6.7e-07 J	4.56e-07 U	7.11e-07 U	3.82e-07 U	1.92e-06 J	7.15e-07 U	8.11e-07 U
E1668A	N	PCB-127	39635-33-1	6.8e-07 U	4.57e-07 U	4.81e-07 U	4.13e-07 U	1.56e-06 U	6.96e-07 U	8.19e-07 U
E1668A	N	PCB-128/166	PCB-128/166	2.76e-05 J	1.05e-05 J	1.83e-05 J	1.04e-05 J	8.64e-05 J	2.04e-05 J	2.08e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000206	8.08e-05	0.000129	7.45e-05	0.000602	0.000133	0.000145
E1668A	N	PCB-130	52663-66-8	1.12e-05 J	3.34e-06 J	7.14e-06 J	4.13e-06 J	3.07e-05 J	5.91e-06 J	1.06e-05 J
E1668A	N	PCB-131	61798-70-7	1.41e-06 U	8.5e-07 U	1.78e-06 J	7.68e-07 U	4.16e-06 U	1.34e-06 U	1.81e-06 U
E1668A	N	PCB-132	38380-05-1	5.89e-05	2.33e-05 J	4.09e-05	2.37e-05 J	0.00019	3.86e-05	4.7e-05
E1668A	N	PCB-133	35694-04-3	3.05e-06 J	7.8e-07 U	3.04e-06 J	1.29e-06 J	9.86e-06 J	1.56e-06 J	1.66e-06 U
E1668A	N	PCB-134/143	PCB-134/143	8.85e-06 J	3.17e-06 J	6.04e-06 J	3.56e-06 J	3.02e-05 J	5.74e-06 J	9.54e-06 J
E1668A	N	PCB-135/151	PCB-135/151	5.86e-05	3.12e-05 J	4.71e-05	2.57e-05 J	0.000168	3.91e-05	4.75e-05
E1668A	N	PCB-136	38411-22-2	2.17e-05 J	8.06e-06 J	1.68e-05 J	1.01e-05 J	5.55e-05	1.16e-05 J	1.74e-05 J
E1668A	N	PCB-137	35694-06-5	7.11e-06 J	2.93e-06 J	4.41e-06 J	2.38e-06 J	2.17e-05 J	4.79e-06 J	5.82e-06 J
E1668A	N	PCB-139/140	PCB-139/140	1.74e-06 J	7.12e-07 U	1.96e-06 J	1.24e-06 J	8.59e-06 J	1.12e-06 U	2.44e-06 J
E1668A	N	PCB-141	52712-04-6	3.13e-05 J	1.26e-05 J	2.14e-05 J	1.07e-05 J	9.38e-05	2.04e-05 J	2.17e-05 J
E1668A	N	PCB-142	41411-61-4	1.35e-06 U	8.18e-07 U	9.59e-07 U	7.39e-07 U	4e-06 U	1.29e-06 U	1.74e-06 U
E1668A	N	PCB-144	68194-14-9	4.84e-06 J	2.36e-06 J	4.36e-06 J	3.19e-06 J	1.84e-05 J	2.71e-06 J	4.01e-06 J
E1668A	N	PCB-145	74472-40-5	8.03e-07 U	5.81e-07 U	6.99e-07 U	5.51e-07 U	1.73e-06 U	8.18e-07 U	1.48e-06 U
E1668A	N	PCB-146	51908-16-8	3.03e-05 J	1.17e-05 J	2.27e-05 J	1.1e-05 J	9.37e-05	2.05e-05 J	2.33e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000164	6.25e-05	0.000105	6.14e-05	0.000501	0.000101	0.000129
E1668A	N	PCB-148	74472-41-6	1.12e-06 U	8.12e-07 U	9.78e-07 U	7.71e-07 U	2.41e-06 U	1.14e-06 U	2.06e-06 U
E1668A	N	PCB-150	68194-08-1	7.83e-07 U	5.66e-07 U	6.81e-07 U	5.37e-07 U	1.68e-06 U	7.98e-07 U	1.44e-06 U
E1668A	N	PCB-152	68194-09-2	7.98e-07 U	5.77e-07 U	6.95e-07 U	5.48e-07 U	1.72e-06 U	8.14e-07 U	1.47e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.000179	7.29e-05	0.000111	6.7e-05	0.000531	0.000113	0.000127
E1668A	N	PCB-154	60145-22-4	4.55e-06 J	1.75e-06 J	3.84e-06 J	1.44e-06 J	1.09e-05 J	3.56e-06 J	2.83e-06 J
E1668A	N	PCB-155	33979-03-2	7.61e-07 U	5.5e-07 U	6.63e-07 U	5.22e-07 U	1.64e-06 U	7.76e-07 U	1.4e-06 U
E1668A	N	PCB-156/157	PCB-156/157	1.74e-05 J	7.54e-06 J	1.1e-05 J	6.97e-06 U	4.57e-05 J	1.14e-05 J	1.01e-05 J
E1668A	N	PCB-158	74472-42-7	1.69e-05 J	6.81e-06 J	9.97e-06 J	6.68e-06 J	5.11e-05	1.11e-05 J	1.05e-05 J
E1668A	N	PCB-159	39635-35-3	9.01e-07 U	5.44e-07 U	6.38e-07 U	4.92e-07 U	4.12e-06 J	8.58e-07 U	1.16e-06 U
E1668A	N	PCB-161	74472-43-8	8.96e-07 U	5.41e-07 U	6.35e-07 U	4.89e-07 U	2.65e-06 U	8.54e-07 U	1.15e-06 U
E1668A	N	PCB-162	39635-34-2	8.9e-07 U	5.37e-07 U	6.3e-07 U	4.86e-07 U	4.07e-06 J	8.47e-07 U	1.14e-06 U
E1668A	N	PCB-164	74472-45-0	1.26e-05 J	4.76e-06 J	8.12e-06 J	4.68e-06 J	3.78e-05 J	7.26e-06 J	8.07e-06 J
E1668A	N	PCB-165	74472-46-1	9.85e-07 U	5.95e-07 U	6.98e-07 U	5.38e-07 U	2.91e-06 U	9.39e-07 U	1.27e-06 U
E1668A	N	PCB-167	52663-72-6	5.55e-06 J	2.54e-06 J	4.58e-06 J	2.44e-06 J	1.39e-05 J	3.63e-06 J	4.97e-06 J
E1668A	N	PCB-169	32774-16-6	6.42e-07 U	3.74e-07 U	4.48e-07 U	3.39e-07 U	2e-06 U	6.37e-07 U	1.09e-06 U
E1668A	N	PCB-170	35065-30-6	4.08e-05	1.55e-05 J	2.87e-05 J	1.64e-05 J	0.000123	2.19e-05 J	2.7e-05 J
E1668A	N	PCB-171/173	PCB-171/173	1.12e-05 J	4.28e-06 J	9.49e-06 J	3.82e-06 J	3.18e-05 J	6.62e-06 J	6.03e-06 J
E1668A	N	PCB-172	52663-74-8	6.4e-06 J	3.98e-06 J	4.48e-06 J	2.13e-06 J	1.84e-05 J	3.23e-06 J	3.5e-06 J
E1668A	N	PCB-174	38411-25-5	4.04e-05	1.7e-05 J	3.09e-05 J	1.61e-05 J	0.000116	2.31e-05 J	2.85e-05 J
E1668A	N	PCB-175	40186-70-7	8.36e-07 U	5.48e-07 U	6.32e-07 U	8.43e-07 J	2.54e-06 U	7.92e-07 U	1.1e-06 U
E1668A	N	PCB-176	52663-65-7	4.27e-06 J	1.93e-06 J	3.84e-06 J	2.03e-06 J	1.45e-05 J	2.44e-06 J	4.37e-06 J
E1668A	N	PCB-177	52663-70-4	2.67e-05 J	9.76e-06 J	1.84e-05 J	8.69e-06 J	7.27e-05	1.45e-05 J	1.86e-05 J
E1668A	N	PCB-178	52663-67-9	9.17e-06 J	3.99e-06 J	6.51e-06 J	3.7e-06 J	3.03e-05 J	5.22e-06 J	6.48e-06 J
E1668A	N	PCB-179	52663-64-6	2.12e-05 J	8.12e-06 J	1.51e-05 J	8.18e-06 J	6.12e-05	1.1e-05 J	1.58e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB
										2.68
				N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	9.94e-05	4.03e-05	6.8e-05	4.16e-05	0.000244	5.74e-05	5.55e-05
E1668A	N	PCB-181	74472-47-2	8.36e-07 U	5.47e-07 U	6.32e-07 U	5.25e-07 U	2.54e-06 U	7.91e-07 U	1.1e-06 U
E1668A	N	PCB-182	60145-23-5	8.12e-07 U	5.32e-07 U	6.14e-07 U	5.1e-07 U	2.47e-06 U	7.69e-07 U	1.07e-06 U
E1668A	N	PCB-183/185	PCB-183/185	3.2e-05 J	1.16e-05 J	2.42e-05 J	1.28e-05 J	8.87e-05	1.67e-05 J	1.92e-05 J
E1668A	N	PCB-184	74472-48-3	6.9e-07 U	4.52e-07 U	5.21e-07 U	4.33e-07 U	2.1e-06 U	6.53e-07 U	9.1e-07 U
E1668A	N	PCB-186	74472-49-4	6.7e-07 U	4.39e-07 U	5.06e-07 U	4.21e-07 U	2.03e-06 U	6.34e-07 U	8.83e-07 U
E1668A	N	PCB-187	52663-68-0	7.23e-05	2.85e-05 J	4.78e-05 J	2.8e-05 J	0.000192	3.73e-05 J	4.48e-05
E1668A	N	PCB-188	74487-85-7	6.13e-07 U	4.06e-07 U	4.64e-07 U	3.94e-07 U	1.7e-06 U	5.94e-07 U	7.4e-07 U
E1668A	N	PCB-189	39635-31-9	5.76e-07 U	3.49e-07 U	1.35e-06 U	3.51e-07 U	3.75e-06 J	5.08e-07 U	8.5e-07 U
E1668A	N	PCB-190	41411-64-7	6.81e-06 J	3.5e-06 J	5.95e-06 J	2.95e-06 J	1.5e-05 J	2.79e-06 J	4.73e-06 J
E1668A	N	PCB-191	74472-50-7	1.07e-06 J	4.17e-07 U	4.81e-07 U	4e-07 U	1.93e-06 U	6.03e-07 U	8.4e-07 U
E1668A	N	PCB-192	74472-51-8	7.11e-07 U	4.66e-07 U	5.37e-07 U	4.47e-07 U	2.16e-06 U	6.73e-07 U	9.38e-07 U
E1668A	N	PCB-194	35694-08-7	2.62e-05 J	1.03e-05 J	1.81e-05 J	1.03e-05 J	8.3e-05	1.53e-05 J	1.64e-05 J
E1668A	N	PCB-195	52663-78-2	8.73e-06 J	3.22e-06 J	5.56e-06 J	2.81e-06 J	3.1e-05 J	3.98e-06 J	4.63e-06 J
E1668A	N	PCB-196	42740-50-1	1.06e-05 J	5.79e-06 J	8.27e-06 J	5.48e-06 J	3.01e-05 J	5.73e-06 J	5.76e-06 J
E1668A	N	PCB-197	33091-17-7	5.68e-07 U	4.68e-07 U	5.47e-07 U	4.39e-07 U	2.19e-06 U	6.59e-07 U	6.58e-07 U
E1668A	N	PCB-198/199	PCB-198/199	3.21e-05 J	1.53e-05 J	2.56e-05 J	1.39e-05 J	8.52e-05	1.79e-05 J	1.68e-05 J
E1668A	N	PCB-200	52663-73-7	2.33e-06 J	1.03e-06 J	1.98e-06 J	1.15e-06 J	7.3e-06 J	6.47e-07 U	6.46e-07 U
E1668A	N	PCB-201	40186-71-8	3.11e-06 J	1.23e-06 J	2.73e-06 J	1.69e-06 J	1.11e-05 J	2.05e-06 J	2.42e-06 J
E1668A	N	PCB-202	2136-99-4	7.08e-06 J	3.32e-06 J	8.16e-06 J	4.18e-06 J	2.36e-05 J	4.51e-06 J	6.01e-06 J
E1668A	N	PCB-203	52663-76-0	1.84e-05 J	8.22e-06 J	1.6e-05 J	8.12e-06 J	4.4e-05 J	1.09e-05 J	9.29e-06 J
E1668A	N	PCB-204	74472-52-9	5.9e-07 U	4.87e-07 U	5.69e-07 U	4.56e-07 U	2.27e-06 U	6.85e-07 U	6.84e-07 U
E1668A	N	PCB-205	74472-53-0	6.43e-07 U	4.37e-07 U	8.33e-07 J	3.82e-07 U	3.37e-06 U	7.05e-07 U	5.96e-07 U
E1668A	N	PCB-206	40186-72-9	2.46e-05 J	8.35e-06 J	1.98e-05 J	1.01e-05 J	6.43e-05	1.27e-05 J	1.62e-05 J
E1668A	N	PCB-207	52663-79-3	7.61e-07 U	6.57e-07 J	1.97e-06 J	8.8e-07 J	5.19e-06 J	7.42e-07 U	1.19e-06 U
E1668A	N	PCB-208	52663-77-1	8.73e-06 J	3.61e-06 J	7.49e-06 J	4.31e-06 J	2.27e-05 J	4.55e-06 J	7.57e-06 J
E1668A	N	PCB-209	2051-24-3	2e-05 J	8.35e-06 J	1.47e-05 J	9.27e-06 J	9.15e-05	1.36e-05 J	1.52e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00607 J	0.00313 J	0.00464 J	0.00317 J	0.0142 J	0.00403 J	0.00527 J
E1668A	N	Total PCB (a)	PCB-Total	0.00636 J	0.00325 J	0.00484 J	0.00329 J	0.0149 J	0.00421 J	0.00545 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	7.81e-08J	4.62e-08J	7.22e-08J	3.89e-08J	2.21e-07J	7.17e-08J	8.08e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.69e-05 J	1.13e-05 J	2.21e-05 J	2.66e-05 J	2.05e-05 J	2.52e-05 J	3.82e-05 J
E1668A	N	PCB-2	2051-61-8	2.67e-06 U	2.58e-06 U	1.66e-06 J	1.88e-06 J	3.15e-06 J	4.92e-07 U	2.3e-06 U
E1668A	N	PCB-3	2051-62-9	4.25e-06 U	2.91e-06 U	5.34e-06 J	4.52e-06 J	4.91e-06 J	5.77e-06 J	7.15e-06 U
E1668A	N	PCB-4	13029-08-8	0.000125	0.000119 J	0.000151	0.000143 J	0.000146	0.000148 J	0.000135 J
E1668A	N	PCB-5	16605-91-7	2.3e-06 U	2.96e-06 U	2.5e-06 U	2.8e-06 U	9.73e-07 J	2.39e-06 U	2.27e-06 U
E1668A	N	PCB-6	25569-80-6	1.3e-05 U	1.15e-05 U	1.76e-05 J	1.92e-05 J	1.48e-05 J	1.79e-05 J	2.32e-05 J
E1668A	N	PCB-7	33284-50-3	5.73e-06 U	5.2e-06 U	6.19e-06 J	3.97e-06 J	4e-06 J	3.91e-06 J	3.06e-06 U
E1668A	N	PCB-8	34883-43-7	5.26e-05 J	4.16e-05 J	5.9e-05 J	6.63e-05 J	5.82e-05 J	6.73e-05 J	5.94e-05 J
E1668A	N	PCB-9	34883-39-1	6.2e-06 U	3.5e-06 U	4.91e-06 J	4.6e-06 J	4.08e-06 J	5.3e-06 J	4.39e-06 U
E1668A	N	PCB-10	33146-45-1	1.97e-05 J	1.65e-05 J	2.33e-05 J	2.31e-05 J	2.04e-05 J	2.08e-05 J	2.75e-05 J
E1668A	N	PCB-11	2050-67-1	4.48e-05 U	3.87e-05 U	3.96e-05 U	6.36e-05 U	5.72e-05 U	5.38e-05 U	5.71e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.11e-05 U	1.05e-05 U	1.48e-05 J	1.82e-05 J	1.39e-05 J	1.8e-05 J	2.17e-05 J
E1668A	N	PCB-14	34883-41-5	1.88e-06 U	2.42e-06 U	2.04e-06 U	2.29e-06 U	1.83e-06 U	1.95e-06 U	1.86e-06 U
E1668A	N	PCB-15	2050-68-2	6.89e-05 J	6.43e-05 J	8.48e-05 J	8.4e-05 J	7.49e-05	0.000102	8.81e-05 J
E1668A	N	PCB-16	38444-78-9	6.61e-05	5.87e-05	7.41e-05	6.28e-05	6.41e-05	8.09e-05	3.32e-05 J
E1668A	N	PCB-17	37680-66-3	9.96e-05	8.9e-05	0.000126	0.000108	0.000105	0.000139	8.64e-05
E1668A	N	PCB-18/30	PCB-18/30	0.000167	0.00016	0.000219	0.000196	0.000191	0.000237	0.00012
E1668A	N	PCB-19	38444-73-4	4.95e-05 J	5.06e-05	6.95e-05	5.21e-05 J	5.76e-05	7.47e-05	5.06e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000252	0.000215	0.000302	0.00027	0.000249	0.000351	0.000188
E1668A	N	PCB-21/33	PCB-21/33	4.71e-05	4.37e-05	5.36e-05	5.23e-05	4.98e-05	6.56e-05	3.58e-05 J
E1668A	N	PCB-22	38444-85-8	5.59e-05	5.27e-05	6.3e-05	5.45e-05	5.21e-05	7.23e-05	3.75e-05 J
E1668A	N	PCB-23	55720-44-0	6.53e-07 U	1.03e-06 U	9.34e-07 U	6.39e-07 U	6.35e-07 U	6.03e-07 U	8.94e-07 U
E1668A	N	PCB-24	55702-45-9	1.25e-06 U	3.36e-06 J	2.77e-06 J	1.47e-06 U	3.83e-06 J	4.78e-06 J	3.2e-06 J
E1668A	N	PCB-25	55712-37-3	3.42e-05 J	3.25e-05 J	4.45e-05	3.85e-05	3.24e-05 J	4.91e-05	2.82e-05 J
E1668A	N	PCB-26/29	PCB-26/29	5.57e-05	5.3e-05	6.77e-05	6.22e-05	5.76e-05	7.57e-05	5.4e-05
E1668A	N	PCB-27	38444-76-7	3.17e-05 J	2.83e-05 J	4.24e-05	3.93e-05	3.71e-05 J	4.53e-05	3.13e-05 J
E1668A	N	PCB-31	16606-02-3	0.000201 J	0.000176 J	0.000237 J	0.000218 J	0.000203 J	0.000274 J	0.000163 J
E1668A	N	PCB-32	38444-77-8	8.17e-05	7.29e-05	0.000111	0.000101	9.22e-05	0.000125	6.78e-05
E1668A	N	PCB-34	37680-68-5	1.53e-06 J	1.01e-06 U	2.04e-06 J	1.62e-06 J	1.39e-06 J	2.86e-06 J	8.8e-07 U
E1668A	N	PCB-35	37680-69-6	3.27e-06 J	3.61e-06 J	4.11e-06 J	3.81e-06 J	2.59e-06 J	5.61e-06 J	2.58e-06 J
E1668A	N	PCB-36	38444-87-0	6.39e-07 U	1e-06 U	9.13e-07 U	9.84e-07 J	3.83e-07 J	1.38e-06 J	8.74e-07 U
E1668A	N	PCB-37	38444-90-5	4.62e-05 J	4.07e-05 J	5.25e-05	4.85e-05	4.26e-05	6.74e-05	4.24e-05 J
E1668A	N	PCB-38	53555-66-1	6.74e-07 U	1.06e-06 U	9.63e-07 U	6.59e-07 U	6.55e-07 U	6.22e-07 U	9.22e-07 U
E1668A	N	PCB-39	38444-88-1	1.18e-06 J	9.43e-07 U	8.56e-07 U	1.67e-06 J	2.18e-06 J	1.89e-06 J	8.19e-07 U
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000139	0.000123	0.000194	0.000147	0.000141	0.000198	9.19e-05
E1668A	N	PCB-42	36559-22-5	6.63e-05	5.54e-05	9.67e-05	6.54e-05	6.52e-05	9.22e-05	3.69e-05 J
E1668A	N	PCB-43/73	PCB-43/73	8.65e-06 J	1.02e-05 J	9.65e-06 J	1.11e-05 J	1.06e-05 J	8.12e-06 J	3.41e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000276	0.000238	0.000392	0.000279	0.000267	4e-04	0.000156
E1668A	N	PCB-45/51	PCB-45/51	9.17e-05	8.09e-05	0.000132	8.67e-05	8.02e-05	0.000123	3.43e-05 J
E1668A	N	PCB-46	41464-47-5	1.97e-05 J	1.7e-05 J	2.54e-05 J	2.17e-05 J	2e-05 J	2.7e-05 J	1.08e-05 J
E1668A	N	PCB-48	70362-47-9	3.64e-05 J	3.27e-05 J	5.56e-05	3.43e-05 J	3.83e-05	5.07e-05 J	2.23e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000174	0.00015	0.000247	0.000182	0.000175	0.000247	0.000118
E1668A	N	PCB-50/53	PCB-50/53	6.64e-05	5.42e-05	8.68e-05	6e-05	5.36e-05 J	8.76e-05	3.07e-05 J
E1668A	N	PCB-52	35693-99-3	0.000271	0.000239	0.00039 J	0.000282 J	0.000276 J	0.000372 J	0.000176
E1668A	N	PCB-54	15968-05-5	7.23e-06 J	6.21e-06 J	6.76e-06 J	6.36e-06 J	4.05e-06 J	1.16e-05 J	1.54e-06 U

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	6.32e-06 J	2.75e-06 J	4.33e-06 J	4.93e-06 J	5.2e-06 J	8.16e-06 J	2.37e-06 J
E1668A	N	PCB-56	41464-43-1	7.21e-05	5.91e-05	9.28e-05	6.51e-05	5.97e-05	9.75e-05	4.17e-05
E1668A	N	PCB-57	70424-67-8	9.19e-07 U	1.25e-06 U	1.33e-06 U	1.57e-06 J	1.52e-06 J	1.74e-06 J	9.65e-07 U
E1668A	N	PCB-58	41464-49-7	9.15e-07 U	1.24e-06 U	1.15e-06 J	8.55e-07 J	7.11e-07 J	1.89e-06 J	9.61e-07 U
E1668A	N	PCB-59/62/75	PCB-59/62/75	2.29e-05 J	2e-05 J	3.37e-05 J	2.6e-05 J	2.42e-05 J	3.41e-05 J	1.5e-05 J
E1668A	N	PCB-60	33025-41-1	2.6e-05 J	1.8e-05 J	3.46e-05 J	2.31e-05 J	2.33e-05 J	3.13e-05 J	1.48e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.00024	0.000193	0.000336	0.000231	0.000224	0.000351	0.000149
E1668A	N	PCB-63	74472-34-7	5.96e-06 J	4.85e-06 J	9.09e-06 J	8.19e-06 J	6.64e-06 J	9.66e-06 J	4.65e-06 J
E1668A	N	PCB-64	52663-58-8	7.8e-05 J	6.98e-05 J	0.00012	8.56e-05	8.25e-05	0.000114	4.87e-05 J
E1668A	N	PCB-66	32598-10-0	0.000151	0.000127	0.000207	0.000146	0.000147	0.000218	9.6e-05
E1668A	N	PCB-67	73575-53-8	5.99e-06 J	5.22e-06 J	6.46e-06 J	6.82e-06 J	4.74e-06 J	7.77e-06 J	3.46e-06 J
E1668A	N	PCB-68	73575-52-7	8.33e-07 U	3.61e-06 U	4.3e-06 J	5.13e-06 J	4.23e-06 J	4.62e-06 J	2.15e-06 J
E1668A	N	PCB-72	41464-42-0	3.6e-06 J	1.22e-06 U	3.42e-06 J	3.76e-06 J	3.46e-06 J	4.66e-06 J	2.76e-06 J
E1668A	N	PCB-77	32598-13-3	1.17e-05 J	1.04e-05 J	1.46e-05 J	1.33e-05 J	1.29e-05 J	2.02e-05 J	9.18e-06 J
E1668A	N	PCB-78	70362-49-1	9.5e-07 U	1.29e-06 U	1.38e-06 U	1.09e-06 U	8.63e-07 U	1.05e-06 U	9.98e-07 U
E1668A	N	PCB-79	41464-48-6	8.34e-07 U	1.13e-06 U	1.86e-06 J	9.56e-07 U	1.73e-06 J	1.95e-06 J	1.02e-06 J
E1668A	N	PCB-80	33284-52-5	8.14e-07 U	1.11e-06 U	1.18e-06 U	9.34e-07 U	7.39e-07 U	9.01e-07 U	8.55e-07 U
E1668A	N	PCB-81	70362-50-4	8.41e-07 U	1.15e-06 U	1.26e-06 U	9.71e-07 U	7.6e-07 U	9.65e-07 U	9.05e-07 U
E1668A	N	PCB-82	52663-62-4	1.53e-05 J	1.1e-05 J	1.73e-05 J	1.56e-05 J	1.58e-05 J	2.03e-05 J	8.28e-06 J
E1668A	N	PCB-83/99	PCB-83/99	8.15e-05 J	7.58e-05 J	0.000115	9.25e-05	8.37e-05	0.000137	6.93e-05
E1668A	N	PCB-84	52663-60-2	3.98e-05 J	4.01e-05	4.87e-05 J	4.18e-05	4.49e-05	6.61e-05	2.88e-05 J
E1668A	N	PCB-85/116/117	PCB-85/116/117	2.91e-05 J	2.26e-05 J	2.61e-05 J	1.85e-05 J	2.17e-05 J	3.55e-05 J	1.24e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	9.99e-05 J	7.94e-05	0.000111	8.74e-05 J	8.01e-05	0.000122 J	5.97e-05
E1668A	N	PCB-88/91	PCB-88/91	2.56e-05 J	2.88e-05 J	3.59e-05 J	2.56e-05 J	2.88e-05 J	3.95e-05	1.81e-05 J
E1668A	N	PCB-89	73575-57-2	1.62e-06 U	1.95e-06 U	2.1e-06 U	1.54e-06 U	2.98e-06 J	1.58e-06 U	1.61e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000143	0.000129	0.000174	0.000135	0.000131	0.000197	8.35e-05 J
E1668A	N	PCB-92	52663-61-3	2.67e-05 J	2.34e-05 J	3.24e-05 J	2.62e-05 J	1.94e-05 J	3.88e-05 J	1.98e-05 J
E1668A	N	PCB-93/100	PCB-93/100	5.16e-06 J	7.23e-06 J	5.35e-06 J	7.26e-06 J	7.9e-06 J	1.77e-05 J	3.24e-06 J
E1668A	N	PCB-94	73575-55-0	1.62e-06 U	1.95e-06 U	2.1e-06 U	1.54e-06 U	1.37e-06 U	1.58e-06 U	1.61e-06 U
E1668A	N	PCB-95	38379-99-6	0.000138	0.000113	0.000157	0.000125	0.000121	0.000176	8.62e-05
E1668A	N	PCB-96	73575-54-9	1.21e-06 U	2.36e-06 J	3.22e-06 J	1.15e-06 U	1.03e-06 U	2.61e-06 J	1.2e-06 U
E1668A	N	PCB-98/102	PCB-98/102	1.08e-05 J	8.45e-06 J	1.13e-05 J	9.25e-06 J	9.41e-06 J	1.43e-05 J	6.91e-06 J
E1668A	N	PCB-103	60145-21-3	3.2e-06 J	1.71e-06 U	5.03e-06 J	3e-06 J	1.21e-06 U	7.06e-06 J	1.41e-06 U
E1668A	N	PCB-104	56558-16-8	1.08e-06 U	1.3e-06 U	1.4e-06 U	1.03e-06 U	9.16e-07 U	1.06e-06 U	1.07e-06 U
E1668A	N	PCB-105	32598-14-4	4.15e-05	2.47e-05 J	4.75e-05	3.52e-05 J	3.22e-05 J	5.79e-05	2.16e-05 J
E1668A	N	PCB-106	70424-69-0	7.05e-07 U	9.32e-07 U	1.11e-06 U	6.84e-07 U	6.49e-07 U	6.96e-07 U	7.63e-07 U
E1668A	N	PCB-107	70424-68-9	6.42e-06 J	3.64e-06 J	9.7e-06 J	6.88e-06 J	6.52e-06 J	1.13e-05 J	6.86e-06 J
E1668A	N	PCB-108/124	PCB-108/124	3.98e-06 J	2.89e-06 J	3.46e-06 J	3.76e-06 J	3.11e-06 J	5.21e-06 J	1.37e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000163	0.000142	0.000187	0.000146	0.000137	0.000218	0.000111
E1668A	N	PCB-111	39635-32-0	1.01e-06 U	1.22e-06 U	1.32e-06 U	9.64e-07 U	8.61e-07 U	9.92e-07 U	1.01e-06 U
E1668A	N	PCB-112	74472-36-9	1.1e-06 U	1.33e-06 U	1.43e-06 U	1.05e-06 U	9.35e-07 U	1.08e-06 U	1.09e-06 U
E1668A	N	PCB-114	74472-37-0	6.42e-07 U	8.73e-07 U	1.01e-06 U	2.14e-06 J	1.61e-06 J	4.01e-06 J	7.01e-07 U
E1668A	N	PCB-118	31508-00-6	0.000103 J	8.1e-05 J	0.000121	8.68e-05	8.75e-05	0.000143	6.23e-05 J
E1668A	N	PCB-120	68194-12-7	1.04e-06 U	1.26e-06 U	1.35e-06 U	9.92e-07 U	8.86e-07 U	1.02e-06 U	1.04e-06 U
E1668A	N	PCB-121	56558-18-0	1.05e-06 U	1.27e-06 U	1.37e-06 U	1e-06 U	8.93e-07 U	1.03e-06 U	1.05e-06 U

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	1.35e-06 J	1.01e-06 U	1.21e-06 U	1.63e-06 J	2.28e-06 J	2e-06 J	8.31e-07 U
E1668A	N	PCB-123	65510-44-3	2.19e-06 J	1.58e-06 J	1.08e-06 U	1.87e-06 J	1.44e-06 J	2.65e-06 J	8.04e-07 U
E1668A	N	PCB-126	57465-28-8	7.16e-07 U	9.15e-07 U	1.19e-06 U	7.54e-07 U	7.33e-07 U	7.23e-07 U	7.11e-07 U
E1668A	N	PCB-127	39635-33-1	6.97e-07 U	9.21e-07 U	1.1e-06 U	6.76e-07 U	6.42e-07 U	6.88e-07 U	7.54e-07 U
E1668A	N	PCB-128/166	PCB-128/166	1.81e-05 J	1.47e-05 J	2.37e-05 J	1.67e-05 J	1.87e-05 J	2.91e-05 J	1.13e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000133	0.000105	0.000199	0.000133	0.000139	0.00023	8.25e-05
E1668A	N	PCB-130	52663-66-8	7.94e-06 J	5.44e-06 J	1.12e-05 J	7.7e-06 J	8.45e-06 J	1.13e-05 J	5.36e-06 J
E1668A	N	PCB-131	61798-70-7	1.83e-06 U	1.9e-06 U	2.74e-06 U	1.78e-06 U	3.56e-06 J	2.12e-06 U	1.46e-06 U
E1668A	N	PCB-132	38380-05-1	4.36e-05	3.54e-05 J	7.3e-05	4.64e-05	5.21e-05	6.84e-05 J	2.71e-05 J
E1668A	N	PCB-133	35694-04-3	1.68e-06 U	1.75e-06 U	3.18e-06 J	2.45e-06 J	3.48e-06 J	1.95e-06 U	1.34e-06 U
E1668A	N	PCB-134/143	PCB-134/143	5.17e-06 J	5.88e-06 J	1.16e-05 J	6.05e-06 J	1.11e-05 J	1.29e-05 J	3.84e-06 J
E1668A	N	PCB-135/151	PCB-135/151	4.3e-05	3.81e-05	4.37e-05 J	3.65e-05 J	3.79e-05	6.23e-05	2.92e-05 J
E1668A	N	PCB-136	38411-22-2	1.66e-05 J	1.16e-05 J	1.8e-05 J	1.14e-05 J	1.44e-05 J	2.24e-05 J	8.36e-06 J
E1668A	N	PCB-137	35694-06-5	5.49e-06 J	2.38e-06 J	4.61e-06 J	3.8e-06 J	5.7e-06 J	8.56e-06 J	2.45e-06 J
E1668A	N	PCB-139/140	PCB-139/140	1.53e-06 U	1.59e-06 U	2.29e-06 U	1.49e-06 U	4.67e-06 J	2.97e-06 J	1.22e-06 U
E1668A	N	PCB-141	52712-04-6	1.79e-05 J	1.51e-05 J	3.22e-05 J	2.13e-05 J	1.97e-05 J	3.73e-05 J	1.05e-05 J
E1668A	N	PCB-142	41411-61-4	1.76e-06 U	1.83e-06 U	2.63e-06 U	1.71e-06 U	1.56e-06 U	2.04e-06 U	1.4e-06 U
E1668A	N	PCB-144	68194-14-9	1.56e-06 U	1.66e-06 U	5.55e-06 J	1.57e-06 U	2.67e-06 J	7.49e-06 J	1.41e-06 U
E1668A	N	PCB-145	74472-40-5	1.18e-06 U	1.26e-06 U	1.49e-06 U	1.19e-06 U	9.41e-07 U	1.16e-06 U	1.06e-06 U
E1668A	N	PCB-146	51908-16-8	2.27e-05 J	1.6e-05 J	3.33e-05 J	2.01e-05 J	2.34e-05 J	3.68e-05 J	1.53e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000121	9.6e-05	0.000216	0.000128	0.00014	0.000214	7.87e-05
E1668A	N	PCB-148	74472-41-6	1.65e-06 U	1.76e-06 U	2.08e-06 U	1.66e-06 U	1.32e-06 U	1.62e-06 U	1.49e-06 U
E1668A	N	PCB-150	68194-08-1	1.15e-06 U	1.23e-06 U	1.45e-06 U	1.16e-06 U	9.17e-07 U	1.13e-06 U	1.04e-06 U
E1668A	N	PCB-152	68194-09-2	1.17e-06 U	1.25e-06 U	1.48e-06 U	1.18e-06 U	9.35e-07 U	1.15e-06 U	1.06e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.00012	9.27e-05	0.000181	0.00012	0.000123	2e-04	7.51e-05
E1668A	N	PCB-154	60145-22-4	1.37e-06 U	2.44e-06 J	2.65e-06 J	4.36e-06 J	3.25e-06 J	4.5e-06 J	2.05e-06 J
E1668A	N	PCB-155	33979-03-2	1.12e-06 U	1.19e-06 U	1.41e-06 U	1.13e-06 U	8.92e-07 U	1.1e-06 U	1.01e-06 U
E1668A	N	PCB-156/157	PCB-156/157	1.13e-05 J	7.48e-06 J	1.39e-05 J	8.77e-06 J	8.1e-06 J	1.62e-05 J	5.93e-06 J
E1668A	N	PCB-158	74472-42-7	1.24e-05 J	8.5e-06 J	1.76e-05 J	1.21e-05 J	1.05e-05 J	1.89e-05 J	6.07e-06 J
E1668A	N	PCB-159	39635-35-3	1.17e-06 U	1.22e-06 U	1.75e-06 U	1.14e-06 U	1.04e-06 U	1.95e-06 J	9.33e-07 U
E1668A	N	PCB-161	74472-43-8	1.16e-06 U	1.21e-06 U	1.74e-06 U	1.13e-06 U	1.03e-06 U	1.35e-06 U	9.28e-07 U
E1668A	N	PCB-162	39635-34-2	1.16e-06 U	1.2e-06 U	1.73e-06 U	1.12e-06 U	1.03e-06 U	1.34e-06 U	9.21e-07 U
E1668A	N	PCB-164	74472-45-0	9.05e-06 J	7.22e-06 J	1.62e-05 J	8.99e-06 J	7.19e-06 J	1.46e-05 J	4.41e-06 J
E1668A	N	PCB-165	74472-46-1	1.28e-06 U	1.33e-06 U	1.91e-06 U	1.25e-06 U	1.14e-06 U	1.48e-06 U	1.02e-06 U
E1668A	N	PCB-167	52663-72-6	3.9e-06 J	2.24e-06 J	4.04e-06 J	2.23e-06 J	2.63e-06 J	6.89e-06 J	2.19e-06 J
E1668A	N	PCB-169	32774-16-6	9.98e-07 U	1.01e-06 U	1.82e-06 U	1.38e-06 U	1.13e-06 U	1.41e-06 U	7.43e-07 U
E1668A	N	PCB-170	35065-30-6	2.21e-05 J	1.44e-05 J	3.31e-05 J	1.62e-05 J	2.05e-05 J	3.32e-05 J	1.67e-05 J
E1668A	N	PCB-171/173	PCB-171/173	8.54e-06 J	4.74e-06 J	9.41e-06 J	6.35e-06 J	6.19e-06 J	9.22e-06 J	4.26e-06 J
E1668A	N	PCB-172	52663-74-8	3.35e-06 J	3.04e-06 J	5.97e-06 J	1.08e-06 U	9.1e-07 U	4.47e-06 J	1.57e-06 J
E1668A	N	PCB-174	38411-25-5	2.34e-05 J	2.1e-05 J	3.15e-05 J	2.3e-05 J	1.99e-05 J	3.95e-05	1.41e-05 J
E1668A	N	PCB-175	40186-70-7	1.35e-06 J	1.07e-06 U	1.43e-06 U	9.74e-07 U	8.18e-07 U	1.68e-06 J	9.61e-07 U
E1668A	N	PCB-176	52663-65-7	3.47e-06 J	8.18e-07 U	4.12e-06 J	2.78e-06 J	2.67e-06 J	5.26e-06 J	1.74e-06 J
E1668A	N	PCB-177	52663-70-4	1.54e-05 J	1.2e-05 J	1.85e-05 J	1.52e-05 J	1.3e-05 J	1.92e-05 J	1.09e-05 J
E1668A	N	PCB-178	52663-67-9	7.09e-06 J	3.38e-06 J	8.08e-06 J	4.66e-06 J	4.57e-06 J	1.13e-05 J	4.33e-06 J
E1668A	N	PCB-179	52663-64-6	1.31e-05 J	1.28e-05 J	1.83e-05 J	1.27e-05 J	1.41e-05 J	2.54e-05 J	1.03e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91
				NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	5.35e-05	4e-05 J	6.57e-05 J	4.16e-05	3.97e-05	6.93e-05 J	3.28e-05 J
E1668A	N	PCB-181	74472-47-2	1.03e-06 U	1.07e-06 U	1.42e-06 U	9.74e-07 U	8.18e-07 U	1.08e-06 U	9.61e-07 U
E1668A	N	PCB-182	60145-23-5	1.01e-06 U	1.04e-06 U	1.38e-06 U	9.46e-07 U	7.95e-07 U	1.05e-06 U	9.34e-07 U
E1668A	N	PCB-183/185	PCB-183/185	2.1e-05 J	1.34e-05 J	2.82e-05 J	1.71e-05 J	1.28e-05 J	3.02e-05 J	1.05e-05 J
E1668A	N	PCB-184	74472-48-3	8.54e-07 U	8.85e-07 U	1.18e-06 U	8.04e-07 U	6.75e-07 U	8.93e-07 U	7.93e-07 U
E1668A	N	PCB-186	74472-49-4	8.29e-07 U	8.6e-07 U	1.14e-06 U	7.8e-07 U	6.55e-07 U	8.67e-07 U	7.7e-07 U
E1668A	N	PCB-187	52663-68-0	4.29e-05	3.48e-05 J	5.55e-05 J	3.58e-05 J	3.72e-05 J	6.67e-05	2.75e-05 J
E1668A	N	PCB-188	74487-85-7	6.77e-07 U	7.04e-07 U	8.65e-07 U	6.31e-07 U	5.06e-07 U	6.84e-07 U	6.4e-07 U
E1668A	N	PCB-189	39635-31-9	7.72e-07 U	1.02e-06 U	1.56e-06 U	6.63e-07 U	6.94e-07 U	8.76e-07 U	7.64e-07 U
E1668A	N	PCB-190	41411-64-7	3.44e-06 J	8.31e-07 U	4.31e-06 J	3.74e-06 J	2.46e-06 J	4.8e-06 J	2.71e-06 J
E1668A	N	PCB-191	74472-50-7	7.88e-07 U	8.17e-07 U	1.08e-06 U	7.42e-07 U	6.23e-07 U	8.24e-07 U	7.32e-07 U
E1668A	N	PCB-192	74472-51-8	8.8e-07 U	9.12e-07 U	1.21e-06 U	8.28e-07 U	6.96e-07 U	9.2e-07 U	8.17e-07 U
E1668A	N	PCB-194	35694-08-7	1.55e-05 J	8.35e-06 J	1.64e-05 J	1.26e-05 J	1.17e-05 J	2.06e-05 J	8.52e-06 J
E1668A	N	PCB-195	52663-78-2	4.33e-06 J	3.42e-06 J	3.43e-06 J	3e-06 J	5.02e-06 J	1.11e-05 J	2.75e-06 J
E1668A	N	PCB-196	42740-50-1	5.51e-06 J	2.82e-06 J	6.42e-06 J	3.39e-06 J	3.29e-06 J	9.98e-06 J	3.92e-06 J
E1668A	N	PCB-197	33091-17-7	6.58e-07 U	6.99e-07 U	8.47e-07 U	5.99e-07 U	5.27e-07 U	6.61e-07 U	5.75e-07 U
E1668A	N	PCB-198/199	PCB-198/199	1.86e-05 J	1.24e-05 J	1.93e-05 J	9.83e-06 J	1.16e-05 J	2.31e-05 J	1.29e-05 J
E1668A	N	PCB-200	52663-73-7	1.94e-06 J	6.86e-07 U	8.31e-07 U	5.88e-07 U	5.17e-07 U	6.49e-07 U	5.64e-07 U
E1668A	N	PCB-201	40186-71-8	1.69e-06 J	6.63e-07 U	8.03e-07 U	1.88e-06 J	2.53e-06 J	2.19e-06 J	1.86e-06 J
E1668A	N	PCB-202	2136-99-4	6.01e-06 J	3.35e-06 J	8.52e-06 J	4.92e-06 J	5.05e-06 J	8.45e-06 J	4.13e-06 J
E1668A	N	PCB-203	52663-76-0	1.04e-05 J	6.94e-06 J	8.69e-06 J	5.9e-06 J	5.73e-06 J	1.26e-05 J	8.25e-06 J
E1668A	N	PCB-204	74472-52-9	6.84e-07 U	7.27e-07 U	8.8e-07 U	6.23e-07 U	5.47e-07 U	6.87e-07 U	5.97e-07 U
E1668A	N	PCB-205	74472-53-0	6.38e-07 U	8.46e-07 U	1.15e-06 U	5.67e-07 U	1.15e-06 J	1.09e-06 J	6.08e-07 U
E1668A	N	PCB-206	40186-72-9	1.74e-05 J	1.26e-05 J	1.68e-05 J	1.38e-05 J	1.27e-05 J	2.39e-05 J	1.37e-05 J
E1668A	N	PCB-207	52663-79-3	8.96e-07 U	1.13e-06 U	3.34e-06 J	1.16e-06 U	9.28e-07 U	1.34e-06 U	8.27e-07 U
E1668A	N	PCB-208	52663-77-1	4.93e-06 J	4.55e-06 J	5.36e-06 J	5.71e-06 J	4.54e-06 J	1.01e-05 J	5.47e-06 J
E1668A	N	PCB-209	2051-24-3	1.17e-05 J	1.68e-05 J	1.63e-05 J	1.5e-05 J	1.24e-05 J	2.25e-05 J	1.05e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00507 J	0.00436 J	0.00668 J	0.00518 J	0.00501 J	0.00725 J	0.00361 J
E1668A	N	Total PCB (a)	PCB-Total	0.00525 J	0.00449 J	0.00689 J	0.00534 J	0.00516 J	0.0075 J	0.00372 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	7.18e-08J	8.86e-08J	1.16e-07J	7.47e-08J	7.26e-08J	7.54e-08J	6.9e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.69e-05 J	1.42e-05 J	1.83e-05 J	1.99e-05 J	1.35e-05 J	1.05e-05 J	2.46e-05 J
E1668A	N	PCB-2	2051-61-8	2.68e-06 U	3.01e-07 U	3.63e-07 U	3.38e-07 U	4.56e-07 U	4.88e-07 U	1.9e-06 J
E1668A	N	PCB-3	2051-62-9	4.3e-06 U	2.64e-06 J	2.81e-06 J	4.62e-06 J	3.12e-06 J	5.58e-07 U	3.92e-06 J
E1668A	N	PCB-4	13029-08-8	0.000134	0.000103 J	0.00013	0.000159 J	0.000106 J	0.000117 J	0.000144 J
E1668A	N	PCB-5	16605-91-7	1.33e-06 U	1.98e-06 J	2.72e-06 U	1.84e-06 J	3.17e-06 U	3.46e-06 U	3.74e-06 U
E1668A	N	PCB-6	25569-80-6	1.43e-05 U	1.15e-05 J	1.45e-05 J	1.92e-05 J	1.23e-05 J	9.63e-06 J	1.93e-05 J
E1668A	N	PCB-7	33284-50-3	5.52e-06 U	2.2e-06 J	3.28e-06 J	4.28e-06 J	3.07e-06 U	3.38e-06 J	3.62e-06 U
E1668A	N	PCB-8	34883-43-7	4.53e-05 J	4.15e-05 J	4.5e-05 J	7.66e-05 J	4.17e-05 J	4.3e-05 J	6.03e-05 J
E1668A	N	PCB-9	34883-39-1	4.09e-06 U	3.67e-06 J	4.02e-06 J	4.58e-06 J	2.42e-06 J	3.36e-06 U	5.8e-06 J
E1668A	N	PCB-10	33146-45-1	2.18e-05 J	1.37e-05 J	1.98e-05 J	2.58e-05 J	1.33e-05 J	1.9e-05 J	2.09e-05 J
E1668A	N	PCB-11	2050-67-1	4.32e-05 U	5.57e-05 U	5.59e-05 U	4.93e-05 U	5.77e-05 U	4.49e-05 U	6.17e-05 U
E1668A	N	PCB-12/13	PCB-12/13	9.98e-06 U	8.45e-06 J	9.3e-06 J	1.81e-05 J	8.64e-06 J	9.76e-06 J	1.35e-05 J
E1668A	N	PCB-14	34883-41-5	1.84e-06 U	2.24e-06 U	2.23e-06 U	2.41e-06 U	2.59e-06 U	2.83e-06 U	3.06e-06 U
E1668A	N	PCB-15	2050-68-2	7.45e-05 J	5.41e-05 J	5.85e-05 J	1e-04	6.31e-05 J	5.38e-05 J	8.5e-05 J
E1668A	N	PCB-16	38444-78-9	5.26e-05	4.36e-05	5.13e-05	9.47e-05	5.97e-05	4.64e-05	6.73e-05
E1668A	N	PCB-17	37680-66-3	8.76e-05	7.36e-05 J	8.93e-05	0.000146	8.71e-05	8.19e-05	0.000128
E1668A	N	PCB-18/30	PCB-18/30	0.000157	0.000123	0.000147	0.000264	0.000159	0.000154	0.00021
E1668A	N	PCB-19	38444-73-4	5.57e-05	4.06e-05	4.89e-05	7.84e-05	5.24e-05	4.86e-05	5.95e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000196	0.000184	0.000203	0.000383	0.000235	0.000207	0.000315
E1668A	N	PCB-21/33	PCB-21/33	3.55e-05 J	3.45e-05 J	3.97e-05	7.29e-05	4.07e-05	3.85e-05	5.82e-05
E1668A	N	PCB-22	38444-85-8	4.17e-05	3.9e-05 J	4.1e-05 J	8.54e-05	5.07e-05	4.6e-05	6.75e-05
E1668A	N	PCB-23	55720-44-0	6.49e-07 U	6.85e-07 U	6.88e-07 U	8.85e-07 U	8.12e-07 U	1.02e-06 U	1.22e-06 U
E1668A	N	PCB-24	55702-45-9	3.38e-06 J	1.62e-06 U	1.62e-06 U	5.42e-06 J	2.51e-06 J	1.68e-06 U	5.34e-06 J
E1668A	N	PCB-25	55712-37-3	2.77e-05 J	2.46e-05 J	2.69e-05 J	5.23e-05	3.13e-05 J	2.72e-05 J	4.17e-05
E1668A	N	PCB-26/29	PCB-26/29	4.57e-05	3.95e-05	4.82e-05	7.91e-05	5.23e-05	4.79e-05	7.22e-05
E1668A	N	PCB-27	38444-76-7	2.73e-05 J	2.93e-05 J	3.39e-05 J	4.41e-05	3.2e-05 J	2.79e-05 J	3.96e-05
E1668A	N	PCB-31	16606-02-3	0.000157 J	0.000146 J	0.000169 J	0.000302 J	0.000187 J	0.000168 J	0.00025 J
E1668A	N	PCB-32	38444-77-8	7.69e-05	6.18e-05	7.03e-05	0.000134	7.61e-05	6.8e-05	9.6e-05
E1668A	N	PCB-34	37680-68-5	1.31e-06 J	1.25e-06 J	1.77e-06 J	2.84e-06 J	2.12e-06 J	1e-06 U	1.21e-06 U
E1668A	N	PCB-35	37680-69-6	2.81e-06 J	2.6e-06 J	2.91e-06 J	5.67e-06 J	3.69e-06 J	3.23e-06 J	3.07e-06 J
E1668A	N	PCB-36	38444-87-0	9.61e-07 J	6.7e-07 U	6.72e-07 U	8.9e-07 J	7.94e-07 U	9.94e-07 U	1.2e-06 U
E1668A	N	PCB-37	38444-90-5	3.75e-05 J	3.21e-05 J	4.23e-05	6.68e-05	4.4e-05	3.96e-05	6.15e-05
E1668A	N	PCB-38	53555-66-1	6.7e-07 U	7.06e-07 U	7.09e-07 U	9.12e-07 U	8.38e-07 U	1.05e-06 U	1.26e-06 U
E1668A	N	PCB-39	38444-88-1	5.95e-07 U	6.28e-07 U	6.3e-07 U	2.08e-06 J	7.45e-07 U	9.32e-07 U	1.12e-06 U
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000112	0.000105	0.00011	0.000202	0.000139	0.00012	0.000164
E1668A	N	PCB-42	36559-22-5	4.96e-05	4.75e-05	5.28e-05	0.000103	6.23e-05	5.57e-05	8.3e-05
E1668A	N	PCB-43/73	PCB-43/73	6.01e-06 J	6.54e-06 J	6.65e-06 J	1.59e-05 J	9.23e-06 J	5.73e-06 J	1.31e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000207	0.000196	0.000208	0.000432	0.000251	0.000232	0.000322
E1668A	N	PCB-45/51	PCB-45/51	6.81e-05	6.21e-05	6.75e-05	0.000155	7.7e-05	7.32e-05	9.97e-05
E1668A	N	PCB-46	41464-47-5	1.47e-05 J	1.43e-05 J	1.39e-05 J	2.62e-05 J	1.81e-05 J	1.33e-05 J	2.35e-05 J
E1668A	N	PCB-48	70362-47-9	2.8e-05 J	2.71e-05 J	2.79e-05 J	6.33e-05	3.25e-05 J	3.22e-05 J	4.62e-05
E1668A	N	PCB-49/69	PCB-49/69	0.000132	0.000133	0.000139	0.000263	0.000158	0.000153	0.000208
E1668A	N	PCB-50/53	PCB-50/53	4.99e-05	4.6e-05	4.89e-05	9.51e-05	6.04e-05	5.74e-05	6.71e-05
E1668A	N	PCB-52	35693-99-3	0.000208	0.000205 J	0.000216 J	0.000404	0.000253	0.000238	0.000317
E1668A	N	PCB-54	15968-05-5	1.66e-06 U	1.75e-06 U	4.5e-06 J	1.34e-05 J	6.56e-06 J	1.82e-06 U	6.62e-06 J

				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	3.98e-06 J	4.54e-06 J	1e-06 U	7.44e-06 J	2.86e-06 J	4.15e-06 J	7.18e-06 J
E1668A	N	PCB-56	41464-43-1	5.1e-05	4.96e-05	5.28e-05	0.000108	6.59e-05	5.44e-05	8.17e-05
E1668A	N	PCB-57	70424-67-8	8.51e-07 U	8.53e-07 U	9.52e-07 U	1.17e-06 U	1.06e-06 U	1.27e-06 U	1.69e-06 U
E1668A	N	PCB-58	41464-49-7	8.47e-07 U	8.48e-07 U	9.47e-07 U	1.96e-06 J	9.89e-07 J	1.27e-06 U	1.81e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	1.8e-05 J	1.83e-05 J	1.89e-05 J	3.39e-05 J	2.1e-05 J	2.02e-05 J	2.94e-05 J
E1668A	N	PCB-60	33025-41-1	1.79e-05 J	1.59e-05 J	1.65e-05 J	3.48e-05 J	2.17e-05 J	1.86e-05 J	3.1e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000173	0.000168	0.000175	0.00037	0.000222	0.00019	0.000286
E1668A	N	PCB-63	74472-34-7	4.97e-06 J	4.82e-06 J	3.56e-06 J	9.13e-06 J	5.84e-06 J	6.29e-06 J	9.28e-06 J
E1668A	N	PCB-64	52663-58-8	6.12e-05 J	5.75e-05	6.52e-05	0.00012	7.65e-05	6.53e-05	9.81e-05
E1668A	N	PCB-66	32598-10-0	0.000112	0.000108	0.000112	0.000225	0.000145	0.000121	0.000188
E1668A	N	PCB-67	73575-53-8	3.35e-06 J	3.44e-06 J	4.14e-06 J	7.22e-06 J	5.01e-06 J	3.88e-06 J	7.01e-06 J
E1668A	N	PCB-68	73575-52-7	4.64e-06 J	7.73e-07 U	8.63e-07 U	3.92e-06 J	9.65e-07 U	1.15e-06 U	3.38e-06 J
E1668A	N	PCB-72	41464-42-0	2.69e-06 J	8.29e-07 U	3.11e-06 J	3.5e-06 J	2.54e-06 J	3.35e-06 J	4.45e-06 J
E1668A	N	PCB-77	32598-13-3	1.07e-05 J	1.22e-05 J	1.06e-05 J	1.86e-05 J	9.37e-06 J	1.14e-05 J	1.42e-05 J
E1668A	N	PCB-78	70362-49-1	8.79e-07 U	8.81e-07 U	9.84e-07 U	1.21e-06 U	1.1e-06 U	1.31e-06 U	1.75e-06 U
E1668A	N	PCB-79	41464-48-6	7.72e-07 U	7.73e-07 U	8.64e-07 U	2.12e-06 J	9.66e-07 U	1.15e-06 U	1.53e-06 U
E1668A	N	PCB-80	33284-52-5	7.53e-07 U	7.55e-07 U	8.43e-07 U	1.04e-06 U	9.43e-07 U	1.13e-06 U	1.5e-06 U
E1668A	N	PCB-81	70362-50-4	7.96e-07 U	7.81e-07 U	8.88e-07 U	1.07e-06 U	9.88e-07 U	1.19e-06 U	1.58e-06 U
E1668A	N	PCB-82	52663-62-4	1.32e-05 J	1.32e-05 J	1.29e-05 J	2.46e-05 J	1.38e-05 J	1.29e-05 J	2.2e-05 J
E1668A	N	PCB-83/99	PCB-83/99	8.8e-05	6.89e-05 J	7.95e-05	0.00012 J	9.11e-05	6.47e-05	0.000121
E1668A	N	PCB-84	52663-60-2	4.35e-05	3.69e-05 J	3.79e-05	6.03e-05	3.68e-05 J	3.21e-05 J	5.49e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	2.3e-05 J	2.21e-05 J	1.94e-05 J	3.22e-05 J	2.12e-05 J	1.57e-05 J	3.06e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	8.34e-05	7.34e-05 J	6.59e-05 J	0.000121	8.57e-05 J	6.17e-05	0.00011 J
E1668A	N	PCB-88/91	PCB-88/91	2.93e-05 J	2.35e-05 J	2.87e-05 J	4.23e-05	2.52e-05 J	1.72e-05 J	3.42e-05 J
E1668A	N	PCB-89	73575-57-2	1.53e-06 U	1.72e-06 U	1.75e-06 U	1.88e-06 U	1.8e-06 U	1.92e-06 U	2.29e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000125	0.000123	0.000112	0.000198	0.000136	0.000109	0.000173
E1668A	N	PCB-92	52663-61-3	2.47e-05 J	2.24e-05 J	2.04e-05 J	3.65e-05 J	2.78e-05 J	1.73e-05 J	3.49e-05 J
E1668A	N	PCB-93/100	PCB-93/100	4.5e-06 J	6.2e-06 J	7.03e-06 J	1.36e-05 J	3.77e-06 J	3.66e-06 J	1.1e-05 J
E1668A	N	PCB-94	73575-55-0	1.53e-06 U	1.72e-06 U	1.75e-06 U	1.88e-06 U	1.8e-06 U	1.92e-06 U	2.29e-06 U
E1668A	N	PCB-95	38379-99-6	0.000126	0.000109	0.000116	0.000176	0.000124	9.54e-05 J	0.00014 J
E1668A	N	PCB-96	73575-54-9	2.62e-06 J	1.29e-06 U	1.31e-06 U	1.4e-06 U	1.35e-06 U	1.43e-06 U	1.72e-06 U
E1668A	N	PCB-98/102	PCB-98/102	9.92e-06 J	7.7e-06 J	7.89e-06 J	1.64e-05 J	9.51e-06 J	5.8e-06 J	1.37e-05 J
E1668A	N	PCB-103	60145-21-3	2.69e-06 J	1.51e-06 U	1.53e-06 U	8.97e-06 J	2.71e-06 J	1.68e-06 U	2.01e-06 U
E1668A	N	PCB-104	56558-16-8	1.02e-06 U	1.15e-06 U	1.17e-06 U	1.85e-06 J	1.2e-06 U	1.28e-06 U	1.53e-06 U
E1668A	N	PCB-105	32598-14-4	2.59e-05 J	2.83e-05 J	2.51e-05 J	5.87e-05	3.35e-05 U	2.97e-05 U	5.36e-05
E1668A	N	PCB-106	70424-69-0	7e-07 U	7.04e-07 U	6.47e-07 U	1e-06 U	0.005	8.6e-07 U	1.13e-06 U
E1668A	N	PCB-107	70424-68-9	5.39e-06 J	5.48e-06 J	4.88e-06 J	1.17e-05 J	9.24e-06 J	5.66e-06 J	1.01e-05 J
E1668A	N	PCB-108/124	PCB-108/124	2.66e-06 J	2.08e-06 J	2.47e-06 J	5.95e-06 J	2.49e-06 J	2.37e-06 J	4.64e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000138	0.000135	0.00013	0.000218	0.000153	0.000116	0.000188
E1668A	N	PCB-111	39635-32-0	9.57e-07 U	1.08e-06 U	1.1e-06 U	1.18e-06 U	1.13e-06 U	1.2e-06 U	1.44e-06 U
E1668A	N	PCB-112	74472-36-9	1.04e-06 U	1.17e-06 U	1.19e-06 U	1.28e-06 U	1.23e-06 U	1.3e-06 U	1.56e-06 U
E1668A	N	PCB-114	74472-37-0	1.28e-06 J	1.96e-06 J	2e-06 J	4.48e-06 J	7.94e-07 J	1.26e-06 J	1.6e-06 J
E1668A	N	PCB-118	31508-00-6	6.92e-05 J	7.51e-05	6.78e-05	0.000138	0.000101	7.61e-05	0.00013
E1668A	N	PCB-120	68194-12-7	9.84e-07 U	1.11e-06 U	1.13e-06 U	1.21e-06 U	1.16e-06 U	1.24e-06 U	1.48e-06 U
E1668A	N	PCB-121	56558-18-0	9.92e-07 U	1.12e-06 U	1.14e-06 U	1.22e-06 U	1.17e-06 U	1.25e-06 U	1.49e-06 U

				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	1.8e-06 J	1.73e-06 J	7.05e-07 U	3.69e-06 J	1.88e-06 J	9.36e-07 U	2.77e-06 J
E1668A	N	PCB-123	65510-44-3	2.05e-06 J	1.54e-06 J	1.67e-06 J	3.44e-06 J	1.31e-06 J	8.7e-07 U	5.34e-06 J
E1668A	N	PCB-126	57465-28-8	6.42e-07 U	6.88e-07 U	6.2e-07 U	1.1e-06 U	9.08e-07 U	8.36e-07 U	1.24e-06 U
E1668A	N	PCB-127	39635-33-1	6.92e-07 U	6.95e-07 U	6.4e-07 U	9.88e-07 U	8.39e-07 U	8.5e-07 U	1.12e-06 U
E1668A	N	PCB-128/166	PCB-128/166	1.27e-05 J	1.2e-05 J	1.02e-05 J	2.96e-05 J	1.49e-05 U	1.22e-05 U	2.04e-05 U
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	8.43e-05	8.95e-05	9.9e-05	0.000206	0.000143	9.28e-05 U	0.000188
E1668A	N	PCB-130	52663-66-8	5.32e-06 J	4.36e-06 J	5.79e-06 J	1.53e-05 J	8.54e-06 J	4.1e-06 J	8.11e-06 J
E1668A	N	PCB-131	61798-70-7	1.23e-06 U	1.4e-06 U	1.45e-06 U	2.61e-06 U	2.29e-06 U	2e-06 U	3.08e-06 U
E1668A	N	PCB-132	38380-05-1	2.7e-05 J	2.85e-05 J	2.75e-05 J	8.24e-05	4.58e-05	2.79e-05 U	5.97e-05 J
E1668A	N	PCB-133	35694-04-3	1.13e-06 U	1.28e-06 U	1.33e-06 U	2.74e-06 J	2.11e-06 U	1.84e-06 U	4.96e-06 J
E1668A	N	PCB-134/143	PCB-134/143	1.2e-06 U	5.65e-06 J	3.79e-06 J	1.38e-05 J	2.15e-05 J	6.05e-06 J	5.63e-06 J
E1668A	N	PCB-135/151	PCB-135/151	3.14e-05 J	3.51e-05 J	2.67e-05 J	6.05e-05	3.92e-05	2.77e-05 J	4.89e-05
E1668A	N	PCB-136	38411-22-2	1.31e-05 J	1.07e-05 J	1.39e-05 J	2.48e-05 J	1.08e-05 J	1.06e-05 J	1.78e-05 J
E1668A	N	PCB-137	35694-06-5	3.1e-06 J	3.23e-06 J	3.06e-06 J	9.01e-06 J	5.7e-06 J	2.6e-06 J	5.9e-06 J
E1668A	N	PCB-139/140	PCB-139/140	1.03e-06 U	1.17e-06 U	1.21e-06 U	2.19e-06 U	1.92e-06 U	1.68e-06 U	3.84e-06 J
E1668A	N	PCB-141	52712-04-6	1.12e-05 J	1.33e-05 J	1.48e-05 J	4.5e-05	2.55e-05 J	1.06e-05 U	2.79e-05 J
E1668A	N	PCB-142	41411-61-4	1.18e-06 U	1.34e-06 U	1.39e-06 U	2.51e-06 U	2.21e-06 U	1.93e-06 U	2.97e-06 U
E1668A	N	PCB-144	68194-14-9	1.52e-06 U	1.54e-06 U	1.44e-06 U	7.27e-06 J	3.09e-06 J	1.65e-06 U	1.94e-06 U
E1668A	N	PCB-145	74472-40-5	1.15e-06 U	1.16e-06 U	1.09e-06 U	1.39e-06 U	1.11e-06 U	1.25e-06 U	1.47e-06 U
E1668A	N	PCB-146	51908-16-8	1.42e-05 J	1.53e-05 J	1.67e-05 J	3.82e-05	2.15e-05 J	1.3e-05 J	3.37e-05 J
E1668A	N	PCB-147/149	PCB-147/149	7.82e-05	9.17e-05	8.73e-05	0.000244	0.000152	8.89e-05	0.000152
E1668A	N	PCB-148	74472-41-6	1.6e-06 U	1.62e-06 U	1.52e-06 U	1.95e-06 U	1.55e-06 U	1.74e-06 U	2.05e-06 U
E1668A	N	PCB-150	68194-08-1	1.12e-06 U	1.13e-06 U	1.06e-06 U	1.36e-06 U	1.08e-06 U	1.22e-06 U	1.43e-06 U
E1668A	N	PCB-152	68194-09-2	1.14e-06 U	1.15e-06 U	1.08e-06 U	1.38e-06 U	1.1e-06 U	1.24e-06 U	1.46e-06 U
E1668A	N	PCB-153/168	PCB-153/168	7.36e-05	8.03e-05	8.14e-05	0.000192	0.000133	8.56e-05	0.000165
E1668A	N	PCB-154	60145-22-4	1.99e-06 J	2.78e-06 J	1.26e-06 U	5.14e-06 J	2.57e-06 J	1.17e-06 J	2.74e-06 J
E1668A	N	PCB-155	33979-03-2	1.09e-06 U	1.1e-06 U	1.03e-06 U	1.32e-06 U	1.05e-06 U	1.18e-06 U	1.39e-06 U
E1668A	N	PCB-156/157	PCB-156/157	8.98e-06 J	8.03e-06 J	7.21e-06 J	1.55e-05 U	1.03e-05 U	6.28e-06 U	1.54e-05 U
E1668A	N	PCB-158	74472-42-7	7.45e-06 J	6.96e-06 J	7.87e-06 J	1.86e-05 J	1.16e-05 J	7.69e-06 J	1.67e-05 J
E1668A	N	PCB-159	39635-35-3	7.85e-07 U	8.93e-07 U	9.27e-07 U	1.67e-06 U	1.47e-06 U	1.28e-06 U	1.97e-06 U
E1668A	N	PCB-161	74472-43-8	7.81e-07 U	8.89e-07 U	9.23e-07 U	1.66e-06 U	1.46e-06 U	1.28e-06 U	1.96e-06 U
E1668A	N	PCB-162	39635-34-2	7.76e-07 U	8.82e-07 U	9.16e-07 U	1.65e-06 U	1.45e-06 U	1.27e-06 U	1.95e-06 U
E1668A	N	PCB-164	74472-45-0	3.93e-06 J	5.21e-06 J	4.95e-06 J	1.69e-05 J	7.82e-06 J	4.65e-06 J	1.26e-05 J
E1668A	N	PCB-165	74472-46-1	8.59e-07 U	9.77e-07 U	1.01e-06 U	1.83e-06 U	1.61e-06 U	1.4e-06 U	2.16e-06 U
E1668A	N	PCB-167	52663-72-6	3.33e-06 J	2.58e-06 J	1.88e-06 J	4.3e-06 J	9.69e-07 U	8.83e-07 U	5.31e-06 J
E1668A	N	PCB-169	32774-16-6	6.03e-07 U	7.22e-07 U	7.95e-07 U	1.54e-06 U	1.4e-06 U	1.12e-06 U	1.81e-06 U
E1668A	N	PCB-170	35065-30-6	1.42e-05 J	1.46e-05 J	1.2e-05 J	4.26e-05 U	2.61e-05 U	1.15e-05 U	3.55e-05 U
E1668A	N	PCB-171/173	PCB-171/173	4.01e-06 J	4.89e-06 J	4.15e-06 J	1.21e-05 J	7.31e-06 J	1.38e-06 U	8.28e-06 J
E1668A	N	PCB-172	52663-74-8	3.46e-06 J	2.53e-06 J	2.86e-06 J	4.28e-06 J	1.31e-06 U	1.36e-06 U	1.84e-06 U
E1668A	N	PCB-174	38411-25-5	2.04e-05 J	1.7e-05 J	1.16e-05 J	3.8e-05 J	2.03e-05 U	1.58e-05 U	3.16e-05 J
E1668A	N	PCB-175	40186-70-7	8.77e-07 U	9.79e-07 U	9.08e-07 U	1.39e-06 U	1.17e-06 U	1.23e-06 U	1.65e-06 U
E1668A	N	PCB-176	52663-65-7	2.59e-06 J	2.2e-06 J	1.69e-06 J	4.21e-06 J	3.32e-06 J	9.34e-07 U	3.79e-06 J
E1668A	N	PCB-177	52663-70-4	1.03e-05 J	1.02e-05 J	1.05e-05 J	2.27e-05 J	1.67e-05 U	6.72e-06 U	1.7e-05 U
E1668A	N	PCB-178	52663-67-9	5.15e-06 J	6.51e-06 J	3.72e-06 J	9.1e-06 J	5.92e-06 J	4.82e-06 J	7.8e-06 J
E1668A	N	PCB-179	52663-64-6	1.15e-05 J	1.1e-05 J	9.86e-06 J	2.82e-05 J	1.62e-05 J	1.02e-05 J	1.87e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBS	N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE
				N05-CE02-TNBS	N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE
				3.11	3.07	2.93	1.28	2.94	2.81	2.58
				NB	NB	NB	NB	NB	NB	NB
				0.98	0.97	0.97	4.57	4.57	4.57	4.57
				N05-CE02-TNBS-AS	N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS
				03/29/2012	03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	4.3e-05	3.94e-05	3.47e-05 J	7.05e-05 U	4.45e-05 U	3.64e-05 U	6.11e-05 U
E1668A	N	PCB-181	74472-47-2	8.77e-07 U	9.79e-07 U	9.08e-07 U	1.39e-06 U	1.17e-06 U	1.23e-06 U	1.65e-06 U
E1668A	N	PCB-182	60145-23-5	8.52e-07 U	9.51e-07 U	8.82e-07 U	1.35e-06 U	1.14e-06 U	1.19e-06 U	1.6e-06 U
E1668A	N	PCB-183/185	PCB-183/185	1.37e-05 J	1.41e-05 J	8.89e-06 J	2.92e-05 J	1.59e-05 J	1.36e-05 J	2.19e-05 J
E1668A	N	PCB-184	74472-48-3	7.23e-07 U	8.08e-07 U	7.49e-07 U	1.15e-06 U	9.69e-07 U	1.01e-06 U	1.36e-06 U
E1668A	N	PCB-186	74472-49-4	7.03e-07 U	7.84e-07 U	7.28e-07 U	1.11e-06 U	9.41e-07 U	9.82e-07 U	1.32e-06 U
E1668A	N	PCB-187	52663-68-0	3.52e-05 J	3.23e-05 J	2.35e-05 J	6e-05 J	4.13e-05	3e-05 J	5.2e-05
E1668A	N	PCB-188	74487-85-7	6.21e-07 U	6.63e-07 U	5.96e-07 U	8.28e-07 U	7.35e-07 U	8.42e-07 U	1.01e-06 U
E1668A	N	PCB-189	39635-31-9	6.18e-07 U	6.96e-07 U	6.34e-07 U	1.53e-06 U	1.06e-06 U	8.63e-07 U	1.67e-06 U
E1668A	N	PCB-190	41411-64-7	3.62e-06 J	2.07e-06 J	1.97e-06 J	4.33e-06 J	3.54e-06 J	2.24e-06 J	4.76e-06 J
E1668A	N	PCB-191	74472-50-7	6.68e-07 U	7.45e-07 U	6.91e-07 U	1.06e-06 U	8.94e-07 U	9.33e-07 U	1.26e-06 U
E1668A	N	PCB-192	74472-51-8	7.46e-07 U	8.33e-07 U	7.72e-07 U	1.18e-06 U	9.99e-07 U	1.04e-06 U	1.4e-06 U
E1668A	N	PCB-194	35694-08-7	9.04e-06 J	7.81e-06 J	7.98e-06 J	2.2e-05 U	1.5e-05 U	8.96e-06 U	1.87e-05 U
E1668A	N	PCB-195	52663-78-2	3.53e-06 J	3.16e-06 J	3.33e-06 J	6.97e-06 J	4.39e-06 J	8.75e-07 U	6.2e-06 J
E1668A	N	PCB-196	42740-50-1	4.6e-06 J	5.3e-06 J	2.18e-06 J	9.05e-06 J	2.48e-06 J	2.27e-06 J	4.75e-06 J
E1668A	N	PCB-197	33091-17-7	5.68e-07 U	5.8e-07 U	5.96e-07 U	1.65e-06 J	7.57e-07 U	6.93e-07 U	1.11e-06 U
E1668A	N	PCB-198/199	PCB-198/199	1.51e-05 J	1.43e-05 J	1.23e-05 J	2.46e-05 U	1.52e-05 U	9.7e-06 U	2.14e-05 U
E1668A	N	PCB-200	52663-73-7	5.57e-07 U	5.7e-07 U	5.85e-07 U	2.61e-06 J	1.76e-06 J	6.8e-07 U	1.09e-06 U
E1668A	N	PCB-201	40186-71-8	2.08e-06 J	1.87e-06 J	1.61e-06 J	2.16e-06 J	1.97e-06 J	6.56e-07 U	2.76e-06 J
E1668A	N	PCB-202	2136-99-4	4.51e-06 J	4.37e-06 J	3.67e-06 J	9.03e-06 J	3.84e-06 J	3.57e-06 J	6.51e-06 J
E1668A	N	PCB-203	52663-76-0	7.63e-06 J	7.08e-06 J	7.23e-06 J	1.18e-05 J	7.6e-06 J	5.25e-06 J	1.39e-05 J
E1668A	N	PCB-204	74472-52-9	5.9e-07 U	6.03e-07 U	6.2e-07 U	8.34e-07 U	7.86e-07 U	7.2e-07 U	1.15e-06 U
E1668A	N	PCB-205	74472-53-0	4.58e-07 U	4.88e-07 U	5.61e-07 U	1.13e-06 U	1.13e-06 U	6.79e-07 U	1.63e-06 U
E1668A	N	PCB-206	40186-72-9	1.66e-05 J	1.17e-05 J	7.75e-06 J	1.35e-05 U	1.41e-05 U	1.19e-05 U	2.28e-05 U
E1668A	N	PCB-207	52663-79-3	6.05e-07 U	8.16e-07 U	9.2e-07 U	2.6e-06 J	1.25e-06 U	8.49e-07 U	2.64e-06 J
E1668A	N	PCB-208	52663-77-1	7.44e-06 J	4.44e-06 J	4.36e-06 J	8.14e-06 J	4.79e-06 J	3.78e-06 J	1.16e-05 J
E1668A	N	PCB-209	2051-24-3	1.2e-05 J	1.16e-05 J	9.96e-06 J	1.93e-05 J	9.81e-06 J	8.57e-06 J	1.83e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.0041 J	0.0038 J	0.00401 J	0.00762 J	0.00981 J	0.004 J	0.00621 J
E1668A	N	Total PCB (a)	PCB-Total	0.00422 J	0.00393 J	0.00413 J	0.00786 J	0.00997 J	0.00413 J	0.00644 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	6.33e-08J	6.79e-08J	6.12e-08J	1.09e-07J	9.56e-08J	8.02e-08J	1.32e-07J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	2.04e-05 J	2.47e-05 J	2.35e-05 J	2.76e-05 J			
E1668A	N	PCB-2	2051-61-8	3.67e-07 U	4.48e-07 U	4.42e-07 U	1.55e-06 J			
E1668A	N	PCB-3	2051-62-9	4.3e-07 U	5.17e-06 U	5.49e-06 U	5.18e-06 U			
E1668A	N	PCB-4	13029-08-8	0.000158	0.000149	0.000144	0.000162 J			
E1668A	N	PCB-5	16605-91-7	2.09e-06 U	2.54e-06 U	1.61e-06 J	2.25e-06 U			
E1668A	N	PCB-6	25569-80-6	1.64e-05 J	1.82e-05 J	1.28e-05 J	2.85e-05 J			
E1668A	N	PCB-7	33284-50-3	3.14e-06 J	3.64e-06 J	2.94e-06 J	3.3e-06 J			
E1668A	N	PCB-8	34883-43-7	6.62e-05 J	6.77e-05 J	5.85e-05 J	7.92e-05 J			
E1668A	N	PCB-9	34883-39-1	4.67e-06 J	3.56e-06 J	5.16e-06 J	6.14e-06 J			
E1668A	N	PCB-10	33146-45-1	2.16e-05 J	2.07e-05 J	1.99e-05 J	2.67e-05 J			
E1668A	N	PCB-11	2050-67-1	5.36e-05 U	5.08e-05 U	6.09e-05 U	4.96e-05 U			
E1668A	N	PCB-12/13	PCB-12/13	1.41e-05 J	1.53e-05 J	1.52e-05 J	2.35e-05 J			
E1668A	N	PCB-14	34883-41-5	1.71e-06 U	2.08e-06 U	1.93e-06 U	1.84e-06 U			
E1668A	N	PCB-15	2050-68-2	8.86e-05 J	0.000102	6.44e-05 J	0.000121			
E1668A	N	PCB-16	38444-78-9	7.73e-05	6.96e-05 J	5.56e-05	7.95e-05 J			
E1668A	N	PCB-17	37680-66-3	0.000128	0.000125	0.000114	0.000146			
E1668A	N	PCB-18/30	PCB-18/30	0.000236	0.000199	0.000188	0.00025			
E1668A	N	PCB-19	38444-73-4	7.19e-05	6.16e-05	5.75e-05	7.43e-05			
E1668A	N	PCB-20/28	PCB-20/28	0.000319	0.000262	0.000253	0.000357			
E1668A	N	PCB-21/33	PCB-21/33	5.69e-05	5.05e-05	4.81e-05	6.63e-05			
E1668A	N	PCB-22	38444-85-8	6.54e-05	5.23e-05	5.52e-05	6.67e-05			
E1668A	N	PCB-23	55720-44-0	7.49e-07 U	8.09e-07 U	5.72e-07 U	9.27e-07 U			
E1668A	N	PCB-24	55702-45-9	2.34e-06 J	4.68e-06 J	3.56e-06 J	3.4e-06 J			
E1668A	N	PCB-25	55712-37-3	4.56e-05	3.69e-05 J	3.58e-05 J	4.86e-05			
E1668A	N	PCB-26/29	PCB-26/29	6.86e-05	6.2e-05	6.1e-05	7.56e-05			
E1668A	N	PCB-27	38444-76-7	4.07e-05	3.85e-05 J	3.84e-05 J	4.85e-05			
E1668A	N	PCB-31	16606-02-3	0.000252 J	0.000216 J	0.000206 J	0.00027 J			
E1668A	N	PCB-32	38444-77-8	0.00011	0.000102	8.69e-05	0.000123			
E1668A	N	PCB-34	37680-68-5	1.98e-06 J	1.72e-06 J	1.74e-06 J	3.09e-06 J			
E1668A	N	PCB-35	37680-69-6	5.25e-06 J	3.14e-06 J	3.42e-06 J	4.41e-06 J			
E1668A	N	PCB-36	38444-87-0	7.32e-07 U	4.86e-07 J	1.2e-06 J	9.06e-07 U			
E1668A	N	PCB-37	38444-90-5	5.49e-05	6.04e-05	4.27e-05	7.06e-05			
E1668A	N	PCB-38	53555-66-1	7.72e-07 U	8.34e-07 U	5.9e-07 U	9.56e-07 U			
E1668A	N	PCB-39	38444-88-1	1.57e-06 J	2.28e-06 J	1.04e-06 J	8.5e-07 U			
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000212	0.000157	0.00015	0.000211			
E1668A	N	PCB-42	36559-22-5	9.83e-05	7.13e-05	6.89e-05	9.44e-05			
E1668A	N	PCB-43/73	PCB-43/73	1.43e-05 J	8.75e-06 J	9.71e-06 J	1.11e-05 J			
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000432	0.000299	0.000277	0.000406			
E1668A	N	PCB-45/51	PCB-45/51	0.00014	9.07e-05	8.88e-05	0.000129			
E1668A	N	PCB-46	41464-47-5	2.6e-05 J	2.32e-05 J	2.24e-05 J	2.67e-05 J			
E1668A	N	PCB-48	70362-47-9	5.54e-05	4.08e-05	3.89e-05 J	5.73e-05			
E1668A	N	PCB-49/69	PCB-49/69	0.000273	0.000194	0.000183	0.000272			
E1668A	N	PCB-50/53	PCB-50/53	9.41e-05	6.34e-05	6.52e-05	9.26e-05			
E1668A	N	PCB-52	35693-99-3	0.000422 J	0.00029	0.000302 J	0.000389 J			
E1668A	N	PCB-54	15968-05-5	8.7e-06 J	6.42e-06 J	6.94e-06 J	1.16e-05 J			

				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	6.4e-06 J	3.68e-06 J	5.7e-06 J	5.48e-06 J			
E1668A	N	PCB-56	41464-43-1	9.74e-05	8.4e-05	5.86e-05	0.000104			
E1668A	N	PCB-57	70424-67-8	2.33e-06 J	1.96e-06 J	9.35e-07 U	1.49e-06 J			
E1668A	N	PCB-58	41464-49-7	1.45e-06 J	1.42e-06 J	1.37e-06 J	1.61e-06 J			
E1668A	N	PCB-59/62/75	PCB-59/62/75	3.52e-05 J	2.62e-05 J	2.41e-05 J	3.58e-05 J			
E1668A	N	PCB-60	33025-41-1	3.37e-05 J	2.77e-05 J	1.98e-05 J	3.62e-05 J			
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000365	0.000275	0.00023	0.000374			
E1668A	N	PCB-63	74472-34-7	9.56e-06 J	8.13e-06 J	7.6e-06 J	1.02e-05 J			
E1668A	N	PCB-64	52663-58-8	0.000123	8.99e-05	7.76e-05	0.000119			
E1668A	N	PCB-66	32598-10-0	0.000231	0.000177	0.000136	0.000245			
E1668A	N	PCB-67	73575-53-8	7.44e-06 J	7.15e-06 J	6.08e-06 J	9.05e-06 J			
E1668A	N	PCB-68	73575-52-7	4.26e-06 J	2.62e-06 J	2.91e-06 J	5.78e-06 J			
E1668A	N	PCB-72	41464-42-0	5.1e-06 J	4.2e-06 J	2.33e-06 J	4.95e-06 J			
E1668A	N	PCB-77	32598-13-3	1.84e-05 J	1.69e-05 J	1.35e-05 J	2.25e-05 J			
E1668A	N	PCB-78	70362-49-1	1.18e-06 U	1.21e-06 U	9.67e-07 U	1.08e-06 U			
E1668A	N	PCB-79	41464-48-6	1.04e-06 U	1.06e-06 U	1.8e-06 J	2.08e-06 J			
E1668A	N	PCB-80	33284-52-5	1.01e-06 U	1.03e-06 U	8.28e-07 U	9.27e-07 U			
E1668A	N	PCB-81	70362-50-4	1.07e-06 U	1.1e-06 U	8.78e-07 U	9.5e-07 U			
E1668A	N	PCB-82	52663-62-4	2.17e-05 J	2.16e-05 J	1.33e-05 J	3.34e-05 J			
E1668A	N	PCB-83/99	PCB-83/99	0.000128	0.000103	7.28e-05	0.000159			
E1668A	N	PCB-84	52663-60-2	5.89e-05	4.88e-05	3.15e-05 J	6.98e-05			
E1668A	N	PCB-85/116/117	PCB-85/116/117	3.19e-05 J	2.56e-05 J	1.5e-05 J	4.28e-05			
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000114	9.05e-05 J	6.52e-05 J	0.000146 J			
E1668A	N	PCB-88/91	PCB-88/91	3.58e-05 J	3.49e-05 J	2.56e-05 J	5.24e-05			
E1668A	N	PCB-89	73575-57-2	1.78e-06 U	1.67e-06 U	1.48e-06 U	4.8e-06 J			
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000189	0.000155	0.00011	0.000232			
E1668A	N	PCB-92	52663-61-3	3.63e-05 J	3.06e-05 J	2.09e-05 J	4.72e-05			
E1668A	N	PCB-93/100	PCB-93/100	1.38e-05 J	1.02e-05 J	5.99e-06 J	1.73e-05 J			
E1668A	N	PCB-94	73575-55-0	2.8e-06 J	1.67e-06 U	1.48e-06 U	5.41e-06 J			
E1668A	N	PCB-95	38379-99-6	0.000177	0.000142	0.000115	0.000205			
E1668A	N	PCB-96	73575-54-9	1.33e-06 U	1.25e-06 U	1.11e-06 U	2.73e-06 J			
E1668A	N	PCB-98/102	PCB-98/102	1.19e-05 J	1.11e-05 J	8.46e-06 J	1.81e-05 J			
E1668A	N	PCB-103	60145-21-3	5.29e-06 J	1.47e-06 U	1.3e-06 U	7.26e-06 J			
E1668A	N	PCB-104	56558-16-8	1.18e-06 U	1.11e-06 U	9.88e-07 U	1.19e-06 U			
E1668A	N	PCB-105	32598-14-4	5.35e-05	4.02e-05	3.6e-05 J	6.91e-05			
E1668A	N	PCB-106	70424-69-0	1.01e-06 U	1.09e-06 U	7.02e-07 U	1.05e-06 U			
E1668A	N	PCB-107	70424-68-9	1.15e-05 J	8.86e-06 J	6.86e-06 J	1.12e-05 J			
E1668A	N	PCB-108/124	PCB-108/124	3.64e-06 J	1.11e-06 U	2.85e-06 J	5.49e-06 J			
E1668A	N	PCB-110/115	PCB-110/115	0.000204	0.00017	0.00012	0.000266			
E1668A	N	PCB-111	39635-32-0	1.11e-06 U	1.05e-06 U	9.28e-07 U	1.12e-06 U			
E1668A	N	PCB-112	74472-36-9	1.21e-06 U	1.14e-06 U	1.01e-06 U	1.22e-06 U			
E1668A	N	PCB-114	74472-37-0	3.52e-06 J	2.74e-06 J	2.43e-06 J	4.15e-06 J			
E1668A	N	PCB-118	31508-00-6	0.000137	0.000108	7.89e-05	0.000161			
E1668A	N	PCB-120	68194-12-7	1.14e-06 U	1.08e-06 U	9.55e-07 U	1.15e-06 U			
E1668A	N	PCB-121	56558-18-0	1.15e-06 U	1.09e-06 U	9.63e-07 U	1.16e-06 U			

				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	2.28e-06 J	1.58e-06 J	1.28e-06 J	1.15e-06 U			
E1668A	N	PCB-123	65510-44-3	3.54e-06 J	2.28e-06 J	9.87e-07 J	2.76e-06 J			
E1668A	N	PCB-126	57465-28-8	1.08e-06 U	1.23e-06 U	8.26e-07 U	1.06e-06 U			
E1668A	N	PCB-127	39635-33-1	9.99e-07 U	1.08e-06 U	6.94e-07 U	1.04e-06 U			
E1668A	N	PCB-128/166	PCB-128/166	2.84e-05 J	1.95e-05 J	1.54e-05 J	2.93e-05 J			
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000222	0.000168	0.000127	0.000219			
E1668A	N	PCB-130	52663-66-8	8.78e-06 J	8.99e-06 J	8.66e-06 J	1.15e-05 J			
E1668A	N	PCB-131	61798-70-7	4.11e-06 J	2.73e-06 U	2.15e-06 U	2.06e-06 U			
E1668A	N	PCB-132	38380-05-1	7.47e-05	6.23e-05	4.3e-05 J	7e-05			
E1668A	N	PCB-133	35694-04-3	2.11e-06 U	2.51e-06 U	3.59e-06 J	1.89e-06 U			
E1668A	N	PCB-134/143	PCB-134/143	1.74e-05 J	1.45e-05 J	8.7e-06 J	1.04e-05 J			
E1668A	N	PCB-135/151	PCB-135/151	5.66e-05	4.38e-05	2.65e-05 J	7.15e-05			
E1668A	N	PCB-136	38411-22-2	1.96e-05 J	1.2e-05 J	1.44e-05 J	2.78e-05 J			
E1668A	N	PCB-137	35694-06-5	7.58e-06 J	6.77e-06 J	3.23e-06 J	8.13e-06 J			
E1668A	N	PCB-139/140	PCB-139/140	7.27e-06 J	2.29e-06 U	1.8e-06 U	3.42e-06 J			
E1668A	N	PCB-141	52712-04-6	3.45e-05 J	2.59e-05 J	2.05e-05 J	4.09e-05 J			
E1668A	N	PCB-142	41411-61-4	2.21e-06 U	2.63e-06 U	2.06e-06 U	1.98e-06 U			
E1668A	N	PCB-144	68194-14-9	5.78e-06 J	3.15e-06 J	3.33e-06 J	6.77e-06 J			
E1668A	N	PCB-145	74472-40-5	1.21e-06 U	1.23e-06 U	1.08e-06 U	1.27e-06 U			
E1668A	N	PCB-146	51908-16-8	3.58e-05 J	2.9e-05 J	2.07e-05 J	3.69e-05 J			
E1668A	N	PCB-147/149	PCB-147/149	0.000156 J	0.000172	0.000136	0.000204			
E1668A	N	PCB-148	74472-41-6	1.7e-06 U	1.72e-06 U	1.51e-06 U	1.77e-06 U			
E1668A	N	PCB-150	68194-08-1	1.18e-06 U	1.2e-06 U	1.06e-06 U	1.23e-06 U			
E1668A	N	PCB-152	68194-09-2	1.21e-06 U	1.22e-06 U	1.08e-06 U	1.26e-06 U			
E1668A	N	PCB-153/168	PCB-153/168	0.000198	0.000157	0.000118	0.000203			
E1668A	N	PCB-154	60145-22-4	1.41e-06 U	2.58e-06 J	3.81e-06 J	6.22e-06 J			
E1668A	N	PCB-155	33979-03-2	1.15e-06 U	1.17e-06 U	1.03e-06 U	1.2e-06 U			
E1668A	N	PCB-156/157	PCB-156/157	1.07e-05 J	9.39e-06 J	1.01e-05 J	1.84e-05 J			
E1668A	N	PCB-158	74472-42-7	1.76e-05 J	1.6e-05 J	1.05e-05 J	1.74e-05 J			
E1668A	N	PCB-159	39635-35-3	1.47e-06 U	1.75e-06 U	1.37e-06 U	1.32e-06 U			
E1668A	N	PCB-161	74472-43-8	1.46e-06 U	1.74e-06 U	1.37e-06 U	1.31e-06 U			
E1668A	N	PCB-162	39635-34-2	1.45e-06 U	1.73e-06 U	1.36e-06 U	1.3e-06 U			
E1668A	N	PCB-164	74472-45-0	1.29e-05 J	8.63e-06 J	8.6e-06 J	1.38e-05 J			
E1668A	N	PCB-165	74472-46-1	1.61e-06 U	1.91e-06 U	1.5e-06 U	1.44e-06 U			
E1668A	N	PCB-167	52663-72-6	6.27e-06 J	4.43e-06 J	3.27e-06 J	6.8e-06 J			
E1668A	N	PCB-169	32774-16-6	1.58e-06 U	1.65e-06 U	1.57e-06 U	1.28e-06 U			
E1668A	N	PCB-170	35065-30-6	3.38e-05 J	2.32e-05 J	1.51e-05 J	4.86e-05			
E1668A	N	PCB-171/173	PCB-171/173	9.59e-06 J	8.02e-06 J	4.57e-06 J	1.59e-05 J			
E1668A	N	PCB-172	52663-74-8	4.09e-06 J	3.33e-06 J	2.4e-06 J	8.32e-06 J			
E1668A	N	PCB-174	38411-25-5	3.06e-05 J	2.52e-05 J	1.79e-05 J	4.96e-05			
E1668A	N	PCB-175	40186-70-7	1.24e-06 U	1.18e-06 U	1.11e-06 U	1.09e-06 U			
E1668A	N	PCB-176	52663-65-7	6.3e-06 J	5.04e-06 J	3.38e-06 J	4.6e-06 J			
E1668A	N	PCB-177	52663-70-4	2.1e-05 J	1.3e-05 J	1.33e-05 J	2.96e-05 J			
E1668A	N	PCB-178	52663-67-9	7.28e-06 J	8.9e-06 J	5.1e-06 J	1.12e-05 J			
E1668A	N	PCB-179	52663-64-6	2.18e-05 J	1.86e-05 J	1.14e-05 J	2.39e-05 J			

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNNW	N05-TNNW	N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE
				N05-CE01-TNNW	N05-CE02-TNNW	N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE
				2.5	2.92	2.96	3.07	2.93	2.7	3.11
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77	2.68	2.68	2.68
				N05-CE01-TNNW-AS	N05-CE02-TNNW-AS	N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS
				03/28/2012	03/28/2012	03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	5.91e-05 J	4.67e-05 J	3.19e-05 J	0.000101			
E1668A	N	PCB-181	74472-47-2	1.24e-06 U	1.18e-06 U	1.11e-06 U	1.09e-06 U			
E1668A	N	PCB-182	60145-23-5	1.21e-06 U	1.15e-06 U	1.08e-06 U	1.06e-06 U			
E1668A	N	PCB-183/185	PCB-183/185	2.95e-05 J	1.87e-05 J	1.67e-05 J	3.6e-05 J			
E1668A	N	PCB-184	74472-48-3	1.03e-06 U	9.73e-07 U	9.19e-07 U	8.98e-07 U			
E1668A	N	PCB-186	74472-49-4	9.96e-07 U	9.45e-07 U	8.92e-07 U	8.72e-07 U			
E1668A	N	PCB-187	52663-68-0	6.17e-05 J	4.61e-05 J	3.11e-05 J	8.13e-05			
E1668A	N	PCB-188	74487-85-7	7.59e-07 U	6.91e-07 U	6.85e-07 U	7.08e-07 U			
E1668A	N	PCB-189	39635-31-9	1.47e-06 U	1.75e-06 U	8.97e-07 U	1.14e-06 U			
E1668A	N	PCB-190	41411-64-7	3.39e-06 J	3.05e-06 J	2.44e-06 J	6.53e-06 J			
E1668A	N	PCB-191	74472-50-7	9.46e-07 U	8.98e-07 U	8.48e-07 U	8.29e-07 U			
E1668A	N	PCB-192	74472-51-8	1.06e-06 U	1e-06 U	9.47e-07 U	9.26e-07 U			
E1668A	N	PCB-194	35694-08-7	1.89e-05 J	1.26e-05 J	9.12e-06 J	2.23e-05 J			
E1668A	N	PCB-195	52663-78-2	7.77e-06 J	1.9e-06 U	3.78e-06 J	7.07e-06 J			
E1668A	N	PCB-196	42740-50-1	4.55e-06 J	5.5e-06 J	1.04e-06 U	1.09e-05 J			
E1668A	N	PCB-197	33091-17-7	7.43e-07 U	9.07e-07 U	7.73e-07 U	6.9e-07 U			
E1668A	N	PCB-198/199	PCB-198/199	2.01e-05 J	1.45e-05 J	1.24e-05 J	3.47e-05 J			
E1668A	N	PCB-200	52663-73-7	7.29e-07 U	1.45e-06 J	7.59e-07 U	1.86e-06 J			
E1668A	N	PCB-201	40186-71-8	7.04e-07 U	2.31e-06 J	2.29e-06 J	3.51e-06 J			
E1668A	N	PCB-202	2136-99-4	7.6e-06 J	4.85e-06 J	4.19e-06 J	9.55e-06 J			
E1668A	N	PCB-203	52663-76-0	1.04e-05 J	9.02e-06 J	6.3e-06 J	1.62e-05 J			
E1668A	N	PCB-204	74472-52-9	7.72e-07 U	9.43e-07 U	8.03e-07 U	7.18e-07 U			
E1668A	N	PCB-205	74472-53-0	9.15e-07 U	1.48e-06 U	9.14e-07 U	8.15e-07 U			
E1668A	N	PCB-206	40186-72-9	1.93e-05 J	1.63e-05 J	1.06e-05 J	2.3e-05 J			
E1668A	N	PCB-207	52663-79-3	1.26e-06 U	2.07e-06 U	1.51e-06 U	3.2e-06 J			
E1668A	N	PCB-208	52663-77-1	7.03e-06 J	5.9e-06 J	4.43e-06 J	7.12e-06 J			
E1668A	N	PCB-209	2051-24-3	1.8e-05 J	1.57e-05 J	6.11e-06 J	3.03e-05 J			
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00709 J	0.00574 J	0.0049 J	0.00782 J			
E1668A	N	Total PCB (a)	PCB-Total	0.00733 J	0.00593 J	0.00505 J	0.0081 J			
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.07e-07J	1.2e-07J	8.11e-08J	1.07e-07J			

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7							
E1668A	N	PCB-2	2051-61-8							
E1668A	N	PCB-3	2051-62-9							
E1668A	N	PCB-4	13029-08-8							
E1668A	N	PCB-5	16605-91-7							
E1668A	N	PCB-6	25569-80-6							
E1668A	N	PCB-7	33284-50-3							
E1668A	N	PCB-8	34883-43-7							
E1668A	N	PCB-9	34883-39-1							
E1668A	N	PCB-10	33146-45-1							
E1668A	N	PCB-11	2050-67-1							
E1668A	N	PCB-12/13	PCB-12/13							
E1668A	N	PCB-14	34883-41-5							
E1668A	N	PCB-15	2050-68-2							
E1668A	N	PCB-16	38444-78-9							
E1668A	N	PCB-17	37680-66-3							
E1668A	N	PCB-18/30	PCB-18/30							
E1668A	N	PCB-19	38444-73-4							
E1668A	N	PCB-20/28	PCB-20/28							
E1668A	N	PCB-21/33	PCB-21/33							
E1668A	N	PCB-22	38444-85-8							
E1668A	N	PCB-23	55720-44-0							
E1668A	N	PCB-24	55702-45-9							
E1668A	N	PCB-25	55712-37-3							
E1668A	N	PCB-26/29	PCB-26/29							
E1668A	N	PCB-27	38444-76-7							
E1668A	N	PCB-31	16606-02-3							
E1668A	N	PCB-32	38444-77-8							
E1668A	N	PCB-34	37680-68-5							
E1668A	N	PCB-35	37680-69-6							
E1668A	N	PCB-36	38444-87-0							
E1668A	N	PCB-37	38444-90-5							
E1668A	N	PCB-38	53555-66-1							
E1668A	N	PCB-39	38444-88-1							
E1668A	N	PCB-40/41/71	PCB-40/41/71							
E1668A	N	PCB-42	36559-22-5							
E1668A	N	PCB-43/73	PCB-43/73							
E1668A	N	PCB-44/47/65	PCB-44/47/65							
E1668A	N	PCB-45/51	PCB-45/51							
E1668A	N	PCB-46	41464-47-5							
E1668A	N	PCB-48	70362-47-9							
E1668A	N	PCB-49/69	PCB-49/69							
E1668A	N	PCB-50/53	PCB-50/53							
E1668A	N	PCB-52	35693-99-3							
E1668A	N	PCB-54	15968-05-5							

				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2							
E1668A	N	PCB-56	41464-43-1							
E1668A	N	PCB-57	70424-67-8							
E1668A	N	PCB-58	41464-49-7							
E1668A	N	PCB-59/62/75	PCB-59/62/75							
E1668A	N	PCB-60	33025-41-1							
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76							
E1668A	N	PCB-63	74472-34-7							
E1668A	N	PCB-64	52663-58-8							
E1668A	N	PCB-66	32598-10-0							
E1668A	N	PCB-67	73575-53-8							
E1668A	N	PCB-68	73575-52-7							
E1668A	N	PCB-72	41464-42-0							
E1668A	N	PCB-77	32598-13-3							
E1668A	N	PCB-78	70362-49-1							
E1668A	N	PCB-79	41464-48-6							
E1668A	N	PCB-80	33284-52-5							
E1668A	N	PCB-81	70362-50-4							
E1668A	N	PCB-82	52663-62-4							
E1668A	N	PCB-83/99	PCB-83/99							
E1668A	N	PCB-84	52663-60-2							
E1668A	N	PCB-85/116/117	PCB-85/116/117							
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125							
E1668A	N	PCB-88/91	PCB-88/91							
E1668A	N	PCB-89	73575-57-2							
E1668A	N	PCB-90/101/113	PCB-90/101/113							
E1668A	N	PCB-92	52663-61-3							
E1668A	N	PCB-93/100	PCB-93/100							
E1668A	N	PCB-94	73575-55-0							
E1668A	N	PCB-95	38379-99-6							
E1668A	N	PCB-96	73575-54-9							
E1668A	N	PCB-98/102	PCB-98/102							
E1668A	N	PCB-103	60145-21-3							
E1668A	N	PCB-104	56558-16-8							
E1668A	N	PCB-105	32598-14-4							
E1668A	N	PCB-106	70424-69-0							
E1668A	N	PCB-107	70424-68-9							
E1668A	N	PCB-108/124	PCB-108/124							
E1668A	N	PCB-110/115	PCB-110/115							
E1668A	N	PCB-111	39635-32-0							
E1668A	N	PCB-112	74472-36-9							
E1668A	N	PCB-114	74472-37-0							
E1668A	N	PCB-118	31508-00-6							
E1668A	N	PCB-120	68194-12-7							
E1668A	N	PCB-121	56558-18-0							

				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4							
E1668A	N	PCB-123	65510-44-3							
E1668A	N	PCB-126	57465-28-8							
E1668A	N	PCB-127	39635-33-1							
E1668A	N	PCB-128/166	PCB-128/166							
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163							
E1668A	N	PCB-130	52663-66-8							
E1668A	N	PCB-131	61798-70-7							
E1668A	N	PCB-132	38380-05-1							
E1668A	N	PCB-133	35694-04-3							
E1668A	N	PCB-134/143	PCB-134/143							
E1668A	N	PCB-135/151	PCB-135/151							
E1668A	N	PCB-136	38411-22-2							
E1668A	N	PCB-137	35694-06-5							
E1668A	N	PCB-139/140	PCB-139/140							
E1668A	N	PCB-141	52712-04-6							
E1668A	N	PCB-142	41411-61-4							
E1668A	N	PCB-144	68194-14-9							
E1668A	N	PCB-145	74472-40-5							
E1668A	N	PCB-146	51908-16-8							
E1668A	N	PCB-147/149	PCB-147/149							
E1668A	N	PCB-148	74472-41-6							
E1668A	N	PCB-150	68194-08-1							
E1668A	N	PCB-152	68194-09-2							
E1668A	N	PCB-153/168	PCB-153/168							
E1668A	N	PCB-154	60145-22-4							
E1668A	N	PCB-155	33979-03-2							
E1668A	N	PCB-156/157	PCB-156/157							
E1668A	N	PCB-158	74472-42-7							
E1668A	N	PCB-159	39635-35-3							
E1668A	N	PCB-161	74472-43-8							
E1668A	N	PCB-162	39635-34-2							
E1668A	N	PCB-164	74472-45-0							
E1668A	N	PCB-165	74472-46-1							
E1668A	N	PCB-167	52663-72-6							
E1668A	N	PCB-169	32774-16-6							
E1668A	N	PCB-170	35065-30-6							
E1668A	N	PCB-171/173	PCB-171/173							
E1668A	N	PCB-172	52663-74-8							
E1668A	N	PCB-174	38411-25-5							
E1668A	N	PCB-175	40186-70-7							
E1668A	N	PCB-176	52663-65-7							
E1668A	N	PCB-177	52663-70-4							
E1668A	N	PCB-178	52663-67-9							
E1668A	N	PCB-179	52663-64-6							

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS
				N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN	N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS
				3	3.16	2.98	3.02	3	3.02	2.98
				NB	NB	NB	NB	NB	NB	NB
				3.87	3.87	3.87	3.87	0.97	0.98	0.98
				N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS	N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/07/2012	06/07/2012	06/07/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193							
E1668A	N	PCB-181	74472-47-2							
E1668A	N	PCB-182	60145-23-5							
E1668A	N	PCB-183/185	PCB-183/185							
E1668A	N	PCB-184	74472-48-3							
E1668A	N	PCB-186	74472-49-4							
E1668A	N	PCB-187	52663-68-0							
E1668A	N	PCB-188	74487-85-7							
E1668A	N	PCB-189	39635-31-9							
E1668A	N	PCB-190	41411-64-7							
E1668A	N	PCB-191	74472-50-7							
E1668A	N	PCB-192	74472-51-8							
E1668A	N	PCB-194	35694-08-7							
E1668A	N	PCB-195	52663-78-2							
E1668A	N	PCB-196	42740-50-1							
E1668A	N	PCB-197	33091-17-7							
E1668A	N	PCB-198/199	PCB-198/199							
E1668A	N	PCB-200	52663-73-7							
E1668A	N	PCB-201	40186-71-8							
E1668A	N	PCB-202	2136-99-4							
E1668A	N	PCB-203	52663-76-0							
E1668A	N	PCB-204	74472-52-9							
E1668A	N	PCB-205	74472-53-0							
E1668A	N	PCB-206	40186-72-9							
E1668A	N	PCB-207	52663-79-3							
E1668A	N	PCB-208	52663-77-1							
E1668A	N	PCB-209	2051-24-3							
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC							
E1668A	N	Total PCB (a)	PCB-Total							
E1668A	N	PCB TEQ (b)	KMTEQPCB							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7							
E1668A	N	PCB-2	2051-61-8							
E1668A	N	PCB-3	2051-62-9							
E1668A	N	PCB-4	13029-08-8							
E1668A	N	PCB-5	16605-91-7							
E1668A	N	PCB-6	25569-80-6							
E1668A	N	PCB-7	33284-50-3							
E1668A	N	PCB-8	34883-43-7							
E1668A	N	PCB-9	34883-39-1							
E1668A	N	PCB-10	33146-45-1							
E1668A	N	PCB-11	2050-67-1							
E1668A	N	PCB-12/13	PCB-12/13							
E1668A	N	PCB-14	34883-41-5							
E1668A	N	PCB-15	2050-68-2							
E1668A	N	PCB-16	38444-78-9							
E1668A	N	PCB-17	37680-66-3							
E1668A	N	PCB-18/30	PCB-18/30							
E1668A	N	PCB-19	38444-73-4							
E1668A	N	PCB-20/28	PCB-20/28							
E1668A	N	PCB-21/33	PCB-21/33							
E1668A	N	PCB-22	38444-85-8							
E1668A	N	PCB-23	55720-44-0							
E1668A	N	PCB-24	55702-45-9							
E1668A	N	PCB-25	55712-37-3							
E1668A	N	PCB-26/29	PCB-26/29							
E1668A	N	PCB-27	38444-76-7							
E1668A	N	PCB-31	16606-02-3							
E1668A	N	PCB-32	38444-77-8							
E1668A	N	PCB-34	37680-68-5							
E1668A	N	PCB-35	37680-69-6							
E1668A	N	PCB-36	38444-87-0							
E1668A	N	PCB-37	38444-90-5							
E1668A	N	PCB-38	53555-66-1							
E1668A	N	PCB-39	38444-88-1							
E1668A	N	PCB-40/41/71	PCB-40/41/71							
E1668A	N	PCB-42	36559-22-5							
E1668A	N	PCB-43/73	PCB-43/73							
E1668A	N	PCB-44/47/65	PCB-44/47/65							
E1668A	N	PCB-45/51	PCB-45/51							
E1668A	N	PCB-46	41464-47-5							
E1668A	N	PCB-48	70362-47-9							
E1668A	N	PCB-49/69	PCB-49/69							
E1668A	N	PCB-50/53	PCB-50/53							
E1668A	N	PCB-52	35693-99-3							
E1668A	N	PCB-54	15968-05-5							

				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2							
E1668A	N	PCB-56	41464-43-1							
E1668A	N	PCB-57	70424-67-8							
E1668A	N	PCB-58	41464-49-7							
E1668A	N	PCB-59/62/75	PCB-59/62/75							
E1668A	N	PCB-60	33025-41-1							
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76							
E1668A	N	PCB-63	74472-34-7							
E1668A	N	PCB-64	52663-58-8							
E1668A	N	PCB-66	32598-10-0							
E1668A	N	PCB-67	73575-53-8							
E1668A	N	PCB-68	73575-52-7							
E1668A	N	PCB-72	41464-42-0							
E1668A	N	PCB-77	32598-13-3							
E1668A	N	PCB-78	70362-49-1							
E1668A	N	PCB-79	41464-48-6							
E1668A	N	PCB-80	33284-52-5							
E1668A	N	PCB-81	70362-50-4							
E1668A	N	PCB-82	52663-62-4							
E1668A	N	PCB-83/99	PCB-83/99							
E1668A	N	PCB-84	52663-60-2							
E1668A	N	PCB-85/116/117	PCB-85/116/117							
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125							
E1668A	N	PCB-88/91	PCB-88/91							
E1668A	N	PCB-89	73575-57-2							
E1668A	N	PCB-90/101/113	PCB-90/101/113							
E1668A	N	PCB-92	52663-61-3							
E1668A	N	PCB-93/100	PCB-93/100							
E1668A	N	PCB-94	73575-55-0							
E1668A	N	PCB-95	38379-99-6							
E1668A	N	PCB-96	73575-54-9							
E1668A	N	PCB-98/102	PCB-98/102							
E1668A	N	PCB-103	60145-21-3							
E1668A	N	PCB-104	56558-16-8							
E1668A	N	PCB-105	32598-14-4							
E1668A	N	PCB-106	70424-69-0							
E1668A	N	PCB-107	70424-68-9							
E1668A	N	PCB-108/124	PCB-108/124							
E1668A	N	PCB-110/115	PCB-110/115							
E1668A	N	PCB-111	39635-32-0							
E1668A	N	PCB-112	74472-36-9							
E1668A	N	PCB-114	74472-37-0							
E1668A	N	PCB-118	31508-00-6							
E1668A	N	PCB-120	68194-12-7							
E1668A	N	PCB-121	56558-18-0							

				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4							
E1668A	N	PCB-123	65510-44-3							
E1668A	N	PCB-126	57465-28-8							
E1668A	N	PCB-127	39635-33-1							
E1668A	N	PCB-128/166	PCB-128/166							
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163							
E1668A	N	PCB-130	52663-66-8							
E1668A	N	PCB-131	61798-70-7							
E1668A	N	PCB-132	38380-05-1							
E1668A	N	PCB-133	35694-04-3							
E1668A	N	PCB-134/143	PCB-134/143							
E1668A	N	PCB-135/151	PCB-135/151							
E1668A	N	PCB-136	38411-22-2							
E1668A	N	PCB-137	35694-06-5							
E1668A	N	PCB-139/140	PCB-139/140							
E1668A	N	PCB-141	52712-04-6							
E1668A	N	PCB-142	41411-61-4							
E1668A	N	PCB-144	68194-14-9							
E1668A	N	PCB-145	74472-40-5							
E1668A	N	PCB-146	51908-16-8							
E1668A	N	PCB-147/149	PCB-147/149							
E1668A	N	PCB-148	74472-41-6							
E1668A	N	PCB-150	68194-08-1							
E1668A	N	PCB-152	68194-09-2							
E1668A	N	PCB-153/168	PCB-153/168							
E1668A	N	PCB-154	60145-22-4							
E1668A	N	PCB-155	33979-03-2							
E1668A	N	PCB-156/157	PCB-156/157							
E1668A	N	PCB-158	74472-42-7							
E1668A	N	PCB-159	39635-35-3							
E1668A	N	PCB-161	74472-43-8							
E1668A	N	PCB-162	39635-34-2							
E1668A	N	PCB-164	74472-45-0							
E1668A	N	PCB-165	74472-46-1							
E1668A	N	PCB-167	52663-72-6							
E1668A	N	PCB-169	32774-16-6							
E1668A	N	PCB-170	35065-30-6							
E1668A	N	PCB-171/173	PCB-171/173							
E1668A	N	PCB-172	52663-74-8							
E1668A	N	PCB-174	38411-25-5							
E1668A	N	PCB-175	40186-70-7							
E1668A	N	PCB-176	52663-65-7							
E1668A	N	PCB-177	52663-70-4							
E1668A	N	PCB-178	52663-67-9							
E1668A	N	PCB-179	52663-64-6							

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNE	N06-TNNW	N06-TNNW
				N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE	N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW
				3.1	1.26	2.5	2.84	2.98	2.63	3
				NB	NB	NB	NB	NB	NB	NB
				0.97	4.57	4.57	4.57	4.57	3.77	3.78
				N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS	N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS
				06/07/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193							
E1668A	N	PCB-181	74472-47-2							
E1668A	N	PCB-182	60145-23-5							
E1668A	N	PCB-183/185	PCB-183/185							
E1668A	N	PCB-184	74472-48-3							
E1668A	N	PCB-186	74472-49-4							
E1668A	N	PCB-187	52663-68-0							
E1668A	N	PCB-188	74487-85-7							
E1668A	N	PCB-189	39635-31-9							
E1668A	N	PCB-190	41411-64-7							
E1668A	N	PCB-191	74472-50-7							
E1668A	N	PCB-192	74472-51-8							
E1668A	N	PCB-194	35694-08-7							
E1668A	N	PCB-195	52663-78-2							
E1668A	N	PCB-196	42740-50-1							
E1668A	N	PCB-197	33091-17-7							
E1668A	N	PCB-198/199	PCB-198/199							
E1668A	N	PCB-200	52663-73-7							
E1668A	N	PCB-201	40186-71-8							
E1668A	N	PCB-202	2136-99-4							
E1668A	N	PCB-203	52663-76-0							
E1668A	N	PCB-204	74472-52-9							
E1668A	N	PCB-205	74472-53-0							
E1668A	N	PCB-206	40186-72-9							
E1668A	N	PCB-207	52663-79-3							
E1668A	N	PCB-208	52663-77-1							
E1668A	N	PCB-209	2051-24-3							
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC							
E1668A	N	Total PCB (a)	PCB-Total							
E1668A	N	PCB TEQ (b)	KMTEQPCB							

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7			1.47e-05 J	6.49e-06 J	1.07e-05 J	1.29e-05 J	1.15e-05 J
E1668A	N	PCB-2	2051-61-8			1.6e-06 U	2.1e-07 U	3.18e-06 U	3.32e-06 U	3.93e-06 U
E1668A	N	PCB-3	2051-62-9			4.18e-06 J	1.92e-06 J	4.33e-06 U	3.86e-06 U	5.24e-06 U
E1668A	N	PCB-4	13029-08-8			0.000104 J	9.22e-05 J	0.000109 J	0.000121 J	0.000121 J
E1668A	N	PCB-5	16605-91-7			9.98e-07 U	8.75e-07 U	9.08e-07 U	7.54e-07 U	1.44e-06 J
E1668A	N	PCB-6	25569-80-6			1.28e-05 U	5.94e-06 U	9.45e-06 J	1.17e-05 J	1.53e-05 U
E1668A	N	PCB-7	33284-50-3			2.19e-06 J	1.61e-06 J	2.63e-06 U	1.33e-06 U	2.06e-06 U
E1668A	N	PCB-8	34883-43-7			3.61e-05 J	1.72e-05 U	3.13e-05 J	3.71e-05 J	5.19e-05 J
E1668A	N	PCB-9	34883-39-1			2.14e-06 U	1.38e-06 U	1.73e-06 U	2.6e-06 U	3.97e-06 U
E1668A	N	PCB-10	33146-45-1			2.18e-05 J	2.2e-05 J	2.18e-05 J	2.13e-05 J	1.72e-05 J
E1668A	N	PCB-11	2050-67-1			3.2e-05 U	1.94e-05 U	3.39e-05 U	3.39e-05 U	5.05e-05 U
E1668A	N	PCB-12/13	PCB-12/13			1.06e-05 U	6.08e-06 U	9.4e-06 J	1.12e-05 J	1.66e-05 J
E1668A	N	PCB-14	34883-41-5			5.83e-07 U	4.44e-07 U	7.14e-07 U	6.9e-07 U	6.74e-07 U
E1668A	N	PCB-15	2050-68-2			6.62e-05 J	4.05e-05 J	5.6e-05 J	6.85e-05 J	9.43e-05 J
E1668A	N	PCB-16	38444-78-9			4.81e-05	3.19e-05 J	5.35e-05 J	5.03e-05 J	8.48e-05
E1668A	N	PCB-17	37680-66-3			7.45e-05	4.57e-05 J	8.15e-05	8.4e-05	0.000126 J
E1668A	N	PCB-18/30	PCB-18/30			0.000137	9.1e-05	0.000145	0.000155	0.000242
E1668A	N	PCB-19	38444-73-4			4.2e-05	4.1e-05	4.45e-05	4.42e-05	5.01e-05
E1668A	N	PCB-20/28	PCB-20/28			0.000224	0.000128	0.000202	0.000221	0.000364
E1668A	N	PCB-21/33	PCB-21/33			2.81e-05 J	1.09e-05 U	2.58e-05 J	2.93e-05 J	5.52e-05
E1668A	N	PCB-22	38444-85-8			3.96e-05 J	2.31e-05 J	3.87e-05 J	4.09e-05 J	6.8e-05 J
E1668A	N	PCB-23	55720-44-0			3.79e-07 U	4.06e-07 U	3.38e-07 U	3.43e-07 U	3.36e-07 U
E1668A	N	PCB-24	55702-45-9			2.84e-06 J	1.03e-06 J	2.61e-06 J	1.45e-06 J	3.11e-06 J
E1668A	N	PCB-25	55712-37-3			2.58e-05 J	1.53e-05 J	2.36e-05 J	2.58e-05 J	4.66e-05
E1668A	N	PCB-26/29	PCB-26/29			4.27e-05	2.49e-05 J	4.01e-05	4.27e-05	6.86e-05
E1668A	N	PCB-27	38444-76-7			2.22e-05 J	2.23e-05 J	2.62e-05 J	2.88e-05 J	3.81e-05 J
E1668A	N	PCB-31	16606-02-3			0.000165 J	9.12e-05 J	0.000151 J	0.000163 J	0.000268 J
E1668A	N	PCB-32	38444-77-8			6.82e-05	4.66e-05	6.9e-05	7.67e-05	0.000111 J
E1668A	N	PCB-34	37680-68-5			9.93e-07 J	4e-07 U	1.22e-06 J	1.22e-06 J	1.92e-06 J
E1668A	N	PCB-35	37680-69-6			3.38e-06 J	1.81e-06 J	2.93e-06 J	3.39e-06 J	5.81e-06 J
E1668A	N	PCB-36	38444-87-0			1.09e-06 J	3.97e-07 U	6.47e-07 J	3.36e-07 U	1.24e-06 J
E1668A	N	PCB-37	38444-90-5			4.81e-05 J	2.48e-05 J	3.6e-05 J	4.55e-05 J	7.61e-05 J
E1668A	N	PCB-38	53555-66-1			3.91e-07 U	4.19e-07 U	3.49e-07 U	3.54e-07 U	3.46e-07 U
E1668A	N	PCB-39	38444-88-1			1.21e-06 J	1.08e-06 J	1.56e-06 J	7.73e-07 J	2.66e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71			9.8e-05	6.46e-05	9.66e-05	0.000101	0.000193
E1668A	N	PCB-42	36559-22-5			4.78e-05	3.58e-05 J	4.49e-05	4.83e-05	9.6e-05 J
E1668A	N	PCB-43/73	PCB-43/73			5.36e-06 J	6.14e-06 J	7.67e-06 J	6.04e-06 J	1.15e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65			0.00019	0.00012	0.000177	2e-04	0.000389
E1668A	N	PCB-45/51	PCB-45/51			5.2e-05	3.7e-05 J	5.3e-05	5.35e-05	0.000106
E1668A	N	PCB-46	41464-47-5			1.22e-05 J	1e-05 J	1.06e-05 J	1.37e-05 J	2.52e-05 J
E1668A	N	PCB-48	70362-47-9			2.51e-05 J	1.65e-05 J	2.53e-05 J	2.93e-05 J	4.89e-05
E1668A	N	PCB-49/69	PCB-49/69			0.000127	8.45e-05	0.000124	0.000134	0.000263
E1668A	N	PCB-50/53	PCB-50/53			4.22e-05	3.05e-05 J	4e-05	4.15e-05	7.55e-05
E1668A	N	PCB-52	35693-99-3			0.000211 J	0.00015 J	0.00021 J	0.000228 J	0.000408 J
E1668A	N	PCB-54	15968-05-5			1.77e-06 U	1.92e-06 U	4.24e-06 J	3.86e-06 J	8.98e-06 J

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2			2.47e-06 J	3.09e-06 J	2.22e-06 U	1.45e-06 U	5.23e-06 J
E1668A	N	PCB-56	41464-43-1			5.49e-05 J	2.93e-05 J	4.99e-05 J	5.7e-05 J	0.000116 J
E1668A	N	PCB-57	70424-67-8			6.66e-07 U	7.18e-07 U	9.12e-07 J	1.24e-06 J	1.1e-06 J
E1668A	N	PCB-58	41464-49-7			9.89e-07 J	7.15e-07 U	3.08e-07 J	6.46e-07 J	6.12e-07 U
E1668A	N	PCB-59/62/75	PCB-59/62/75			1.64e-05 J	1.18e-05 J	1.57e-05 J	1.79e-05 J	3.14e-05 J
E1668A	N	PCB-60	33025-41-1			1.92e-05 J	9.26e-06 J	1.53e-05 J	1.89e-05 J	3.63e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76			0.000191	9.42e-05	0.000164	0.000192	0.000411
E1668A	N	PCB-63	74472-34-7			4.87e-06 J	2.76e-06 J	5.27e-06 J	5.65e-06 J	9.88e-06 J
E1668A	N	PCB-64	52663-58-8			5.91e-05	3.84e-05 J	5.89e-05 J	6.74e-05 J	0.000139 J
E1668A	N	PCB-66	32598-10-0			0.000125 J	6.95e-05 J	0.00011 J	0.000133 J	0.000271 J
E1668A	N	PCB-67	73575-53-8			3.45e-06 J	2.76e-06 J	3.65e-06 J	3.9e-06 J	8.49e-06 J
E1668A	N	PCB-68	73575-52-7			1.77e-06 J	6.51e-07 U	1.55e-06 J	2.34e-06 J	3.46e-06 J
E1668A	N	PCB-72	41464-42-0			2.86e-06 J	1.95e-06 J	2.06e-06 J	1.66e-06 J	5.18e-06 J
E1668A	N	PCB-77	32598-13-3			1.17e-05 J	4.7e-06 J	9.81e-06 J	1.27e-05 J	2.42e-05 J
E1668A	N	PCB-78	70362-49-1			6.88e-07 U	7.42e-07 U	6.18e-07 U	5.61e-07 U	6.36e-07 U
E1668A	N	PCB-79	41464-48-6			2.29e-06 J	1.46e-06 J	1.18e-06 J	1.64e-06 J	4.16e-06 J
E1668A	N	PCB-80	33284-52-5			5.9e-07 U	6.36e-07 U	5.29e-07 U	4.8e-07 U	5.45e-07 U
E1668A	N	PCB-81	70362-50-4			6.4e-07 U	6.92e-07 U	5.59e-07 U	6.26e-07 J	6.24e-07 J
E1668A	N	PCB-82	52663-62-4			1.51e-05 J	5.57e-06 J	6.67e-06 J	1.39e-05 J	3.13e-05 J
E1668A	N	PCB-83/99	PCB-83/99			8.06e-05	3.55e-05 J	7e-05	8.39e-05	0.00016
E1668A	N	PCB-84	52663-60-2			3.22e-05 J	2.07e-05 J	3.12e-05 J	3.89e-05	6.98e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117			2.06e-05 J	1.12e-05 J	1.55e-05 J	1.87e-05 J	4.33e-05
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125			7.25e-05	3.67e-05 U	6.36e-05 J	9.07e-05	0.000156 J
E1668A	N	PCB-88/91	PCB-88/91			2.28e-05 J	1.06e-05 J	2.25e-05 J	2.47e-05 J	4.49e-05
E1668A	N	PCB-89	73575-57-2			1.24e-06 U	1.28e-06 U	1.14e-06 U	1.14e-06 U	1.2e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113			0.000119	5.85e-05	0.000106	0.000128	0.000239
E1668A	N	PCB-92	52663-61-3			1.5e-05 J	1.13e-05 J	1.52e-05 J	2.13e-05 J	4.27e-05
E1668A	N	PCB-93/100	PCB-93/100			2.66e-06 J	1.13e-06 U	2.43e-06 J	4.44e-06 J	1.06e-05 J
E1668A	N	PCB-94	73575-55-0			1.24e-06 U	1.27e-06 U	1.14e-06 U	1.14e-06 U	4.51e-06 J
E1668A	N	PCB-95	38379-99-6			0.000113	6.31e-05	9.16e-05 J	0.000111	0.000204
E1668A	N	PCB-96	73575-54-9			9.27e-07 U	9.54e-07 U	1.49e-06 J	8.53e-07 U	3.33e-06 J
E1668A	N	PCB-98/102	PCB-98/102			4.87e-06 J	1.1e-06 U	5.19e-06 J	7.07e-06 J	1.34e-05 J
E1668A	N	PCB-103	60145-21-3			1.09e-06 U	1.12e-06 U	2.67e-06 J	1e-06 U	6.66e-06 J
E1668A	N	PCB-104	56558-16-8			8.26e-07 U	8.5e-07 U	7.61e-07 U	7.6e-07 U	8.02e-07 U
E1668A	N	PCB-105	32598-14-4			3.47e-05 J	1.56e-05 J	2.82e-05 J	3.17e-05 J	7.93e-05
E1668A	N	PCB-106	70424-69-0			4.79e-07 U	5.16e-07 U	4.62e-07 U	4.46e-07 U	5.39e-07 U
E1668A	N	PCB-107	70424-68-9			8.4e-06 J	3.63e-06 J	4.27e-06 J	7.94e-06 J	1.45e-05 J
E1668A	N	PCB-108/124	PCB-108/124			3.52e-06 J	5.26e-07 U	2.56e-06 J	2.51e-06 J	8.37e-06 J
E1668A	N	PCB-110/115	PCB-110/115			0.000132	6.75e-05	0.000114	0.000144	0.000276
E1668A	N	PCB-111	39635-32-0			7.76e-07 U	7.99e-07 U	7.16e-07 U	7.14e-07 U	7.54e-07 U
E1668A	N	PCB-112	74472-36-9			8.43e-07 U	8.67e-07 U	7.77e-07 U	7.76e-07 U	8.19e-07 U
E1668A	N	PCB-114	74472-37-0			2.15e-06 J	4.89e-07 U	4.31e-07 U	4.15e-07 U	4.12e-06 J
E1668A	N	PCB-118	31508-00-6			9.32e-05 J	4.55e-05 J	7.53e-05 J	9.29e-05 J	0.000197 J
E1668A	N	PCB-120	68194-12-7			7.99e-07 U	8.22e-07 U	7.36e-07 U	7.35e-07 U	7.76e-07 U
E1668A	N	PCB-121	56558-18-0			8.05e-07 U	8.28e-07 U	7.42e-07 U	7.41e-07 U	7.82e-07 U

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4			1.62e-06 J	5.61e-07 U	5.03e-07 U	4.85e-07 U	4.56e-06 J
E1668A	N	PCB-123	65510-44-3			1.58e-06 J	8.35e-07 J	1.77e-06 J	1.5e-06 J	4.41e-06 J
E1668A	N	PCB-126	57465-28-8			4.43e-07 U	4.9e-07 U	4.31e-07 U	3.72e-07 J	1.33e-06 J
E1668A	N	PCB-127	39635-33-1			4.74e-07 U	5.1e-07 U	4.57e-07 U	4.41e-07 U	5.33e-07 U
E1668A	N	PCB-128/166	PCB-128/166			1.14e-05 J	4.84e-06 J	1.01e-05 J	9.71e-06 J	2.93e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163			8.37e-05	4.15e-05	6.24e-05 J	8.91e-05	0.000204
E1668A	N	PCB-130	52663-66-8			4.63e-06 J	8.86e-07 U	3.08e-06 J	4.6e-06 J	1.16e-05 J
E1668A	N	PCB-131	61798-70-7			9.57e-07 U	9.08e-07 U	9.11e-07 U	9.12e-07 U	1.24e-06 U
E1668A	N	PCB-132	38380-05-1			2.32e-05 J	1.12e-05 J	2.13e-05 J	2.72e-05 J	6.45e-05
E1668A	N	PCB-133	35694-04-3			8.78e-07 U	8.33e-07 U	8.36e-07 U	1.35e-06 J	3.4e-06 J
E1668A	N	PCB-134/143	PCB-134/143			4.18e-06 J	1.76e-06 J	2.04e-06 J	3.27e-06 J	1.16e-05 J
E1668A	N	PCB-135/151	PCB-135/151			2.77e-05 J	1.24e-05 J	2.75e-05 J	3.13e-05 J	7.2e-05
E1668A	N	PCB-136	38411-22-2			1.25e-05 J	4.44e-06 J	9.67e-06 J	1.2e-05 J	2.69e-05 J
E1668A	N	PCB-137	35694-06-5			2.78e-06 J	7.64e-07 U	1.85e-06 J	2.36e-06 J	6.87e-06 J
E1668A	N	PCB-139/140	PCB-139/140			8.01e-07 U	7.6e-07 U	8.13e-07 J	7.64e-07 U	2.98e-06 J
E1668A	N	PCB-141	52712-04-6			1.02e-05 J	6.29e-06 J	9.91e-06 J	1.1e-05 J	3.07e-05 J
E1668A	N	PCB-142	41411-61-4			9.2e-07 U	8.73e-07 U	8.76e-07 U	8.77e-07 U	1.19e-06 U
E1668A	N	PCB-144	68194-14-9			2.25e-06 J	1.24e-06 U	3.19e-06 J	2.11e-06 J	5.12e-06 J
E1668A	N	PCB-145	74472-40-5			9.5e-07 U	9.41e-07 U	8.38e-07 U	8.88e-07 U	1.04e-06 U
E1668A	N	PCB-146	51908-16-8			1.46e-05 J	6.72e-06 J	1.1e-05 J	1.34e-05 J	3.26e-05 J
E1668A	N	PCB-147/149	PCB-147/149			6.91e-05	3.54e-05 J	6.06e-05	7.49e-05	0.00018
E1668A	N	PCB-148	74472-41-6			1.33e-06 U	1.32e-06 U	1.17e-06 U	1.24e-06 U	1.45e-06 U
E1668A	N	PCB-150	68194-08-1			9.26e-07 U	9.17e-07 U	8.17e-07 U	8.66e-07 U	1.01e-06 U
E1668A	N	PCB-152	68194-09-2			9.44e-07 U	9.35e-07 U	8.33e-07 U	8.83e-07 U	1.03e-06 U
E1668A	N	PCB-153/168	PCB-153/168			7.95e-05	3.62e-05 J	6.24e-05	8.12e-05	0.000186
E1668A	N	PCB-154	60145-22-4			2.27e-06 J	1.09e-06 U	2.48e-06 J	2.03e-06 J	6.47e-06 J
E1668A	N	PCB-155	33979-03-2			9e-07 U	8.91e-07 U	7.94e-07 U	8.42e-07 U	9.83e-07 U
E1668A	N	PCB-156/157	PCB-156/157			7.93e-06 J	4.35e-06 J	6.89e-06 J	7.49e-06 J	2.01e-05 J
E1668A	N	PCB-158	74472-42-7			5.81e-06 J	2.96e-06 J	5.6e-06 J	8.02e-06 J	1.69e-05 J
E1668A	N	PCB-159	39635-35-3			6.12e-07 U	5.81e-07 U	5.83e-07 U	5.84e-07 U	1.54e-06 J
E1668A	N	PCB-161	74472-43-8			6.09e-07 U	5.78e-07 U	5.8e-07 U	5.81e-07 U	7.9e-07 U
E1668A	N	PCB-162	39635-34-2			6.04e-07 U	5.73e-07 U	5.76e-07 U	5.76e-07 U	1.64e-06 J
E1668A	N	PCB-164	74472-45-0			5.35e-06 J	2.51e-06 J	4.05e-06 J	5.47e-06 J	1.28e-05 J
E1668A	N	PCB-165	74472-46-1			6.69e-07 U	6.35e-07 U	6.38e-07 U	6.38e-07 U	8.68e-07 U
E1668A	N	PCB-167	52663-72-6			2.74e-06 J	9.34e-07 J	2.27e-06 J	3.1e-06 J	6.27e-06 J
E1668A	N	PCB-169	32774-16-6			3.92e-07 U	3.96e-07 U	3.89e-07 U	3.48e-07 U	7.19e-07 U
E1668A	N	PCB-170	35065-30-6			1.94e-05 J	6.67e-06 J	1.34e-05 J	1.75e-05 J	4.29e-05
E1668A	N	PCB-171/173	PCB-171/173			5.26e-06 J	9.01e-07 U	4.18e-06 J	5.44e-06 J	1.24e-05 J
E1668A	N	PCB-172	52663-74-8			2.12e-06 J	1.2e-06 J	8.2e-07 U	2.13e-06 J	6.92e-06 J
E1668A	N	PCB-174	38411-25-5			1.67e-05 J	8.16e-06 J	1.53e-05 J	1.83e-05 J	4.49e-05
E1668A	N	PCB-175	40186-70-7			7.39e-07 U	8.02e-07 U	7.37e-07 U	6.38e-07 U	7.39e-07 U
E1668A	N	PCB-176	52663-65-7			2.61e-06 J	6.11e-07 U	2.28e-06 J	1.88e-06 J	6.48e-06 J
E1668A	N	PCB-177	52663-70-4			1.33e-05 J	4.53e-06 J	8.66e-06 J	1.04e-05 J	2.45e-05 J
E1668A	N	PCB-178	52663-67-9			3.97e-06 J	8.67e-07 U	5.18e-06 J	4.18e-06 J	1.08e-05 J
E1668A	N	PCB-179	52663-64-6			9.47e-06 J	4.38e-06 J	1.07e-05 J	1.25e-05 J	2e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBE	N07-TNBN
				N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE	N07-CE04-TNBE	N07-CE01-TNBN
				3	3	2.05	2.95	3.1	3.05	3
				NB	NB	NB	NB	NB	NB	NB
				3.77	3.77					
				N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS	N07-CE04-TNBE-AS	N07-CE01-TNBN-AS
				06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193			4.63e-05	2.04e-05 J	3.57e-05 J	4.84e-05	0.000107
E1668A	N	PCB-181	74472-47-2			7.38e-07 U	8.02e-07 U	7.37e-07 U	6.37e-07 U	7.39e-07 U
E1668A	N	PCB-182	60145-23-5			7.18e-07 U	7.79e-07 U	7.16e-07 U	6.19e-07 U	7.18e-07 U
E1668A	N	PCB-183/185	PCB-183/185			1.38e-05 J	5.58e-06 J	1.01e-05 J	1.46e-05 J	3.25e-05 J
E1668A	N	PCB-184	74472-48-3			6.09e-07 U	6.62e-07 U	6.08e-07 U	5.26e-07 U	6.1e-07 U
E1668A	N	PCB-186	74472-49-4			5.92e-07 U	6.42e-07 U	5.9e-07 U	5.11e-07 U	5.92e-07 U
E1668A	N	PCB-187	52663-68-0			3.51e-05 J	1.47e-05 J	2.58e-05 J	3.62e-05 J	7.04e-05 J
E1668A	N	PCB-188	74487-85-7			5.35e-07 U	5.94e-07 U	5.38e-07 U	4.61e-07 U	5.3e-07 U
E1668A	N	PCB-189	39635-31-9			7.73e-07 J	5.99e-07 J	3.47e-07 U	2.62e-07 U	1.62e-06 J
E1668A	N	PCB-190	41411-64-7			3.81e-06 J	6.21e-07 U	2.4e-06 J	3.98e-06 J	8.05e-06 J
E1668A	N	PCB-191	74472-50-7			5.62e-07 U	6.11e-07 U	1.25e-06 J	4.85e-07 U	2.79e-06 J
E1668A	N	PCB-192	74472-51-8			6.28e-07 U	6.82e-07 U	6.27e-07 U	5.42e-07 U	6.28e-07 U
E1668A	N	PCB-194	35694-08-7			1.09e-05 J	4.28e-06 J	8.64e-06 J	9.49e-06 J	2.56e-05 J
E1668A	N	PCB-195	52663-78-2			2.16e-06 J	1.58e-06 J	2.57e-06 J	3.59e-06 J	6.96e-06 J
E1668A	N	PCB-196	42740-50-1			5.52e-06 J	9.07e-07 U	4.9e-06 J	6.42e-06 J	1.47e-05 J
E1668A	N	PCB-197	33091-17-7			6.09e-07 U	6.75e-07 U	6.32e-07 U	4.38e-07 U	1.36e-06 J
E1668A	N	PCB-198/199	PCB-198/199			1.9e-05 J	8.67e-06 J	1.45e-05 J	1.91e-05 J	3.37e-05 J
E1668A	N	PCB-200	52663-73-7			1.15e-06 J	6.63e-07 U	6.21e-07 U	1.55e-06 J	3.05e-06 J
E1668A	N	PCB-201	40186-71-8			1.5e-06 J	6.4e-07 U	5.99e-07 U	1.97e-06 J	4.53e-06 J
E1668A	N	PCB-202	2136-99-4			5.44e-06 J	2.26e-06 J	4.18e-06 J	5.34e-06 J	8.4e-06 J
E1668A	N	PCB-203	52663-76-0			9.75e-06 J	4.09e-06 J	7.55e-06 J	9.71e-06 J	1.92e-05 J
E1668A	N	PCB-204	74472-52-9			6.33e-07 U	7.02e-07 U	6.57e-07 U	4.55e-07 U	5.99e-07 U
E1668A	N	PCB-205	74472-53-0			7.93e-07 J	3.76e-07 U	3.38e-07 U	5.24e-07 J	3.34e-07 U
E1668A	N	PCB-206	40186-72-9			1.74e-05 J	7.57e-06 J	1.1e-05 J	1.46e-05 J	2.24e-05 J
E1668A	N	PCB-207	52663-79-3			9.68e-07 U	1.21e-06 U	8.36e-07 U	2.24e-06 J	2.6e-06 J
E1668A	N	PCB-208	52663-77-1			6.63e-06 J	1.28e-06 U	4.54e-06 J	4.9e-06 J	1.17e-05 J
E1668A	N	PCB-209	2051-24-3			1.08e-05 J	6.37e-06 J	9.9e-06 J	1.86e-05 J	2.74e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC			0.00388 J	0.00228 J	0.00355 J	0.00408 J	0.00751 J
E1668A	N	Total PCB (a)	PCB-Total			0.00403 J	0.00235 J	0.00367 J	0.00424 J	0.00785 J
E1668A	N	PCB TEQ (b)	KMTEQPCB			5.04e-08J	4.75e-08J	4.4e-08J	4.34e-08J	1.46e-07J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.92e-05 J	3.09e-05 J	2.23e-05 J	1.07e-05 J	3.52e-05 J	3.21e-05 J	1.11e-05 J
E1668A	N	PCB-2	2051-61-8	4.15e-06 U	3.87e-06 U	8.55e-06 U	2.95e-07 U	5.03e-06 U	3.27e-06 U	2.9e-06 U
E1668A	N	PCB-3	2051-62-9	7.12e-06 U	7.64e-06 U	9.68e-06 U	2.9e-06 U	1.06e-05 J	7.43e-06 U	3.93e-06 U
E1668A	N	PCB-4	13029-08-8	0.000122 J	0.000126 J	0.000131 J	9.62e-05 J	0.000155 J	0.000179 J	0.000114 J
E1668A	N	PCB-5	16605-91-7	6.75e-07 U	8.87e-07 U	1.54e-06 U	1.14e-06 U	1.76e-06 U	1.01e-06 U	1.09e-06 U
E1668A	N	PCB-6	25569-80-6	2.17e-05 J	1.58e-05 U	2.61e-05 J	1.06e-05 U	3.18e-05 J	2.71e-05 J	1.02e-05 U
E1668A	N	PCB-7	33284-50-3	2.62e-06 U	2.09e-06 U	3.6e-06 U	2.03e-06 U	3.41e-06 U	2.67e-06 U	2.37e-06 U
E1668A	N	PCB-8	34883-43-7	5.71e-05 J	4.94e-05 J	6.52e-05 J	3.45e-05 J	8.33e-05 J	6.8e-05 J	3.77e-05 J
E1668A	N	PCB-9	34883-39-1	2.82e-06 U	3.04e-06 U	6.34e-06 U	2.32e-06 U	4.93e-06 U	3.94e-06 U	3.21e-06 U
E1668A	N	PCB-10	33146-45-1	2.27e-05 J	2.53e-05 J	2.24e-05 J	2.18e-05 J	3.5e-05 J	4.1e-05	2.16e-05 J
E1668A	N	PCB-11	2050-67-1	5.44e-05 U	4.21e-05 U	5.96e-05 U	3.04e-05 U	4.89e-05 U	4.85e-05 U	3.86e-05 U
E1668A	N	PCB-12/13	PCB-12/13	2.14e-05 J	1.76e-05 U	2.23e-05 J	1.23e-05 U	2.43e-05 J	2.29e-05 J	1.09e-05 J
E1668A	N	PCB-14	34883-41-5	5.16e-07 U	7.04e-07 U	1.54e-06 J	1.44e-06 U	1.18e-06 U	5.71e-07 U	8.91e-07 U
E1668A	N	PCB-15	2050-68-2	0.000118 J	8.86e-05 J	0.000128 J	6.71e-05 J	0.000161 J	0.000138 J	5.57e-05 J
E1668A	N	PCB-16	38444-78-9	6.23e-05 J	5.08e-05 J	5.91e-05 J	5.32e-05 J	4.01e-05 J	4.5e-05 J	4.85e-05 J
E1668A	N	PCB-17	37680-66-3	0.000105 J	9.9e-05 J	0.000116 J	8.37e-05	9.94e-05	0.000107 J	8.07e-05
E1668A	N	PCB-18/30	PCB-18/30	0.000179	0.000167	0.000195	0.00015	0.000154	0.000149	0.000143
E1668A	N	PCB-19	38444-73-4	4.97e-05	4.59e-05	4.99e-05	4.34e-05	5.05e-05	5.6e-05	3.94e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000319	0.00025	0.000387	0.000246	0.000366	0.000309	0.00019
E1668A	N	PCB-21/33	PCB-21/33	4.13e-05	3.61e-05 J	5.54e-05	3.46e-05 J	4.4e-05	3.78e-05 J	2.85e-05 J
E1668A	N	PCB-22	38444-85-8	5.34e-05 J	4.71e-05 J	6.95e-05 J	4.28e-05 J	5.35e-05 J	4.64e-05 J	3.77e-05 J
E1668A	N	PCB-23	55720-44-0	2.68e-07 U	3.92e-07 U	5.65e-07 U	5.29e-07 U	4.69e-07 U	3.06e-07 U	3.53e-07 U
E1668A	N	PCB-24	55702-45-9	2.52e-06 J	2.47e-06 J	3.77e-06 J	1.35e-06 U	2.27e-06 J	1.83e-06 J	1.37e-06 J
E1668A	N	PCB-25	55712-37-3	3.68e-05 J	3.02e-05 J	4.6e-05 J	3.14e-05 J	4.42e-05	4.02e-05 J	2.46e-05 J
E1668A	N	PCB-26/29	PCB-26/29	6.11e-05	5.27e-05	7.45e-05	4.34e-05	7.88e-05	7.39e-05	3.87e-05 J
E1668A	N	PCB-27	38444-76-7	3.74e-05 J	3.11e-05 J	3.88e-05 J	2.75e-05 J	3.87e-05 J	3.73e-05 J	2.66e-05 J
E1668A	N	PCB-31	16606-02-3	0.000214 J	0.00019 J	0.000276 J	0.000162 J	0.000268 J	0.000243 J	0.000148 J
E1668A	N	PCB-32	38444-77-8	8.59e-05 J	7.99e-05 J	1e-04 J	7.28e-05	9.11e-05	8.1e-05 J	6.64e-05
E1668A	N	PCB-34	37680-68-5	1.59e-06 J	1.52e-06 J	1.65e-06 J	5.21e-07 U	1.99e-06 J	1.71e-06 J	1.07e-06 J
E1668A	N	PCB-35	37680-69-6	7.46e-06 J	6.95e-06 U	7.22e-06 U	4.02e-06 J	5.58e-06 J	4.69e-06 J	2.52e-06 J
E1668A	N	PCB-36	38444-87-0	6.19e-07 J	8.78e-07 J	8.38e-07 J	5.17e-07 U	1.89e-06 J	6.48e-07 J	3.46e-07 U
E1668A	N	PCB-37	38444-90-5	7.75e-05 J	5.79e-05 J	9.59e-05 J	4.89e-05 J	9.29e-05 J	7.46e-05 J	3.29e-05 J
E1668A	N	PCB-38	53555-66-1	2.77e-07 U	4.04e-07 U	5.83e-07 U	5.46e-07 U	4.84e-07 U	3.15e-07 U	3.65e-07 U
E1668A	N	PCB-39	38444-88-1	2.38e-06 J	1.81e-06 J	2.28e-06 J	4.85e-07 U	3.05e-06 J	1.78e-06 J	1.14e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000157	0.000109	0.000163	0.000116	0.00013	0.000111	8.79e-05
E1668A	N	PCB-42	36559-22-5	7.65e-05 J	5.4e-05	7.78e-05	5.93e-05	5.55e-05	4.8e-05 J	4.15e-05
E1668A	N	PCB-43/73	PCB-43/73	9.34e-06 J	5.75e-06 J	9.67e-06 J	8.34e-06 J	7.25e-06 J	7.03e-06 J	5.45e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.00029	0.000199	0.000323	0.000217	0.00022	0.000186	0.00017
E1668A	N	PCB-45/51	PCB-45/51	7.76e-05	5.08e-05	8.07e-05	6.48e-05	4.61e-05	3.91e-05 J	4.2e-05
E1668A	N	PCB-46	41464-47-5	1.91e-05 J	1.31e-05 J	1.72e-05 J	1.4e-05 J	1.33e-05 J	1.29e-05 J	1.12e-05 J
E1668A	N	PCB-48	70362-47-9	3.76e-05 J	2.84e-05 J	4.31e-05	3.07e-05 J	2.68e-05 J	2.41e-05 J	2.5e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000202	0.000143	0.000209	0.000153	0.000162	0.000146	0.000115
E1668A	N	PCB-50/53	PCB-50/53	6e-05	3.87e-05 J	6.14e-05	4.97e-05	4.08e-05	3.71e-05 J	3.73e-05 J
E1668A	N	PCB-52	35693-99-3	0.000337 J	0.000223 J	0.000325 J	0.00025 J	0.000239 J	0.000213 J	0.000189 J
E1668A	N	PCB-54	15968-05-5	5.29e-06 J	2.16e-06 U	2.11e-06 U	2.83e-06 U	2.44e-06 U	1.2e-06 U	1.74e-06 U

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	4.8e-06 J	3.21e-06 J	5.34e-06 J	1.67e-06 J	3.13e-06 J	2.57e-06 J	4.16e-06 U
E1668A	N	PCB-56	41464-43-1	9.36e-05 J	6.55e-05	0.000107	6.44e-05 J	7.4e-05 J	6.12e-05 J	4.49e-05 J
E1668A	N	PCB-57	70424-67-8	1.23e-06 J	6.9e-07 U	8.52e-07 U	9.11e-07 U	1.95e-06 J	1.78e-06 J	5.73e-07 U
E1668A	N	PCB-58	41464-49-7	1.07e-06 J	6.86e-07 U	8.48e-07 U	1.11e-06 J	1.49e-06 J	8.15e-07 J	8.88e-07 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	2.66e-05 J	1.74e-05 J	2.35e-05 J	2.1e-05 J	2.09e-05 J	1.79e-05 J	1.59e-05 J
E1668A	N	PCB-60	33025-41-1	2.86e-05 J	2.15e-05 J	3.46e-05 J	2.08e-05 J	2.37e-05 J	2.07e-05 J	1.52e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000313	0.000219	0.000345	0.000205	0.00025	0.000217	0.000154
E1668A	N	PCB-63	74472-34-7	8.6e-06 J	5.6e-06 J	6.97e-06 J	4.48e-06 J	8.28e-06 J	7.87e-06 J	4.3e-06 J
E1668A	N	PCB-64	52663-58-8	9.29e-05 J	6.92e-05 J	0.000104 J	6.51e-05	7.23e-05	6.39e-05 J	5.64e-05 J
E1668A	N	PCB-66	32598-10-0	0.000231 J	0.000152 J	0.000244 J	0.000146 J	0.000185 J	0.000153 J	0.000102 J
E1668A	N	PCB-67	73575-53-8	6.91e-06 J	5.52e-06 J	7.31e-06 J	3.59e-06 J	6.08e-06 J	4.73e-06 J	3.11e-06 J
E1668A	N	PCB-68	73575-52-7	3.01e-06 J	2.65e-06 U	3.18e-06 U	8.25e-07 U	3.09e-06 J	1.87e-06 J	1.44e-06 J
E1668A	N	PCB-72	41464-42-0	3.44e-06 J	2.28e-06 J	5.14e-06 J	2.63e-06 J	3.83e-06 J	3.35e-06 J	2.38e-06 J
E1668A	N	PCB-77	32598-13-3	2.66e-05 J	2.35e-05 J	2.73e-05 J	1.48e-05 J	1.97e-05 J	1.73e-05 J	8.85e-06 J
E1668A	N	PCB-78	70362-49-1	4.88e-07 U	7.13e-07 U	8.81e-07 U	9.41e-07 U	8.96e-07 U	4.7e-07 U	5.92e-07 U
E1668A	N	PCB-79	41464-48-6	3.19e-06 J	1.66e-06 J	3.38e-06 J	2.34e-06 J	3.44e-06 J	1.95e-06 J	1.73e-06 J
E1668A	N	PCB-80	33284-52-5	4.18e-07 U	6.11e-07 U	7.55e-07 U	8.06e-07 U	7.67e-07 U	4.02e-07 U	5.07e-07 U
E1668A	N	PCB-81	70362-50-4	6.5e-07 J	5.22e-07 J	9.31e-07 J	8.46e-07 U	1.37e-06 J	5.88e-07 J	7.69e-07 J
E1668A	N	PCB-82	52663-62-4	2.06e-05 J	1.76e-05 J	2.54e-05 J	1.4e-05 J	1.48e-05 J	1.2e-05 J	1.06e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000148	9.88e-05	0.000163	9.85e-05	0.000109	9.05e-05	6.5e-05
E1668A	N	PCB-84	52663-60-2	5.81e-05	3.89e-05 J	6.47e-05	4.57e-05	4.36e-05	3.48e-05 J	2.81e-05 J
E1668A	N	PCB-85/116/117	PCB-85/116/117	3.59e-05 J	2.2e-05 J	4.06e-05	2.45e-05 J	2.41e-05 J	2.11e-05 J	1.52e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000137	9.56e-05	0.000158	9.07e-05 J	9.55e-05	7.82e-05	6.42e-05
E1668A	N	PCB-88/91	PCB-88/91	4.69e-05	2.53e-05 J	4.48e-05	2.7e-05 J	3.06e-05 J	2.6e-05 J	1.83e-05 J
E1668A	N	PCB-89	73575-57-2	2.43e-06 J	1.38e-06 U	4.15e-06 J	1.58e-06 U	1.58e-06 U	8.82e-07 U	1.07e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000213	0.000146	0.000231	0.000145	0.000146	0.000128	9.47e-05
E1668A	N	PCB-92	52663-61-3	3.95e-05	2.03e-05 J	4.3e-05	2.77e-05 J	2.61e-05 J	2.5e-05 J	1.57e-05 J
E1668A	N	PCB-93/100	PCB-93/100	6.85e-06 J	2.2e-06 J	1.09e-05 J	4.66e-06 J	2.68e-06 J	2.78e-06 J	1.66e-06 J
E1668A	N	PCB-94	73575-55-0	1.95e-06 J	1.38e-06 U	1.75e-06 U	1.58e-06 U	1.58e-06 U	8.82e-07 U	1.07e-06 U
E1668A	N	PCB-95	38379-99-6	0.000183 J	0.000119	0.000179	0.000127	0.000126	0.000109 J	8.62e-05
E1668A	N	PCB-96	73575-54-9	4.13e-06 J	1.03e-06 U	3.22e-06 J	1.18e-06 U	1.18e-06 U	6.6e-07 U	8.01e-07 U
E1668A	N	PCB-98/102	PCB-98/102	1.25e-05 J	8.46e-06 J	1.46e-05 J	8.17e-06 J	7.23e-06 J	6.3e-06 J	5.22e-06 J
E1668A	N	PCB-103	60145-21-3	7.83e-06 J	3.4e-06 J	5.22e-06 J	3.33e-06 J	1.39e-06 U	2.07e-06 J	9.39e-07 U
E1668A	N	PCB-104	56558-16-8	5.79e-07 U	9.19e-07 U	1.16e-06 U	1.05e-06 U	1.05e-06 U	5.88e-07 U	7.13e-07 U
E1668A	N	PCB-105	32598-14-4	6.68e-05 J	4.21e-05	7.15e-05 J	4.11e-05	4.15e-05 J	3.72e-05 J	2.48e-05 J
E1668A	N	PCB-106	70424-69-0	3.92e-07 U	5.02e-07 U	7.54e-07 U	6.07e-07 U	6.15e-07 U	3.67e-07 U	4.69e-07 U
E1668A	N	PCB-107	70424-68-9	1.27e-05 J	7.95e-06 J	1.51e-05 J	7.59e-06 J	1.25e-05 J	9.11e-06 J	4.95e-06 J
E1668A	N	PCB-108/124	PCB-108/124	5.43e-06 J	3.83e-06 J	6.83e-06 J	2.96e-06 J	4.51e-06 J	2.86e-06 J	2.23e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.00024	0.000166	0.000265	0.000161	0.000176	0.000143	0.000102
E1668A	N	PCB-111	39635-32-0	5.44e-07 U	8.64e-07 U	1.09e-06 U	9.87e-07 U	9.9e-07 U	5.52e-07 U	6.7e-07 U
E1668A	N	PCB-112	74472-36-9	5.91e-07 U	9.38e-07 U	1.19e-06 U	1.07e-06 U	1.08e-06 U	6e-07 U	7.28e-07 U
E1668A	N	PCB-114	74472-37-0	2.58e-06 J	2.54e-06 J	3.83e-06 J	1.91e-06 J	5.78e-07 U	1.85e-06 J	1.6e-06 J
E1668A	N	PCB-118	31508-00-6	0.000169 J	0.000109 J	0.000207 J	0.000109 J	0.000133 J	1e-04 J	6.48e-05 J
E1668A	N	PCB-120	68194-12-7	5.6e-07 U	8.89e-07 U	1.13e-06 U	1.02e-06 U	1.02e-06 U	5.68e-07 U	6.9e-07 U
E1668A	N	PCB-121	56558-18-0	5.64e-07 U	8.96e-07 U	1.13e-06 U	1.02e-06 U	1.03e-06 U	5.73e-07 U	6.95e-07 U

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	1.99e-06 J	1.71e-06 J	3.81e-06 J	1.71e-06 J	6.7e-07 U	1.85e-06 J	5.11e-07 U
E1668A	N	PCB-123	65510-44-3	3.64e-06 J	1.86e-06 J	4.61e-06 J	1.84e-06 J	2.51e-06 J	1.99e-06 J	9.43e-07 J
E1668A	N	PCB-126	57465-28-8	5.33e-07 J	6.39e-07 J	1.2e-06 J	5.72e-07 U	4.74e-07 J	3.45e-07 U	5.43e-07 J
E1668A	N	PCB-127	39635-33-1	3.87e-07 U	4.96e-07 U	7.45e-07 U	6e-07 U	6.08e-07 U	3.63e-07 U	4.64e-07 U
E1668A	N	PCB-128/166	PCB-128/166	2.43e-05 J	1.39e-05 J	2.84e-05 J	1.29e-05 J	2.01e-05 J	1.44e-05 J	8.06e-06 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000175	0.000104	2e-04	0.000112	0.00013	9.58e-05	5.96e-05
E1668A	N	PCB-130	52663-66-8	1.03e-05 J	5.13e-06 J	1.02e-05 J	6.34e-06 J	6.77e-06 J	6.24e-06 J	2.86e-06 J
E1668A	N	PCB-131	61798-70-7	2.17e-06 J	1.1e-06 U	2.05e-06 J	1.37e-06 U	1.41e-06 U	8.09e-07 U	8.89e-07 U
E1668A	N	PCB-132	38380-05-1	5.17e-05 J	2.89e-05 J	5.49e-05	3.43e-05 J	3.77e-05 J	2.6e-05 J	1.96e-05 J
E1668A	N	PCB-133	35694-04-3	3.33e-06 J	1.01e-06 U	3.62e-06 J	1.25e-06 U	2.69e-06 J	1.66e-06 J	1.28e-06 J
E1668A	N	PCB-134/143	PCB-134/143	8.23e-06 J	6.03e-06 J	8.9e-06 J	3.25e-06 J	4.88e-06 J	4.62e-06 J	2.61e-06 J
E1668A	N	PCB-135/151	PCB-135/151	5.68e-05 J	4.05e-05	7.47e-05	3.64e-05 J	4.48e-05	3.31e-05 J	2.42e-05 J
E1668A	N	PCB-136	38411-22-2	2.82e-05 J	1.28e-05 J	2.2e-05 J	1.36e-05 J	1.84e-05 J	1.08e-05 J	9.04e-06 J
E1668A	N	PCB-137	35694-06-5	4.87e-06 J	3.07e-06 J	7.65e-06 J	3.32e-06 J	3.7e-06 J	2.14e-06 J	1.93e-06 J
E1668A	N	PCB-139/140	PCB-139/140	2.83e-06 J	1.72e-06 J	3.31e-06 J	1.62e-06 J	1.18e-06 U	1.44e-06 J	7.45e-07 U
E1668A	N	PCB-141	52712-04-6	2.67e-05 J	1.3e-05 J	2.85e-05 J	1.66e-05 J	1.97e-05 J	1.17e-05 J	8.49e-06 J
E1668A	N	PCB-142	41411-61-4	7.76e-07 U	1.06e-06 U	1.38e-06 U	1.31e-06 U	1.36e-06 U	7.78e-07 U	8.55e-07 U
E1668A	N	PCB-144	68194-14-9	5.92e-06 J	1.6e-06 U	6.96e-06 J	3.62e-06 J	3.79e-06 J	2.63e-06 J	1.23e-06 U
E1668A	N	PCB-145	74472-40-5	7.16e-07 U	1.21e-06 U	1.17e-06 U	1.26e-06 U	1.42e-06 U	7.57e-07 U	9.31e-07 U
E1668A	N	PCB-146	51908-16-8	2.79e-05 J	1.2e-05 J	3.05e-05 J	1.97e-05 J	2.14e-05 J	1.65e-05 J	9.7e-06 J
E1668A	N	PCB-147/149	PCB-147/149	0.000148	8.51e-05	0.000163	9.38e-05	0.000102	7.5e-05	5.88e-05
E1668A	N	PCB-148	74472-41-6	1e-06 U	1.7e-06 U	1.63e-06 U	1.76e-06 U	1.99e-06 U	1.06e-06 U	1.3e-06 U
E1668A	N	PCB-150	68194-08-1	6.97e-07 U	1.18e-06 U	1.14e-06 U	1.23e-06 U	1.39e-06 U	7.38e-07 U	9.07e-07 U
E1668A	N	PCB-152	68194-09-2	7.11e-07 U	1.21e-06 U	1.16e-06 U	1.25e-06 U	1.41e-06 U	7.52e-07 U	9.25e-07 U
E1668A	N	PCB-153/168	PCB-153/168	0.000152	9.16e-05	0.000177	9.63e-05	0.000115	8.64e-05	5.75e-05
E1668A	N	PCB-154	60145-22-4	5.54e-06 J	2.89e-06 J	5.5e-06 J	2.17e-06 J	2.99e-06 J	2.63e-06 J	1.4e-06 J
E1668A	N	PCB-155	33979-03-2	6.78e-07 U	1.15e-06 U	1.11e-06 U	1.2e-06 U	1.35e-06 U	7.17e-07 U	8.82e-07 U
E1668A	N	PCB-156/157	PCB-156/157	1.69e-05 J	1.09e-05 J	1.99e-05 J	9.39e-06 J	1.22e-05 J	9.58e-06 J	5.62e-06 J
E1668A	N	PCB-158	74472-42-7	1.42e-05 J	8.44e-06 J	1.61e-05 J	7.96e-06 J	1.11e-05 J	7.91e-06 J	5.33e-06 J
E1668A	N	PCB-159	39635-35-3	5.17e-07 U	7.05e-07 U	9.18e-07 U	8.74e-07 U	9.05e-07 U	5.18e-07 U	5.69e-07 U
E1668A	N	PCB-161	74472-43-8	5.14e-07 U	7.02e-07 U	9.14e-07 U	8.69e-07 U	9e-07 U	5.15e-07 U	5.66e-07 U
E1668A	N	PCB-162	39635-34-2	7.42e-07 J	6.96e-07 U	9.07e-07 U	8.63e-07 U	8.94e-07 U	5.11e-07 U	5.62e-07 U
E1668A	N	PCB-164	74472-45-0	1.03e-05 J	6.57e-06 J	1.31e-05 J	7.26e-06 J	6.29e-06 J	4.81e-06 J	3.56e-06 J
E1668A	N	PCB-165	74472-46-1	5.65e-07 U	7.71e-07 U	1e-06 U	9.56e-07 U	9.9e-07 U	5.66e-07 U	6.22e-07 U
E1668A	N	PCB-167	52663-72-6	5.67e-06 J	3.01e-06 J	5.37e-06 J	2.77e-06 J	4.54e-06 J	2.63e-06 J	2.26e-06 J
E1668A	N	PCB-169	32774-16-6	3.86e-07 U	4.37e-07 U	7e-07 U	6.09e-07 U	6.42e-07 U	3.39e-07 U	3.63e-07 U
E1668A	N	PCB-170	35065-30-6	3.77e-05 J	2.1e-05 J	4.36e-05	2.08e-05 J	2.63e-05 J	1.94e-05 J	1.32e-05 J
E1668A	N	PCB-171/173	PCB-171/173	1.14e-05 J	9.01e-06 J	1.36e-05 J	5.56e-06 J	9.53e-06 J	5.78e-06 J	5.06e-06 J
E1668A	N	PCB-172	52663-74-8	5.76e-06 J	3.08e-06 J	6.54e-06 J	3.22e-06 J	3.25e-06 J	2.63e-06 J	1.96e-06 J
E1668A	N	PCB-174	38411-25-5	3.61e-05 J	1.88e-05 J	4.14e-05	2.46e-05 J	2.56e-05 J	1.82e-05 J	1.29e-05 J
E1668A	N	PCB-175	40186-70-7	1.5e-06 J	8.22e-07 U	1.3e-06 J	9.84e-07 U	1.12e-06 U	6.43e-07 U	7.09e-07 U
E1668A	N	PCB-176	52663-65-7	5.03e-06 J	4.09e-06 J	6.07e-06 J	2.42e-06 J	4.01e-06 J	2.34e-06 J	5.4e-07 U
E1668A	N	PCB-177	52663-70-4	2.76e-05 J	1.4e-05 J	3.18e-05 J	1.86e-05 J	1.93e-05 J	1.46e-05 J	8.58e-06 J
E1668A	N	PCB-178	52663-67-9	9.11e-06 J	7.49e-06 J	1.17e-05 J	5.72e-06 J	7.66e-06 J	5.29e-06 J	3.82e-06 J
E1668A	N	PCB-179	52663-64-6	2.34e-05 J	1.32e-05 J	2.28e-05 J	1.48e-05 J	1.97e-05 J	1.23e-05 J	8.75e-06 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS	N07-CE04-TNBS
				3	3.05	2.97	3	3.03	3.12	3.05
				NB	NB	NB	NB	NB	NB	NB
				N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS	N07-CE04-TNBS-AS
				12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	9.3e-05	5.63e-05	0.000115	5.72e-05	7.06e-05	4.54e-05	3.44e-05 J
E1668A	N	PCB-181	74472-47-2	5.56e-07 U	8.22e-07 U	9.42e-07 U	9.84e-07 U	1.11e-06 U	6.43e-07 U	7.09e-07 U
E1668A	N	PCB-182	60145-23-5	5.41e-07 U	7.98e-07 U	9.15e-07 U	9.56e-07 U	1.08e-06 U	6.25e-07 U	6.89e-07 U
E1668A	N	PCB-183/185	PCB-183/185	3.1e-05 J	1.45e-05 J	2.96e-05 J	1.51e-05 J	1.73e-05 J	1.62e-05 J	1.24e-05 J
E1668A	N	PCB-184	74472-48-3	4.59e-07 U	6.78e-07 U	7.77e-07 U	8.12e-07 U	9.2e-07 U	5.31e-07 U	5.85e-07 U
E1668A	N	PCB-186	74472-49-4	4.46e-07 U	6.58e-07 U	7.55e-07 U	7.88e-07 U	8.93e-07 U	5.15e-07 U	5.68e-07 U
E1668A	N	PCB-187	52663-68-0	6.45e-05 J	3.98e-05	7.22e-05	4.2e-05	5.38e-05	3.5e-05 J	2.39e-05 J
E1668A	N	PCB-188	74487-85-7	4.1e-07 U	6.16e-07 U	6.92e-07 U	7.09e-07 U	8.35e-07 U	4.71e-07 U	5.07e-07 U
E1668A	N	PCB-189	39635-31-9	1.29e-06 J	9.78e-07 J	4.43e-07 U	4.76e-07 U	4.47e-07 U	3.06e-07 U	3.69e-07 U
E1668A	N	PCB-190	41411-64-7	7.69e-06 J	2.93e-06 J	6.4e-06 J	3.33e-06 J	6.3e-06 J	4.06e-06 J	3.02e-06 J
E1668A	N	PCB-191	74472-50-7	1.29e-06 J	6.26e-07 U	1.27e-06 J	7.49e-07 U	8.49e-07 U	4.9e-07 U	5.4e-07 U
E1668A	N	PCB-192	74472-51-8	4.73e-07 U	6.99e-07 U	8.01e-07 U	8.37e-07 U	9.48e-07 U	5.47e-07 U	6.03e-07 U
E1668A	N	PCB-194	35694-08-7	2.06e-05 J	1e-05 J	2.65e-05 J	1.17e-05 J	1.73e-05 J	1.15e-05 J	6.41e-06 J
E1668A	N	PCB-195	52663-78-2	5.34e-06 J	3.35e-06 J	7.52e-06 J	3.81e-06 J	5.17e-06 J	3.16e-06 J	1.73e-06 J
E1668A	N	PCB-196	42740-50-1	9.56e-06 J	5.75e-06 J	1.52e-05 J	5.41e-06 J	9.29e-06 J	4.94e-06 J	4.05e-06 J
E1668A	N	PCB-197	33091-17-7	4.12e-07 U	6.51e-07 U	7.4e-07 U	9.86e-07 U	1.13e-06 U	5.66e-07 U	5.96e-07 U
E1668A	N	PCB-198/199	PCB-198/199	3.58e-05 J	2.32e-05 J	4.72e-05	1.96e-05 J	3.1e-05 J	2.08e-05 J	1.04e-05 J
E1668A	N	PCB-200	52663-73-7	2.02e-06 J	6.4e-07 U	2.45e-06 J	9.68e-07 U	1.11e-06 U	5.56e-07 U	5.85e-07 U
E1668A	N	PCB-201	40186-71-8	3.39e-06 J	1.56e-06 J	3.83e-06 J	9.34e-07 U	3.27e-06 J	1.91e-06 J	5.65e-07 U
E1668A	N	PCB-202	2136-99-4	1.1e-05 J	6.38e-06 J	1.43e-05 J	4.78e-06 J	9.62e-06 J	7.44e-06 J	4.32e-06 J
E1668A	N	PCB-203	52663-76-0	2.08e-05 J	1.24e-05 J	2.65e-05 J	1.14e-05 J	1.76e-05 J	1.26e-05 J	6.53e-06 J
E1668A	N	PCB-204	74472-52-9	4.28e-07 U	6.77e-07 U	7.69e-07 U	1.02e-06 U	1.18e-06 U	5.88e-07 U	6.2e-07 U
E1668A	N	PCB-205	74472-53-0	1.37e-06 J	9.12e-07 J	8.34e-07 J	6.47e-07 U	6.23e-07 U	3.02e-07 U	3.27e-07 U
E1668A	N	PCB-206	40186-72-9	2.43e-05 J	2.31e-05 J	3.23e-05 J	1.74e-05 J	3.15e-05 J	1.83e-05 J	1.17e-05 J
E1668A	N	PCB-207	52663-79-3	2.75e-06 J	3.11e-06 J	1.06e-06 U	1.51e-06 U	2.98e-06 J	1.94e-06 J	1.85e-06 J
E1668A	N	PCB-208	52663-77-1	9.99e-06 J	6.68e-06 J	1.44e-05 J	6.55e-06 J	1.13e-05 J	8.52e-06 J	4.75e-06 J
E1668A	N	PCB-209	2051-24-3	3.59e-05 J	1.57e-05 J	5.3e-05 J	1.26e-05 J	2.8e-05 J	2.07e-05 J	9.99e-06 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00637 J	0.00456 J	0.0071 J	0.00445 J	0.00548 J	0.00468 J	0.00337 J
E1668A	N	Total PCB (a)	PCB-Total	0.00666 J	0.00476 J	0.00745 J	0.00464 J	0.0057 J	0.00485 J	0.00348 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	6.53e-08J	7.24e-08J	1.34e-07J	5.9e-08J	5.65e-08J	3.82e-08J	5.89e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.23e-05 J	1.3e-05 J	1.12e-05 U	2.41e-05 J	1.86e-05 J	1.92e-05 J	1.59e-05 J
E1668A	N	PCB-2	2051-61-8	3.37e-06 U	2.39e-06 U	5.64e-06 U	4.99e-06 U	4.56e-06 U	4.23e-06 U	4.49e-06 U
E1668A	N	PCB-3	2051-62-9	3.43e-06 U	4.51e-06 U	7.13e-06 U	7.25e-06 U	6.89e-06 U	7.51e-06 U	6.18e-06 U
E1668A	N	PCB-4	13029-08-8	0.000129 J	9.92e-05 J	9.69e-05 J	0.000134 J	0.000142 J	0.000134 J	0.000117 J
E1668A	N	PCB-5	16605-91-7	5.74e-07 U	1.51e-06 U	1.59e-06 U	1.56e-06 U	2.7e-06 U	1.51e-06 U	9.33e-07 U
E1668A	N	PCB-6	25569-80-6	1.67e-05 J	1.5e-05 U	1.24e-05 U	2.19e-05 J	2.43e-05 J	2.02e-05 J	1.42e-05 U
E1668A	N	PCB-7	33284-50-3	3.75e-06 U	2.04e-06 U	3.63e-06 U	4.14e-06 U	3.84e-06 U	3.71e-06 U	2.33e-06 U
E1668A	N	PCB-8	34883-43-7	5.97e-05 J	4.05e-05 J	3.33e-05 U	7.47e-05 J	7.23e-05 J	6.83e-05 J	4.53e-05 J
E1668A	N	PCB-9	34883-39-1	4.1e-06 U	3.62e-06 U	2.86e-06 U	4.2e-06 U	4.35e-06 U	3.01e-06 U	3.4e-06 U
E1668A	N	PCB-10	33146-45-1	1.57e-05 J	2.15e-05 J	1.65e-05 J	2.21e-05 J	2.07e-05 J	2.5e-05 J	2.31e-05 J
E1668A	N	PCB-11	2050-67-1	5.59e-05 U	3.62e-05 U	3.15e-05 U	6.03e-05 U	6.97e-05 U	5.6e-05 U	5.37e-05 U
E1668A	N	PCB-12/13	PCB-12/13	1.87e-05 U	1.64e-05 U	1.47e-05 U	2.63e-05 J	2.3e-05 J	2.29e-05 J	1.56e-05 U
E1668A	N	PCB-14	34883-41-5	7.44e-07 U	1.85e-06 U	4.72e-07 U	6.7e-07 U	1.15e-06 U	1.06e-06 U	6.15e-07 U
E1668A	N	PCB-15	2050-68-2	9.6e-05 J	8.64e-05 J	6.18e-05 J	0.00014 J	0.000123 J	0.00012 J	8.4e-05 J
E1668A	N	PCB-16	38444-78-9	8.82e-05 J	5.41e-05	5.35e-05 J	7.7e-05 J	9.37e-05	7.09e-05	5.57e-05 J
E1668A	N	PCB-17	37680-66-3	0.000143	8.85e-05	8.17e-05 J	0.000142 J	0.000149 J	0.00012 J	9.53e-05 J
E1668A	N	PCB-18/30	PCB-18/30	0.000264	0.000171	0.000159	0.000246	0.000282	0.000195	0.000174
E1668A	N	PCB-19	38444-73-4	5.85e-05	4.96e-05	4.33e-05	5.79e-05	5.7e-05	5.01e-05	4.66e-05
E1668A	N	PCB-20/28	PCB-20/28	0.00038	0.000315	0.000214	0.000418	0.000443	0.000332	0.000244
E1668A	N	PCB-21/33	PCB-21/33	6.29e-05	4.11e-05	2.88e-05 J	5.9e-05	7.44e-05	5.15e-05	3.44e-05 J
E1668A	N	PCB-22	38444-85-8	6.91e-05 J	4.77e-05 J	4.11e-05 J	7.36e-05 J	8.65e-05 J	6.22e-05 J	4.92e-05 J
E1668A	N	PCB-23	55720-44-0	3.71e-07 U	4.61e-07 U	4.13e-07 U	3.6e-07 U	4.64e-07 U	4.89e-07 U	3.28e-07 U
E1668A	N	PCB-24	55702-45-9	5.01e-06 J	2.25e-06 J	2.15e-06 J	2.96e-06 J	4.03e-06 J	3.25e-06 J	3.02e-06 J
E1668A	N	PCB-25	55712-37-3	4.78e-05 J	3.9e-05	2.47e-05 J	4.78e-05 J	5.44e-05	3.92e-05 J	2.82e-05 J
E1668A	N	PCB-26/29	PCB-26/29	6.64e-05	5.14e-05	4.28e-05	7.67e-05	8.25e-05	6.44e-05	4.86e-05
E1668A	N	PCB-27	38444-76-7	4.16e-05	3.49e-05 J	2.65e-05 J	4.36e-05	3.72e-05 J	3.15e-05 J	2.98e-05 J
E1668A	N	PCB-31	16606-02-3	0.000263 J	0.000189 J	0.000162 J	0.000295 J	0.000323 J	0.000236 J	0.000185 J
E1668A	N	PCB-32	38444-77-8	0.000129	8.67e-05	7.26e-05 J	0.000125 J	0.000133 J	0.000101 J	8.15e-05 J
E1668A	N	PCB-34	37680-68-5	2.29e-06 J	1.55e-06 J	1.63e-06 J	2.26e-06 J	1.92e-06 J	4.82e-07 U	1.16e-06 J
E1668A	N	PCB-35	37680-69-6	6.31e-06 J	5.15e-06 J	4.2e-06 U	8.52e-06 J	7.46e-06 J	5.03e-06 J	4.77e-06 U
E1668A	N	PCB-36	38444-87-0	3.63e-07 U	6.91e-07 J	7.23e-07 J	7.89e-07 J	8.41e-07 J	1.39e-06 J	8.41e-07 J
E1668A	N	PCB-37	38444-90-5	7.21e-05 J	6.66e-05 J	4.72e-05 J	0.000102 J	9.61e-05 J	8.46e-05 J	5.74e-05 J
E1668A	N	PCB-38	53555-66-1	7.74e-07 J	4.75e-07 U	4.26e-07 U	7.56e-07 J	4.79e-07 U	5.05e-07 U	4.68e-07 J
E1668A	N	PCB-39	38444-88-1	3.24e-06 J	2.14e-06 J	1.41e-06 J	2.98e-06 J	3.07e-06 J	2.03e-06 J	1.7e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000209	0.000166	9.22e-05	0.000201	0.000217	0.000158	0.000116
E1668A	N	PCB-42	36559-22-5	9.85e-05	8.15e-05	4.35e-05	9.91e-05	0.000112 J	7.69e-05 J	5.51e-05
E1668A	N	PCB-43/73	PCB-43/73	1.28e-05 J	7.63e-06 J	7.17e-06 J	1.27e-05 J	1.08e-05 J	1.16e-05 J	6.27e-06 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000427	0.00032	0.00018	0.000383	0.000456	0.000305	0.000216
E1668A	N	PCB-45/51	PCB-45/51	0.000143	9.92e-05	4.97e-05	8.73e-05	0.000129	7.6e-05	5.13e-05
E1668A	N	PCB-46	41464-47-5	2.88e-05 J	2.27e-05 J	1.43e-05 J	2.32e-05 J	2.97e-05 J	1.54e-05 J	1.2e-05 J
E1668A	N	PCB-48	70362-47-9	5.54e-05	4.11e-05	2.75e-05 J	5.32e-05	5.83e-05	4.48e-05	3.07e-05 J
E1668A	N	PCB-49/69	PCB-49/69	0.000278	0.000205	0.000127	0.000259	0.000291	0.00021	0.000147
E1668A	N	PCB-50/53	PCB-50/53	9.67e-05	7.02e-05	3.79e-05 J	6.64e-05	9.02e-05	5.58e-05	4.24e-05
E1668A	N	PCB-52	35693-99-3	0.000438 J	0.000346 J	0.000209 J	0.000413 J	0.000458 J	0.000332 J	0.000232 J
E1668A	N	PCB-54	15968-05-5	1.13e-05 J	9.55e-06 J	3.19e-06 J	1.91e-06 U	1.15e-05 J	2.73e-06 U	3.65e-06 J

				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	8.23e-06 J	5.71e-06 J	3.41e-06 J	7.03e-06 J	4.99e-06 J	2.18e-06 J	3.34e-06 J
E1668A	N	PCB-56	41464-43-1	0.000118 J	9.21e-05 J	5.13e-05	0.000139	0.000158 J	0.000112 J	7.19e-05
E1668A	N	PCB-57	70424-67-8	1.14e-06 J	8.49e-07 U	1.47e-06 J	2.44e-06 J	2.53e-06 J	1.5e-06 J	5.73e-07 U
E1668A	N	PCB-58	41464-49-7	1.51e-06 J	2.07e-06 J	1.16e-06 J	9.01e-07 J	3.5e-06 J	5.98e-07 J	6.78e-07 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	3.5e-05 J	3.02e-05 J	1.59e-05 J	3.42e-05 J	3.85e-05 J	2.59e-05 J	1.94e-05 J
E1668A	N	PCB-60	33025-41-1	3.75e-05 J	2.77e-05 J	1.69e-05 J	4.57e-05	4.66e-05	3.43e-05 J	2.18e-05 J
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000422	0.000282	0.000177	0.00046	0.000498	0.000352	0.000232
E1668A	N	PCB-63	74472-34-7	9.75e-06 J	6.05e-06 J	5.25e-06 J	1.12e-05 J	1.16e-05 J	8.3e-06 J	5.21e-06 J
E1668A	N	PCB-64	52663-58-8	0.000132 J	8.53e-05	6.07e-05 J	0.000129 J	0.00015 J	0.00011 J	7.26e-05 J
E1668A	N	PCB-66	32598-10-0	0.000287 J	0.000231 J	0.000116 J	0.000314 J	0.000322 J	0.000245 J	0.000151 J
E1668A	N	PCB-67	73575-53-8	8.29e-06 J	6.46e-06 J	3.9e-06 J	9.82e-06 J	1.03e-05 J	7.52e-06 J	4.81e-06 J
E1668A	N	PCB-68	73575-52-7	3.06e-06 J	2.58e-06 J	1.95e-06 U	3.85e-06 U	4.02e-06 J	3.16e-06 J	2.92e-06 U
E1668A	N	PCB-72	41464-42-0	4.65e-06 J	3.68e-06 J	5.71e-07 U	5.76e-06 J	4.88e-06 J	4.24e-06 J	3.05e-06 J
E1668A	N	PCB-77	32598-13-3	2.94e-05 J	2.35e-05 J	1.17e-05 J	3.91e-05 J	3.36e-05 J	2.34e-05 J	1.55e-05 J
E1668A	N	PCB-78	70362-49-1	6.64e-07 U	8.78e-07 U	6.07e-07 U	6.02e-07 U	8.64e-07 U	9.27e-07 U	5.92e-07 U
E1668A	N	PCB-79	41464-48-6	3.91e-06 J	3.48e-06 J	1.2e-06 J	4.24e-06 J	3.82e-06 J	2.45e-06 J	1.69e-06 J
E1668A	N	PCB-80	33284-52-5	5.69e-07 U	7.52e-07 U	5.2e-07 U	5.15e-07 U	7.41e-07 U	7.94e-07 U	5.08e-07 U
E1668A	N	PCB-81	70362-50-4	5.98e-07 U	8.08e-07 U	5.57e-07 U	8.27e-07 J	7.77e-07 U	8.46e-07 U	3.66e-07 J
E1668A	N	PCB-82	52663-62-4	3.32e-05 J	2.57e-05 J	1.27e-05 J	4.35e-05	3.71e-05 J	2.84e-05 J	1.66e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000178	0.000151	7.61e-05	0.00023	0.00022	0.000158	1e-04
E1668A	N	PCB-84	52663-60-2	7.47e-05	6.53e-05	3.43e-05 J	9.05e-05	8.94e-05	6.34e-05	4.59e-05
E1668A	N	PCB-85/116/117	PCB-85/116/117	3.58e-05 J	3.53e-05 J	1.91e-05 J	6.03e-05	5.7e-05	4.25e-05	2.29e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000178	0.000147	7.83e-05	0.00022	0.000196 J	0.000154	9.11e-05
E1668A	N	PCB-88/91	PCB-88/91	5.16e-05	4.38e-05	2.19e-05 J	6.27e-05	6.18e-05	4.15e-05 J	2.85e-05 J
E1668A	N	PCB-89	73575-57-2	4.08e-06 J	1.67e-06 U	1.01e-06 U	4.42e-06 J	1.74e-06 U	1.79e-06 U	1.22e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000268	0.000218	0.000105	0.000341	0.00032	0.000234	0.00015
E1668A	N	PCB-92	52663-61-3	4.4e-05	3.95e-05	1.68e-05 J	5.02e-05 J	4.59e-05 J	3.4e-05 J	2.62e-05 J
E1668A	N	PCB-93/100	PCB-93/100	9.54e-06 J	9.92e-06 J	4.68e-06 J	8.64e-06 J	1.48e-05 J	8.59e-06 J	1.77e-06 J
E1668A	N	PCB-94	73575-55-0	1.23e-06 U	2.65e-06 J	1e-06 U	4.89e-06 J	5.93e-06 J	1.79e-06 U	1.22e-06 U
E1668A	N	PCB-95	38379-99-6	0.00022	0.00019	1e-04	0.00029	0.000254	0.00019	0.000128
E1668A	N	PCB-96	73575-54-9	4.13e-06 J	1.25e-06 U	1.81e-06 J	3.94e-06 J	5.07e-06 J	2.3e-06 J	1.91e-06 J
E1668A	N	PCB-98/102	PCB-98/102	2.06e-05 J	1.56e-05 J	6.74e-06 J	1.96e-05 J	2.16e-05 J	1.26e-05 J	9.39e-06 J
E1668A	N	PCB-103	60145-21-3	8.38e-06 J	5.94e-06 J	2.47e-06 J	6.47e-06 J	8.77e-06 J	4.5e-06 J	3.03e-06 J
E1668A	N	PCB-104	56558-16-8	8.21e-07 U	1.11e-06 U	6.7e-07 U	9.3e-07 U	1.16e-06 U	1.2e-06 U	8.12e-07 U
E1668A	N	PCB-105	32598-14-4	8.42e-05 J	7.49e-05	2.86e-05 J	9.83e-05	9.54e-05	7.35e-05	4.32e-05
E1668A	N	PCB-106	70424-69-0	5.41e-07 U	6.52e-07 U	4.72e-07 U	4.87e-07 U	6.12e-07 U	6.85e-07 U	4.19e-07 U
E1668A	N	PCB-107	70424-68-9	1.45e-05 J	1.34e-05 J	7.42e-06 J	1.84e-05 J	2.16e-05 J	1.45e-05 J	9.53e-06 J
E1668A	N	PCB-108/124	PCB-108/124	6.63e-06 J	6.53e-06 J	3.61e-06 J	8.67e-06 J	7.76e-06 J	5.38e-06 J	3.7e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000292	0.000248	0.000118	0.000386	0.000347	0.000278	0.000172
E1668A	N	PCB-111	39635-32-0	7.71e-07 U	1.05e-06 U	6.29e-07 U	8.74e-07 U	1.09e-06 U	1.12e-06 U	7.64e-07 U
E1668A	N	PCB-112	74472-36-9	8.38e-07 U	1.14e-06 U	6.84e-07 U	9.49e-07 U	1.19e-06 U	1.22e-06 U	8.29e-07 U
E1668A	N	PCB-114	74472-37-0	5.11e-06 J	4.49e-06 J	1.79e-06 J	5.58e-06 J	3.92e-06 J	3.76e-06 J	1.35e-06 J
E1668A	N	PCB-118	31508-00-6	2e-04 J	0.00018 J	8.55e-05 J	0.000253 J	0.000251 J	0.000191 J	0.000109 J
E1668A	N	PCB-120	68194-12-7	7.93e-07 U	1.08e-06 U	6.48e-07 U	8.99e-07 U	1.12e-06 U	1.16e-06 U	7.86e-07 U
E1668A	N	PCB-121	56558-18-0	8e-07 U	1.09e-06 U	6.53e-07 U	9.06e-07 U	1.13e-06 U	1.17e-06 U	7.92e-07 U

				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	3.48e-06 J	2.43e-06 J	1.25e-06 J	3.43e-06 J	4.63e-06 J	3.24e-06 J	1.75e-06 J
E1668A	N	PCB-123	65510-44-3	4.38e-06 J	3.04e-06 J	1.5e-06 J	5.29e-06 J	5.08e-06 J	2.78e-06 J	1.59e-06 J
E1668A	N	PCB-126	57465-28-8	9e-07 J	5.97e-07 U	4.08e-07 U	1.19e-06 J	4.8e-07 U	7.31e-07 U	6.51e-07 J
E1668A	N	PCB-127	39635-33-1	5.34e-07 U	6.44e-07 U	4.67e-07 U	4.81e-07 U	6.05e-07 U	6.77e-07 U	4.14e-07 U
E1668A	N	PCB-128/166	PCB-128/166	2.88e-05 J	2.14e-05 J	1.1e-05 J	3.75e-05 J	3.56e-05 J	2.75e-05 J	1.62e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000206	0.00017	7.93e-05	0.000258	0.000234	0.000207	0.000111
E1668A	N	PCB-130	52663-66-8	9.54e-06 J	9.4e-06 J	5.1e-06 J	1.35e-05 J	1.37e-05 J	1e-05 J	6.35e-06 J
E1668A	N	PCB-131	61798-70-7	2.75e-06 J	1.42e-06 U	8.69e-07 U	2.93e-06 J	1.35e-06 U	2.57e-06 J	9.51e-07 U
E1668A	N	PCB-132	38380-05-1	5.86e-05	4.97e-05	2.1e-05 J	7.62e-05	7.34e-05	5.97e-05	3.31e-05 J
E1668A	N	PCB-133	35694-04-3	3.13e-06 J	3.55e-06 J	1.14e-06 J	5.02e-06 J	3.33e-06 J	3.28e-06 J	1.74e-06 J
E1668A	N	PCB-134/143	PCB-134/143	9.4e-06 J	9.73e-06 J	3.38e-06 J	1.14e-05 J	1.16e-05 J	9.54e-06 J	5.74e-06 J
E1668A	N	PCB-135/151	PCB-135/151	7.56e-05	6.96e-05	2.71e-05 J	0.000114	9.44e-05	6.54e-05	3.34e-05 J
E1668A	N	PCB-136	38411-22-2	2.66e-05 J	2.58e-05 J	1.02e-05 J	4.36e-05	3.7e-05 J	1.92e-05 J	1.48e-05 J
E1668A	N	PCB-137	35694-06-5	5.49e-06 J	5.25e-06 J	1.9e-06 J	7.74e-06 J	8.34e-06 J	6.6e-06 J	4.13e-06 J
E1668A	N	PCB-139/140	PCB-139/140	3.42e-06 J	2.27e-06 J	1.55e-06 J	4e-06 J	4.84e-06 J	3.19e-06 J	7.97e-07 U
E1668A	N	PCB-141	52712-04-6	3.24e-05 J	2.72e-05 J	1.27e-05 J	4.31e-05	4.09e-05	3.28e-05 J	1.61e-05 J
E1668A	N	PCB-142	41411-61-4	8.67e-07 U	1.36e-06 U	8.35e-07 U	1.01e-06 U	1.3e-06 U	1.46e-06 U	9.15e-07 U
E1668A	N	PCB-144	68194-14-9	7.15e-06 J	7.93e-06 J	2.97e-06 J	1.25e-05 J	8.9e-06 J	7.18e-06 J	3.69e-06 J
E1668A	N	PCB-145	74472-40-5	9.5e-07 U	1.6e-06 U	6.09e-07 U	1.16e-06 U	1.43e-06 U	1.61e-06 U	9.9e-07 U
E1668A	N	PCB-146	51908-16-8	3.08e-05 J	2.83e-05 J	1.3e-05 J	3.76e-05 J	3.84e-05 J	3.06e-05 J	1.57e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.00017	0.000142	6.96e-05	0.000218	0.000206	0.000157	8.67e-05
E1668A	N	PCB-148	74472-41-6	1.33e-06 U	2.24e-06 U	8.51e-07 U	1.62e-06 U	2e-06 U	2.25e-06 U	1.38e-06 U
E1668A	N	PCB-150	68194-08-1	9.26e-07 U	1.56e-06 U	5.93e-07 U	1.13e-06 U	1.39e-06 U	1.57e-06 U	9.65e-07 U
E1668A	N	PCB-152	68194-09-2	9.45e-07 U	1.59e-06 U	6.05e-07 U	1.15e-06 U	1.42e-06 U	1.6e-06 U	9.84e-07 U
E1668A	N	PCB-153/168	PCB-153/168	0.000175	0.000161	6.98e-05	0.000237	0.000225	0.000178	9.28e-05
E1668A	N	PCB-154	60145-22-4	4.71e-06 J	3.44e-06 J	2.04e-06 J	8.41e-06 J	1.11e-05 J	5.85e-06 J	2.8e-06 J
E1668A	N	PCB-155	33979-03-2	9.01e-07 U	1.52e-06 U	5.77e-07 U	1.1e-06 U	1.36e-06 U	1.52e-06 U	9.38e-07 U
E1668A	N	PCB-156/157	PCB-156/157	2.17e-05 J	2e-05 J	6.96e-06 J	2.51e-05 J	2.52e-05 J	1.91e-05 J	1.08e-05 J
E1668A	N	PCB-158	74472-42-7	1.8e-05 J	1.54e-05 J	6.63e-06 J	2.45e-05 J	2.21e-05 J	1.76e-05 J	8.39e-06 J
E1668A	N	PCB-159	39635-35-3	2.11e-06 J	9.05e-07 U	5.56e-07 U	2.92e-06 J	8.62e-07 U	1.62e-06 J	1.01e-06 J
E1668A	N	PCB-161	74472-43-8	5.74e-07 U	9.01e-07 U	5.53e-07 U	6.68e-07 U	8.57e-07 U	9.68e-07 U	6.06e-07 U
E1668A	N	PCB-162	39635-34-2	9.85e-07 J	8.94e-07 U	5.49e-07 U	6.63e-07 U	8.51e-07 U	9.61e-07 U	6.01e-07 U
E1668A	N	PCB-164	74472-45-0	1.37e-05 J	9.53e-06 J	5.04e-06 J	1.58e-05 J	1.57e-05 J	1.23e-05 J	5.97e-06 J
E1668A	N	PCB-165	74472-46-1	6.31e-07 U	9.9e-07 U	6.08e-07 U	7.34e-07 U	9.43e-07 U	1.06e-06 U	6.66e-07 U
E1668A	N	PCB-167	52663-72-6	7.6e-06 J	6.93e-06 J	1.94e-06 J	1.02e-05 J	8.12e-06 J	7.19e-06 J	3.41e-06 J
E1668A	N	PCB-169	32774-16-6	3.47e-07 J	5.85e-07 U	4.11e-07 U	4.1e-07 U	6.77e-07 U	8.25e-07 U	4.77e-07 U
E1668A	N	PCB-170	35065-30-6	5.42e-05	4.5e-05	1.17e-05 J	6.94e-05	5.74e-05	4.82e-05	2.17e-05 J
E1668A	N	PCB-171/173	PCB-171/173	1.79e-05 J	1.05e-05 J	4.6e-06 J	2.26e-05 J	1.75e-05 J	1.47e-05 J	6.13e-06 J
E1668A	N	PCB-172	52663-74-8	9.99e-06 J	5.54e-06 J	2.56e-06 J	1.03e-05 J	9.48e-06 J	6.72e-06 J	3.78e-06 J
E1668A	N	PCB-174	38411-25-5	6e-05	4.45e-05	1.47e-05 J	7.28e-05	6.19e-05	4.14e-05 J	2.23e-05 J
E1668A	N	PCB-175	40186-70-7	3.14e-06 J	1.43e-06 U	5.22e-07 U	4.06e-06 J	2.27e-06 J	1.23e-06 U	5.7e-07 U
E1668A	N	PCB-176	52663-65-7	6.21e-06 J	6.48e-06 J	2.19e-06 J	9.26e-06 J	8.69e-06 J	4.97e-06 J	2.81e-06 J
E1668A	N	PCB-177	52663-70-4	3.48e-05 J	2.86e-05 J	1.12e-05 J	4.95e-05	3.86e-05 J	3.21e-05 J	1.29e-05 J
E1668A	N	PCB-178	52663-67-9	1.35e-05 J	1.21e-05 J	4.3e-06 J	8.89e-07 U	1.4e-05 J	1.12e-05 J	7.87e-06 J
E1668A	N	PCB-179	52663-64-6	2.83e-05 J	2.4e-05 J	7.07e-06 J	4.4e-05	3.55e-05 J	2.43e-05 J	1.19e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB
				N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.000134	0.000116	3.75e-05 J	0.000178	0.000154	0.000126	6.27e-05
E1668A	N	PCB-181	74472-47-2	8.8e-07 U	1.43e-06 U	5.22e-07 U	8.22e-07 U	1e-06 U	1.23e-06 U	5.69e-07 U
E1668A	N	PCB-182	60145-23-5	8.56e-07 U	1.39e-06 U	5.07e-07 U	7.99e-07 U	9.73e-07 U	1.19e-06 U	5.53e-07 U
E1668A	N	PCB-183/185	PCB-183/185	4.15e-05	3.52e-05 J	1.24e-05 J	5.92e-05	4.5e-05	3.75e-05 J	1.74e-05 J
E1668A	N	PCB-184	74472-48-3	7.26e-07 U	1.18e-06 U	4.31e-07 U	6.79e-07 U	8.26e-07 U	1.01e-06 U	4.7e-07 U
E1668A	N	PCB-186	74472-49-4	7.05e-07 U	1.14e-06 U	4.18e-07 U	6.59e-07 U	8.02e-07 U	9.84e-07 U	4.56e-07 U
E1668A	N	PCB-187	52663-68-0	9.13e-05	6.79e-05 J	2.76e-05 J	0.00012	0.000107 J	7.1e-05 J	4.2e-05
E1668A	N	PCB-188	74487-85-7	6.52e-07 U	1.06e-06 U	3.78e-07 U	6.01e-07 U	7.38e-07 U	9.25e-07 U	4.23e-07 U
E1668A	N	PCB-189	39635-31-9	1.68e-06 J	1.83e-06 J	5.61e-07 J	1.89e-06 J	1.95e-06 J	5.38e-07 U	6.75e-07 J
E1668A	N	PCB-190	41411-64-7	1.31e-05 J	9.43e-06 J	3.18e-06 J	1.63e-05 J	1.06e-05 J	9.42e-06 J	5.29e-06 J
E1668A	N	PCB-191	74472-50-7	2.46e-06 J	1.82e-06 J	3.97e-07 U	2.38e-06 J	2.33e-06 J	1.85e-06 J	4.34e-07 U
E1668A	N	PCB-192	74472-51-8	7.49e-07 U	1.21e-06 U	4.44e-07 U	6.99e-07 U	8.52e-07 U	1.04e-06 U	4.84e-07 U
E1668A	N	PCB-194	35694-08-7	2.89e-05 J	2.73e-05 J	8.95e-06 J	4.32e-05	3.48e-05 J	2.38e-05 J	1.34e-05 J
E1668A	N	PCB-195	52663-78-2	8.27e-06 J	8.39e-06 J	2.82e-06 J	1.33e-05 J	9.16e-06 J	6.37e-06 J	3.31e-06 J
E1668A	N	PCB-196	42740-50-1	1.38e-05 J	1.54e-05 J	2.91e-06 J	2.54e-05 J	1.66e-05 J	1.51e-05 J	7.71e-06 J
E1668A	N	PCB-197	33091-17-7	6.85e-07 U	1.21e-06 U	3.98e-07 U	1.2e-06 J	1.7e-06 J	9.28e-07 U	5.54e-07 U
E1668A	N	PCB-198/199	PCB-198/199	4.77e-05	4.8e-05	1.24e-05 J	6.74e-05	5.61e-05	3.69e-05 J	2.14e-05 J
E1668A	N	PCB-200	52663-73-7	3.01e-06 J	3.01e-06 J	3.9e-07 U	4.26e-06 J	4.17e-06 J	4.13e-06 J	5.43e-07 U
E1668A	N	PCB-201	40186-71-8	3.99e-06 J	4.94e-06 J	2.08e-06 J	6.49e-06 J	6.14e-06 J	3.85e-06 J	2.37e-06 J
E1668A	N	PCB-202	2136-99-4	8.84e-06 J	1.39e-05 J	3.24e-06 J	1.58e-05 J	1.21e-05 J	9.95e-06 J	5.93e-06 J
E1668A	N	PCB-203	52663-76-0	2.29e-05 J	2.56e-05 J	9.46e-06 J	3.58e-05 J	3.45e-05 J	2.65e-05 J	1.32e-05 J
E1668A	N	PCB-204	74472-52-9	7.12e-07 U	1.26e-06 U	4.13e-07 U	6.44e-07 U	8.94e-07 U	9.65e-07 U	5.75e-07 U
E1668A	N	PCB-205	74472-53-0	1.7e-06 J	1.75e-06 J	2.71e-07 U	1.86e-06 J	1.59e-06 J	1.33e-06 J	2.97e-07 U
E1668A	N	PCB-206	40186-72-9	2.3e-05 J	7.52e-05	9.08e-06 J	4.3e-05	4.62e-05	3.17e-05 J	1.81e-05 J
E1668A	N	PCB-207	52663-79-3	3.42e-06 J	7.56e-06 J	7.19e-07 U	6.03e-06 J	4.7e-06 J	1.04e-06 U	1.65e-06 J
E1668A	N	PCB-208	52663-77-1	9.63e-06 J	2.95e-05 J	3.59e-06 J	1.65e-05 J	1.68e-05 J	1.16e-05 J	7.01e-06 J
E1668A	N	PCB-209	2051-24-3	2.68e-05 J	5.28e-05	1.21e-05 J	4.14e-05 J	3.98e-05 J	4.08e-05 J	1.7e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00806 J	0.00648 J	0.00374 J	0.0091 J	0.00925 J	0.00694 J	0.00466 J
E1668A	N	Total PCB (a)	PCB-Total	0.00841 J	0.0068 J	0.00388 J	0.00954 J	0.00968 J	0.00727 J	0.00484 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.13e-07J	7.22e-08J	4.64e-08J	1.37e-07J	6.49e-08J	7.85e-08J	7.26e-08J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	2.49e-05 J	2.14e-05 J	1.62e-05 J	4.92e-06 J	1.82e-05 J	1.31e-05 J	1.23e-05 J
E1668A	N	PCB-2	2051-61-8	4.94e-06 U	3.72e-07 U	2.13e-06 J	2.84e-07 U	4.55e-07 U	3.12e-06 J	5.01e-07 U
E1668A	N	PCB-3	2051-62-9	9.08e-06 U	5.43e-06 J	3.38e-06 J	3.2e-07 U	4.54e-06 U	4.06e-06 J	4.1e-06 J
E1668A	N	PCB-4	13029-08-8	0.000117 J	0.000244	0.000264	0.000232	0.000342	0.000266	0.000278
E1668A	N	PCB-5	16605-91-7	2.89e-06 U	1.4e-06 U	1.53e-06 U	4.09e-06 U	3.3e-06 U	1.8e-06 U	1.64e-06 U
E1668A	N	PCB-6	25569-80-6	3.04e-05 J	2.9e-05 J	1.76e-05 J	6.33e-06 J	1.96e-05 J	1.91e-05 J	2.18e-05 J
E1668A	N	PCB-7	33284-50-3	4.82e-06 U	5.29e-06 U	4.24e-06 U	3.45e-06 J	1e-05 J	3.82e-06 U	6.85e-06 U
E1668A	N	PCB-8	34883-43-7	9.55e-05 J	9.78e-05 J	7.16e-05	3.14e-05 J	6.44e-05 J	8.51e-05	7.58e-05 J
E1668A	N	PCB-9	34883-39-1	5.28e-06 U	7.08e-06 U	8.01e-06 U	3.96e-06 U	7.62e-06 U	7.49e-06 U	1.07e-05 J
E1668A	N	PCB-10	33146-45-1	1.97e-05 J	1.9e-05 J	2.05e-05 J	1.51e-05 J	4.17e-05	2.14e-05 J	1.75e-05 J
E1668A	N	PCB-11	2050-67-1	7.21e-05 U	0.000106	6.02e-05 U	4.21e-05 U	8.83e-05	9.4e-05	7.41e-05
E1668A	N	PCB-12/13	PCB-12/13	3.3e-05 J	2.32e-05 J	1.85e-05 U	8.96e-06 J	2.9e-05 J	2.09e-05 J	2.07e-05 J
E1668A	N	PCB-14	34883-41-5	8.1e-07 U	1.14e-06 U	4.05e-07 J	1.4e-06 U	2.07e-06 U	1.48e-06 U	3.51e-06 U
E1668A	N	PCB-15	2050-68-2	0.000172 J	0.00013	8.94e-05	7.27e-05 J	0.000122	0.00011	0.000101
E1668A	N	PCB-16	38444-78-9	7.9e-05 J	0.000115 J	0.000124	8.62e-05	0.000145 J	0.000154	0.000124
E1668A	N	PCB-17	37680-66-3	0.000136 J	0.000208	0.000172	0.000127	0.000218	0.000218	0.000186
E1668A	N	PCB-18/30	PCB-18/30	0.000245	0.000394	0.00032	0.00026	0.000403	0.000403	0.000321
E1668A	N	PCB-19	38444-73-4	5.68e-05 J	9.72e-05	9.46e-05	7.73e-05	0.000109	0.000107	9.95e-05
E1668A	N	PCB-20/28	PCB-20/28	0.000575	0.000523	0.000351	0.000275	0.000435	0.000483	0.000402
E1668A	N	PCB-21/33	PCB-21/33	9.36e-05	9.99e-05	6.14e-05	2.75e-05 J	7.13e-05	9.94e-05	7.86e-05
E1668A	N	PCB-22	38444-85-8	0.000101 J	0.000122	8.01e-05	5.82e-05	9.07e-05	0.000123	9.71e-05
E1668A	N	PCB-23	55720-44-0	4.29e-07 U	9.59e-07 U	5.68e-07 U	5.9e-07 U	7e-07 U	1.14e-06 U	1.53e-06 U
E1668A	N	PCB-24	55702-45-9	2.37e-06 J	4.77e-06 J	5.21e-06 J	3.18e-06 J	6.62e-06 J	4.94e-06 J	4.96e-06 J
E1668A	N	PCB-25	55712-37-3	6.35e-05 J	6.77e-05	4.96e-05	3.46e-05 J	5.52e-05	6.85e-05	4.98e-05 J
E1668A	N	PCB-26/29	PCB-26/29	9.97e-05	0.000104	7.11e-05	5.88e-05	8.69e-05	0.000102	9.39e-05
E1668A	N	PCB-27	38444-76-7	4.2e-05 J	4.6e-05	4.66e-05 J	3.84e-05	6.36e-05	5.35e-05	5.04e-05
E1668A	N	PCB-31	16606-02-3	0.000393 J	0.00041	0.000287	0.000225	0.000332	0.000393	0.000329
E1668A	N	PCB-32	38444-77-8	0.00012 J	0.000165	0.000138	0.000111	1.32e-06 U	0.000172	0.000145
E1668A	N	PCB-34	37680-68-5	2.95e-06 J	2.33e-06 J	2.32e-06 J	5.81e-07 U	2.71e-06 J	3.56e-06 J	1.5e-06 U
E1668A	N	PCB-35	37680-69-6	1.04e-05 J	8.04e-06 J	5.34e-06 J	2.38e-06 J	6.81e-06 J	6.14e-06 J	6.55e-06 J
E1668A	N	PCB-36	38444-87-0	2.29e-06 J	9.37e-07 U	1.06e-06 J	5.77e-07 U	1.03e-06 J	1.11e-06 U	2.03e-06 J
E1668A	N	PCB-37	38444-90-5	0.000152 J	0.000104	5.86e-05	4.55e-05	8.92e-05	9.05e-05	7.15e-05
E1668A	N	PCB-38	53555-66-1	8.47e-07 J	9.89e-07 U	5.86e-07 U	6.08e-07 U	7.23e-07 U	1.17e-06 U	1.57e-06 U
E1668A	N	PCB-39	38444-88-1	3.72e-06 J	2.5e-06 J	2.95e-06 J	5.41e-07 U	2.59e-06 J	1.04e-06 U	2.64e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000247	0.000253	0.000163	0.000121	0.000215	0.00023	0.00023
E1668A	N	PCB-42	36559-22-5	0.000121	0.000129	7.9e-05	5.92e-05	0.000106	0.00012	0.000114
E1668A	N	PCB-43/73	PCB-43/73	1.09e-05 J	1.03e-05 J	1.02e-05 J	6.56e-06 J	1.54e-05 J	1.42e-05 J	1.65e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000494	0.000522	0.000314	0.000244	0.00041	0.000466	0.00044
E1668A	N	PCB-45/51	PCB-45/51	0.00013	0.000137	9.51e-05	7.05e-05 J	0.000119	0.000133	0.000133
E1668A	N	PCB-46	41464-47-5	2.86e-05 J	3.02e-05 J	2.6e-05 J	1.38e-05 J	3.1e-05 J	3.42e-05 J	3.87e-05
E1668A	N	PCB-48	70362-47-9	6.45e-05	6.86e-05	4.56e-05	3.14e-05 J	6.08e-05	7.24e-05	7.14e-05
E1668A	N	PCB-49/69	PCB-49/69	0.000318	0.000329	0.000209	0.000159	0.000261	0.000293	0.000287
E1668A	N	PCB-50/53	PCB-50/53	8.73e-05	9.66e-05	6.96e-05	5.61e-05	8.43e-05	9.78e-05	1e-04
E1668A	N	PCB-52	35693-99-3	0.000505 J	0.000525	0.000342	0.000269	0.000413	0.000481	0.000473
E1668A	N	PCB-54	15968-05-5	1.15e-05 J	9.73e-06 J	1.02e-05 J	5.29e-06 J	1.33e-05 J	1.18e-05 J	8.88e-06 J

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	5.02e-06 J	8.13e-06 J	4.52e-06 J	1.49e-06 J	4.48e-06 J	7.34e-06 J	4.83e-06 J
E1668A	N	PCB-56	41464-43-1	0.000174	0.000149	8.34e-05	6.11e-05	0.000125	0.00013	0.000113
E1668A	N	PCB-57	70424-67-8	2.62e-06 J	9.03e-07 U	1.48e-06 J	6.53e-07 U	1.58e-06 J	1.14e-06 U	1.97e-06 U
E1668A	N	PCB-58	41464-49-7	7.5e-07 U	3.2e-06 J	2.29e-06 J	6.5e-07 U	1.3e-06 J	1.46e-06 J	3.74e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	4.3e-05	3.82e-05	2.97e-05 J	1.5e-05 J	3.48e-05 J	3.83e-05 J	4.02e-05
E1668A	N	PCB-60	33025-41-1	5.44e-05	5.06e-05	3.15e-05 J	1.99e-05 J	4.54e-05	5.03e-05	3.97e-05
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000581	0.000548	0.000312	0.000216	0.000434	0.000468	0.000403
E1668A	N	PCB-63	74472-34-7	1.42e-05 J	1.16e-05 J	9.15e-06 J	4.73e-06 J	1.15e-05 J	1.21e-05 J	1.28e-05 J
E1668A	N	PCB-64	52663-58-8	0.000163 J	0.000169	0.000107	7.82e-05	0.000133	0.000152	0.000144
E1668A	N	PCB-66	32598-10-0	0.000415 J	0.000351	0.000195	0.000135	0.000285	0.000295	0.000243
E1668A	N	PCB-67	73575-53-8	1.18e-05 J	1.04e-05 J	7.05e-06 J	2.81e-06 J	9.07e-06 J	7.99e-06 J	1.03e-05 J
E1668A	N	PCB-68	73575-52-7	5.08e-06 U	3.36e-06 J	3.13e-06 J	2.01e-06 J	2.96e-06 U	3.27e-06 J	4.35e-06 J
E1668A	N	PCB-72	41464-42-0	6.69e-06 J	4.29e-06 J	4.45e-06 J	1.66e-06 J	4.01e-06 J	3.97e-06 J	1.92e-06 U
E1668A	N	PCB-77	32598-13-3	4.4e-05 J	3.07e-05 J	1.85e-05 J	1.02e-05 J	2.76e-05 J	2.85e-05 J	2.23e-05 J
E1668A	N	PCB-78	70362-49-1	7.79e-07 U	9.34e-07 U	6.43e-07 U	6.75e-07 U	8.98e-07 U	1.18e-06 U	2.04e-06 U
E1668A	N	PCB-79	41464-48-6	5.38e-06 J	3.06e-06 J	1.46e-06 J	9.13e-07 J	3.2e-06 J	2.85e-06 J	1.79e-06 U
E1668A	N	PCB-80	33284-52-5	6.68e-07 U	8e-07 U	5.51e-07 U	5.78e-07 U	7.7e-07 U	1.01e-06 U	1.75e-06 U
E1668A	N	PCB-81	70362-50-4	1.5e-06 J	1.38e-06 J	1.01e-06 J	6.34e-07 U	9.66e-07 J	1.09e-06 U	1.86e-06 U
E1668A	N	PCB-82	52663-62-4	5.2e-05	5.04e-05	2.53e-05 J	1.3e-05 J	4.11e-05 J	4.57e-05	2.77e-05 J
E1668A	N	PCB-83/99	PCB-83/99	0.000279	0.000271	0.00014	8.93e-05	0.000225	0.000203 J	0.000167
E1668A	N	PCB-84	52663-60-2	0.000105	0.00011	6.66e-05	3.75e-05 J	0.000101	9.84e-05	6.85e-05 J
E1668A	N	PCB-85/116/117	PCB-85/116/117	7.29e-05	6.18e-05	4.01e-05	2.12e-05 J	6.4e-05	5.69e-05	4.19e-05 J
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000255	0.000257 J	0.000139	8.59e-05	0.000216	0.000214	0.000173
E1668A	N	PCB-88/91	PCB-88/91	7.36e-05	7.33e-05	4.23e-05	2.79e-05 J	6.6e-05	6.9e-05	5.14e-05
E1668A	N	PCB-89	73575-57-2	3.97e-06 J	4.07e-06 J	3.63e-06 J	1.03e-06 U	4.99e-06 J	4.37e-06 J	3.25e-06 U
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000399	0.000397	0.00021	0.000141	0.000323	0.000331	0.000255
E1668A	N	PCB-92	52663-61-3	7.23e-05	6.68e-05	4.06e-05	2.37e-05 J	6.2e-05	6.38e-05	4.28e-05 J
E1668A	N	PCB-93/100	PCB-93/100	1.83e-05 J	1.36e-06 J	2.2e-06 J	3.93e-06 J	1.74e-05 J	4.62e-06 J	4.51e-06 J
E1668A	N	PCB-94	73575-55-0	6.27e-06 J	6.49e-06 J	3.88e-06 J	1.03e-06 U	4.42e-06 J	5.6e-06 J	3.24e-06 U
E1668A	N	PCB-95	38379-99-6	0.000312	0.000354	0.000201	0.000134	0.000272	0.000293	0.000235
E1668A	N	PCB-96	73575-54-9	4.88e-06 J	3.53e-06 J	3.27e-06 J	1.76e-06 J	4.75e-06 J	5.17e-06 J	2.43e-06 U
E1668A	N	PCB-98/102	PCB-98/102	2.43e-05 J	2.24e-05 J	1.49e-05 J	7.4e-06 J	2.14e-05 J	2.1e-05 J	1.92e-05 J
E1668A	N	PCB-103	60145-21-3	7.1e-06 J	5.95e-06 J	4.74e-06 J	3.3e-06 J	8.61e-06 J	6.39e-06 J	6.32e-06 J
E1668A	N	PCB-104	56558-16-8	9.73e-07 U	1.14e-06 U	7.96e-07 U	6.87e-07 U	1.09e-06 U	1.28e-06 U	2.16e-06 U
E1668A	N	PCB-105	32598-14-4	0.000145	0.000126	6.03e-05	3.67e-05 J	9.78e-05	0.000108	8.16e-05
E1668A	N	PCB-106	70424-69-0	6.24e-07 U	1.02e-06 U	6.59e-07 U	7.17e-07 U	8.57e-07 U	1.27e-06 U	1.67e-06 U
E1668A	N	PCB-107	70424-68-9	2.95e-05 J	2.52e-05 J	1.26e-05 J	7.14e-06 J	2.11e-05 J	1.96e-05 J	1.35e-05 J
E1668A	N	PCB-108/124	PCB-108/124	1.42e-05 J	9.75e-06 J	4.96e-06 J	2.58e-06 J	9.73e-06 U	1.11e-05 J	7.35e-06 J
E1668A	N	PCB-110/115	PCB-110/115	0.000457	0.000469	0.000257	0.000159	0.000364	0.000368	0.000289
E1668A	N	PCB-111	39635-32-0	9.15e-07 U	1.08e-06 U	7.48e-07 U	6.45e-07 U	1.03e-06 U	1.21e-06 U	2.03e-06 U
E1668A	N	PCB-112	74472-36-9	9.94e-07 U	1.17e-06 U	8.13e-07 U	7.01e-07 U	1.12e-06 U	1.31e-06 U	2.21e-06 U
E1668A	N	PCB-114	74472-37-0	8.44e-06 J	6.69e-06 J	3.7e-06 J	1.49e-06 J	6.19e-06 U	5.89e-06 J	3.57e-06 J
E1668A	N	PCB-118	31508-00-6	0.000367 J	0.000333	0.000147	9.96e-05	0.000241	0.00026	0.000192
E1668A	N	PCB-120	68194-12-7	2.56e-06 J	1.11e-06 U	7.7e-07 U	6.64e-07 U	1.06e-06 U	1.24e-06 U	2.09e-06 U
E1668A	N	PCB-121	56558-18-0	9.49e-07 U	1.12e-06 U	7.76e-07 U	6.69e-07 U	1.07e-06 U	1.25e-06 U	2.11e-06 U

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	6.62e-06 J	4.78e-06 J	2.41e-06 J	7.81e-07 U	4.84e-06 J	3.77e-06 J	4.88e-06 J
E1668A	N	PCB-123	65510-44-3	8.65e-06 J	5.25e-06 J	4.17e-06 J	1.1e-06 J	4.17e-06 U	5.05e-06 J	2.87e-06 J
E1668A	N	PCB-126	57465-28-8	1.44e-06 J	1.02e-06 U	6.52e-07 U	7.04e-07 U	8.33e-07 U	1.29e-06 U	1.72e-06 U
E1668A	N	PCB-127	39635-33-1	4.46e-07 J	1e-06 U	6.51e-07 U	7.09e-07 U	8.48e-07 U	1.26e-06 U	1.65e-06 U
E1668A	N	PCB-128/166	PCB-128/166	5.08e-05	4.61e-05	2.6e-05 J	1.04e-05 J	3.45e-05 J	3.89e-05	3.67e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000369	0.00035	0.000155	1e-04	0.00026	0.000288	0.000249
E1668A	N	PCB-130	52663-66-8	2.36e-05 J	1.43e-05 J	9.54e-06 J	5.21e-06 J	1.26e-05 J	1.57e-05 J	8.9e-06 J
E1668A	N	PCB-131	61798-70-7	3.26e-06 J	2.02e-06 U	2.38e-06 J	1.22e-06 U	1.61e-06 U	2.47e-06 U	3.91e-06 U
E1668A	N	PCB-132	38380-05-1	0.000116	9.93e-05	5.01e-05	3.15e-05 J	7.96e-05	8.78e-05	7.88e-05
E1668A	N	PCB-133	35694-04-3	5.75e-06 J	5.66e-06 J	2.99e-06 J	1.12e-06 U	5e-06 J	4.66e-06 J	3.59e-06 U
E1668A	N	PCB-134/143	PCB-134/143	1.67e-05 J	1.69e-05 J	7.85e-06 J	3.18e-06 J	1.41e-05 J	1.75e-05 J	1.57e-05 J
E1668A	N	PCB-135/151	PCB-135/151	0.000132	0.000133	5.71e-05	3.35e-05 J	0.00011	7.85e-05	9.06e-05
E1668A	N	PCB-136	38411-22-2	4.54e-05	4.78e-05	2.45e-05 J	1.03e-05 J	3.88e-05 J	4.2e-05	2.78e-05 J
E1668A	N	PCB-137	35694-06-5	1.14e-05 J	1e-05 J	6.66e-06 J	3.12e-06 J	9.85e-06 J	8.27e-06 J	1.14e-05 J
E1668A	N	PCB-139/140	PCB-139/140	5.63e-06 J	5.55e-06 J	2.77e-06 J	1.8e-06 J	4.34e-06 J	3.86e-06 J	3.28e-06 U
E1668A	N	PCB-141	52712-04-6	5.12e-05	5.49e-05	2.78e-05 J	1.29e-05 J	4.13e-05	5.16e-05	4.32e-05
E1668A	N	PCB-142	41411-61-4	1.32e-06 U	1.94e-06 U	1.08e-06 U	1.18e-06 U	1.55e-06 U	2.37e-06 U	3.76e-06 U
E1668A	N	PCB-144	68194-14-9	1.1e-05 J	1.31e-05 J	6.85e-06 J	2.04e-06 J	9.87e-06 J	1.12e-05 J	1.23e-05 J
E1668A	N	PCB-145	74472-40-5	1.09e-06 U	1.61e-06 U	8.65e-07 U	7.53e-07 U	1.37e-06 U	1.6e-06 U	2.68e-06 U
E1668A	N	PCB-146	51908-16-8	5.76e-05	4.83e-05	2.62e-05 J	1.22e-05 J	3.8e-05 J	4.57e-05	3.34e-05 J
E1668A	N	PCB-147/149	PCB-147/149	0.000286	0.000283	0.000131	8.64e-05	0.000209	0.000231	0.000208
E1668A	N	PCB-148	74472-41-6	1.53e-06 U	2.25e-06 U	1.21e-06 U	1.05e-06 U	1.91e-06 U	2.24e-06 U	3.75e-06 U
E1668A	N	PCB-150	68194-08-1	1.07e-06 U	1.57e-06 U	8.43e-07 U	7.34e-07 U	1.33e-06 U	1.56e-06 U	2.62e-06 U
E1668A	N	PCB-152	68194-09-2	1.09e-06 U	1.6e-06 U	8.6e-07 U	7.48e-07 U	1.36e-06 U	1.59e-06 U	2.67e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.000324	0.000306	0.00014	8.9e-05	0.000224	0.00024	0.000214
E1668A	N	PCB-154	60145-22-4	7.92e-06 J	6.99e-06 J	1.24e-05 J	1.88e-06 J	8.63e-06 J	4.4e-05	5.84e-06 J
E1668A	N	PCB-155	33979-03-2	2.02e-06 J	1.52e-06 U	8.81e-07 J	7.13e-07 U	1.29e-06 U	1.52e-06 U	2.54e-06 U
E1668A	N	PCB-156/157	PCB-156/157	3.87e-05 J	3.47e-05 J	1.55e-05 J	8.48e-06 J	2.89e-05 J	2.79e-05 J	2.04e-05 J
E1668A	N	PCB-158	74472-42-7	3.43e-05 J	2.92e-05 J	1.46e-05 J	7.64e-06 J	2.42e-05 J	2.67e-05 J	1.94e-05 J
E1668A	N	PCB-159	39635-35-3	3.57e-06 J	2.06e-06 J	1.66e-06 J	7.83e-07 U	2.57e-06 U	2.37e-06 J	2.5e-06 U
E1668A	N	PCB-161	74472-43-8	8.76e-07 U	1.29e-06 U	7.15e-07 U	7.79e-07 U	1.03e-06 U	1.57e-06 U	2.49e-06 U
E1668A	N	PCB-162	39635-34-2	1.9e-06 J	1.24e-06 J	7.1e-07 U	7.73e-07 U	1.02e-06 U	1.6e-06 J	2.47e-06 U
E1668A	N	PCB-164	74472-45-0	2.22e-05 J	2.12e-05 J	9.89e-06 J	4.97e-06 J	1.71e-05 J	1.94e-05 J	1.73e-05 J
E1668A	N	PCB-165	74472-46-1	9.63e-07 U	1.41e-06 U	7.86e-07 U	8.56e-07 U	1.13e-06 U	1.73e-06 U	2.74e-06 U
E1668A	N	PCB-167	52663-72-6	1.11e-05 J	1.06e-05 J	5.75e-06 J	2.82e-06 J	1e-05 J	7.68e-06 J	8.62e-06 J
E1668A	N	PCB-169	32774-16-6	6.39e-07 U	8.51e-07 U	1.04e-06 J	6.05e-07 U	7.98e-07 U	1.08e-06 U	1.8e-06 U
E1668A	N	PCB-170	35065-30-6	8.5e-05	8.75e-05	3.38e-05 J	1.77e-05 J	5.91e-05	6.62e-05	4.88e-05
E1668A	N	PCB-171/173	PCB-171/173	2.65e-05 J	2.62e-05 J	1.11e-05 J	5.34e-06 J	2.07e-05 J	1.68e-05 J	1.39e-05 J
E1668A	N	PCB-172	52663-74-8	1.49e-05 J	1.55e-05 J	6.54e-06 J	3.33e-06 J	1.18e-05 J	1.15e-05 J	9.54e-06 J
E1668A	N	PCB-174	38411-25-5	8.76e-05	8.96e-05	3.83e-05	1.99e-05 J	5.78e-05	6.73e-05	4.71e-05
E1668A	N	PCB-175	40186-70-7	9.5e-07 U	1.37e-06 U	7.88e-07 U	8.73e-07 U	1.31e-06 U	3.16e-06 J	2.4e-06 U
E1668A	N	PCB-176	52663-65-7	1.13e-05 J	1.07e-05 J	5.24e-06 J	1.97e-06 J	7.29e-06 J	8.78e-06 J	6.24e-06 J
E1668A	N	PCB-177	52663-70-4	5.4e-05	5.16e-05	2.63e-05 J	1.18e-05 J	3.88e-05 J	3.92e-05 J	2.83e-05 J
E1668A	N	PCB-178	52663-67-9	2.26e-05 J	2.12e-05 J	1.09e-05 J	3.23e-06 J	1.78e-05 J	1.36e-05 J	1.04e-05 J
E1668A	N	PCB-179	52663-64-6	4.01e-05	4.35e-05	1.94e-05 J	8.66e-06 J	3.57e-05 J	3.41e-05 J	2.87e-05 J

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN
				3.01	2.1	3	3	3.1	3.1	3
				NB	NB				NB	
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.000193	0.000217	8.89e-05	4.44e-05	0.000144	0.000161	0.000106
E1668A	N	PCB-181	74472-47-2	9.5e-07 U	1.37e-06 U	7.87e-07 U	8.72e-07 U	1.31e-06 U	1.41e-06 U	2.4e-06 U
E1668A	N	PCB-182	60145-23-5	9.23e-07 U	1.33e-06 U	7.65e-07 U	8.48e-07 U	1.27e-06 U	1.37e-06 U	2.34e-06 U
E1668A	N	PCB-183/185	PCB-183/185	6.78e-05 J	6.5e-05	3.04e-05 J	1.3e-05 J	4.86e-05	5.01e-05	3.63e-05 J
E1668A	N	PCB-184	74472-48-3	7.84e-07 U	1.13e-06 U	6.5e-07 U	7.2e-07 U	1.08e-06 U	1.16e-06 U	1.98e-06 U
E1668A	N	PCB-186	74472-49-4	7.61e-07 U	1.1e-06 U	6.31e-07 U	6.99e-07 U	1.05e-06 U	1.13e-06 U	1.93e-06 U
E1668A	N	PCB-187	52663-68-0	0.000138	0.000134	6.1e-05	3.13e-05 J	0.000101	0.000102	8.98e-05
E1668A	N	PCB-188	74487-85-7	6.96e-07 U	1.02e-06 U	5.94e-07 U	6.14e-07 U	9.44e-07 U	1.06e-06 U	1.62e-06 U
E1668A	N	PCB-189	39635-31-9	2.87e-06 J	2.55e-06 U	1.26e-06 J	6.63e-07 U	2.65e-06 U	1.05e-06 U	1.41e-06 U
E1668A	N	PCB-190	41411-64-7	1.39e-05 J	1.72e-05 J	9.39e-06 J	3.53e-06 J	1.09e-05 J	1.3e-05 J	9.27e-06 J
E1668A	N	PCB-191	74472-50-7	3.78e-06 J	3.15e-06 J	1.7e-06 J	6.64e-07 U	1.89e-06 J	1.07e-06 U	2.9e-06 J
E1668A	N	PCB-192	74472-51-8	8.08e-07 U	1.16e-06 U	6.7e-07 U	7.42e-07 U	1.12e-06 U	1.2e-06 U	2.04e-06 U
E1668A	N	PCB-194	35694-08-7	4.96e-05	5.4e-05 J	2.43e-05 J	1.13e-05 J	4.57e-05	3.87e-05 J	2.64e-05 J
E1668A	N	PCB-195	52663-78-2	1.43e-05 J	1.68e-05 J	7.04e-06 J	4.9e-06 J	1.71e-05 J	1.72e-05 J	9.41e-06 J
E1668A	N	PCB-196	42740-50-1	2.66e-05 J	2.41e-05 J	1.12e-05 J	4.92e-06 J	2.12e-05 J	2.3e-05 J	1.1e-05 J
E1668A	N	PCB-197	33091-17-7	6.11e-07 U	9.32e-07 U	1.24e-06 J	6.85e-07 U	1.41e-06 U	1.04e-06 U	2.03e-06 U
E1668A	N	PCB-198/199	PCB-198/199	7.44e-05	8.17e-05	3.2e-05 J	1.5e-05 J	5.52e-05	6.16e-05	3.71e-05 J
E1668A	N	PCB-200	52663-73-7	4.65e-06 J	5.59e-06 J	2.82e-06 J	6.73e-07 U	4.04e-06 J	5.61e-06 J	1.99e-06 U
E1668A	N	PCB-201	40186-71-8	9.82e-06 J	7.74e-06 J	3.32e-06 J	1.62e-06 J	5.98e-06 U	6.29e-06 J	1.92e-06 U
E1668A	N	PCB-202	2136-99-4	1.89e-05 J	2e-05 J	7.11e-06 J	3.47e-06 J	1.61e-05 J	1.43e-05 J	8.1e-06 J
E1668A	N	PCB-203	52663-76-0	4.23e-05	4.29e-05	1.97e-05 J	8.52e-06 J	2.73e-05 J	4.08e-05	1.8e-05 J
E1668A	N	PCB-204	74472-52-9	6.35e-07 U	9.68e-07 U	5.78e-07 U	7.12e-07 U	1.13e-06 U	1.08e-06 U	2.11e-06 U
E1668A	N	PCB-205	74472-53-0	2e-06 J	2.66e-06 U	5.16e-07 U	8.63e-07 U	2.9e-06 U	1.17e-06 U	1.85e-06 U
E1668A	N	PCB-206	40186-72-9	5.51e-05	4.91e-05	1.95e-05 J	8.98e-06 J	4.31e-05	4.03e-05	2.27e-05 J
E1668A	N	PCB-207	52663-79-3	5.93e-06 J	3.5e-06 J	2.2e-06 J	1.07e-06 U	5.63e-06 U	4.14e-06 J	1.82e-06 U
E1668A	N	PCB-208	52663-77-1	1.78e-05 J	1.68e-05 J	6.02e-06 J	4.79e-06 J	1.61e-05 J	1.06e-05 J	1.08e-05 J
E1668A	N	PCB-209	2051-24-3	5.46e-05 J	4.72e-05	2.36e-05 J	1.39e-05 J	3.47e-05 J	3.16e-05 J	2.94e-05 J
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.0112 J	0.0115 J	0.00706 J	0.00488 J	0.00956 J	0.0103 J	0.00882 J
E1668A	N	Total PCB (a)	PCB-Total	0.0118 J	0.0121 J	0.00732 J	0.00504 J	0.00998 J	0.0107 J	0.00915 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.69e-07J	1.13e-07J	1.06e-07J	7.02e-08J	9.1e-08J	1.34e-07J	1.69e-07J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-1	2051-60-7	1.02e-05 J	1.16e-05 J	1.35e-05 J	1.34e-05 J	8.75e-06 J	1.56e-05 J	2.94e-05 J
E1668A	N	PCB-2	2051-61-8	1.86e-06 J	3.79e-07 U	1.98e-06 J	4.51e-07 U	4.18e-07 U	1.07e-06 J	3.21e-06 J
E1668A	N	PCB-3	2051-62-9	3.2e-06 J	1.92e-06 U	3.93e-06 U	3.51e-06 U	2.19e-06 J	2.29e-07 U	8.51e-06 J
E1668A	N	PCB-4	13029-08-8	0.000252	0.000315	0.000682	0.000282	0.000217	0.000372	0.000307
E1668A	N	PCB-5	16605-91-7	5.26e-06 U	2.79e-06 U	6.23e-06 J	1.31e-06 J	3.09e-06 U	1.92e-06 U	1.92e-06 J
E1668A	N	PCB-6	25569-80-6	1.56e-05 J	2.25e-05 J	4.56e-05 J	2.08e-05 J	1.02e-05 J	1.5e-05 J	3.47e-05 J
E1668A	N	PCB-7	33284-50-3	8.69e-06 J	4.87e-06 J	1.82e-05 J	8.05e-06 U	5.95e-06 J	3.54e-06 U	6.44e-06 U
E1668A	N	PCB-8	34883-43-7	6.15e-05 J	6.95e-05 J	0.000218	8.24e-05 J	4.42e-05 J	5.48e-05 J	0.000115
E1668A	N	PCB-9	34883-39-1	1.05e-05 J	4.18e-06 U	2.69e-05 J	1.15e-05 J	7.17e-06 J	4.43e-06 J	1.21e-05 J
E1668A	N	PCB-10	33146-45-1	1.84e-05 J	3.76e-05 J	3.94e-05	2.48e-05 J	2.03e-05 J	5.47e-05	2.55e-05 J
E1668A	N	PCB-11	2050-67-1	6.78e-05	7.95e-05	9.76e-05	7e-05 U	5.93e-05 J	7.74e-05 U	0.000103
E1668A	N	PCB-12/13	PCB-12/13	2.13e-05 J	2.48e-05 J	4.19e-05 J	1.93e-05 J	1.39e-05 J	1.66e-05 J	3.68e-05 J
E1668A	N	PCB-14	34883-41-5	1.39e-06 J	2.54e-06 U	1.47e-06 U	2.54e-06 U	1.59e-06 U	8.75e-07 U	1.41e-06 U
E1668A	N	PCB-15	2050-68-2	0.000108 J	0.000116	0.000187	9.07e-05 J	8.25e-05	9.83e-05	0.000181
E1668A	N	PCB-16	38444-78-9	0.000149	0.000169	0.000218	0.000128	8.52e-05	0.000126	0.00015 J
E1668A	N	PCB-17	37680-66-3	0.000211	0.000228	0.000362	0.000183	0.000133	0.000185	0.000279
E1668A	N	PCB-18/30	PCB-18/30	0.000422	0.000451	0.000588	0.000331	0.00023	0.000375	0.00047
E1668A	N	PCB-19	38444-73-4	0.000108	0.000115	0.000184	9.9e-05	8e-05	0.000109	0.000131
E1668A	N	PCB-20/28	PCB-20/28	0.000485	0.000461	0.000576	0.000375	0.000265	0.000378	0.00067
E1668A	N	PCB-21/33	PCB-21/33	8.46e-05	9.5e-05	0.000123	7.68e-05	3.33e-05 J	6.29e-05	0.000119
E1668A	N	PCB-22	38444-85-8	0.000115	0.000106	0.000158	9.63e-05	6.32e-05	7.57e-05	0.000141
E1668A	N	PCB-23	55720-44-0	8.44e-07 U	7.5e-07 U	7.64e-07 U	1.29e-06 U	8.44e-07 U	3.79e-07 U	9.32e-07 U
E1668A	N	PCB-24	55702-45-9	5.07e-06 J	8.77e-06 J	6.68e-06 J	6.33e-06 J	3.42e-06 J	5.22e-06 J	5.17e-06 J
E1668A	N	PCB-25	55712-37-3	6.64e-05	5.78e-05	9.79e-05	5.69e-05	3.69e-05 J	4.6e-05	9.04e-05
E1668A	N	PCB-26/29	PCB-26/29	9.69e-05	9.88e-05	0.000147	8.63e-05	5.94e-05	7.55e-05	0.000142
E1668A	N	PCB-27	38444-76-7	5.17e-05	5.88e-05	8.96e-05	4.85e-05	3.93e-05	4.81e-05	7.99e-05
E1668A	N	PCB-31	16606-02-3	0.000393	0.000378	0.000501	0.000317	0.00022	0.000301	0.000513
E1668A	N	PCB-32	38444-77-8	0.000173	0.000196	0.000262	0.000139	9.98e-05	0.000156	0.000216
E1668A	N	PCB-34	37680-68-5	3.71e-06 J	3.3e-06 J	5.92e-06 J	2.82e-06 J	2.55e-06 J	1.81e-06 J	3.25e-06 J
E1668A	N	PCB-35	37680-69-6	7.57e-06 J	8.1e-06 J	7.18e-06 J	5.17e-06 J	3.55e-06 J	4.63e-06 J	1.51e-05 J
E1668A	N	PCB-36	38444-87-0	8.25e-07 U	7.33e-07 U	7.47e-07 U	1.26e-06 U	8.79e-07 J	8.48e-07 J	8.49e-07 J
E1668A	N	PCB-37	38444-90-5	9.06e-05	8.99e-05	8.61e-05	5.97e-05	4.88e-05	7.01e-05	0.000136
E1668A	N	PCB-38	53555-66-1	8.71e-07 U	7.73e-07 U	7.88e-07 U	1.33e-06 U	8.71e-07 U	3.91e-07 U	9.61e-07 U
E1668A	N	PCB-39	38444-88-1	3.35e-06 J	6.88e-07 U	3.21e-06 J	1.18e-06 U	1.31e-06 J	1.66e-06 J	5.07e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000241	0.000228	0.000219	0.000176	0.000126	0.000175	0.000334
E1668A	N	PCB-42	36559-22-5	0.000123	0.000112	0.000109	8.53e-05 J	6.19e-05	8.37e-05	0.000165
E1668A	N	PCB-43/73	PCB-43/73	1.41e-05 J	1.71e-05 J	1.41e-05 J	1.21e-05 J	9.16e-06 J	7.89e-06 J	2.48e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000471	0.000452	0.00042	0.000358	0.000228	0.000349	0.000631
E1668A	N	PCB-45/51	PCB-45/51	0.000147	0.000143	0.000131	0.000121	7.1e-05	0.000102	0.000165
E1668A	N	PCB-46	41464-47-5	3.74e-05 J	3.33e-05 J	3.93e-05	2.76e-05 J	1.99e-05 J	2.34e-05 J	4.39e-05 J
E1668A	N	PCB-48	70362-47-9	7.71e-05	7.5e-05	6.53e-05	5.38e-05	3.37e-05 J	4.78e-05	9.47e-05
E1668A	N	PCB-49/69	PCB-49/69	0.000303	0.000284	0.000271	0.000232	0.00016	0.000223	0.00042
E1668A	N	PCB-50/53	PCB-50/53	0.000103	9.67e-05	0.000101	7.42e-05 J	6.02e-05	7.02e-05	0.000121
E1668A	N	PCB-52	35693-99-3	0.000499	0.000454	0.00044	0.000374	0.000259	0.000368	0.000657
E1668A	N	PCB-54	15968-05-5	1.32e-05 J	1.43e-05 J	1.11e-05 J	8.45e-06 J	5.94e-06 J	8.89e-06 J	1.31e-05 J

				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-55	74338-24-2	4.16e-06 J	4.43e-06 J	8.02e-06 J	4.72e-06 J	1.67e-06 J	1.91e-06 J	8.29e-06 J
E1668A	N	PCB-56	41464-43-1	0.000136	0.000133	0.000118	8.99e-05	6.02e-05	9.65e-05	0.000219
E1668A	N	PCB-57	70424-67-8	1.73e-06 J	1.89e-06 J	1.68e-06 J	1.67e-06 U	1.25e-06 J	1.18e-06 J	5.08e-06 J
E1668A	N	PCB-58	41464-49-7	1.09e-06 J	1.33e-06 J	2.6e-06 J	1.69e-06 J	8.27e-07 U	1.04e-06 J	1.9e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	4.47e-05	3.79e-05 J	3.66e-05 J	3.26e-05 J	2.08e-05 J	2.61e-05 J	5.61e-05
E1668A	N	PCB-60	33025-41-1	5.19e-05	4.91e-05	3.73e-05 J	3.51e-05 J	2.26e-05 J	3.39e-05 J	7.59e-05
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000483	0.000471	4e-04	0.000332	0.000209	0.000351	0.000749
E1668A	N	PCB-63	74472-34-7	1.2e-05 J	1.2e-05 J	1.3e-05 J	7.25e-06 J	5.42e-06 J	7.51e-06 J	2.09e-05 J
E1668A	N	PCB-64	52663-58-8	0.000158	0.000149	0.000135	0.000121	7.56e-05	0.000117	0.000211
E1668A	N	PCB-66	32598-10-0	0.000299	0.000287	0.000242	0.000208	0.000127	0.000212	0.000484
E1668A	N	PCB-67	73575-53-8	1.06e-05 J	1.08e-05 J	8.68e-06 J	5.39e-06 J	5.38e-06 J	6.39e-06 J	1.53e-05 J
E1668A	N	PCB-68	73575-52-7	4.34e-06 J	4.82e-06 U	2.87e-06 J	1.51e-06 U	1.52e-06 J	2.01e-06 U	6.16e-06 J
E1668A	N	PCB-72	41464-42-0	4.45e-06 J	4.73e-06 J	4.41e-06 J	5.71e-06 J	2.54e-06 J	3.24e-06 J	6.89e-06 J
E1668A	N	PCB-77	32598-13-3	2.99e-05 J	2.91e-05 J	2.34e-05 J	1.77e-05 J	1.13e-05 J	1.96e-05 J	4.76e-05
E1668A	N	PCB-78	70362-49-1	1.09e-06 U	9.98e-07 U	7.58e-07 U	1.73e-06 U	8.59e-07 U	5.44e-07 U	1.04e-06 U
E1668A	N	PCB-79	41464-48-6	3.25e-06 J	2.51e-06 J	2.12e-06 J	1.51e-06 U	1.2e-06 J	1.4e-06 J	4.89e-06 J
E1668A	N	PCB-80	33284-52-5	9.33e-07 U	8.55e-07 U	6.49e-07 U	1.48e-06 U	7.36e-07 U	4.66e-07 U	8.87e-07 U
E1668A	N	PCB-81	70362-50-4	1.8e-06 J	1.13e-06 J	6.94e-07 U	1.56e-06 U	7.75e-07 U	9.85e-07 J	2.5e-06 J
E1668A	N	PCB-82	52663-62-4	3.89e-05 J	1.88e-06 U	3.3e-05 J	2.48e-05 J	1.97e-05 J	2.9e-05 J	8.19e-05
E1668A	N	PCB-83/99	PCB-83/99	0.000203	0.000219	0.00017	0.000131	9.68e-05	0.000153	0.000373
E1668A	N	PCB-84	52663-60-2	9.48e-05	9.98e-05	8.39e-05	6.75e-05	5.14e-05	6.92e-05	0.00015
E1668A	N	PCB-85/116/117	PCB-85/116/117	5.87e-05	1.3e-06 U	4.6e-05	3.8e-05 J	2.69e-05 J	4.17e-05	1e-04
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000212	0.00021 J	0.000167 J	0.000142 J	9.15e-05	0.000156 J	0.000343
E1668A	N	PCB-88/91	PCB-88/91	6.1e-05	6.67e-05	4.93e-05	4.22e-05	3.15e-05 J	4.46e-05	0.000109
E1668A	N	PCB-89	73575-57-2	5.23e-06 J	1.74e-06 U	1.22e-06 U	2.91e-06 U	1.4e-06 U	1.08e-06 U	1.04e-05 J
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000315	0.000332	0.000249	0.000204	0.000142	0.000242	0.000519
E1668A	N	PCB-92	52663-61-3	5.41e-05	5.34e-05 J	4.86e-05	4.07e-05	2.56e-05 J	3.47e-05 J	9.09e-05
E1668A	N	PCB-93/100	PCB-93/100	1.5e-05 J	1.98e-05 J	2.82e-06 J	2.58e-06 U	6.42e-06 J	1.04e-05 J	4.86e-06 J
E1668A	N	PCB-94	73575-55-0	6.77e-06 J	5.36e-06 J	5e-06 J	2.91e-06 U	1.4e-06 U	1.08e-06 U	7.15e-06 J
E1668A	N	PCB-95	38379-99-6	0.000277	0.00028	0.000236	2e-04	0.000136	0.000213	0.000434
E1668A	N	PCB-96	73575-54-9	6.16e-06 J	5.84e-06 J	3.69e-06 J	2.18e-06 U	2.64e-06 J	2.95e-06 J	8.71e-06 J
E1668A	N	PCB-98/102	PCB-98/102	2.17e-05 J	2.01e-05 J	1.78e-05 J	1.19e-05 J	8.12e-06 J	1.2e-05 J	3.99e-05
E1668A	N	PCB-103	60145-21-3	8.78e-06 J	1.16e-05 J	5.77e-06 J	2.55e-06 U	3.04e-06 J	5.27e-06 J	1.33e-05 J
E1668A	N	PCB-104	56558-16-8	1.34e-06 U	2.25e-06 J	8.14e-07 U	1.94e-06 U	9.3e-07 U	7.18e-07 U	1.23e-06 U
E1668A	N	PCB-105	32598-14-4	0.000101	9.37e-05	7.34e-05	5.76e-05	3.99e-05	6.56e-05	0.000176
E1668A	N	PCB-106	70424-69-0	1.24e-06 U	8.97e-07 U	7.4e-07 U	1.38e-06 U	9.59e-07 U	5.36e-07 U	1.14e-06 U
E1668A	N	PCB-107	70424-68-9	1.81e-05 J	1.98e-05 J	1.5e-05 J	1.49e-05 J	9.36e-06 J	1.16e-05 J	3.88e-05
E1668A	N	PCB-108/124	PCB-108/124	1.05e-05 J	9.44e-06 U	7.87e-06 J	6.42e-06 J	5.03e-06 J	5.83e-06 U	1.77e-05 J
E1668A	N	PCB-110/115	PCB-110/115	0.00036	0.000384	0.000294	0.000234	0.000156	0.000288	6e-04
E1668A	N	PCB-111	39635-32-0	1.26e-06 U	1.09e-06 U	7.65e-07 U	1.82e-06 U	8.74e-07 U	6.75e-07 U	1.15e-06 U
E1668A	N	PCB-112	74472-36-9	1.37e-06 U	1.18e-06 U	8.31e-07 U	1.98e-06 U	9.49e-07 U	7.33e-07 U	1.25e-06 U
E1668A	N	PCB-114	74472-37-0	5.36e-06 J	6.11e-06 U	5.48e-06 J	2.9e-06 J	2.53e-06 J	2.85e-06 U	1.24e-05 J
E1668A	N	PCB-118	31508-00-6	0.000249	0.000235	0.000177	0.000143	0.000106	0.000171	0.000418
E1668A	N	PCB-120	68194-12-7	1.96e-06 J	1.12e-06 U	7.88e-07 U	1.88e-06 U	8.99e-07 U	6.94e-07 U	4.27e-06 J
E1668A	N	PCB-121	56558-18-0	1.3e-06 U	1.13e-06 U	7.94e-07 U	1.89e-06 U	9.06e-07 U	7e-07 U	1.2e-06 U

				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-122	76842-07-4	6.16e-06 J	4.26e-06 J	3.66e-06 J	1.5e-06 U	1.04e-06 U	2.28e-06 J	5.08e-06 J
E1668A	N	PCB-123	65510-44-3	5.24e-06 J	5.9e-06 J	3.69e-06 J	2.29e-06 J	2.3e-06 J	3.51e-06 U	1.29e-05 J
E1668A	N	PCB-126	57465-28-8	1.22e-06 U	8.91e-07 U	7.51e-07 U	1.42e-06 U	9.23e-07 U	5.24e-07 U	1.7e-06 J
E1668A	N	PCB-127	39635-33-1	1.23e-06 U	8.87e-07 U	7.32e-07 U	1.36e-06 U	9.48e-07 U	5.3e-07 U	1.13e-06 U
E1668A	N	PCB-128/166	PCB-128/166	4.06e-05	3.91e-05	3.02e-05 J	2.28e-05 J	1.63e-05 J	2.25e-05 J	5.97e-05 J
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000261	0.000245	0.000203	0.000157	0.000104	0.000173	0.000445
E1668A	N	PCB-130	52663-66-8	1.66e-05 J	1.63e-05 J	1.11e-05 J	7.91e-06 J	4.42e-06 J	8.57e-06 J	3.02e-05 J
E1668A	N	PCB-131	61798-70-7	4.05e-06 J	3.11e-06 J	2.5e-06 J	2.89e-06 U	1.53e-06 U	1.54e-06 J	5.66e-06 J
E1668A	N	PCB-132	38380-05-1	8.55e-05	7.76e-05	6.55e-05	4.57e-05 J	3.76e-05 J	5.06e-05	0.000139
E1668A	N	PCB-133	35694-04-3	4.87e-06 J	4.54e-06 J	3.15e-06 J	2.65e-06 U	1.41e-06 U	2.82e-06 J	9.3e-06 J
E1668A	N	PCB-134/143	PCB-134/143	1.23e-05 J	1.35e-05 J	1.36e-05 J	7.11e-06 J	5.25e-06 J	7.93e-06 J	2.64e-05 J
E1668A	N	PCB-135/151	PCB-135/151	0.000111	0.000107	8.92e-05	4.55e-05	4.27e-05	7.03e-05	0.00019
E1668A	N	PCB-136	38411-22-2	3.9e-05	3.83e-05 J	3.21e-05 J	2.11e-05 J	1.73e-05 J	2.27e-05 J	5.88e-05 J
E1668A	N	PCB-137	35694-06-5	1.01e-05 J	9.1e-06 J	8.38e-06 J	6.12e-06 J	3.34e-06 J	5.57e-06 J	1.99e-05 J
E1668A	N	PCB-139/140	PCB-139/140	5.06e-06 J	4.79e-06 J	3.9e-06 J	2.42e-06 U	2.62e-06 J	1.52e-06 J	9.23e-06 J
E1668A	N	PCB-141	52712-04-6	4.15e-05 J	4.66e-05	3.85e-05 J	2.48e-05 J	1.56e-05 J	2.68e-05 J	7.24e-05
E1668A	N	PCB-142	41411-61-4	1.93e-06 U	1.63e-06 U	1.33e-06 U	2.78e-06 U	1.47e-06 U	8e-07 U	2.11e-06 U
E1668A	N	PCB-144	68194-14-9	9.84e-06 J	1.08e-05 J	8.85e-06 J	2.86e-06 U	3.88e-06 J	4.5e-06 J	2.27e-05 J
E1668A	N	PCB-145	74472-40-5	1.55e-06 U	1.51e-06 U	1e-06 U	2.17e-06 U	8.85e-07 U	8.15e-07 U	1.5e-06 U
E1668A	N	PCB-146	51908-16-8	4.36e-05	3.76e-05 J	3.3e-05 J	2.46e-05 J	1.8e-05 J	2.27e-05 J	7.33e-05
E1668A	N	PCB-147/149	PCB-147/149	0.000217	0.000211	0.000167	0.00014	9.24e-05	0.000141	0.000377
E1668A	N	PCB-148	74472-41-6	2.16e-06 U	2.11e-06 U	1.4e-06 U	3.03e-06 U	1.24e-06 U	1.14e-06 U	2.09e-06 U
E1668A	N	PCB-150	68194-08-1	1.51e-06 U	1.47e-06 U	9.75e-07 U	2.11e-06 U	8.62e-07 U	7.94e-07 U	1.46e-06 U
E1668A	N	PCB-152	68194-09-2	1.54e-06 U	1.5e-06 U	9.94e-07 U	2.15e-06 U	8.79e-07 U	8.1e-07 U	1.49e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.00023	0.00022	0.000177	0.000142	9e-05	0.00015	0.00039
E1668A	N	PCB-154	60145-22-4	6.98e-06 J	8.39e-06 J	2.15e-06 J	1.11e-05 J	2.49e-06 J	3.43e-06 J	9.15e-06 J
E1668A	N	PCB-155	33979-03-2	1.47e-06 U	3.39e-06 J	9.48e-07 U	2.05e-06 U	8.38e-07 U	7.72e-07 U	4.48e-06 J
E1668A	N	PCB-156/157	PCB-156/157	2.9e-05 J	2.86e-05 J	2.14e-05 J	1.44e-05 J	9.09e-06 J	1.74e-05 U	4.95e-05
E1668A	N	PCB-158	74472-42-7	2.51e-05 J	2.34e-05 J	1.93e-05 J	1.28e-05 J	1.08e-05 J	1.22e-05 J	4.6e-05
E1668A	N	PCB-159	39635-35-3	3.22e-06 J	2.53e-06 U	1.64e-06 J	1.85e-06 U	9.8e-07 U	7.5e-07 U	3.95e-06 J
E1668A	N	PCB-161	74472-43-8	1.28e-06 U	1.08e-06 U	8.81e-07 U	1.84e-06 U	9.76e-07 U	5.29e-07 U	1.4e-06 U
E1668A	N	PCB-162	39635-34-2	1.54e-06 J	1.71e-06 U	8.75e-07 U	1.83e-06 U	9.68e-07 U	1.02e-06 U	4.45e-06 J
E1668A	N	PCB-164	74472-45-0	1.76e-05 J	1.67e-05 J	1.36e-05 J	8.73e-06 J	7.27e-06 J	8.29e-06 J	3.26e-05 J
E1668A	N	PCB-165	74472-46-1	1.4e-06 U	1.18e-06 U	9.69e-07 U	2.02e-06 U	1.07e-06 U	5.82e-07 U	1.53e-06 U
E1668A	N	PCB-167	52663-72-6	1.02e-05 J	9.88e-06 J	7.11e-06 J	6.35e-06 J	3.46e-06 J	5.25e-06 U	1.71e-05 J
E1668A	N	PCB-169	32774-16-6	9.57e-07 U	8.28e-07 U	6.11e-07 U	1.26e-06 U	7.53e-07 U	3.96e-07 U	9.52e-07 U
E1668A	N	PCB-170	35065-30-6	6.25e-05	5.9e-05	5.32e-05	3.31e-05 J	2.17e-05 J	3.96e-05	0.00011
E1668A	N	PCB-171/173	PCB-171/173	1.9e-05 J	2.45e-05 J	1.61e-05 J	1.15e-05 J	6.38e-06 J	1.07e-05 J	3.35e-05 J
E1668A	N	PCB-172	52663-74-8	1.22e-05 J	1.09e-05 J	9.52e-06 J	8e-06 J	2.91e-06 J	4.97e-06 J	1.76e-05 J
E1668A	N	PCB-174	38411-25-5	6.48e-05	6.62e-05	4.6e-05	3.36e-05 J	2.26e-05 J	3.77e-05 J	0.000115
E1668A	N	PCB-175	40186-70-7	1.53e-06 U	2.27e-06 J	2.45e-06 J	2.06e-06 U	1.18e-06 U	6.71e-07 U	4.83e-06 J
E1668A	N	PCB-176	52663-65-7	8.04e-06 J	7.56e-06 J	6.33e-06 J	4.76e-06 J	3.77e-06 J	3.75e-06 J	1.49e-05 J
E1668A	N	PCB-177	52663-70-4	3.42e-05 J	3.87e-05	3.2e-05 J	1.52e-05 J	1.47e-05 J	2.2e-05 J	7.02e-05
E1668A	N	PCB-178	52663-67-9	1.68e-05 J	1.66e-05 J	1.07e-05 J	9.82e-06 J	5.63e-06 J	8.29e-06 J	2.87e-05 J
E1668A	N	PCB-179	52663-64-6	3.49e-05 J	3.46e-05 J	2.61e-05 J	1.62e-05 J	1.33e-05 J	2.07e-05 J	5.89e-05

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNBN	N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE
				N09-CE20-TNBN	N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE
				3	3.2	3	2.9	3	3.06	3
						NB				NB
				N09-CE20-TNBN-AS	N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS
				06/10/2013	06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013
				N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS							
E1668A	N	PCB-180/193	PCB-180/193	0.000151	0.000145	0.000116	8.84e-05	4.91e-05	9.26e-05	0.00026
E1668A	N	PCB-181	74472-47-2	1.53e-06 U	1.3e-06 U	9.2e-07 U	2.06e-06 U	1.18e-06 U	6.7e-07 U	1.36e-06 U
E1668A	N	PCB-182	60145-23-5	1.49e-06 U	1.27e-06 U	8.94e-07 U	2e-06 U	1.15e-06 U	6.51e-07 U	1.32e-06 U
E1668A	N	PCB-183/185	PCB-183/185	4.83e-05	4.68e-05	3.9e-05 J	3.06e-05 J	1.54e-05 J	2.77e-05 J	8.77e-05
E1668A	N	PCB-184	74472-48-3	1.26e-06 U	1.08e-06 U	7.59e-07 U	1.7e-06 U	9.74e-07 U	5.53e-07 U	1.12e-06 U
E1668A	N	PCB-186	74472-49-4	1.23e-06 U	1.04e-06 U	7.37e-07 U	1.65e-06 U	9.46e-07 U	5.37e-07 U	1.09e-06 U
E1668A	N	PCB-187	52663-68-0	9.95e-05	9.52e-05	7.63e-05	6e-05	3.49e-05 J	5.92e-05	0.000167
E1668A	N	PCB-188	74487-85-7	1.13e-06 U	9.56e-07 U	6.78e-07 U	1.5e-06 U	8.48e-07 U	5.04e-07 U	1.01e-06 U
E1668A	N	PCB-189	39635-31-9	3.58e-06 J	2.59e-06 U	1.52e-06 J	1.11e-06 U	8.84e-07 U	1.03e-06 U	4.54e-06 U
E1668A	N	PCB-190	41411-64-7	1.33e-05 J	1.22e-05 J	1.08e-05 J	6.95e-06 J	3.32e-06 J	6.35e-06 U	2.39e-05 J
E1668A	N	PCB-191	74472-50-7	2.6e-06 J	2.37e-06 J	2.82e-06 J	1.57e-06 U	8.99e-07 U	5.1e-07 U	5.13e-06 J
E1668A	N	PCB-192	74472-51-8	1.3e-06 U	1.11e-06 U	7.82e-07 U	1.75e-06 U	1e-06 U	5.7e-07 U	1.15e-06 U
E1668A	N	PCB-194	35694-08-7	4.6e-05	4.02e-05	3.2e-05 J	1.92e-05 J	1.51e-05 J	2.47e-05 J	7.98e-05
E1668A	N	PCB-195	52663-78-2	1.57e-05 J	1.6e-05 J	1.2e-05 J	8.42e-06 J	4.94e-06 J	8.22e-06 J	2.65e-05 J
E1668A	N	PCB-196	42740-50-1	2.08e-05 J	2.09e-05 J	1.6e-05 J	9.76e-06 J	4.31e-06 J	1.1e-05 J	4.03e-05
E1668A	N	PCB-197	33091-17-7	9.36e-07 J	1.13e-06 U	1.2e-06 J	1.49e-06 U	9.69e-07 U	8.33e-07 U	1.94e-06 J
E1668A	N	PCB-198/199	PCB-198/199	5.66e-05	5.65e-05	3.86e-05 J	3.24e-05 J	1.72e-05 J	3.11e-05 J	0.000105
E1668A	N	PCB-200	52663-73-7	4.32e-06 J	3.89e-06 J	3.55e-06 J	2.46e-06 J	9.51e-07 U	1.7e-06 J	6.89e-06 J
E1668A	N	PCB-201	40186-71-8	4.6e-06 J	4.7e-06 U	4.39e-06 J	1.41e-06 U	2.1e-06 J	2.6e-06 U	1.22e-05 J
E1668A	N	PCB-202	2136-99-4	1.41e-05 J	1.3e-05 J	9.98e-06 J	6.02e-06 J	5.52e-06 J	8.6e-06 J	2.44e-05 J
E1668A	N	PCB-203	52663-76-0	3.14e-05 J	3.41e-05 J	2.32e-05 J	2.05e-05 J	8.75e-06 J	1.88e-05 J	6.52e-05
E1668A	N	PCB-204	74472-52-9	1.03e-06 U	1.17e-06 U	7.47e-07 U	1.55e-06 U	1.01e-06 U	5.35e-07 U	1.05e-06 U
E1668A	N	PCB-205	74472-53-0	2.67e-06 J	1.17e-06 U	1.94e-06 J	1.2e-06 U	1.38e-06 U	4.85e-07 U	3.71e-06 U
E1668A	N	PCB-206	40186-72-9	3.68e-05 J	3.51e-05 J	2.17e-05 J	1.74e-05 J	1.64e-05 J	2.12e-05 U	7.61e-05
E1668A	N	PCB-207	52663-79-3	5.32e-06 J	4.01e-06 U	2.11e-06 J	2.15e-06 J	2.17e-06 J	2.44e-06 U	8.16e-06 J
E1668A	N	PCB-208	52663-77-1	1.27e-05 J	1.29e-05 J	8.65e-06 J	6.49e-06 J	5.57e-06 J	7.39e-06 J	2.57e-05 J
E1668A	N	PCB-209	2051-24-3	3.55e-05 J	3.94e-05	2.44e-05 J	1.66e-05 J	1.53e-05 J	1.81e-05 J	6.66e-05
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.0101 J	0.0101 J	0.0107 J	0.00739 J	0.00507 J	0.00763 J	0.0151 J
E1668A	N	Total PCB (a)	PCB-Total	0.0106 J	0.0105 J	0.011 J	0.00764 J	0.00525 J	0.00792 J	0.0159 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.39e-07J	9.64e-08J	8.75e-08J	1.39e-07J	9.08e-08J	5.76e-08J	1.99e-07J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
E1668A	N	PCB-1	2051-60-7	7.65e-06 J	2.65e-05 J	1.75e-05 J	1.88e-05 J	9.07e-06 J	1.58e-05 J
E1668A	N	PCB-2	2051-61-8	3.21e-07 U	3.1e-06 J	2.89e-06 J	3.77e-06 J	1.43e-06 J	1.98e-06 J
E1668A	N	PCB-3	2051-62-9	1.69e-06 J	6.75e-06 J	4.43e-06 J	3.85e-06 J	2.49e-06 J	4.53e-06 U
E1668A	N	PCB-4	13029-08-8	0.000232	0.000348	0.000307	0.000256	0.000238	0.000303 J
E1668A	N	PCB-5	16605-91-7	4.36e-06 U	2.54e-06 U	1.79e-06 J	2.29e-06 U	4.5e-06 U	2.46e-06 U
E1668A	N	PCB-6	25569-80-6	1.39e-05 U	2.81e-05 J	2.75e-05 J	2.78e-05 J	1.67e-05 U	3.25e-05 J
E1668A	N	PCB-7	33284-50-3	6.51e-06 J	6.43e-06 J	8.37e-06 J	6.18e-06 U	7.11e-06 J	1.1e-05 J
E1668A	N	PCB-8	34883-43-7	5.85e-05	8.55e-05	0.000116	9.05e-05 J	7.01e-05	9.65e-05 J
E1668A	N	PCB-9	34883-39-1	9.69e-06 J	7.42e-06 J	1.19e-05 J	8.43e-06 U	8.53e-06 J	9.32e-06 J
E1668A	N	PCB-10	33146-45-1	1.81e-05 J	4.67e-05 J	2.15e-05 J	2.76e-05 J	1.8e-05 J	3.49e-05 J
E1668A	N	PCB-11	2050-67-1	5.89e-05 U	9.46e-05	0.000132	9.28e-05	7.3e-05 U	9.75e-05
E1668A	N	PCB-12/13	PCB-12/13	1.61e-05 J	3.04e-05 J	3.13e-05 J	2.09e-05 J	1.86e-05 J	2.93e-05 J
E1668A	N	PCB-14	34883-41-5	1.02e-06 J	2.44e-06 U	1.1e-06 J	3.38e-06 U	8.37e-07 J	3.04e-06 U
E1668A	N	PCB-15	2050-68-2	9.11e-05	0.00015	0.000154	9.81e-05	9.08e-05	0.000137
E1668A	N	PCB-16	38444-78-9	0.000113	0.000153	0.000198	0.000135	0.000116	0.000219
E1668A	N	PCB-17	37680-66-3	0.000157	0.00023	0.000302	0.000186	0.000173	0.000286
E1668A	N	PCB-18/30	PCB-18/30	0.000302	0.000417	0.000533	0.000357	0.00035	0.000526
E1668A	N	PCB-19	38444-73-4	8.6e-05	0.00012	0.000133	0.000104	8.78e-05	0.000118
E1668A	N	PCB-20/28	PCB-20/28	0.000337	0.000503	0.000677	0.000382	0.000378	0.000608
E1668A	N	PCB-21/33	PCB-21/33	5.06e-05 J	8.39e-05	0.00015	8.4e-05	7.82e-05	0.000148
E1668A	N	PCB-22	38444-85-8	7.91e-05	0.000102	0.000159	9.51e-05	9.19e-05	0.000147
E1668A	N	PCB-23	55720-44-0	8.58e-07 U	7.78e-07 U	8.04e-07 U	1.54e-06 U	6.77e-07 U	7.27e-07 U
E1668A	N	PCB-24	55702-45-9	3.77e-06 J	7.11e-06 J	7.39e-06 J	5.43e-06 J	4.37e-06 J	1.66e-06 U
E1668A	N	PCB-25	55712-37-3	4.64e-05	6.37e-05	8.66e-05	5.64e-05	5.3e-05	7.07e-05
E1668A	N	PCB-26/29	PCB-26/29	7.6e-05	9.75e-05	0.000133	9.15e-05	7.9e-05	0.000113
E1668A	N	PCB-27	38444-76-7	4.47e-05	6.75e-05	7.89e-05	5.32e-05	4.33e-05	6.84e-05
E1668A	N	PCB-31	16606-02-3	0.000271	0.000376	0.00054	0.000318	0.000318	0.000477
E1668A	N	PCB-32	38444-77-8	0.000127	0.000182	0.000231	0.000153	0.00014	0.000222
E1668A	N	PCB-34	37680-68-5	2.71e-06 J	3.92e-06 J	4.92e-06 J	2.85e-06 J	3.19e-06 J	3.96e-06 J
E1668A	N	PCB-35	37680-69-6	5.28e-06 J	1.19e-05 J	2.07e-05 J	7.21e-06 J	6.29e-06 J	1.26e-05 J
E1668A	N	PCB-36	38444-87-0	8.39e-07 U	1.39e-06 J	7.48e-07 J	1.5e-06 U	6.48e-07 J	1.39e-06 J
E1668A	N	PCB-37	38444-90-5	5.75e-05	0.000107	0.000126	6.6e-05 J	6.84e-05	0.000134
E1668A	N	PCB-38	53555-66-1	8.85e-07 U	8.03e-07 U	8.29e-07 U	1.59e-06 U	6.98e-07 U	7.5e-07 U
E1668A	N	PCB-39	38444-88-1	2.82e-06 J	2.84e-06 J	3.93e-06 J	3.04e-06 J	2.79e-06 J	3.98e-06 J
E1668A	N	PCB-40/41/71	PCB-40/41/71	0.000167	0.000243	0.000315	0.000229	0.000192	3e-04
E1668A	N	PCB-42	36559-22-5	8.48e-05	0.000116	0.000161	0.000112	9.04e-05	0.000139
E1668A	N	PCB-43/73	PCB-43/73	8.28e-06 J	1.57e-05 J	1.84e-05 J	1.54e-05 J	1.12e-05 J	1.59e-05 J
E1668A	N	PCB-44/47/65	PCB-44/47/65	0.000315	0.000455	0.000642	0.000415	0.000368	0.00055
E1668A	N	PCB-45/51	PCB-45/51	0.000103	0.000136	0.000183	0.000136	0.000121	0.000158
E1668A	N	PCB-46	41464-47-5	2.73e-05 J	3.38e-05 J	4.5e-05	3.11e-05 J	3.25e-05 J	3.69e-05 J
E1668A	N	PCB-48	70362-47-9	4.79e-05	6.53e-05	9.91e-05	5.86e-05 J	5.8e-05	8.97e-05
E1668A	N	PCB-49/69	PCB-49/69	0.000213	0.000307	4e-04	0.000266	0.000233	0.000344
E1668A	N	PCB-50/53	PCB-50/53	7.33e-05	8.99e-05	0.000124	9.81e-05	8.14e-05	0.000108
E1668A	N	PCB-52	35693-99-3	0.000345	0.000475	0.000651	0.000428	0.000379	0.000573
E1668A	N	PCB-54	15968-05-5	7.24e-06 J	3.36e-06 U	1.69e-05 J	1.08e-05 J	1.16e-05 J	1.67e-05 J

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
E1668A	N	PCB-55	74338-24-2	2.41e-06 J	4.63e-06 J	9.69e-06 J	6.04e-06 J	3.88e-06 J	8.85e-06 J
E1668A	N	PCB-56	41464-43-1	8.62e-05	0.000155	0.000188	0.000114	9.75e-05	0.000187
E1668A	N	PCB-57	70424-67-8	1.98e-06 J	2.14e-06 J	3.84e-06 J	1.98e-06 U	1.2e-06 J	3.28e-06 J
E1668A	N	PCB-58	41464-49-7	1.17e-06 J	1.86e-06 J	2.32e-06 J	7.16e-06 J	1.44e-06 J	1.5e-06 J
E1668A	N	PCB-59/62/75	PCB-59/62/75	2.83e-05 J	4.14e-05	5.42e-05	3.56e-05 J	3.13e-05 J	4.71e-05
E1668A	N	PCB-60	33025-41-1	3.2e-05 J	5.7e-05	7.31e-05	4.44e-05	3.82e-05 J	7.55e-05
E1668A	N	PCB-61/70/74/76	PCB-61/70/74/76	0.000296	0.00053	0.000702	0.000415	0.000345	0.000661
E1668A	N	PCB-63	74472-34-7	8.46e-06 J	1.56e-05 J	1.96e-05 J	8.26e-06 J	1.09e-05 J	1.52e-05 J
E1668A	N	PCB-64	52663-58-8	0.000105	0.000156	0.000206	0.00014	0.000126	0.000195
E1668A	N	PCB-66	32598-10-0	0.000186	0.000343	0.000425	0.000252	0.000211	0.000401
E1668A	N	PCB-67	73575-53-8	7.06e-06 J	1.19e-05 J	1.49e-05 J	1.07e-05 J	8.71e-06 J	1.43e-05 J
E1668A	N	PCB-68	73575-52-7	9.75e-07 U	5.43e-06 U	5.13e-06 J	2.8e-06 J	2.2e-06 J	4.79e-06 U
E1668A	N	PCB-72	41464-42-0	4.3e-06 J	5.26e-06 J	7.81e-06 J	5e-06 J	4.44e-06 J	5.82e-06 J
E1668A	N	PCB-77	32598-13-3	1.52e-05 J	3.64e-05 J	6.06e-05	2.17e-05 J	2.01e-05 J	4.15e-05
E1668A	N	PCB-78	70362-49-1	1.11e-06 U	9.73e-07 U	9.82e-07 U	2.05e-06 U	8.96e-07 U	9.48e-07 U
E1668A	N	PCB-79	41464-48-6	2.6e-06 J	3.97e-06 J	5.31e-06 J	1.8e-06 U	3.44e-06 J	3.85e-06 J
E1668A	N	PCB-80	33284-52-5	9.52e-07 U	8.34e-07 U	8.41e-07 U	1.76e-06 U	7.67e-07 U	8.12e-07 U
E1668A	N	PCB-81	70362-50-4	1.01e-06 U	1.97e-06 J	1.81e-06 J	1.82e-06 U	8.17e-07 U	1.03e-06 J
E1668A	N	PCB-82	52663-62-4	2.66e-05 J	5.57e-05	6.73e-05	3.65e-05 J	3.09e-05 J	5.81e-05
E1668A	N	PCB-83/99	PCB-83/99	0.000136	0.000279	0.00032	0.000201	0.000146	0.000277
E1668A	N	PCB-84	52663-60-2	6.21e-05	0.000118	0.000146	8.97e-05	7.31e-05	0.000129
E1668A	N	PCB-85/116/117	PCB-85/116/117	3.87e-05	7.81e-05	9.31e-05	5.79e-05	4.59e-05	8.24e-05
E1668A	N	PCB-86/87/97/109/119	PCB-86/87/97/109/119/125	0.000128 J	0.000254 J	0.000314	0.000189 J	0.000146 J	0.000284 J
E1668A	N	PCB-88/91	PCB-88/91	4.44e-05	7.86e-05	8.9e-05	5.89e-05 J	4.65e-05	8.62e-05
E1668A	N	PCB-89	73575-57-2	1.81e-06 U	5.25e-06 J	8.07e-06 J	3.59e-06 U	1.54e-06 U	1.01e-05 J
E1668A	N	PCB-90/101/113	PCB-90/101/113	0.000189	0.000401	0.000475	0.000304	0.000229	0.000431
E1668A	N	PCB-92	52663-61-3	3.61e-05 J	7.89e-05	8.98e-05	5.91e-05 J	3.97e-05	8.21e-05
E1668A	N	PCB-93/100	PCB-93/100	8.93e-06 J	1.7e-05 J	4.01e-06 J	3.09e-06 J	1.28e-05 J	2.73e-05 J
E1668A	N	PCB-94	73575-55-0	1.81e-06 U	7.17e-06 J	9.1e-06 J	3.59e-06 U	5.13e-06 J	6.01e-06 J
E1668A	N	PCB-95	38379-99-6	0.000177	0.000329	0.000413	0.000302	0.000208	0.000357
E1668A	N	PCB-96	73575-54-9	1.35e-06 U	5e-06 J	9.69e-06 J	2.69e-06 U	3.38e-06 J	6.84e-06 J
E1668A	N	PCB-98/102	PCB-98/102	1.16e-05 J	2.25e-05 J	3.36e-05 J	2.42e-05 J	1.87e-05 J	2.76e-05 J
E1668A	N	PCB-103	60145-21-3	1.59e-06 U	8.65e-06 J	1.17e-05 J	3.15e-06 U	6.32e-06 J	1.15e-05 J
E1668A	N	PCB-104	56558-16-8	1.21e-06 U	1.16e-06 U	1.09e-06 U	2.4e-06 U	1.03e-06 U	3.01e-06 J
E1668A	N	PCB-105	32598-14-4	5.79e-05	0.000125	0.000151	8.07e-05	6.99e-05	0.000134
E1668A	N	PCB-106	70424-69-0	1.15e-06 U	9.14e-07 U	1e-06 U	1.73e-06 U	9.97e-07 U	9.25e-07 U
E1668A	N	PCB-107	70424-68-9	1.23e-05 J	2.23e-05 J	3e-05 J	1.61e-05 J	1.5e-05 J	2.76e-05 J
E1668A	N	PCB-108/124	PCB-108/124	7.7e-06 J	1.09e-05 J	1.7e-05 J	1.01e-05 J	7.21e-06 J	1.33e-05 J
E1668A	N	PCB-110/115	PCB-110/115	0.000222	0.000462	0.000544	0.000318	0.000261	0.000502
E1668A	N	PCB-111	39635-32-0	1.13e-06 U	1.09e-06 U	1.02e-06 U	2.25e-06 U	9.66e-07 U	1.09e-06 U
E1668A	N	PCB-112	74472-36-9	1.23e-06 U	1.18e-06 U	1.11e-06 U	2.44e-06 U	1.05e-06 U	1.18e-06 U
E1668A	N	PCB-114	74472-37-0	3.14e-06 J	6.24e-06 U	8.79e-06 J	3.77e-06 J	4.07e-06 J	8.9e-06 J
E1668A	N	PCB-118	31508-00-6	0.000144	0.000307	0.000375	0.000196	0.000168	0.000325
E1668A	N	PCB-120	68194-12-7	1.17e-06 U	1.12e-06 U	1.05e-06 U	2.32e-06 U	9.93e-07 U	1.12e-06 U
E1668A	N	PCB-121	56558-18-0	1.18e-06 U	1.13e-06 U	1.06e-06 U	2.33e-06 U	1e-06 U	1.13e-06 U

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
E1668A	N	PCB-122	76842-07-4	1.26e-06 U	6.85e-06 J	8.17e-06 J	1.89e-06 U	1.09e-06 U	4.52e-06 J
E1668A	N	PCB-123	65510-44-3	2.66e-06 J	7.1e-06 J	1.03e-05 J	4e-06 J	3.67e-06 J	6.98e-06 J
E1668A	N	PCB-126	57465-28-8	1.15e-06 U	1.59e-06 U	5.24e-06 J	1.68e-06 U	1.01e-06 U	1.47e-06 U
E1668A	N	PCB-127	39635-33-1	1.14e-06 U	9.04e-07 U	9.88e-07 U	1.71e-06 U	9.86e-07 U	9.14e-07 U
E1668A	N	PCB-128/166	PCB-128/166	2.3e-05 J	4.64e-05	6.11e-05	3.38e-05 J	2.87e-05 J	5.35e-05
E1668A	N	PCB-129/138/160/163	PCB-129/138/160/163	0.000149	0.000332	0.000405	0.000215	0.000182	0.000355
E1668A	N	PCB-130	52663-66-8	7.16e-06 J	1.8e-05 J	2.61e-05 J	1.57e-05 J	1.26e-05 J	2.24e-05 J
E1668A	N	PCB-131	61798-70-7	1.96e-06 U	1.81e-06 U	5.4e-06 J	3.79e-06 U	1.71e-06 U	4.67e-06 J
E1668A	N	PCB-132	38380-05-1	4.51e-05	0.000104	0.00013	7.11e-05	5.95e-05	0.000115
E1668A	N	PCB-133	35694-04-3	1.8e-06 U	6.43e-06 J	8.72e-06 J	3.48e-06 U	1.57e-06 U	5.03e-06 J
E1668A	N	PCB-134/143	PCB-134/143	6.98e-06 J	1.8e-05 J	2.71e-05 J	1.11e-05 J	1.13e-05 J	2.03e-05 J
E1668A	N	PCB-135/151	PCB-135/151	6.35e-05	0.000139	0.000178	9.37e-05	7.67e-05	0.000144
E1668A	N	PCB-136	38411-22-2	2.19e-05 J	4.86e-05	6.33e-05	3.29e-05 J	2.99e-05 J	5.2e-05
E1668A	N	PCB-137	35694-06-5	6.76e-06 J	1.18e-05 J	1.74e-05 J	4.88e-06 J	8.73e-06 J	1.39e-05 J
E1668A	N	PCB-139/140	PCB-139/140	1.64e-06 U	5.62e-06 J	8.49e-06 J	3.17e-06 U	1.43e-06 U	6.98e-06 J
E1668A	N	PCB-141	52712-04-6	2.29e-05 J	5.67e-05	7.48e-05	3.76e-05 J	3.27e-05 J	6.3e-05
E1668A	N	PCB-142	41411-61-4	1.89e-06 U	1.74e-06 U	1.89e-06 U	3.64e-06 U	1.65e-06 U	1.68e-06 U
E1668A	N	PCB-144	68194-14-9	6.28e-06 J	1.41e-05 J	1.87e-05 J	9.6e-06 J	7.59e-06 J	1.6e-05 J
E1668A	N	PCB-145	74472-40-5	1.44e-06 U	1.57e-06 U	1.37e-06 U	2.78e-06 U	1.25e-06 U	1.46e-06 U
E1668A	N	PCB-146	51908-16-8	2.25e-05 J	4.87e-05	6.72e-05	3.6e-05 J	2.94e-05 J	5.31e-05
E1668A	N	PCB-147/149	PCB-147/149	0.000126	0.000263	0.000335	0.000206	0.000152	0.000284
E1668A	N	PCB-148	74472-41-6	2.01e-06 U	2.19e-06 U	1.92e-06 U	3.89e-06 U	1.74e-06 U	2.05e-06 U
E1668A	N	PCB-150	68194-08-1	1.4e-06 U	1.53e-06 U	2.12e-06 J	2.71e-06 U	1.22e-06 U	1.43e-06 U
E1668A	N	PCB-152	68194-09-2	1.43e-06 U	1.56e-06 U	1.36e-06 U	2.77e-06 U	1.24e-06 U	1.46e-06 U
E1668A	N	PCB-153/168	PCB-153/168	0.000136	0.000284	0.000361	0.000198	0.000152	0.000299
E1668A	N	PCB-154	60145-22-4	5.21e-06 J	1.04e-05 J	6.93e-06 J	4.24e-06 J	5.32e-06 J	1.19e-05 J
E1668A	N	PCB-155	33979-03-2	1.36e-06 U	1.48e-06 U	3.97e-06 J	2.64e-06 U	1.18e-06 U	1.39e-06 U
E1668A	N	PCB-156/157	PCB-156/157	1.59e-05 J	3.54e-05 J	4.47e-05	1.97e-05 J	1.72e-05 J	3.85e-05 J
E1668A	N	PCB-158	74472-42-7	1.33e-05 J	3.15e-05 J	4e-05	1.78e-05 J	1.72e-05 J	3.26e-05 J
E1668A	N	PCB-159	39635-35-3	1.26e-06 U	1.16e-06 U	4.25e-06 J	2.42e-06 U	1.09e-06 U	3.72e-06 U
E1668A	N	PCB-161	74472-43-8	1.25e-06 U	1.15e-06 U	1.25e-06 U	2.41e-06 U	1.09e-06 U	1.11e-06 U
E1668A	N	PCB-162	39635-34-2	1.24e-06 U	1.14e-06 U	4.02e-06 J	2.39e-06 U	1.08e-06 U	3.22e-06 U
E1668A	N	PCB-164	74472-45-0	8.83e-06 J	2.3e-05 J	2.58e-05 J	1.67e-05 J	1.37e-05 J	2.86e-05 J
E1668A	N	PCB-165	74472-46-1	1.37e-06 U	1.27e-06 U	1.38e-06 U	2.65e-06 U	1.2e-06 U	1.22e-06 U
E1668A	N	PCB-167	52663-72-6	5.37e-06 J	1.33e-05 J	1.58e-05 J	6.3e-06 J	5.79e-06 J	1.34e-05 J
E1668A	N	PCB-169	32774-16-6	9.48e-07 U	8.86e-07 U	8.62e-07 U	1.69e-06 U	8.16e-07 U	8.51e-07 U
E1668A	N	PCB-170	35065-30-6	3.06e-05 J	8.27e-05	9.99e-05	4.41e-05	4.62e-05	8.81e-05
E1668A	N	PCB-171/173	PCB-171/173	1.09e-05 J	2.45e-05 J	3.52e-05 J	8.52e-06 J	1.26e-05 J	2.72e-05 J
E1668A	N	PCB-172	52663-74-8	5.28e-06 J	1.46e-05 J	2.18e-05 J	8.83e-06 J	6.45e-06 J	1.72e-05 J
E1668A	N	PCB-174	38411-25-5	3.5e-05 J	7.94e-05	0.000111	4.69e-05 J	4.68e-05	9.18e-05
E1668A	N	PCB-175	40186-70-7	1.35e-06 U	4.45e-06 J	3.67e-06 J	2.55e-06 U	2.33e-06 J	3.81e-06 J
E1668A	N	PCB-176	52663-65-7	3.92e-06 J	1.1e-05 J	1.42e-05 J	1.95e-06 U	5.72e-06 J	1.29e-05 J
E1668A	N	PCB-177	52663-70-4	2.1e-05 J	4.92e-05	6.59e-05	3.4e-05 J	2.58e-05 J	5.34e-05
E1668A	N	PCB-178	52663-67-9	9.19e-06 J	2.06e-05 J	2.31e-05 J	1.33e-05 J	8.98e-06 J	2.23e-05 J
E1668A	N	PCB-179	52663-64-6	1.79e-05 J	4.14e-05	5.45e-05	3.1e-05 J	2.17e-05 J	4.77e-05

Table A-18
Analytical Data for Polychlorinated Biphenyls
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNNE	N09-TNNE	N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE20-TNNE	N09-CE21-TNNE	N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3	3.1	3.3	3.1	3	3
						NB			
				N09-CE20-TNNE-AS	N09-CE21-TNNE-AS	N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N
Method	Fraction	Analyte	CAS						
E1668A	N	PCB-180/193	PCB-180/193	8.48e-05	0.00018	0.000248	0.000112	0.000104	0.000195
E1668A	N	PCB-181	74472-47-2	1.35e-06 U	1.47e-06 U	1.15e-06 U	2.55e-06 U	1.17e-06 U	1.32e-06 U
E1668A	N	PCB-182	60145-23-5	1.31e-06 U	1.43e-06 U	1.11e-06 U	2.48e-06 U	1.14e-06 U	1.28e-06 U
E1668A	N	PCB-183/185	PCB-183/185	2.71e-05 J	6.47e-05	8.42e-05	4.41e-05	3.5e-05 J	6.93e-05
E1668A	N	PCB-184	74472-48-3	1.11e-06 U	1.21e-06 U	9.47e-07 U	2.11e-06 U	9.66e-07 U	1.09e-06 U
E1668A	N	PCB-186	74472-49-4	1.08e-06 U	1.18e-06 U	9.19e-07 U	2.05e-06 U	9.38e-07 U	1.06e-06 U
E1668A	N	PCB-187	52663-68-0	5.41e-05 J	0.000124	0.000156	7.94e-05	7.15e-05	0.000133
E1668A	N	PCB-188	74487-85-7	9.85e-07 U	1.06e-06 U	8.37e-07 U	1.87e-06 U	8.4e-07 U	9.45e-07 U
E1668A	N	PCB-189	39635-31-9	9.84e-07 U	3.47e-06 U	4.8e-06 U	1.46e-06 U	1.74e-06 J	3.4e-06 U
E1668A	N	PCB-190	41411-64-7	7.86e-06 J	1.7e-05 J	2.2e-05 J	8.63e-06 J	9.56e-06 J	1.97e-05 J
E1668A	N	PCB-191	74472-50-7	1.03e-06 U	3.54e-06 J	4.94e-06 J	1.94e-06 U	1.5e-06 J	4.1e-06 J
E1668A	N	PCB-192	74472-51-8	1.15e-06 U	1.25e-06 U	9.76e-07 U	2.17e-06 U	9.95e-07 U	1.12e-06 U
E1668A	N	PCB-194	35694-08-7	2.02e-05 J	5.39e-05 J	7.06e-05	2.39e-05 J	2.91e-05 J	6.78e-05
E1668A	N	PCB-195	52663-78-2	6.77e-06 J	1.62e-05 J	2.75e-05 J	1.13e-05 J	1.09e-05 J	2.36e-05 J
E1668A	N	PCB-196	42740-50-1	1.15e-05 J	2.24e-05 J	3.07e-05 J	1.31e-05 J	1.12e-05 J	2.54e-05 J
E1668A	N	PCB-197	33091-17-7	1.15e-06 U	2.59e-06 U	1.73e-06 J	2.01e-06 U	8.81e-07 U	2.09e-06 U
E1668A	N	PCB-198/199	PCB-198/199	3.65e-05 J	6.9e-05	9.07e-05	3.7e-05 J	3.67e-05 J	7.26e-05
E1668A	N	PCB-200	52663-73-7	2.98e-06 J	5.91e-06 J	7.21e-06 J	1.98e-06 U	3.73e-06 J	5.52e-06 J
E1668A	N	PCB-201	40186-71-8	3.28e-06 J	6.43e-06 U	1.12e-05 J	1.91e-06 U	2.96e-06 J	9.8e-06 J
E1668A	N	PCB-202	2136-99-4	6.96e-06 J	1.91e-05 J	2.12e-05 J	6.07e-06 J	9.55e-06 J	1.87e-05 J
E1668A	N	PCB-203	52663-76-0	1.66e-05 J	3.98e-05	5.72e-05	2.01e-05 J	2.1e-05 J	4.28e-05
E1668A	N	PCB-204	74472-52-9	1.2e-06 U	1.14e-06 U	7.75e-07 U	2.09e-06 U	9.15e-07 U	1.11e-06 U
E1668A	N	PCB-205	74472-53-0	1.27e-06 U	1.21e-06 U	4.34e-06 U	1.7e-06 U	9.64e-07 U	3.69e-06 U
E1668A	N	PCB-206	40186-72-9	2.37e-05 J	5.6e-05	5.29e-05	2.36e-05 J	2.33e-05 J	5.43e-05
E1668A	N	PCB-207	52663-79-3	1.66e-06 U	5.19e-06 U	5.82e-06 J	1.83e-06 U	1.36e-06 U	5.96e-06 U
E1668A	N	PCB-208	52663-77-1	7.88e-06 J	2.02e-05 J	1.77e-05 J	6.19e-06 J	8.2e-06 J	2.06e-05 J
E1668A	N	PCB-209	2051-24-3	1.81e-05 J	6.5e-05	4.95e-05	2.09e-05 J	2.11e-05 J	4.69e-05
E1668A	N	Total non-DLC PCB (a)	PCB-nonDLC	0.00672 J	0.0115 J	0.0146 J	0.00898 J	0.00775 J	0.0131 J
E1668A	N	Total PCB (a)	PCB-Total	0.00697 J	0.012 J	0.0152 J	0.00932 J	0.00804 J	0.0137 J
E1668A	N	PCB TEQ (b)	KMTEQPCB	1.14e-07J	1.65e-07J	5.52e-07J	1.66e-07J	1.12e-07J	1.55e-07J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				Location Name	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBE	N02-TNBN	N02-TNBN	N02-TNBN
				Location ID	N02-CE01-TNBE	N02-CE02-TNBE	N02-CE03-TNBE	N02-CE04-TNBE	N02-CE01-TNBN	N02-CE02-TNBN	N02-CE03-TNBN
				Depth (ft)	2.69	3.26	2.94	3.01	2.95	3	3.14
				Stream Code	NB	NB	NB	NB	NB	NB	NB
				Stream Mile	2.68	2.68	2.68	2.68	3.87	3.87	3.87
				Sample ID	N02-CE01-TNBE-AS	N02-CE02-TNBE-AS	N02-CE03-TNBE-AS	N02-CE04-TNBE-AS	N02-CE01-TNBN-AS	N02-CE02-TNBN-AS	N02-CE03-TNBN-AS
				Sample Date	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				Sample Type	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS	Unit							
SW1613B	T	2,3,7,8-TCDD	1746-01-6	ug/l	1.29e-06 J	8.9e-07 J	6.69e-07 J	7.55e-07 J	5.31e-06 J	5.42e-07 J	1.54e-06 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	ug/l	4.02e-07 U	3.85e-07 U	3.6e-07 U	4.61e-07 U	5.57e-07 J	4.27e-07 U	1.57e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	ug/l	3.8e-07 U	4.36e-07 U	3.8e-07 U	4.96e-07 U	4.45e-07 U	5.17e-07 U	2.02e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	ug/l	3.83e-07 U	4.24e-07 U	3.87e-07 U	4.88e-07 U	5.56e-07 J	5.25e-07 U	2.14e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	ug/l	9.12e-07 J	5.8e-07 U	1.06e-06 J	9.48e-07 U	1.03e-06 J	1.38e-06 U	2.67e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	ug/l	5.92e-06 J	4.55e-06 J	4.68e-06 J	6.12e-06 U	7.25e-06 U	6.71e-06 U	7.45e-06 U
SW1613B	T	OCDD	3268-87-9	ug/l	7.78e-05	5.25e-05	5.1e-05	5.94e-05	0.000104	7.53e-05	4.44e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	ug/l	2.93e-07 U	2.44e-07 U	2.59e-07 U	3.98e-07 U	4.08e-07 J	3.59e-07 U	1.1e-06 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	ug/l	3.42e-07 U	2.52e-07 U	2.63e-07 U	3.79e-07 U	3.74e-07 U	3.09e-07 J	1.39e-06 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	ug/l	3e-07 U	2.42e-07 U	2.33e-07 U	3.6e-07 U	5.95e-07 J	4.92e-07 J	1.22e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	ug/l	3.34e-06 J	1.2e-06 J	9.95e-07 J	1.35e-06 J	2.59e-06 J	1.43e-06 J	1.48e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	ug/l	6.55e-07 J	2.93e-07 U	2.55e-07 U	2.5e-07 U	6.51e-07 J	2.96e-07 U	1.34e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	ug/l	3.75e-07 U	5.08e-07 U	4.2e-07 U	3.83e-07 U	4.91e-07 U	4.95e-07 J	2.54e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	ug/l	2.67e-07 U	3.44e-07 U	2.72e-07 U	2.78e-07 U	5.15e-07 J	4.72e-07 J	1.56e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	ug/l	1.34e-05 J	5.81e-06 J	4.74e-06 J	6.1e-06 J	1.1e-05 J	5.74e-06 U	4.88e-06 U
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	ug/l	4.45e-07 U	7.17e-07 U	4.95e-07 U	5.35e-07 U	6.48e-07 U	7.02e-07 J	2.9e-06 U
SW1613B	T	OCDF	39001-02-0	ug/l	2.8e-05 J	9.53e-06 J	7.3e-06 J	1.05e-05 J	2e-05 J	1.16e-05 J	9.93e-06 U
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	ug/l	2.14e-06J	1.22e-06J	1.06e-06J	1.07e-06J	6.85e-06J	1.13e-06J	Not calculated

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N02-TNBN	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNBS	N02-TNNE	N02-TNNE	N02-TNNE
				N02-CE04-TNBN	N02-CE01-TNBS	N02-CE02-TNBS	N02-CE03-TNBS	N02-CE04-TNBS	N02-CE01-TNNE	N02-CE02-TNNE	N02-CE03-TNNE
				3.3	2.98	2.91	3.15	3.09	2.07	2.77	2.78
				NB	NB	NB	NB	NB	NB	NB	NB
				3.87	0.97	0.99	0.99	0.97	4.57	4.57	4.57
				N02-CE04-TNBN-AS	N02-CE01-TNBS-AS	N02-CE02-TNBS-AS	N02-CE03-TNBS-AS	N02-CE04-TNBS-AS	N02-CE01-TNNE-AS	N02-CE02-TNNE-AS	N02-CE03-TNNE-AS
				08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011	08/18/2011
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	2.01e-06 J	6.59e-07 J	6.73e-07 U	5.56e-07 U	5.53e-07 J	2.28e-06 J	5.92e-07 U	1.79e-06 J
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	7.46e-07 U	6.47e-07 U	6.06e-07 U	4.36e-07 U	3.85e-07 U	5.09e-07 U	6.89e-07 U	6.05e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	8.21e-07 U	5.91e-07 U	6.08e-07 U	5.91e-07 U	4.16e-07 U	5.55e-07 U	6.59e-07 U	5.06e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	8.07e-07 U	5.88e-07 U	5.85e-07 U	5.68e-07 U	4.29e-07 U	5.26e-07 U	6.43e-07 U	4.61e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.04e-06 U	1.12e-06 U	7.69e-07 U	1.01e-06 U	1.03e-06 U	1.25e-06 J	7.82e-07 U	5.89e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	7.08e-06 U	4.59e-06 J	3.42e-06 J	3.97e-06 J	3.62e-06 J	1.06e-05 J	6.06e-06 J	6.1e-06 J
SW1613B	T	OCDD	3268-87-9	9.58e-05	5.93e-05	3.89e-05 J	4.78e-05 J	3.44e-05 J	0.000127	8.44e-05	7.41e-05
SW1613B	T	2,3,7,8-TCDF	51207-31-9	5.49e-07 U	4.29e-07 U	4.36e-07 U	3.46e-07 U	3.28e-07 U	5.8e-07 J	5.73e-07 U	4.34e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	6.42e-07 U	4.45e-07 U	6.14e-07 U	3.97e-07 U	3.05e-07 U	4.88e-07 U	6.29e-07 U	4.44e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	5.79e-07 U	4.57e-07 J	5.16e-07 U	3.5e-07 U	2.79e-07 U	6.73e-07 J	5.54e-07 U	3.93e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	2.33e-06 J	1.11e-06 J	2.97e-07 U	5.61e-07 J	6.78e-07 J	2.65e-06 J	1.79e-06 J	1.58e-06 J
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	4.92e-07 U	3.91e-07 U	3.01e-07 U	2.57e-07 U	2.66e-07 U	7.86e-07 J	4.48e-07 U	3.7e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	7.25e-07 U	6.48e-07 U	4.49e-07 U	4.43e-07 U	4.17e-07 U	4.21e-07 U	6.78e-07 U	5.02e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	5.14e-07 U	4.34e-07 U	3.08e-07 U	2.86e-07 U	2.97e-07 U	5.57e-07 J	4.06e-07 U	3.8e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	9.96e-06 J	4.95e-06 J	2.97e-06 J	2.97e-06 J	3.47e-06 J	1.23e-05 J	6.99e-06 J	7.39e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	9.34e-07 U	8.62e-07 U	8.98e-07 U	6.44e-07 U	3.75e-07 U	6.31e-07 U	8.87e-07 U	9.91e-07 U
SW1613B	T	OCDF	39001-02-0	1.8e-05 J	8.16e-06 J	5.02e-06 J	5.77e-06 J	6.17e-06 J	2.16e-05 J	1.34e-05 J	1.31e-05 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	2.54e-06J	1.15e-06J	8.62e-07J	8.11e-07J	7.98e-07J	3.47e-06J	1.18e-06J	2.22e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N02-TNNE	N03-TNBE	N03-TNBE	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBN	N03-TNBS
				N02-CE04-TNNE	N03-CE02-TNBE	N03-CE03-TNBE	N03-CE01-TNBN	N03-CE02-TNBN	N03-CE03-TNBN	N03-CE04-TNBN	N03-CE01-TNBS
				3.28	3.14	3.04	2.94	3.09	3.02	2.99	2.96
				NB	NB	NB	NB	NB	NB	NB	NB
				4.57	2.68	2.68	3.87	3.87	3.87	3.87	0.97
				N02-CE04-TNNE-AS	N03-CE02-TNBE-AS	N03-CE03-TNBE-AS	N03-CE01-TNBN-AS	N03-CE02-TNBN-AS	N03-CE03-TNBN-AS	N03-CE04-TNBN-AS	N03-CE01-TNBS-AS
				08/18/2011	02/23/2012	02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/23/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.28e-06 J	1.87e-06 U	1.66e-06 U	2.31e-06 U	1.69e-06 J	2.41e-07 U	2.09e-06 J	8.79e-07 J
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	4.95e-07 U	1.94e-06 U	1.72e-06 U	1.3e-06 U	1.36e-06 U	1.12e-06 U	1.19e-06 U	8.31e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	5.85e-07 U	1.63e-06 U	1.86e-06 U	1.05e-06 U	1.31e-06 U	1.14e-06 U	1.26e-06 U	8.34e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	5.83e-07 U	1.62e-06 U	1.95e-06 U	1.08e-06 U	1.44e-06 U	1.13e-06 U	1.25e-06 U	8.03e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.1e-06 J	1.79e-06 U	2.06e-06 U	1.11e-06 U	1.41e-06 U	1.1e-06 U	1.23e-06 U	8.74e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	8.38e-06 J	2.32e-06 U	2.37e-06 U	7.81e-06 J	3.86e-06 J	2.51e-06 J	7.25e-06 J	3.06e-06 J
SW1613B	T	OCDD	3268-87-9	1e-04	1.05e-05 U	1.29e-05 U	7.84e-05	6e-05	3.31e-05 J	8.01e-05	3e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	3.96e-07 J	1.64e-06 U	1.85e-06 U	8.25e-07 U	8.09e-07 U	7.47e-07 U	9.13e-07 U	6.08e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	4e-07 U	1.72e-06 U	1.52e-06 U	8.56e-07 U	9.68e-07 U	6.88e-07 U	8.78e-07 U	7.88e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	4.55e-07 J	1.51e-06 U	1.43e-06 U	8.15e-07 U	8.43e-07 U	6.28e-07 U	7.58e-07 U	7.31e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	2.43e-06 J	1.26e-06 U	1.02e-06 U	2.03e-06 J	1.02e-06 J	9.22e-07 U	1.68e-06 J	6.52e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	5.06e-07 J	1.16e-06 U	9.75e-07 U	6.66e-07 J	8.7e-07 U	8.47e-07 U	8.22e-07 U	6.54e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	6.3e-07 U	1.4e-06 U	1.32e-06 U	9.18e-07 U	1.05e-06 U	1.03e-06 U	1.01e-06 U	7.77e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	4.35e-07 U	1.13e-06 U	1.04e-06 U	5.12e-07 J	6.63e-07 U	8.55e-07 U	8.63e-07 U	6.5e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	1.13e-05 J	1.29e-06 U	1.09e-06 U	1.08e-05 J	4.59e-06 J	2.34e-06 J	6.44e-06 J	2.74e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	9.43e-07 U	2.03e-06 U	1.74e-06 U	1.16e-06 U	1.12e-06 U	9.22e-07 U	1.09e-06 U	8.41e-07 U
SW1613B	T	OCDF	39001-02-0	1.91e-05 J	4.59e-06 U	6.13e-06 U	1.33e-05 J	7.35e-06 J	4.23e-06 J	8.62e-06 J	4.99e-06 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	2.25e-06J	Not calculated	Not calculated	3.14e-06J	2.13e-06J	1.29e-06J	2.72e-06J	1.08e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNBS	N03-TNBS	N03-TNBS	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE	N03-TNNE
				N03-CE02-TNBS	N03-CE03-TNBS	N03-CE04-TNBS	N03-CE01-TNBE	N03-CE01-TNNE	N03-CE02-TNNE	N03-CE03-TNNE	N03-CE04-TNNE
				3.05	3.1	3.04	2.63	1.1	2.75	3.1	2.9
				NB	NB	NB	NB	NB	NB	NB	NB
				0.98	0.98	0.98	2.68	4.57	4.57	4.57	4.57
				N03-CE02-TNBS-AS	N03-CE03-TNBS-AS	N03-CE04-TNBS-AS	N03-CE01-TNBE-AS	N03-CE01-TNNE-AS	N03-CE02-TNNE-AS	N03-CE03-TNNE-AS	N03-CE04-TNNE-AS
				02/23/2012	02/23/2012	02/23/2012	02/23/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	3.13e-07 J	9.78e-07 U	4.3e-07 J	9.13e-07 J	2e-06 U	1.48e-06 J	8.09e-07 J	1.44e-06 J
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	8.5e-07 U	9.66e-07 U	9.24e-07 U	6.84e-07 U	1.37e-06 U	1.71e-06 U	1.3e-06 U	5.91e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	6.57e-07 U	9.21e-07 U	7.99e-07 U	6.59e-07 U	1.41e-06 U	1.68e-06 U	1.03e-06 U	6.12e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	6.56e-07 U	8.89e-07 U	8.93e-07 U	7.42e-07 U	1.48e-06 U	1.75e-06 U	1.15e-06 U	6.31e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.02e-06 U	9.6e-07 U	9.5e-07 J	7.08e-07 U	1.64e-06 U	1.8e-06 U	1.02e-06 U	1.11e-06 J
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	2.59e-06 U	2.4e-06 U	1.68e-06 J	4.04e-06 J	6.44e-06 J	5.83e-06 J	3.32e-06 J	6.62e-06 U
SW1613B	T	OCDD	3268-87-9	2.65e-05 J	1.74e-05 U	2.62e-05 J	4.19e-05 J	9.4e-05	6.86e-05	3.65e-05 J	7.49e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	5.37e-07 U	8.86e-07 U	6.11e-07 U	5.18e-07 U	1.19e-06 U	1.06e-06 U	8.12e-07 U	5.76e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	5.68e-07 U	8.56e-07 U	6.71e-07 U	5e-07 U	1.16e-06 U	1.18e-06 U	8.82e-07 U	5.27e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	5.06e-07 U	8.02e-07 U	5.72e-07 U	4.52e-07 U	1.04e-06 U	1.04e-06 U	7.82e-07 U	4.65e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	5.88e-07 U	6.12e-07 U	4.51e-07 J	8.35e-07 J	2.44e-06 J	1.75e-06 J	1.18e-06 J	1.23e-06 J
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	5.64e-07 U	5.62e-07 U	5.63e-07 U	5.1e-07 U	3.25e-07 J	8.62e-07 U	7.64e-07 U	3.61e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	6.75e-07 U	7.39e-07 U	7.01e-07 U	6.24e-07 U	1.49e-06 U	1.1e-06 U	8.66e-07 U	4.81e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	6.04e-07 U	5.94e-07 U	5.87e-07 U	1.49e-07 J	1.27e-06 U	6.6e-07 U	7.32e-07 U	4.64e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	8.24e-07 J	1.19e-06 U	1.48e-06 J	3.45e-06 J	8.83e-06 J	5.25e-06 J	3.28e-06 J	4.66e-06 U
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	8.7e-07 U	9.89e-07 U	1.05e-06 U	6.94e-07 U	1.27e-06 U	1.16e-06 U	1.19e-06 U	7.06e-07 U
SW1613B	T	OCDF	39001-02-0	2.93e-06 J	3.03e-06 U	2.78e-06 J	4.89e-06 J	1.33e-05 J	8.87e-06 J	4.99e-06 J	8.43e-06 U
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	1.25e-06J	Not calculated	1.65e-06J	1.25e-06J	2.79e-06J	3.73e-06J	2.45e-06J	1.81e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N03-TNNW	N03-TNNW	N03-TNNW	N03-TNNW	N04-TNBE	N04-TNBE	N04-TNBE	N04-TNBE
				N03-CE01-TNNW	N03-CE02-TNNW	N03-CE03-TNNW	N03-CE04-TNNW	N04-CE11-TNBE	N04-CE12-TNBE	N04-CE20-TNBE	N04-CE21-TNBE
				2.6	2.7	3.14	2.97	3	3	3	3
				NB	NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	3.77	3.77				
				N03-CE01-TNNW-AS	N03-CE02-TNNW-AS	N03-CE03-TNNW-AS	N03-CE04-TNNW-AS	N04-CE11-TNBE-AS	N04-CE12-TNBE-AS	N04-CE20-TNBE-AS	N04-CE21-TNBE-AS
				02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/27/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.82e-06 J	1.64e-06 J	1.52e-06 U	4.69e-06 J	1.19e-06 U	1.02e-06 U	1.25e-06 J	1.37e-06 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.05e-06 U	1.39e-06 U	1.69e-06 U	7.06e-07 J	9.67e-07 U	7.58e-07 U	9.95e-07 U	1.3e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	8.36e-07 U	1.18e-06 U	1.42e-06 U	6.69e-07 U	1.03e-06 U	1.08e-06 U	1.12e-06 U	1.27e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	8.25e-07 U	1.27e-06 U	1.38e-06 U	7.65e-07 J	1.04e-06 U	1.09e-06 U	1.06e-06 U	1.33e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	9.18e-07 U	1.22e-06 U	1.51e-06 U	1.39e-06 J	1.08e-06 U	1.18e-06 U	1.16e-06 U	1.33e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	7.39e-06 U	7.09e-06 J	1.05e-05 U	1.08e-05 U	3.6e-06 J	3.93e-06 J	3.51e-06 J	3.22e-06 U
SW1613B	T	OCDD	3268-87-9	6.47e-05 J	8e-05	7.49e-05 J	0.000109	4.07e-05 U	4.3e-05 J	4.31e-05 J	3.83e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	8.28e-07 U	8.39e-07 U	1.48e-06 U	5.82e-07 U	8.14e-07 U	8.26e-07 U	8.54e-07 U	1.35e-06 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	9.29e-07 U	8.72e-07 U	1.24e-06 U	4.91e-07 U	6.29e-07 U	7.09e-07 U	7.49e-07 U	9.86e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	8.5e-07 U	7.45e-07 U	1.12e-06 U	4.48e-07 U	5.91e-07 U	6.28e-07 U	7.58e-07 U	9.44e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	1.67e-06 J	1.16e-06 J	1.72e-06 J	2.21e-06 J	5.68e-07 U	6.78e-07 U	7.4e-07 U	9.06e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	6.47e-07 U	8.57e-07 U	1.88e-06 J	9.42e-07 J	6e-07 U	6.16e-07 U	7e-07 U	8.44e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	8.59e-07 U	9.53e-07 U	1.05e-06 U	5.37e-07 U	7.21e-07 U	6.72e-07 U	8.39e-07 U	1.03e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	6.55e-07 U	8.22e-07 U	3.61e-06 U	4.18e-07 U	6.01e-07 U	6.04e-07 U	7.27e-07 U	8.85e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	7.52e-06 U	6.93e-06 J	1.39e-05 U	9.91e-06 U	1.48e-06 J	2.89e-06 J	3.26e-06 J	2.17e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	1.14e-06 U	1.28e-06 U	1.45e-06 J	8.28e-07 J	8.47e-07 U	7.98e-07 U	9.43e-07 U	1.06e-06 U
SW1613B	T	OCDF	39001-02-0	9.96e-06 U	1.12e-05 J	1.52e-05 U	1.52e-05 U	2.46e-06 J	4e-06 J	4.81e-06 J	4.01e-06 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	2.14e-06J	2.25e-06J	2.15e-06J	6.11e-06J	1.34e-06J	1.26e-06J	1.49e-06J	1.51e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N04-TNBN	N04-TNBN	N04-TNBN	N04-TNBN	N04-TNBS	N04-TNBS	N04-TNBS	N04-TNBS
				N04-CE11-TNBN	N04-CE12-TNBN	N04-CE20-TNBN	N04-CE21-TNBN	N04-CE11-TNBS	N04-CE12-TNBS	N04-CE20-TNBS	N04-CE21-TNBS
				3.2	3.13	2.76	2.95	3	3	3	3
				NB	NB	NB	NB	NB	NB	NB	NB
				N04-CE11-TNBN-AS	N04-CE12-TNBN-AS	N04-CE20-TNBN-AS	N04-CE21-TNBN-AS	N04-CE11-TNBS-AS	N04-CE12-TNBS-AS	N04-CE20-TNBS-AS	N04-CE21-TNBS-BS
				02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/13/2013	02/27/2013	02/28/2013	03/04/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.32e-06 J	8.43e-07 U	9.58e-07 U	9.63e-07 U	1.06e-06 U	8.23e-07 U	1.04e-06 U	9.64e-07 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.29e-06 U	9.22e-07 U	9.07e-07 U	9.93e-07 U	9.04e-07 U	6.23e-07 U	1.09e-06 U	9.76e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.47e-06 U	7.34e-07 U	8.61e-07 U	1.04e-06 U	1.18e-06 U	5.63e-07 U	1.13e-06 U	1.09e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.41e-06 U	7.63e-07 U	8.71e-07 U	1.1e-06 U	1.2e-06 U	5.82e-07 U	1.09e-06 U	1.1e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.49e-06 U	8.93e-07 J	8.81e-07 U	1.07e-06 U	1.33e-06 U	6.24e-07 U	1.12e-06 U	1.19e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	5.78e-06 J	3.03e-06 J	6.63e-06 J	3.09e-06 U	4.05e-06 J	2.99e-06 J	3.98e-06 J	7.12e-06 U
SW1613B	T	OCDD	3268-87-9	5.36e-05	3.07e-05 J	7.21e-05	2.85e-05 U	3.6e-05 U	2.88e-05 J	4.08e-05 J	7.02e-05
SW1613B	T	2,3,7,8-TCDF	51207-31-9	8.64e-07 U	6.42e-07 U	7.18e-07 U	7.34e-07 U	7.51e-07 U	4.83e-07 U	9.57e-07 U	7.1e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	6.84e-07 U	5.16e-07 U	6.1e-07 U	7.73e-07 U	7.47e-07 U	4.33e-07 U	7.31e-07 U	7.83e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	6.38e-07 U	5.01e-07 U	5.28e-07 U	6.94e-07 U	6.89e-07 U	3.92e-07 U	6.89e-07 U	7.28e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	1.18e-06 J	6.36e-07 U	1.19e-06 J	6.64e-07 U	7.23e-07 J	3.98e-07 U	6.47e-07 U	6.08e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	9.19e-07 U	6.09e-07 U	5.3e-07 U	6.41e-07 U	6.51e-07 U	4e-07 U	6.56e-07 U	6.08e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	1.04e-06 U	6.7e-07 U	6.13e-07 U	7.59e-07 U	7.51e-07 U	4.99e-07 U	8.19e-07 U	7.51e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	8.4e-07 U	5.84e-07 U	5.52e-07 U	6.41e-07 U	6.65e-07 U	4.26e-07 U	6.96e-07 U	6.23e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	6.23e-06 J	2.22e-06 J	5.37e-06 J	2.4e-06 J	1.58e-06 J	1.45e-06 J	2.99e-06 J	2.64e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	8.39e-07 U	7.42e-07 U	6.4e-07 U	7.08e-07 U	8.2e-07 U	4.56e-07 U	6.99e-07 U	9.93e-07 U
SW1613B	T	OCDF	39001-02-0	1.11e-05 J	3.57e-06 J	8.29e-06 J	4.12e-06 J	3.64e-06 J	2.24e-06 J	3.51e-06 J	3.77e-06 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	1.86e-06J	1.19e-06J	1.4e-06J	Not calculated	1.34e-06J	9.77e-07J	1.33e-06J	1.16e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N04-TNNE	N04-TNNE	N04-TNNE	N04-TNNW	N04-TNNW	N04-TNNW	N04-TNNW	N05-TNBE
				N04-CE12-TNNE	N04-CE20-TNNE	N04-CE21-TNNE	N04-CE11-TNNW	N04-CE12-TNNW	N04-CE20-TNNW	N04-CE21-TNNW	N05-CE01-TNBE
				3.26	1.75	2.65	2.97	3.01	2.95	2.8	2.32
				NB	NB	NB	NB	NB	NB	NB	NB
											2.68
				N04-CE12-TNNE-AS	N04-CE20-TNNE-BS	N04-CE21-TNNE-BS	N04-CE11-TNNW-AS	N04-CE12-TNNW-AS	N04-CE20-TNNW-AS	N04-CE21-TNNW-AS	N05-CE01-TNBE-AS
				02/27/2013	02/28/2013	03/04/2013	02/27/2013	02/27/2013	02/28/2013	03/04/2013	03/29/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.28e-06 U	1.1e-06 U	9.02e-07 U	8.15e-07 U	7.53e-07 U	3.05e-06 J	1.22e-06 U	2.1e-06 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	9.65e-07 U	1.09e-06 U	1.01e-06 U	6.15e-07 U	7.64e-07 U	6.96e-07 U	1.32e-06 U	1.87e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	9.23e-07 U	9.08e-07 U	1e-06 U	7.18e-07 U	8.73e-07 U	8.33e-07 U	1.43e-06 U	1.79e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	9.05e-07 U	9.35e-07 U	1.11e-06 U	7.15e-07 U	9.9e-07 U	8.6e-07 U	1.46e-06 U	1.78e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	9.26e-07 U	8.79e-07 U	1.02e-06 U	7.33e-07 U	1.03e-06 U	9.54e-07 U	1.56e-06 U	1.91e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	2.96e-06 J	6.79e-06 J	3.13e-06 U	3.19e-06 J	2.15e-06 J	1.62e-05 J	4.68e-06 U	2.43e-06 U
SW1613B	T	OCDD	3268-87-9	4.58e-05 J	6.56e-05	3.72e-05 J	3.28e-05 J	2.07e-05 J	0.000153	4.88e-05 J	1.94e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	9.1e-07 U	8.67e-07 U	7.68e-07 U	6.48e-07 U	6.04e-07 U	7.59e-07 U	1.18e-06 U	1.56e-06 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	8.05e-07 U	7.2e-07 U	9.37e-07 U	5.38e-07 U	5.02e-07 U	5.61e-07 U	1.02e-06 U	1.28e-06 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	7.29e-07 U	7.26e-07 U	8.36e-07 U	5.18e-07 U	5e-07 U	9.92e-07 J	9.32e-07 U	1.23e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	9.17e-07 J	1.57e-06 J	9.16e-07 U	5.14e-07 U	4.67e-07 U	3.32e-06 J	9.6e-07 U	1.23e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	6.23e-07 U	7.03e-07 U	8.5e-07 U	5.17e-07 U	4.41e-07 U	7.52e-07 J	9.96e-07 U	1.2e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	7.23e-07 U	7.93e-07 U	1.05e-06 U	5.88e-07 U	4.96e-07 U	6.04e-07 U	1.07e-06 U	1.54e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	6.88e-07 U	6.6e-07 U	9e-07 U	4.99e-07 U	4.4e-07 U	5.18e-07 U	1.03e-06 U	1.23e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	2.75e-06 J	6.75e-06 J	1.92e-06 J	3.07e-06 J	1.04e-06 J	1.57e-05 J	2.91e-06 J	2.06e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	6.83e-07 U	6.72e-07 U	1.04e-06 U	5.57e-07 U	7.05e-07 U	5.77e-07 U	1.21e-06 U	1.46e-06 U
SW1613B	T	OCDF	39001-02-0	4.66e-06 J	1.06e-05 J	3.62e-06 J	4.48e-06 J	2.51e-06 J	2.84e-05 J	4.86e-06 J	3.29e-06 U
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	1.6e-06J	1.66e-06J	1.14e-06J	1.03e-06J	8.91e-07J	4.36e-06J	1.51e-06J	Not calculated

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBE	N05-TNBE	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBN	N05-TNBS	N05-TNBS
				N05-CE02-TNBE	N05-CE03-TNBE	N05-CE01-TNBN	N05-CE02-TNBN	N05-CE03-TNBN	N05-CE04-TNBN	N05-CE01-TNBS	N05-CE02-TNBS
				3.46	3.34	3.12	3.13	3.02	3.18	2.91	3.11
				NB	NB	NB	NB	NB	NB	NB	NB
				2.68	2.68	3.87	3.87	3.87	3.87	0.98	0.98
				N05-CE02-TNBE-AS	N05-CE03-TNBE-AS	N05-CE01-TNBN-AS	N05-CE02-TNBN-AS	N05-CE03-TNBN-AS	N05-CE04-TNBN-AS	N05-CE01-TNBS-AS	N05-CE02-TNBS-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/29/2012	03/29/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	2.81e-06 U	4.92e-07 J	7.74e-07 J	1.76e-06 U	1.35e-06 U	2.29e-06 J	1.95e-06 U	1.83e-06 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	3.29e-06 U	1.54e-06 U	1.71e-06 U	2.28e-06 U	1.37e-06 U	1.16e-06 U	1.99e-06 U	1.91e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	2.28e-06 U	1.63e-06 U	1.52e-06 U	1.99e-06 U	1.52e-06 U	1.17e-06 U	1.84e-06 U	2.04e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	2.45e-06 U	1.48e-06 U	1.5e-06 U	2.03e-06 U	1.41e-06 U	1.16e-06 U	1.62e-06 U	2.28e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	2.48e-06 U	1.65e-06 U	1.72e-06 U	2.15e-06 U	1.43e-06 U	1.26e-06 U	1.84e-06 U	2.39e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	2.07e-06 J	1.13e-06 J	3.05e-06 J	1.58e-06 J	2.3e-06 J	4e-06 J	1.71e-06 U	1.48e-06 J
SW1613B	T	OCDD	3268-87-9	3.18e-05 J	2.07e-05 J	3.86e-05 J	2.27e-05 J	2.21e-05 J	4.17e-05 J	1.67e-05 J	1.78e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	1.95e-06 U	1.1e-06 U	1.11e-06 U	1.53e-06 U	1.02e-06 U	8.6e-07 U	1.84e-06 U	1.14e-06 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	1.9e-06 U	1.4e-06 U	1.2e-06 U	1.45e-06 U	1.11e-06 U	7.66e-07 U	1.58e-06 U	1.52e-06 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	1.92e-06 U	1.28e-06 U	1.12e-06 U	1.28e-06 U	1.01e-06 U	7.29e-07 U	1.42e-06 U	1.35e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	2.13e-06 U	9.31e-07 U	4.89e-06 J	1.45e-06 U	9.2e-07 U	1.13e-06 J	1.42e-06 U	1.46e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	2.15e-06 U	8.82e-07 U	1.08e-06 U	1.32e-06 U	8.32e-07 U	7.26e-07 U	1.38e-06 U	1.27e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	2.56e-06 U	1.06e-06 U	1.4e-06 U	1.76e-06 U	9.99e-07 U	9.11e-07 U	1.6e-06 U	1.62e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	2.09e-06 U	9.68e-07 U	1.17e-06 U	1.37e-06 U	9.28e-07 U	8.19e-07 U	1.36e-06 U	1.5e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	2.68e-06 J	1.46e-06 J	1.88e-05 J	2.35e-06 J	1.24e-06 J	6.9e-06 J	1.53e-06 J	1.23e-06 U
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	3.19e-06 U	1.56e-06 U	1.79e-06 U	1.56e-06 U	1.44e-06 U	1.11e-06 U	1.46e-06 U	1.89e-06 U
SW1613B	T	OCDF	39001-02-0	3.99e-06 J	2.71e-06 J	2.88e-05 J	3.07e-06 J	2.58e-06 J	1.21e-05 J	2.1e-06 J	2.22e-06 U
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	3.52e-06J	2.16e-06J	3.37e-06J	2.44e-06J	1.53e-06J	2.78e-06J	2.09e-06J	Not calculated

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N05-TNBS	N05-TNBS	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNE	N05-TNNW	N05-TNNW
				N05-CE03-TNBS	N05-CE04-TNBS	N05-CE01-TNNE	N05-CE02-TNNE	N05-CE03-TNNE	N05-CE04-TNNE	N05-CE01-TNNW	N05-CE02-TNNW
				3.07	2.93	1.28	2.94	2.81	2.58	2.5	2.92
				NB	NB	NB	NB	NB	NB	NB	NB
				0.97	0.97	4.57	4.57	4.57	4.57	3.77	3.77
				N05-CE03-TNBS-AS	N05-CE04-TNBS-AS	N05-CE01-TNNE-AS	N05-CE02-TNNE-AS	N05-CE03-TNNE-AS	N05-CE04-TNNE-AS	N05-CE01-TNNW-AS	N05-CE02-TNNW-AS
				03/29/2012	03/29/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012	03/28/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.61e-06 U	1.6e-06 U	1.17e-06 J	9.86e-07 U	1.37e-06 U	2.19e-07 J	2.28e-06 J	1.01e-06 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	2e-06 U	1.67e-06 U	1.31e-06 U	1.27e-06 U	1.56e-06 U	1.77e-06 U	2.32e-06 U	1.05e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.69e-06 U	1.91e-06 U	1.52e-06 U	1.07e-06 U	1.26e-06 U	1.7e-06 U	1.39e-06 U	9.92e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.76e-06 U	1.84e-06 U	1.72e-06 U	1.01e-06 U	1.38e-06 U	1.67e-06 U	1.45e-06 U	9.69e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.62e-06 U	2e-06 U	1.6e-06 U	1.18e-06 J	1.35e-06 U	1.74e-06 U	1.55e-06 U	1.02e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	2.13e-06 U	1.95e-06 J	3.11e-06 J	2.35e-06 J	1.83e-06 U	3.12e-06 J	1.77e-06 J	2.87e-06 J
SW1613B	T	OCDD	3268-87-9	1.59e-05 J	1.51e-05 J	3.47e-05 J	2.65e-05 J	1.65e-05 J	4.11e-05 J	3.44e-05 J	2.63e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	1.02e-06 U	1.4e-06 U	1.01e-06 U	6.72e-07 U	1.1e-06 U	1.23e-06 U	1.34e-06 U	7.86e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	9.94e-07 U	1.4e-06 U	1.32e-06 U	8.03e-07 U	1.37e-06 U	1.32e-06 U	1.38e-06 U	8.39e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	9.27e-07 U	1.42e-06 U	1.16e-06 U	7.44e-07 U	1.23e-06 U	1.24e-06 U	1.35e-06 U	7.35e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	8.66e-07 U	9.73e-07 U	1.19e-06 J	1.13e-06 J	9.35e-07 U	1.22e-06 U	1.19e-06 J	7.38e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	7.84e-07 U	9.24e-07 U	1.04e-06 U	7.87e-07 U	8.98e-07 U	1.06e-06 U	1.26e-06 U	7.02e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	1.02e-06 U	1.24e-06 U	1.2e-06 U	9.95e-07 U	1.11e-06 U	1.24e-06 U	1.41e-06 U	9.13e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	8.83e-07 U	9.21e-07 U	1.1e-06 U	8.97e-07 U	9.76e-07 U	1.1e-06 U	1.21e-06 U	7.18e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	1.16e-06 J	1.64e-06 J	3.32e-06 J	4.88e-06 J	1.69e-06 J	3.46e-06 J	7.09e-06 J	2.21e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	1.85e-06 U	1.69e-06 U	1.38e-06 U	8.47e-07 U	1.34e-06 U	1.43e-06 U	1.74e-06 U	8.66e-07 U
SW1613B	T	OCDF	39001-02-0	1.55e-06 J	3.81e-06 U	6.83e-06 J	7.82e-06 J	3.23e-06 J	6.45e-06 J	1.73e-05 J	3.14e-06 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	2.09e-06J	1.7e-06J	2.88e-06J	1.76e-06J	1.66e-06J	2.26e-06J	5.12e-06J	1.24e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N05-TNNW	N05-TNNW	N06-THKN	N06-TNBE	N06-TNBE	N06-TNBN	N06-TNBN	N06-TNBN
				N05-CE03-TNNW	N05-CE04-TNNW	N06-CE03-TNBE	N06-CE01-TNBE	N06-CE02-TNBE	N06-CE01-TNBN	N06-CE02-TNBN	N06-CE03-TNBN
				2.96	3.07	2.93	2.7	3.11	3	3.16	2.98
				NB	NB	NB	NB	NB	NB	NB	NB
				3.77	3.77	2.68	2.68	2.68	3.87	3.87	3.87
				N05-CE03-TNNW-AS	N05-CE04-TNNW-AS	N06-CE03-TNBE-AS	N06-CE01-TNBE-AS	N06-CE02-TNBE-AS	N06-CE01-TNBN-AS	N06-CE02-TNBN-AS	N06-CE03-TNBN-AS
				03/28/2012	03/28/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.6e-06 U	1.96e-06 J						
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.72e-06 U	1.4e-06 U						
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.85e-06 U	1.43e-06 U						
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.83e-06 U	1.07e-06 J						
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	2.02e-06 U	6.73e-07 J						
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	1.05e-06 J	1.46e-05 J						
SW1613B	T	OCDD	3268-87-9	2.18e-05 J	0.000194						
SW1613B	T	2,3,7,8-TCDF	51207-31-9	1.08e-06 U	8.52e-07 U						
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	1.07e-06 U	1.22e-06 U						
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	1.02e-06 U	1.17e-06 J						
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	9.96e-07 U	8.01e-06 J						
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	9.18e-07 U	1.17e-06 J						
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	1.17e-06 U	1.13e-06 U						
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	1.05e-06 U	1.03e-06 U						
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	1.41e-06 J	2.71e-05						
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	1.51e-06 U	1.51e-06 U						
SW1613B	T	OCDF	39001-02-0	2.39e-06 J	5.67e-05						
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	1.85e-06J	4.23e-06J						

Notes:
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Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N06-TNBN	N06-TNBS	N06-TNBS	N06-TNBS	N06-TNBS	N06-TNNE	N06-TNNE	N06-TNNE
				N06-CE04-TNBN	N06-CE01-TNBS	N06-CE02-TNBS	N06-CE03-TNBS	N06-CE04-TNBS	N06-CE01-TNNE	N06-CE02-TNNE	N06-CE03-TNNE
				3.02	3	3.02	2.98	3.1	1.26	2.5	2.84
				NB	NB	NB	NB	NB	NB	NB	NB
				3.87	0.97	0.98	0.98	0.97	4.57	4.57	4.57
				N06-CE04-TNBN-AS	N06-CE01-TNBS-AS	N06-CE02-TNBS-AS	N06-CE03-TNBS-AS	N06-CE04-TNBS-AS	N06-CE01-TNNE-AS	N06-CE02-TNNE-AS	N06-CE03-TNNE-AS
				06/06/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/06/2012	06/06/2012	06/06/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6								
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4								
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6								
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7								
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3								
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9								
SW1613B	T	OCDD	3268-87-9								
SW1613B	T	2,3,7,8-TCDF	51207-31-9								
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6								
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4								
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9								
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9								
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9								
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5								
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4								
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7								
SW1613B	T	OCDF	39001-02-0								
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF								

Notes:
J - Estimated Concentration
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Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N06-TNNE	N06-TNNW	N06-TNNW	N06-TNNW	N06-TNNW	N07-TNBE	N07-TNBE	N07-TNBE
				N06-CE04-TNNE	N06-CE01-TNNW	N06-CE02-TNNW	N06-CE03-TNNW	N06-CE04-TNNW	N07-CE01-TNBE	N07-CE02-TNBE	N07-CE03-TNBE
				2.98	2.63	3	3	3	2.05	2.95	3.1
				NB	NB	NB	NB	NB	NB	NB	NB
				4.57	3.77	3.78	3.77	3.77			
				N06-CE04-TNNE-AS	N06-CE01-TNNW-AS	N06-CE02-TNNW-AS	N06-CE03-TNNW-AS	N06-CE04-TNNW-AS	N07-CE01-TNBE-AS	N07-CE02-TNBE-AS	N07-CE03-TNBE-AS
				06/06/2012	06/06/2012	06/06/2012	06/06/2012	06/06/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6						1.16e-06 U	9.89e-07 U	1.37e-06 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4						1.3e-06 U	1.17e-06 U	1.29e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6						9.87e-07 U	1.2e-06 U	1.39e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7						1.12e-06 J	1.3e-06 U	1.53e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3						2.1e-06 U	1.46e-06 U	1.51e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9						1.41e-05 J	4.53e-06 U	3.25e-06 U
SW1613B	T	OCDD	3268-87-9						0.000149	3.96e-05 J	2.86e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9						2.73e-06 J	8.59e-07 U	7.93e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6						1.66e-06 J	1.01e-06 U	8.68e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4						6.46e-06 J	9.68e-07 U	8.2e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9						7.61e-06 J	1.05e-06 J	9.82e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9						1.57e-06 J	8.96e-07 U	9.19e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9						1.18e-06 U	1.25e-06 U	1.09e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5						1.76e-06 J	9.16e-07 U	9.21e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4						6.14e-06 J	3.06e-06 J	2.28e-06 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7						2.25e-06 U	1.42e-06 U	1.22e-06 U
SW1613B	T	OCDF	39001-02-0						1.33e-05 U	5.23e-06 U	3.47e-06 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF						4.15e-06J	1.39e-06J	1.52e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N07-TNBE	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBN	N07-TNBS	N07-TNBS	N07-TNBS
				N07-CE04-TNBE	N07-CE01-TNBN	N07-CE02-TNBN	N07-CE03-TNBN	N07-CE04-TNBN	N07-CE01-TNBS	N07-CE02-TNBS	N07-CE03-TNBS
				3.05	3	3	3.05	2.97	3	3.03	3.12
				NB	NB	NB	NB	NB	NB	NB	NB
				N07-CE04-TNBE-AS	N07-CE01-TNBN-AS	N07-CE02-TNBN-AS	N07-CE03-TNBN-AS	N07-CE04-TNBN-AS	N07-CE01-TNBS-AS	N07-CE02-TNBS-AS	N07-CE03-TNBS-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/13/2012	12/13/2012	12/13/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	7.36e-07 U	1.11e-06 U	7.97e-07 U	9.58e-07 U	1.34e-06 J	9.41e-07 U	8.07e-07 U	7.38e-07 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.25e-06 U	1.33e-06 U	8.57e-07 U	1.25e-06 U	1.04e-06 U	1.61e-06 U	8e-07 U	9.31e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.12e-06 U	1.2e-06 U	8.44e-07 U	1.29e-06 U	8.69e-07 U	1.59e-06 U	8.19e-07 U	8.71e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.1e-06 U	1.29e-06 U	8.16e-07 U	1.33e-06 U	9.32e-07 U	1.58e-06 U	1.13e-06 J	9.2e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.21e-06 U	1.32e-06 U	9.61e-07 U	1.35e-06 U	9.74e-07 U	1.88e-06 U	1.32e-06 J	8.78e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	3.19e-06 J	4.7e-06 J	5.91e-06 J	3.28e-06 J	8.32e-06 J	6.48e-06 U	1.18e-05 J	4.42e-06 U
SW1613B	T	OCDD	3268-87-9	4.07e-05 J	6.04e-05	6.63e-05	3.77e-05 J	0.000115	9.71e-05	0.000113	4.76e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	6.75e-07 U	8.03e-07 U	5.5e-07 U	6.75e-07 U	6.19e-07 U	1.04e-06 U	5.6e-07 U	6.83e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	5.87e-07 U	8.76e-07 U	5.22e-07 U	8.21e-07 U	6.82e-07 U	1.19e-06 U	5.24e-07 U	6.54e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	5.39e-07 U	8.47e-07 U	4.57e-07 U	7.68e-07 U	5.82e-07 U	1.14e-06 U	4.15e-07 U	6.06e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	6.59e-07 U	1.37e-06 U	9.61e-07 J	5.01e-06 J	1.68e-06 J	1.55e-06 J	9.85e-07 J	7.22e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	6.23e-07 U	1.4e-06 U	6.17e-07 U	9.75e-07 U	7.77e-07 J	6.82e-07 U	9.07e-07 J	6.6e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	7.92e-07 U	2.04e-06 U	7.45e-07 U	1.41e-06 U	8.56e-07 U	1.03e-06 U	7.57e-07 U	7.66e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	6.08e-07 U	1.45e-06 U	6.24e-07 U	1.04e-06 U	7.02e-07 U	7.16e-07 U	1.06e-06 J	6.44e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	3.08e-06 J	5.97e-06 J	5.2e-06 J	4.4e-05	8.66e-06 U	3.48e-06 U	6.16e-06 U	1.53e-06 U
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	1.01e-06 U	2.49e-06 U	6.9e-07 U	1.81e-06 U	1e-06 U	1.67e-06 U	8.01e-07 U	8.23e-07 U
SW1613B	T	OCDF	39001-02-0	7.6e-06 U	9.6e-06 J	7.21e-06 U	0.000115	1.74e-05 J	8.44e-06 U	7.25e-06 U	2.66e-06 U
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	1.37e-06J	1.73e-06J	1.19e-06J	2.53e-06J	1.97e-06J	Not calculated	1.53e-06J	Not calculated

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N07-TNBS	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNE	N07-TNNW	N07-TNNW	N07-TNNW
				N07-CE04-TNBS	N07-CE01-TNNE	N07-CE02-TNNE	N07-CE03-TNNE	N07-CE04-TNNE	N07-CE01-TNNW	N07-CE02-TNNW	N07-CE03-TNNW
				3.05	0.55	1.62	3	2.6	3.09	3.1	3.1
				NB	NB	NB	NB	NB	NB	NB	NB
				N07-CE04-TNBS-AS	N07-CE01-TNNE-AS	N07-CE02-TNNE-AS	N07-CE03-TNNE-AS	N07-CE04-TNNE-AS	N07-CE01-TNNW-AS	N07-CE02-TNNW-AS	N07-CE03-TNNW-AS
				12/13/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.39e-06 U	1.69e-06 J	1.14e-06 J	9.46e-07 U	2.2e-06 U	9.7e-07 U	9.23e-07 U	7.58e-07 U
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.46e-06 U	8.02e-07 U	1.23e-06 U	1.13e-06 U	2.88e-06 U	1.06e-06 U	9.61e-07 U	8.65e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.38e-06 U	8.18e-07 U	1.11e-06 U	1.09e-06 U	2.53e-06 U	9.06e-07 U	9.42e-07 U	1.13e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.42e-06 U	8.49e-07 U	1.23e-06 U	1.08e-06 U	2.41e-06 U	9.2e-07 U	9.09e-07 U	1.16e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.54e-06 U	9.47e-07 U	1.33e-06 U	1.1e-06 U	2.87e-06 U	1.25e-06 J	9.59e-07 U	1.26e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	2.23e-06 J	7.12e-06 J	3e-06 J	1.92e-06 J	1.25e-05 J	1.44e-06 J	6.03e-06 J	3.61e-06 J
SW1613B	T	OCDD	3268-87-9	1.91e-05 J	0.000104	3.6e-05 J	1.46e-05 U	0.000127	1.22e-05 U	5.34e-05	4.02e-05 J
SW1613B	T	2,3,7,8-TCDF	51207-31-9	9.1e-07 U	5.65e-07 U	7.17e-07 U	6.06e-07 U	1.73e-06 U	5.5e-07 U	7.24e-07 U	5.7e-07 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	8.66e-07 U	5.44e-07 U	9.04e-07 U	6.27e-07 U	1.69e-06 U	6.19e-07 U	6.97e-07 U	6.35e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	7.7e-07 U	4.77e-07 U	8.35e-07 U	5.75e-07 U	1.58e-06 U	5.91e-07 U	6.74e-07 U	5.49e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	8.47e-07 U	1.63e-06 J	1.17e-06 U	7.44e-07 U	1.85e-06 J	6.69e-07 U	1.32e-06 J	6.62e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	8.79e-07 U	5.59e-07 U	1.08e-06 U	7.13e-07 U	1.77e-06 U	6.46e-07 U	7.24e-07 U	6.3e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	1.16e-06 U	6.6e-07 U	1.67e-06 U	9.98e-07 U	2.39e-06 U	7.81e-07 U	7.74e-07 U	8.82e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	9.26e-07 U	5.3e-07 U	1.19e-06 U	7.35e-07 U	1.65e-06 U	6.62e-07 U	6.41e-07 U	6.98e-07 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	2.63e-06 U	7.88e-06 J	3.54e-06 J	1.64e-06 U	9.66e-06 U	1.42e-06 U	5.94e-06 U	2.73e-06 U
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	1.21e-06 U	7.82e-07 U	2.24e-06 U	1.28e-06 U	1.95e-06 U	9.21e-07 U	1e-06 U	9.58e-07 U
SW1613B	T	OCDF	39001-02-0	2.22e-05 U	1.15e-05 U	5.34e-06 U	1.56e-06 U	1.43e-05 U	3.01e-06 U	3.36e-05 U	3.86e-06 U
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	Not calculated	2.21e-06J	2.42e-06J	Not calculated	3.39e-06J	Not calculated	1.28e-06J	Not calculated

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N07-TNNW	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBE	N09-TNBN	N09-TNBN	N09-TNBN
				N07-CE04-TNNW	N09-CE11-TNBE	N09-CE12-TNBE	N09-CE20-TNBE	N09-CE21-TNBE	N09-CE11-TNBN	N09-CE12-TNBN	N09-CE20-TNBN
				3.01	2.1	3	3	3.1	3.1	3	3
				NB	NB				NB		
				N07-CE04-TNNW-AS	N09-CE11-TNBE-AS	N09-CE12-TNBE-AS	N09-CE20-TNBE-AS	N09-CE21-TNBE-AS	N09-CE11-TNBN-AS	N09-CE12-TNBN-AS	N09-CE20-TNBN-AS
				12/12/2012	06/08/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/09/2013	06/10/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.69e-06 J	3.19e-06 J	1.47e-06 U	5.89e-07 U	2.4e-06 J	1.79e-06 U	1.4e-06 U	2.63e-06 J
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.08e-06 U	1.94e-06 U	1.57e-06 U	5.16e-07 U	2.16e-06 U	1.54e-06 U	1.54e-06 U	4.79e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.32e-06 U	2.02e-06 U	1.52e-06 U	3.97e-07 U	2.65e-06 U	1.96e-06 U	1.69e-06 U	4.68e-07 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.31e-06 U	2.19e-06 U	1.42e-06 U	4.06e-07 U	3.06e-06 U	1.98e-06 U	1.77e-06 U	4.81e-07 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.37e-06 U	2.6e-06 U	1.8e-06 U	8.52e-07 J	3.06e-06 U	2.21e-06 U	1.94e-06 U	1.24e-06 J
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	8.71e-06 J	1.38e-05 J	3.19e-06 J	3.14e-06 U	8.69e-06 J	9.64e-06 J	4.24e-06 J	9.4e-06 J
SW1613B	T	OCDD	3268-87-9	9.78e-05	0.000156	3.63e-05 J	2.63e-05 J	9.1e-05	9.45e-05	4.58e-05 J	9.08e-05
SW1613B	T	2,3,7,8-TCDF	51207-31-9	7.54e-07 U	1.45e-06 U	1.05e-06 U	4.34e-07 U	1.51e-06 U	1.46e-06 U	1.17e-06 U	5.34e-07 J
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	8.8e-07 U	1.86e-06 U	1.18e-06 U	3.4e-07 U	1.98e-06 U	1.32e-06 U	1.1e-06 U	4.3e-07 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	8.09e-07 U	1.67e-06 U	1.03e-06 U	3.1e-07 U	1.87e-06 U	1.14e-06 U	1.07e-06 U	4.05e-07 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	1.68e-06 J	2.97e-06 J	1.04e-06 U	3.96e-07 U	2.34e-06 U	1.68e-06 J	8.53e-07 U	1.66e-06 J
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	1.08e-06 U	1.25e-06 U	1.01e-06 U	3.45e-07 U	2.17e-06 U	1.37e-06 U	7.84e-07 U	4.07e-07 J
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	1.56e-06 U	1.8e-06 U	1.41e-06 U	5.15e-07 U	2.6e-06 U	1.71e-06 U	1.07e-06 U	4.29e-07 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	1.05e-06 U	1.36e-06 U	1.07e-06 U	3.66e-07 U	2.4e-06 U	1.43e-06 U	8.89e-07 U	4.86e-07 J
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	8.96e-06 J	1.21e-05 J	4.15e-06 J	2.37e-06 J	9.37e-06 J	8.29e-06 J	3.9e-06 J	1.04e-05 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	2.04e-06 U	1.95e-06 U	1.57e-06 U	5.13e-07 U	3.36e-06 U	1.73e-06 U	1.44e-06 U	5.54e-07 J
SW1613B	T	OCDF	39001-02-0	8.55e-06 U	1.97e-05 J	4.66e-06 J	4.88e-06 J	1.61e-05 J	1.32e-05 J	6.41e-06 J	1.87e-05 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	2.36e-06J	4.3e-06J	1.85e-06J	8e-07J	3.05e-06J	2.61e-06J	1.84e-06J	3.44e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

				N09-TNBN	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNBS	N09-TNNE	N09-TNNE	N09-TNNE
				N09-CE21-TNBN	N09-CE11-TNBS	N09-CE12-TNBS	N09-CE20-TNBS	N09-CE21-TNBS	N09-CE11-TNNE	N09-CE20-TNNE	N09-CE21-TNNE
				3.2	3	2.9	3	3.06	3	3	3.1
					NB				NB		
				N09-CE21-TNBN-AS	N09-CE11-TNBS-AS	N09-CE12-TNBS-AS	N09-CE20-TNBS-AS	N09-CE21-TNBS-AS	N09-CE11-TNNE-AS	N09-CE20-TNNE-AS	N09-CE21-TNNE-AS
				06/21/2013	06/07/2013	06/09/2013	06/10/2013	06/21/2013	06/08/2013	06/10/2013	06/21/2013
				N	N	N	N	N	N	N	N
Method	Fraction	Analyte	CAS								
SW1613B	T	2,3,7,8-TCDD	1746-01-6	2.75e-06 J	1.26e-06 U	1.36e-06 U	7.42e-07 U	2.72e-06 U	3.34e-06 J	8.65e-07 J	2.17e-06 J
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	3.62e-06 U	1.7e-06 U	1.4e-06 U	5.35e-07 U	2.69e-06 U	1.41e-06 U	3.53e-07 U	1.8e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	3.07e-06 U	1.79e-06 U	1.41e-06 U	4.83e-07 U	3.03e-06 U	1.27e-06 U	4.04e-07 U	1.97e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	3.17e-06 U	1.67e-06 U	1.32e-06 U	5.17e-07 U	3.18e-06 U	1.28e-06 U	4.25e-07 U	2.04e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	3.17e-06 U	1.77e-06 U	1.46e-06 U	1.02e-06 J	3.61e-06 U	1.44e-06 U	7.66e-07 J	2.06e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	8.39e-06 J	6.21e-06 J	3.75e-06 J	3.65e-06 U	4.49e-06 U	1.34e-05 J	4.49e-06 U	1.14e-05 J
SW1613B	T	OCDD	3268-87-9	0.000116	5.53e-05	3.58e-05 J	2.77e-05 J	6.58e-05	0.00014	6.31e-05	0.00014
SW1613B	T	2,3,7,8-TCDF	51207-31-9	1.95e-06 U	1.25e-06 U	1.08e-06 U	4.96e-07 U	1.85e-06 U	8.55e-07 U	3.1e-07 U	1.01e-06 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	2.5e-06 U	1.19e-06 U	1.13e-06 U	3.79e-07 U	2.12e-06 U	9.23e-07 U	2.54e-07 U	1.59e-06 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	2.3e-06 U	1.15e-06 U	1.12e-06 U	4.25e-07 J	2.07e-06 U	8.41e-07 U	3.21e-07 J	1.41e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	3.3e-06 J	1.21e-06 U	1.04e-06 U	9.21e-07 J	1.91e-06 U	3.73e-06 J	1.13e-06 J	2.18e-06 J
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	2.15e-06 U	1.11e-06 U	9.73e-07 U	4.56e-07 J	1.95e-06 U	9.6e-07 J	2.96e-07 J	1.28e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	2.64e-06 U	1.69e-06 U	1.3e-06 U	5.29e-07 U	2.5e-06 U	9.69e-07 U	4.01e-07 U	1.68e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	2.3e-06 U	1.21e-06 U	1.06e-06 U	3.8e-07 U	2.23e-06 U	8.37e-07 U	3.04e-07 U	1.35e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	1.03e-05 J	4.76e-06 J	3.58e-06 J	2.81e-06 J	8.05e-06 J	1.56e-05 J	4.85e-06 J	1.33e-05 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	3.46e-06 U	1.91e-06 U	1.21e-06 U	6.04e-07 U	3.13e-06 U	9.96e-07 U	4.23e-07 U	2.2e-06 U
SW1613B	T	OCDF	39001-02-0	1.96e-05 J	6.25e-06 J	5.62e-06 J	4.17e-06 J	8.66e-06 J	2.09e-05 J	7.95e-06 J	1.74e-05 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	7.3e-06J	2.09e-06J	1.66e-06J	1.25e-06J	3.08e-06J	4.42e-06J	1.35e-06J	3.1e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-19
Analytical Data for Dioxins and Furans
NBSA Surface Water
Baseline Human Health Risk Assessment
Newark Bay Study Area

				N09-TNNW	N09-TNNW	N09-TNNW	N09-TNNW
				N09-CE11-TNNW	N09-CE12-TNNW	N09-CE20-TNNW	N09-CE21-TNNW
				3.3	3.1	3	3
				NB			
				N09-CE11-TNNW-AS	N09-CE12-TNNW-AS	N09-CE20-TNNW-AS	N09-CE21-TNNW-AS
				06/08/2013	06/09/2013	06/10/2013	06/21/2013
				N	N	N	N
Method	Fraction	Analyte	CAS				
SW1613B	T	2,3,7,8-TCDD	1746-01-6	1.83e-06 J	1.37e-06 U	1.44e-06 J	4.35e-06 J
SW1613B	T	1,2,3,7,8-PCDD	40321-76-4	1.13e-06 U	1.6e-06 U	5.03e-07 U	2.65e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDD	39227-28-6	1.31e-06 U	1.62e-06 U	3.64e-07 U	2.55e-06 U
SW1613B	T	1,2,3,6,7,8-HxCDD	57653-85-7	1.26e-06 U	1.46e-06 U	3.73e-07 U	2.6e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDD	19408-74-3	1.42e-06 U	1.77e-06 U	9.5e-07 J	2.63e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDD	35822-46-9	9.48e-06 J	5.35e-06 U	5.17e-06 U	1.66e-05 J
SW1613B	T	OCDD	3268-87-9	9.24e-05	5.86e-05	5.16e-05	0.000152
SW1613B	T	2,3,7,8-TCDF	51207-31-9	1.06e-06 U	1.11e-06 U	2.85e-07 U	1.8e-06 U
SW1613B	T	1,2,3,7,8-PCDF	57117-41-6	8.86e-07 U	1.19e-06 U	3.46e-07 U	1.9e-06 U
SW1613B	T	2,3,4,7,8-PCDF	57117-31-4	7.55e-07 U	1.12e-06 U	3.25e-07 U	1.91e-06 U
SW1613B	T	1,2,3,4,7,8-HxCDF	70648-26-9	2.17e-06 J	1.04e-06 J	8.19e-07 J	3.05e-06 J
SW1613B	T	1,2,3,6,7,8-HxCDF	57117-44-9	8.16e-07 U	8.74e-07 U	2.29e-07 U	1.74e-06 U
SW1613B	T	1,2,3,7,8,9-HxCDF	72918-21-9	1.08e-06 U	1.3e-06 U	3.25e-07 U	2.11e-06 U
SW1613B	T	2,3,4,6,7,8-HxCDF	60851-34-5	8.42e-07 U	9.73e-07 U	2.55e-07 U	1.85e-06 U
SW1613B	T	1,2,3,4,6,7,8-HpCDF	67562-39-4	9.68e-06 J	5.97e-06 J	4.45e-06 J	1.44e-05 J
SW1613B	T	1,2,3,4,7,8,9-HpCDF	55673-89-7	1.23e-06 U	1.5e-06 U	4.64e-07 U	3.13e-06 U
SW1613B	T	OCDF	39001-02-0	1.42e-05 J	7.44e-06 J	6.42e-06 J	2.08e-05 J
SW1613B	T	Dioxin-Furan TEQ (a)	KMTEQDF	2.55e-06J	2.01e-06J	1.76e-06J	5.66e-06J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
Not calculated - Fewer than 3 detected results
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502	NB03FAEC508
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16	09/29/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0012 U	0.0013 U	R	R	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.019 U	0.021 U	R	R	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0016 U	0.0017 U	R	R	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0014 U	0.0015 U	R	R	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04	NB03FAEN-COMP05	NB03FAEN-COMP06
			Sample Date	10/01/15	10/01/15	01/12/16	01/12/16	09/29/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0012 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.021 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0016 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0021	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAES-COMP01	NB03FAES018	NB03FAES019	NB03FAES347	NB03FAES364	NB03FAES365
			Sample Date	01/13/16	10/01/15	10/01/15	01/13/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	R
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	R
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	R
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	R

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03CRB-HEP122	NB03CRB-HEP123	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127
			Sample Date	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP129	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	08/19/15	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0018 J	0.0017 J	0.0013 J	0.0013 U	0.0013 U	0.0016 J
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005	NB03CRB-HEP-C006
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002	NB03CRB-HEP-N003	NB03CRB-HEP-N004
			Sample Date	09/01/15	08/30/15	08/30/15	08/30/15	08/25/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	R	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	R	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	R	0.0017 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	R	0.0015 U	0.0014 U	0.0015 U	0.0014 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002
			Sample Date	08/26/15	08/24/15	08/24/15	09/01/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0016 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-S003	NB03CRB-HEP-S004	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0012 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.02 U	0.02 U	0.021 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0014 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03CRB-HEP-S009	NB03CRB-MUS122	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127
			Sample Date	08/24/15	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0012 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0016 U	0.0016 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0014 U	0.0014 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN
			Sample ID	NB03CRB-MUS129	NB03CRB-MUS130	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001
			Sample Date	08/19/15	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0016 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.021 U	0.021 U	0.02 U	0.025 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.002 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0018 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS-C002	NB03CRB-MUS-C003	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008
			Sample Date	08/26/15	08/19/15	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.02 U	0.02 U	0.021 U	0.021 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0014 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007
			Sample Date	08/25/15	08/30/15	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006
			Sample Date	09/08/15	08/26/15	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122
			Sample Date	10/06/15	10/06/15	10/06/15	
			Sample Type	N	N	N	Calc
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB123	NB03CRB124
			Sample ID	NB03-CRB-COMBHEPMUS-123	NB03-CRB-COMBHEPMUS-124
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.02026 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.001226 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.001626 U	0.001626 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.001426 U	0.001426 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.00143 J
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02074 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.001626 U	0.001674 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB130	NB03CRB131
			Sample ID	NB03-CRB-COMBHEPMUS-130	NB03-CRB-COMBHEPMUS-131
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.001404 J	0.0013 J
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02074 U	0.02074 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.001522 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02026 U	0.0237 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.001922 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.001722 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.001378 J	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02074 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.001674 U	0.001674 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.001474 U	0.001474 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C002	NB03-CRB-COMBHEPMUS-C003
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02074 U	0.02026 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.001626 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.001426 U	0.0015 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02074 U	
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-C008	NB03-CRB-COMBHEPMUS-N001
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.001674 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.001474 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02074 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.001674 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.001474 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N006	NB03-CRB-COMBHEPMUS-N007
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02026 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.001226 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.001426 U	0.0015 U

Notes:
J - Estimated Concentration
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02074 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.001674 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S004	NB03-CRB-COMBHEPMUS-S005
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02026 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date		
			Sample Type	Calc	Calc
Method	Analyte	CAS	Unit		
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01
			Sample Date			12/10/15
			Sample Type	Calc	Calc	N
Method	Analyte	CAS	Unit			
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.021 U	0.02026 U	0.019 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP02	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468
			Sample Date	12/10/15	12/10/15	12/01/15	12/01/15	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0012 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.019 U	0.019 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0014 U	0.0015 U	0.0014 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBLC469	NB03FBLC471	NB03FBLC475	NB03FBLC476	NB03FBLC478
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0016 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0014 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FBLC479	NB03FBLC481	NB03FBLN404	NB03FBLN405	NB03FBLN406
			Sample Date	01/12/16	01/12/16	12/01/15	12/01/15	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16
			Sample Type	N	N	FD	FD
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15
			Sample Type	FD	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0012 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.019 U	0.019 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0016 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0014 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS323	NB03FSBS324	NB03FSBS325	NB03FSBS327
			Sample Date	12/10/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	0.019 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0016 U	0.0017 U	0.0015 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0014 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS328	NB03FSBS329	NB03FSBS330	NB03FSBS331
			Sample Date	12/10/15	12/10/15	12/10/15	01/12/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0013 U	0.0012 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.019 U	0.02 U	0.019 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0016 U	0.0015 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0015 U	0.0014 U	0.0015 U

Notes:
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R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS332	NB03FSBS333	NB03FSBS334	NB03FSBS335
			Sample Date	12/10/15	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.019 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN
			Sample ID	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486
			Sample Date	01/20/16	01/20/16	12/01/15	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.003 J	0.0012 U	0.0012 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.019 U	0.019 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.011 J	0.0016 U	0.0016 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0064 J	0.0014 U	0.0014 U	0.0015 U

Notes:
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Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC487	NB03FSFC488	NB03FSFC489	NB03FSFC490
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0012 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.019 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0016 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0014 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC491	NB03FSFN407	NB03FSFN408	NB03FSFN409
			Sample Date	12/01/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0013 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0014 U	0.0015 U	0.0015 U	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0012 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.019 U	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0016 U	0.0017 U	0.0016 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 J	0.0021 J	0.0017 J	0.0014 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09
			Sample Date	12/01/15	04/27/16	04/27/16	04/26/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0012 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.019 U	0.02 U	0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0016 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP10	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15
			Sample Date	04/26/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	N	N	FD
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0016 U	
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07	NB03FWPN-COMP08
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16
			Sample Type	FD	FD	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U		0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U		0.021 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U		0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0019 J		0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12
			Sample Date	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U	0.021 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09
			Sample Date	04/27/16	04/27/16	04/27/16	04/27/16
			Sample Type	FD	N	N	N
Method	Analyte	CAS	Unit				
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.021 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0017 U	0.0017 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-20
Analytical Data for Butyltins
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
ORGANOTINS_GC	Dibutyltin	1002-53-5	mg/kg	0.0013 U	0.0013 U	0.0013 U
ORGANOTINS_GC	Monobutyltin	2406-65-7	mg/kg	0.02 U	0.02 U	0.02 U
ORGANOTINS_GC	Tetrabutyltin	1461-25-2	mg/kg	0.0017 U	0.0016 U	0.0017 U
ORGANOTINS_GC	Tributyltin	688-73-3	mg/kg	0.0015 U	0.0015 U	0.0015 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00177 J	0.00137 J	0.00123 J	0.00187	0.00522
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00267 J	0.000499 J	0.000433 J	0.000523	0.00197
E1699	2,4'-DDT	789-02-6	mg/kg	9.59e-05 J	8.16e-05 J	0.000155 J	0.000223	0.000302
E1699	4,4'-DDD	72-54-8	mg/kg	0.0584 J	0.0562 J	0.0488 J	0.0962 J	0.0992 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.125 J	0.16 J	0.104 J	0.207 J	0.2 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0019 J	0.00187 J	0.00287 J	0.00446	0.0021
E1699	Aldrin	309-00-2	mg/kg	3.28e-05 J	2.4e-05 J	4.05e-05 J	3.7e-05 J	3.61e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	8.62e-05 J	5.75e-05 J	6.45e-05 J	0.00027 J	0.000128
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0132 J	0.012 J	0.018 J	0.0113	0.0201
E1699	Beta-BHC	319-85-7	mg/kg	8.57e-05 J	7.31e-05 J	7.18e-05 J	0.000134	0.000124
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00774 J	0.0102 J	0.00879 J	0.00985	0.0117
E1699	Delta-BHC	319-86-8	mg/kg	7.8e-06 J	4.96e-06 J	5.08e-06 U	6.61e-06 J	5.54e-06 J
E1699	Dieldrin	60-57-1	mg/kg	0.00998 J	0.00891 J	0.0142 J	0.0138	0.0153
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	4.38e-05 J	1.39e-05 U	4.69e-05 J	3.75e-05 J	4.8e-05
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	R	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	3.57e-05 J	2.79e-05 J	2.47e-05 J	4.96e-05	5.71e-05
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00221 J	0.00197 J	0.00372 J	0.00379	0.00384
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00246 J	0.00218 J	0.00251 J	0.00322 J	0.00387 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	R	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.00031 J	0.000441 J	0.00038 J	0.000413 J	0.000539
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0199 J	0.023 J	0.0209 J	0.0222	0.024 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00741 J	0.0102 J	0.00842 J	0.0186	0.0106
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00489 J	0.0034 J	0.00439 J	0.00302	0.0071 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.000438 J	0.000639 J	0.000936 J	0.0013 J	0.00165 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000388 J	0.000613 J	0.000236 J	0.000624 J	0.00153 J
E1699	2,4'-DDT	789-02-6	mg/kg	6.3e-05 J	5.97e-05 J	0.000192 J	0.000155 J	0.000112 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.064 J	0.0163 J	0.022 J	0.12 J	0.0753 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.191 J	0.0507 J	0.0384 J	0.271 J	0.209 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00535 J	0.00115 J	0.00142 J	0.00946 J	0.00264 J
E1699	Aldrin	309-00-2	mg/kg	1.13e-05 J	1.34e-05 J	1.83e-05 J	0.000121 J	4.16e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	3.22e-05 J	2.81e-05 J	3.44e-05 J	9.01e-05 J	8.64e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00416 J	0.00552 J	0.00706 J	0.0187 J	0.017 J
E1699	Beta-BHC	319-85-7	mg/kg	3.68e-05 J	5.22e-05 J	6.32e-05 J	0.000153 J	0.000138 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00612 J	0.00375 J	0.00358 J	0.0176 J	0.0149 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	8.48e-06 J
E1699	Dieldrin	60-57-1	mg/kg	0.00129 J	0.00485 J	0.00639 J	0.0212 J	0.0194 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.73e-05 J	1.39e-05 U	1.39e-05 U	7e-05 J	4.64e-05 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	1.53e-05 J	1.64e-05 J	4.26e-05 J	3.94e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	5.74e-06 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00146 J	0.00118 J	0.00134 J	0.00634 J	0.0058 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00139 J	0.00182 J	0.00183 J	0.00624 J	0.00594 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.00021 J	0.000186 J	0.000144 J	0.000574 J	0.000485 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0146 J	0.00929 J	0.0082 J	0.0531 J	0.0272 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0117 J	0.00408 J	0.0026 J	0.0287 J	0.0197 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000954 J	0.00121 J	0.00154 J	0.00496 J	0.00398 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00145 J	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
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			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.000739 J	0.00189 J	0.000509	0.00789 J	0.00361 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000468 J	0.00064 J	0.000324	0.00236 J	0.00156 J
E1699	2,4'-DDT	789-02-6	mg/kg	5.88e-05 J	0.00013 J	0.000127	0.000665 J	0.000493 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0325 J	0.0691 J	0.0395 J	0.29 J	0.207 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0746 J	0.174 J	0.095 J	0.679 J	0.33 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0011 J	0.00376 J	0.00141 J	0.0124 J	0.0164 J
E1699	Aldrin	309-00-2	mg/kg	2e-05 J	5.53e-05 J	6.43e-06 J	2.69e-05 J	1.93e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	4.29e-05 J	8.79e-05 J	R	9.03e-05 J	7e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00847 J	0.0201 J	0.00199	0.00925 J	0.00467 J
E1699	Beta-BHC	319-85-7	mg/kg	6.7e-05 J	0.00015 J	1.36e-05 J	0.000121 J	8.94e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0054 J	0.0154 J	0.00271	0.0121 J	0.00373 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	9.08e-06 J	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.009 J	0.0213 J	0.00274	0.0143 J	0.00826 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	2.31e-05 J	6.42e-05 J	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	5.42e-05 J	7.6e-05 U	R	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.86e-05 J	3.79e-05 J	1.11e-05 J	5.21e-05 J	3.53e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00251 J	0.00587 J	0.000474	0.0034 J	0.00185 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00272 J	0.00588 J	0.000771 J	0.00659 J	0.00334 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	R	3.89e-05 U	2.99e-05 J
E1699	Mirex	2385-85-5	mg/kg	0.000151 J	0.000487 J	R	0.000386 J	0.000321 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0125 J	0.0396 J	0.00598	0.025 J	0.00965 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00704 J	0.0182 J	0.00269	0.0175 J	0.00811 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.0023 J	0.00554 J	4e-04	0.00247 J	0.00165 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00104 J	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00157	0.00218	0.00329	0.000149 J	0.000171
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000551	0.00159	0.00272	0.000376 J	0.000369 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000303	0.000502	0.000668	1.08e-05 U	8.55e-05
E1699	4,4'-DDD	72-54-8	mg/kg	0.157 J	0.14 J	0.216 J	0.0358 J	0.0774 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.25 J	0.38 J	0.352 J	0.157 J	0.274 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0168	0.00876	0.00661	0.000437 J	0.000601
E1699	Aldrin	309-00-2	mg/kg	1.43e-05 J	1.77e-05 J	6.64e-05	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	9.86e-05	6.3e-05	0.000211	7.98e-05 J	7.14e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00795	0.00616	0.0208	0.00309 J	0.00771 J
E1699	Beta-BHC	319-85-7	mg/kg	7.53e-05	5.6e-05	0.000147	0.000153 J	0.00027
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00648	0.00704	0.0137	0.0178 J	0.0219 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.83e-06 J	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0106	0.00789	0.0217	0.0114 J	R
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	R
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	5.48e-05	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000145 J
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	5.11e-05	2.37e-05 J	7.04e-05	7.69e-06 U	2.55e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	1.06e-05 J	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00253	0.00184	0.00462	0.0135 J	0.0167
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00224 J	0.00337 J	0.00402 J	0.00394 J	0.00381 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	R
E1699	Mirex	2385-85-5	mg/kg	0.000209 J	0.000253 J	0.000565 J	0.000497 J	0.00063 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0149	0.0166	0.0361 J	0.0298 J	0.063 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0121	0.0102	0.0106	0.0501 J	0.0739 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00226	0.00184	0.00458 J	0.00076 J	0.00103
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	0.00252 J	0.00513

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129	NB03CRB-HEP130
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.000551	0.000251 J	0.000316	0.000233	0.000274 J	0.000434
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000721 J	0.000506	0.000919 J	0.000511	0.000755 J	0.00627
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	0.000126 J	0.000171	8.84e-05 J	0.000542 J	0.000685
E1699	4,4'-DDD	72-54-8	mg/kg	0.0982 J	0.036 J	0.0887 J	0.052 J	0.14 J	0.228 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.272 J	0.135 J	0.274 J	0.211 J	0.32 J	0.67 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000591 J	0.000684 J	0.00219 J	0.000635 J	0.00315 J	0.00877 J
E1699	Aldrin	309-00-2	mg/kg	8.92e-06 J	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	0.000112 J	7.1e-05	6.66e-05 J	7.83e-05	8.02e-05 J	0.000125
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00178	0.00935	0.00106	0.0103	0.00391 J	0.00523
E1699	Beta-BHC	319-85-7	mg/kg	0.000298	0.000145	0.000157	0.000152	0.000141 J	0.000411 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0204 J	0.0132	0.0172	0.0127 J	0.0122 J	0.0132 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	R	5.08e-06 U	R
E1699	Dieldrin	60-57-1	mg/kg	0.0201 J	0.0155	0.0176	0.00905	0.0063 J	0.0151
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	R
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	R
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	0.000131 U	0.000131 U	0.000131 U	R	0.000228 J
E1699	Endrin Ketone	53494-70-5	mg/kg	R	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	2.71e-05 J	2.23e-05 J	1.91e-05 J	2.5e-05 J	7.69e-06 U	2.14e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	1.58e-06 J	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.0129	0.00908	0.0107	0.00886	0.00969 J	0.0106
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00314 J	0.00185 J	0.00202 J	0.00177 J	0.00233 J	0.00493 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000608 J	0.00055	0.00053 J	0.000573	0.000458 J	0.000656 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0368 J	0.0199 J	0.0279 J	0.0211	0.022 J	0.0351 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0429 J	0.0436 J	0.0436 J	0.0423 J	0.0373 J	0.0521 J
E1699	trans-Chlordane	5103-74-2	mg/kg	R	0.000692	R	0.000636 J	1.37e-05 U	0.000476
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00303	0.00285	0.00234	0.00342	0.00446 J	0.0045

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134	NB03CRB-HEP-C001	NB03CRB-HEP-C002
			Sample Date	08/26/15	08/24/15	08/24/15	08/24/15	08/30/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.000371	0.000243	0.000185	0.000603	0.000328	0.00039
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00304 J	0.000352 J	0.00048 J	0.000723 J	0.000423	0.000726 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000245	0.00011	0.000139	0.000383	4.79e-05	0.000229
E1699	4,4'-DDD	72-54-8	mg/kg	0.0935 J	0.0872 J	0.117 J	0.475 J	0.0457 J	0.0893 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.335 J	0.281 J	0.292 J	0.643 J	0.156 J	0.34 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.009 J	0.00134 J	0.000304 J	0.0026 J	0.000511 J	0.000817 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	9.06e-05	7.73e-05	9.22e-05	7.25e-05	6.78e-05	0.000127
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00257	0.00619	0.00816	0.00334	0.0106	0.00646
E1699	Beta-BHC	319-85-7	mg/kg	0.000192	0.000286	0.000343	2e-04	0.00017	0.000299
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0119 J	0.0211 J	0.026 J	0.00913 J	0.0117	0.0222 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	1.96e-05 J	4.22e-05	R	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0162	0.0279 J	0.0305 J	0.0146 J	0.00927	0.0319 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	R	5.74e-05 U	R	5.74e-05 U	R
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	R	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	R	R	0.000187 J	R	R
E1699	Endrin Ketone	53494-70-5	mg/kg	R	R	R	R	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	2.52e-05 J	3.21e-05	3.37e-05 J	2.11e-05 J	7.69e-06 U	4.85e-05
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.011	0.012	0.0145	0.00819	0.00694	0.0153
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00288 J	0.00458 J	0.00557 J	0.00207 J	0.00209 J	0.00477 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	R	R	R	3.89e-05 U	R
E1699	Mirex	2385-85-5	mg/kg	0.000618 J	0.000697 J	7e-04 J	0.000353 J	0.000458	0.000971 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0281 J	0.0491 J	0.0533 J	0.021	0.0193 J	0.041 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0465 J	0.0786 J	0.0811 J	0.0305 J	0.0333 J	0.052 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000513	0.000966	0.00108	0.000533	0.00075	0.00128
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00382	0.00331	0.00398	0.00259	0.00245	0.00491

Notes:
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R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008
			Sample Date	08/19/15	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.000213 J	0.000142	0.00018	0.00026	0.00184	0.000406 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000622 J	0.00046 J	0.000426 J	9e-04 J	0.0012	0.000659 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	1.08e-05 U	0.000198	0.000303	0.000261	6.15e-05
E1699	4,4'-DDD	72-54-8	mg/kg	0.0733 J	0.0424 J	0.0504 J	0.0975 J	0.0839 J	0.047 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.29 J	0.171 J	0.197 J	0.354 J	0.271 J	0.182 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000801 J	0.000234 J	0.000539 J	0.00182 J	0.0014 J	0.000613 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	0.000109 J	6.59e-05	9.84e-05	0.000141	0.000104	8.48e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00658 J	0.00381	0.00449	0.00536	0.0102	8.83e-06 U
E1699	Beta-BHC	319-85-7	mg/kg	0.000273 J	0.000176	0.000214	0.000404	0.000225	0.000216
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0196 J	0.0125	0.0167	0.0165 J	0.0177 J	0.0157 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0296 J	0.0169	0.0198	0.0269 J	0.034 J	0.0213
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	2.5e-05 J	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	R	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	R	R	0.000131 U	R	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	R	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	1.89e-05 J	3.12e-05 J	3.98e-05	3.86e-05	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.0126 J	0.00891	0.0112	0.0122	0.0106	0.0051
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00378 J	0.00211 J	0.0033 J	0.00359 J	0.00274 J	0.00345 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	R	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000776 J	0.000516 J	0.000816 J	0.000915 J	0.000764	0.000656
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0334 J	0.0332 J	0.0292 J	0.0363 J	0.0346 J	0.00556 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0493 J	0.0429 J	0.0512 J	0.0522 J	0.0575 J	0.0429 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.0011 J	R	0.000815	0.00108	0.00157	R
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00473 J	0.00247	0.0034	0.0034	0.00354	0.00113

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N001	NB03CRB-HEP-N002	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006
			Sample Date	08/30/15	08/30/15	08/25/15	09/01/15	08/26/15	08/24/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.00014	8.13e-05	0.000111	0.00021	0.000167	0.000122
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000267	0.000295	0.000385 J	0.000348	0.000381 J	0.000302 J
E1699	2,4'-DDT	789-02-6	mg/kg	6.14e-05	7.38e-05	9.98e-05	0.000155	0.000125	9.21e-05
E1699	4,4'-DDD	72-54-8	mg/kg	0.0274 J	0.0204 J	0.0516 J	0.0575 J	0.0717 J	0.0625 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.108 J	0.108 J	0.19 J	0.209 J	0.259 J	0.226 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00071 J	0.000542 J	0.000935 J	0.000858 J	0.000369 J	0.000878
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	1.37e-05 J	5.81e-06 J	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	3.99e-05	4.13e-05	5.78e-05	6.84e-05	9.2e-05	9.91e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0113	0.00919	0.00497	0.00608	0.00458	0.00675
E1699	Beta-BHC	319-85-7	mg/kg	0.00018	0.000199	0.000303	0.000261	0.000366	0.00036
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0135	0.0143	0.0186 J	0.0192	0.0176 J	0.0265 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	R	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00752	0.0188	0.00654	0.0263 J	0.0278 J	0.00471 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	R	R	R	R
E1699	Endosulfan II	33213-65-9	mg/kg	R	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	R	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	0.000131 U	R	R	R	R
E1699	Endrin Ketone	53494-70-5	mg/kg	R	7.6e-05 U	R	R	R	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	3.57e-05 J	3.15e-05 J	3.23e-05 J	2.97e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00896	0.0103	0.0133	0.0136	0.0124	0.0182
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00291 J	0.00257 J	0.0041 J	0.00384 J	0.00577 J	0.00342 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	R	3.89e-05 U	1.39e-05 J	R
E1699	Mirex	2385-85-5	mg/kg	0.000383	0.000382	0.000479 J	0.000566 J	0.000754 J	0.000582 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0196 J	0.0199 J	0.0362 J	0.0401 J	0.029 J	0.0637 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0351 J	0.0338 J	0.0489 J	0.06 J	0.0571 J	0.0693 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000777 J	0.000524	0.000893	0.000764	0.00104	0.000909
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00264	0.00263	0.00393	0.00373	0.00415	0.00545

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N007	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	08/24/15	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.000336	9.18e-05	0.00313	0.000278	0.000119	6.83e-05
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000622 J	0.000233 J	0.00093 J	0.000416	R	0.000179
E1699	2,4'-DDT	789-02-6	mg/kg	0.000207	7.44e-05	0.00347	2e-04	5.24e-05	1.08e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.213 J	0.104 J	0.119 J	0.104 J	0.0423 J	0.0487 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.571 J	0.235 J	0.308 J	0.353 J	0.168 J	0.16 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000778 J	0.000522 J	0.0131 J	0.00142 J	0.000344 J	0.000379 J
E1699	Aldrin	309-00-2	mg/kg	1.61e-05 J	9.16e-06 U	9.16e-06 U	9.16e-06 U	R	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	0.000132	R	9.07e-05	8.74e-05	6.36e-05 J	5.68e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0115	0.0018	0.00306	0.00557	0.000853	0.0111
E1699	Beta-BHC	319-85-7	mg/kg	0.000551	0.000218 J	0.000166	0.000229	0.000125 J	0.000146
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0409 J	0.0191 J	0.0122	0.0192	0.0163	0.0123
E1699	Delta-BHC	319-86-8	mg/kg	1.99e-05 J	R	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0282 J	0.0256 J	0.00595	0.016	0.0214	0.00455
E1699	Endosulfan I	959-98-8	mg/kg	R	R	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.05e-05 J	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	R	R	R	R	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	R	7.6e-05 U	R	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	5.7e-05	2.69e-05 J	2.83e-05 J	2.3e-05 J	1.86e-05 J	1.68e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.5e-06 J	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.0388 J	0.0131	0.00622	0.0143	0.0112	0.00773
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00858 J	0.00394 J	0.00238 J	0.0031 J	0.00239 J	0.00168 J
E1699	Methoxychlor	72-43-5	mg/kg	R	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.00116 J	0.000555 J	0.000584 J	0.000737 J	0.000659 J	0.000585
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0854 J	0.0366 J	0.0186 J	0.0448 J	0.034 J	0.018
E1699	Oxychlordane	27304-13-8	mg/kg	0.124 J	0.0475 J	0.0295 J	0.0735 J	0.0469 J	0.0341 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00161	0.000622	0.000824	0.000623	R	0.000634
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00876	0.00196	0.00283	0.00426	0.00145	0.00271

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-21
Analytical Data for Pesticides
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	4.98e-06 U	0.000161	0.000293 J	0.000119	0.000407	4.98e-06 U
E1699	2,4'-DDE	3424-82-6	mg/kg	9.95e-06 U	0.000363 J	0.000675 J	0.000338 J	0.00232 J	2.08e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	9.63e-05	4e-04 J	0.000182	0.000102	1.08e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.0763 J	0.126 J	0.121 J	0.181 J	0.185 J	0.00208 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.237 J	0.316 J	0.313 J	0.347 J	0.542 J	0.00867 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00068 J	0.000536 J	0.00214 J	0.00332 J	0.000349 J	5.8e-05 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	1.32e-05 J	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	9.38e-05	5.9e-05 J	9.65e-05 J	8.82e-05	0.000111	7.51e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00527	0.00157	0.00954 J	0.00311	0.00505	0.000265 J
E1699	Beta-BHC	319-85-7	mg/kg	0.000217	0.000125	0.000171 J	0.000229	1.11e-05 U	1.56e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0167	0.00898	0.0167 J	0.0114	0.0112 J	0.000486 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0211 J	0.0133	0.0169 J	0.0159	0.00659 J	0.00145 J
E1699	Endosulfan I	959-98-8	mg/kg	R	5.74e-05 U	5.74e-05 U	R	R	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	0.000131 U	0.000131 U	R	R	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	R	R	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	3.62e-05 J	1.26e-05 J	2.25e-05 J	2.8e-05 J	2.53e-05 J	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00983	0.00547	0.0118 J	0.00765	0.00912	0.000213 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00309 J	0.00139 J	0.00188 J	0.00196 J	0.00206 J	0.00021 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	R	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000605	0.000324 J	0.000646 J	0.000495 J	0.000659 J	4.16e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.033 J	0.0194	0.0256 J	0.0209 J	0.0213 J	0.000926 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.043 J	0.02 J	0.0504 J	0.0288 J	0.0437 J	0.00133 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000848	R	1.37e-05 U	0.000576	0.000722	1.37e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00323	0.00137	0.00483 J	0.00249	0.00334	0.000226 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1699	2,4'-DDD	53-19-0	mg/kg	1.21e-05 J	4.98e-06 U	1.87e-05 J	4.98e-06 U	3.09e-05 J	6.31e-05 J	2.6e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	1.98e-05 J	9.95e-06 U	3.93e-05 J	3.88e-05	6.06e-05	3.35e-05 J	0.000123
E1699	2,4'-DDT	789-02-6	mg/kg	1.55e-05 J	1.08e-05 U	1.51e-05 J	1.08e-05 U	1.08e-05 U	4.9e-05 J	1.08e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.0036	0.00292	0.00354 J	0.00548	0.006	0.00361 J	0.00633
E1699	4,4'-DDE	72-55-9	mg/kg	0.013 J	0.00669 J	0.0135 J	0.0162 J	0.0151 J	0.00843 J	0.0223 J
E1699	4,4'-DDT	50-29-3	mg/kg	7e-05	4.02e-05 J	7.86e-05 J	8.19e-05 J	9.77e-05 J	0.000298 J	0.00012 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	R	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	9.7e-06 J	8.02e-06 J	8.34e-06 J	6.4e-06 U	1.16e-05 J	6.4e-06 U	8.52e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000427	0.000354	0.000898	0.000362	0.00159	8.83e-06 U	0.000362
E1699	Beta-BHC	319-85-7	mg/kg	1.99e-05 J	1.11e-05 U	1.3e-05 J	1.11e-05 U	1.96e-05 J	1.11e-05 U	2.01e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00117	0.000416	0.000586	0.000736	0.0011	0.000183 J	0.000928 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00266	0.000793	0.00108 J	0.00127	0.00165	0.000377 J	0.00143
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	R
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	R
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	R	0.000131 U	0.000131 U	R
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	4.05e-06 J	7.69e-06 U	3.94e-06 J	7.69e-06 U	5.23e-06 J	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000477	0.000119	0.000231	0.000248	0.000589	0.000152 J	0.000286
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000383 J	0.000136 J	0.00019 J	0.000195 J	0.000257 J	7.65e-05 J	0.000412 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	6.88e-05	3.31e-05 J	5.99e-05	6.58e-05 J	0.000119	9.33e-06 U	6.93e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00238	1.04e-05 U	1.04e-05 U	0.00165	1.04e-05 U	1.04e-05 U	0.00182
E1699	Oxychlordane	27304-13-8	mg/kg	0.00288	0.000915	0.00189	0.0016	0.00363	0.00075 J	0.00216
E1699	trans-Chlordane	5103-74-2	mg/kg	4.81e-05	R	4e-05	R	6.22e-05	1.37e-05 U	1.37e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00048	0.00016	0.000226	0.000276	0.000408	0.000115 J	0.000275

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003
			Sample Date	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1699	2,4'-DDD	53-19-0	mg/kg	1.2e-05 J	7.81e-06 J	4.98e-06 U	2.89e-05 J	1.89e-05 J	1.65e-05 J	3.44e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	5.7e-05 J	1.02e-05 J	2.3e-05 J	3.59e-05 J	2.91e-05 J	2.86e-05 J	2.06e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.01e-05 J	1.09e-05 J	1.08e-05 U	2.49e-05 J	1.08e-05 U	1.08e-05 U	1.08e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.00217 J	0.00237	0.00508	0.0143 J	0.00323 J	0.00242 J	0.0023 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00752 J	0.00808 J	0.0142 J	0.027 J	0.0118 J	0.0106 J	0.00825 J
E1699	4,4'-DDT	50-29-3	mg/kg	9.46e-05 J	0.000273	0.000108 J	0.000144	7.3e-05 J	7.63e-05 J	9.91e-05 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	6.49e-06 J	4.6e-06 J	8.52e-06 J	6.11e-06 J	8.47e-06 J	6.85e-06 J	6.4e-06 U
E1699	Alpha-Chlordane	5103-71-9	mg/kg	6.02e-05	0.000251	0.000447	0.000399	0.000226 J	0.000322	0.000217 J
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	1.11e-05 U	1.11e-05 U	1.11e-05 U	9.61e-06 J	1.6e-05 J	1.11e-05 U
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000179	0.000547	0.000811	0.000241	0.000422 J	0.000663	0.00039 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000307	0.00118	0.00158	0.000528	0.000778 J	0.00141	0.000848 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	R	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	R	R	0.000131 U	0.000131 U	R	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	R	7.6e-05 U	7.6e-05 U	R	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	4.32e-06 J	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	6.09e-05	0.000197	0.000441	0.000122	0.000142 J	0.000207	0.000165 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000104 J	0.000214 J	0.000335 J	0.000123 J	0.000119 J	0.000165 J	0.000104 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	R	3.89e-05 U	3.89e-05 U	8.78e-06 J	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	9.33e-06 U	2.62e-05 J	5.07e-05 J	2.65e-05 J	3.47e-05 J	4.71e-05 J	3.57e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.000358	0.000988	0.00161	0.000576 J	0.000733 J	0.00112	0.000747 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.000549	0.00154	0.00256	0.000773	0.000963 J	0.0013	0.000878 J
E1699	trans-Chlordane	5103-74-2	mg/kg	1.37e-05 U	3.01e-05	4.53e-05	2.22e-05 J	1.37e-05 U	1.37e-05 U	1.37e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	0.00016	0.000225	0.000136	1.7e-05 U	0.000235	0.000209 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002
			Sample Date	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1699	2,4'-DDD	53-19-0	mg/kg	4.98e-06 U	4.98e-06 U	4.98e-06 U	5.77e-05	1.54e-05 J	8.44e-06 J	9.07e-06 J
E1699	2,4'-DDE	3424-82-6	mg/kg	2.66e-05 J	2.93e-05 J	1.97e-05 J	2.71e-05 J	2.64e-05 J	1.78e-05 J	2.82e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	1.08e-05 U	1.08e-05 U	1.08e-05 U	9.28e-06 J	1.08e-05 U	1.64e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00292	0.0033 J	0.00149 J	0.0018	0.00227	0.00216	0.00535
E1699	4,4'-DDE	72-55-9	mg/kg	0.0107 J	0.0109 J	0.00556 J	0.00616 J	0.00908 J	0.00712 J	0.0209 J
E1699	4,4'-DDT	50-29-3	mg/kg	9.4e-06 U	7.75e-05 J	5.54e-05 J	0.000148 J	5.21e-05 J	3.72e-05 J	5.64e-05 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	7.85e-06 J	7.41e-06 J	6.08e-06 J	8.18e-06 J	7.35e-06 J	6.4e-06 U	6.96e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000288	0.000253	0.000144	0.000233	0.000514	0.000322	0.00108 J
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	1.11e-05 U	1.58e-05 J	1.11e-05 U	1.11e-05 U	1.11e-05 U	2.19e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000617	0.000553	0.000274	0.000409	0.00047	0.000441	0.000949
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00098	0.000917	0.00071 J	0.000731	0.000922	0.00183	0.00237
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	R	0.000131 U	R	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	R	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	3.31e-06 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000129	0.000151	9.57e-05	0.000128	0.000143	0.000239	0.000387
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000185 J	0.000189 J	9.15e-05 J	0.000111 J	0.000189 J	0.000177 J	0.000295 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	5.32e-05 J	5.3e-05 J	2.27e-05 J	3.62e-05 J	5.18e-05	2.15e-05 J	5.41e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0012	0.00101	0.00056 J	0.000875	0.000861	0.000871	0.00195
E1699	Oxychlordane	27304-13-8	mg/kg	0.000996	0.0013	0.000577 J	0.000792	0.00128	0.000958	0.00265
E1699	trans-Chlordane	5103-74-2	mg/kg	R	1.37e-05 U	1.37e-05 U	1.37e-05 U	3.01e-05 J	3.75e-05	3.71e-05
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000201	0.000205	1.7e-05 U	0.000107	0.000156	0.000164	0.000287 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1699	2,4'-DDD	53-19-0	mg/kg	4.98e-06 U	1.05e-05 J	4.98e-06 U	4.98e-06 U	4.98e-06 U	4.98e-06 U	0.000105
E1699	2,4'-DDE	3424-82-6	mg/kg	2.28e-05 J	2.9e-05 J	1.5e-05 J	2.55e-05 J	3.04e-05 J	3.04e-05 J	5.38e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	1.81e-05 J	1.08e-05 U	1.08e-05 U	1.08e-05 U	1.08e-05 U	0.000174
E1699	4,4'-DDD	72-54-8	mg/kg	0.00217	0.00438 J	0.00238 J	0.00104	0.00439	0.0108	0.0066 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00674 J	0.0166 J	0.00784 J	0.00458 J	0.0142 J	0.0167 J	0.0181 J
E1699	4,4'-DDT	50-29-3	mg/kg	4.66e-05 J	9.9e-05 J	6.63e-05 J	8.9e-05 J	0.000146 J	9.98e-05 J	0.000354 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	6.4e-06 U	7.18e-06 J	7.25e-06 J	8.13e-06 J	9.34e-06 J	6.4e-06 U	1e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000215	0.000442	0.000208	0.000153	0.000447	0.000532	0.000206
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	2.4e-05 J	1.11e-05 U	1.11e-05 U	2.29e-05 J	1.41e-05 J	1.11e-05 U
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00044	0.00112	0.00036	0.000314	0.00113	0.000856	0.000457
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00118	0.0025	0.000987	0.000718	0.00211	0.00145	0.000997
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	R	6.33e-05 U	6.33e-05 U	R	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	R	R	R	R	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	R	R	R	R	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000223	0.00064	0.000145	0.000131	0.000615	2e-04	0.000156
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000143 J	0.000365 J	0.000191 J	0.000116 J	0.000315 J	0.000356 J	0.00019 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	R	R	R	R	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	1.62e-05 J	5.97e-05 J	R	R	R	5.05e-05 J	5.21e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.000785	0.00214	0.000694	0.000577	0.00208	0.00171	0.000845
E1699	Oxychlordane	27304-13-8	mg/kg	0.0011	0.00362	0.00108	0.00081	0.00307	0.00145	0.00117
E1699	trans-Chlordane	5103-74-2	mg/kg	1.37e-05 U	4.64e-05	1.37e-05 U	1.37e-05 U	1.37e-05 U	R	1.37e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00017	0.000339	1.7e-05 U	0.000153	0.000358	0.000184	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008
			Sample Date	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1699	2,4'-DDD	53-19-0	mg/kg	2.15e-05 J	6.62e-06 J	3.99e-06 J	4.98e-06 U	4.98e-06 U	4.98e-06 U	7.67e-06 J
E1699	2,4'-DDE	3424-82-6	mg/kg	2.89e-05 J	R	7.76e-06 J	9.95e-06 U	2.25e-05 J	9.95e-06 U	1.96e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	3.18e-05 J	7.17e-06 J	1.08e-05 U	1.08e-05 U	1.08e-05 U	1.08e-05 U	2.02e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00747 J	0.00279	0.00178	0.00365	0.00743	0.00942 J	0.00607 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0331 J	0.01 J	0.00637 J	0.011 J	0.0168 J	0.0219 J	0.0143 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000124 J	3.44e-05 J	2.52e-05 J	R	9.27e-05 J	9.4e-06 U	9.42e-05 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U	9.16e-06 U	R	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	6.2e-06 J	7.22e-06 J	5.44e-06 J	6.4e-06 U	5.65e-06 J	6.4e-06 U	6.54e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000451	0.000214	0.000704	0.000228	0.000335	0.000201 J	0.00017 J
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	7.75e-06 J	1.11e-05 U	1.11e-05 U	8.38e-06 J	1.11e-05 U	1.09e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000751 J	0.000591	0.000471	0.000528 J	0.000347	0.000461 J	0.000682 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00141	0.00104	0.000945	0.000999	0.000778	0.000721 J	0.00115 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	R	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	R	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	R	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	R	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U	2.69e-06 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000201	0.000156	0.00015	0.000154	8.08e-05	9.25e-05 J	0.000158 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000218 J	0.000131 J	0.000138 J	0.000151 J	0.000143 J	0.000117 J	0.000223 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	R	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	5.81e-05	3.44e-05 J	3.5e-05 J	R	4.04e-05 J	9.33e-06 U	6.64e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00151 J	0.00191	1.04e-05 U	1.04e-05 U	0.00102	0.000871 J	0.00135 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00203 J	0.00119	0.00116	0.00102	0.000863	0.000957 J	0.00169 J
E1699	trans-Chlordane	5103-74-2	mg/kg	2.28e-05 J	R	1.37e-05 U	1.37e-05 U	1.37e-05 U	1.37e-05 U	1.37e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000314 J	0.000219	0.000164	0.000146	0.000132	1.7e-05 U	0.00026 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123
			Sample Date	10/06/15		
			Sample Type	N	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	8.82e-06 J	4.24252e-05 J	5.3414e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	1e-04 J	0.000113152 J	0.000110592 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.36e-05 J	1.08e-05 U	3.37e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00535 J	0.0108472 J	0.022788 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0159 J	0.0472358 J	0.08086 J
E1699	4,4'-DDT	50-29-3	mg/kg	8.78e-05 J	0.00015654 J	0.00020806
E1699	Aldrin	309-00-2	mg/kg	R	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	6.62e-06 J	2.63054e-05 J	2.5742e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000241 J	0.0009995 J	0.00232058 J
E1699	Beta-BHC	319-85-7	mg/kg	9.34e-06 J	5.1324e-05 J	8.4926e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000518 J	0.00498764 J	0.0065598 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000878 J	0.004037 J	
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.00013464 J
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	3.87e-06 J	7.69e-06 U	9.627e-06 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000103 J	0.00366762 J	0.00469498
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000135 J	0.0011798 J	0.00127402 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	
E1699	Mirex	2385-85-5	mg/kg	4.75e-05 J	0.000160004 J	0.000214712 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	1.04e-05 U	0.00843324 J	0.0181412 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00094 J	0.0140102 J	0.0213452 J
E1699	trans-Chlordane	5103-74-2	mg/kg	1.37e-05 U	0.000207738 J	0.000303394
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.000216 J	0.00082244 J	0.001689

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-124	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	0.0001469452 J	7.9098e-05 J	8.58452e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000194823 J	0.000160642 J	0.000267652 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	4.3934e-05 J	5.2452e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0276928 J	0.0119796 J	0.0271172 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0756706 J	0.04509 J	0.083228 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000183408 J	0.000236004 J	0.000630006 J
E1699	Aldrin	309-00-2	mg/kg		9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	3.50548e-05 J	2.46316e-05 J	2.2052e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00072476	0.00309552	0.00054348
E1699	Beta-BHC	319-85-7	mg/kg	8.5694e-05 J	4.732e-05 J	4.9034e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00561184 J	0.00386564	0.00501664
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00581282 J	0.0048292 J	0.0055158
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg		0.000131 U	
E1699	Endrin Ketone	53494-70-5	mg/kg		7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.27366e-05 J	8.7136e-06 J	1.06566e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	2.44608e-05 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00344206	0.00253174	0.00296552
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00091704 J	0.0006216 J	0.0006695 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000182574 J	0.000187326	0.000186492 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.009575696 J	0.005181696 J	0.008475 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0118311 J	0.0127346 J	0.01252 J
E1699	trans-Chlordane	5103-74-2	mg/kg		0.00020952	
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.0009062	0.00090824	0.00081264

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	8.3446e-05 J	0.000117934 J	0.00013208 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000177704	0.00022109 J	0.00172122
E1699	2,4'-DDT	789-02-6	mg/kg	3.0976e-05 J	0.00017718 J	0.000186092 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.01796 J	0.0390714 J	0.0639642 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.066034 J	0.0894382 J	0.190702 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000237398 J	0.00103952 J	0.002369 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	2.8942e-05 J	2.5588e-05 J	3.88048e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0038546	0.0010231342 J	0.00162768
E1699	Beta-BHC	319-85-7	mg/kg	5.4024e-05 J	4.4874e-05 J	0.000121734 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.004116 J	0.00330742 J	0.00411872 J
E1699	Delta-BHC	319-86-8	mg/kg		5.08e-06 U	
E1699	Dieldrin	60-57-1	mg/kg	0.003574	0.00191698 J	0.0049842
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U		
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.03702e-05 J	7.69e-06 U	1.12546e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00273946	0.00263188 J	0.00296764
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00065038 J	0.00066241 J	0.00158668 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.00023704	0.0001259842 J	0.000221842 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.005493696 J	0.005727696 J	0.0104728 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0136842 J	0.010253 J	0.0151444 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000211388 J	1.37e-05 U	0.000133898 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00119112	0.0012447 J	0.0013735

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-131	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	0.00010534 J	6.89594e-05 J	5.17852e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00083258 J	9.9068e-05 J	0.00014182 J
E1699	2,4'-DDT	789-02-6	mg/kg	7.1174e-05 J	3.6666e-05 J	4.4132e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0259158 J	0.0244258 J	0.0341792 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0926648 J	0.0790392 J	0.086428 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.002410004 J	0.00055042 J	0.00015896 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	2.83586e-05 J	2.3502e-05 J	3.02768e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000712748	0.00179514	0.00245238
E1699	Beta-BHC	319-85-7	mg/kg	5.8134e-05 J	8.2574e-05 J	9.7394e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00322646 J	0.00589078 J	0.00736014 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	8.8552e-06 J
E1699	Dieldrin	60-57-1	mg/kg	0.00443918	0.0081272 J	0.0090992 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U		5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg			
E1699	Endrin Ketone	53494-70-5	mg/kg			
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.22426e-05 J	1.40366e-05 J	1.19588e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.002905066	0.00326578	0.00409634
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00082576 J	0.00134916 J	0.0016961 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U		
E1699	Mirex	2385-85-5	mg/kg	0.0001675842 J	0.000200608 J	0.000219518 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00757092 J	0.01349712 J	0.0150494 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.01249626 J	0.0215756 J	0.0229804 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000143518 J	0.000273434	0.000314322
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00100578 J	0.000979	0.0012013

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-21
Analytical Data for Pesticides
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	0.000178166 J	9.9266e-05 J	0.00011361 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000214546 J	0.000131514 J	0.000209924 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000118006 J	2.0446e-05 J	6.7532e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.134082 J	0.0142722 J	0.0250088 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.18716 J	0.049292 J	0.096244 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00078256 J	0.00018688 J	0.000268882 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	2.33714e-05 J	2.38958e-05 J	3.8089e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00116366	0.00292324 J	0.00191788
E1699	Beta-BHC	319-85-7	mg/kg	6.0214e-05 J	5.13114e-05 J	8.958e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00255214 J	0.00335428 J	0.00626262 J
E1699	Delta-BHC	319-86-8	mg/kg	1.47312e-05 J		5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00418672 J	0.00298592 J	0.0093374 J
E1699	Endosulfan I	959-98-8	mg/kg		5.74e-05 U	
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.00014556 J		
E1699	Endrin Ketone	53494-70-5	mg/kg		7.6e-05 U	
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.11766e-05 J	7.69e-06 U	1.83006e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00221968	0.00190948 J	0.00413118
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00062922 J	0.00063146 J	0.0013623 J
E1699	Methoxychlor	72-43-5	mg/kg		3.89e-05 U	
E1699	Mirex	2385-85-5	mg/kg	0.00011139 J	0.000144758 J	0.000287314 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00588624 J	0.00556042 J	0.0114888 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00850202 J	0.00937062 J	0.014482 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000155008 J	0.000205138 J	0.000342938 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00077404	0.00064958 J	0.0014505

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-21
Analytical Data for Pesticides
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C003	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	8.0836e-05 J	4.06052e-05 J	5.04852e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000176964 J	0.000139284 J	0.000132442 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	1.08e-05 U	5.9472e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.02076 J	0.0131848 J	0.015546 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.081505 J	0.052378 J	0.059286 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000281594 J	6.7796e-05 J	0.00019749 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	3.3076e-05 J	2.2943e-05 J	3.10674e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00187138 J	0.00120372	0.00135462
E1699	Beta-BHC	319-85-7	mg/kg	7.9194e-05 J	5.3974e-05 J	6.3854e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0053846 J	0.00370658	0.00475122
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00832352 J	0.0051192	0.00582658
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U		
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U		
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	1.06046e-05 J	1.38026e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.0033981 J	0.00241206	0.00302374
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00105976 J	0.0006855 J	0.00099786 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	
E1699	Mirex	2385-85-5	mg/kg	0.000228178 J	0.000173528 J	0.00025138 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00923678 J	0.00952 J	0.0083394 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.01346772 J	0.01189104 J	0.014274 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000296138 J		0.000222038 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00138446 J	0.00079094	0.0010357

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	7.12852e-05 J	0.000521098	0.000116956 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000248578 J	0.000332054 J	0.000190876 J
E1699	2,4'-DDT	789-02-6	mg/kg	8.6772e-05 J	7.5852e-05 J	2.28572e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0264526 J	0.023146 J	0.0138998 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0961544 J	0.0750184 J	0.0540392 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000514196 J	0.00047352 J	0.000197934 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	4.11592e-05 J	3.30932e-05 J	2.7487e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00150016	0.00282442	0.0003826558 J
E1699	Beta-BHC	319-85-7	mg/kg	0.000116732 J	6.6714e-05 J	6.4374e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00449276 J	0.00490466 J	0.0044298 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0075194 J	0.00938094 J	0.00622028
E1699	Endosulfan I	959-98-8	mg/kg	4.8976e-05 J	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U		0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.60386e-05 J	1.57266e-05 J	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.003242818	0.00285072	0.00143182
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00100111 J	0.00079454 J	0.00103686 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000254698 J	0.000225428 J	0.000208892
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0098524 J	0.0096435 J	0.00208274 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.01399898 J	0.01553608 J	0.0121012 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000290938 J	0.000418338 J	
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00089658 J	0.00099958	0.00040924

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N001	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	4.26456e-05 J	2.78498e-05 J	3.25452e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	8.2592e-05 J	9.7568e-05 J	0.000116972 J
E1699	2,4'-DDT	789-02-6	mg/kg	2.3956e-05 J	3.1324e-05 J	3.394e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0087224 J	0.009263 J	0.0150218 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0333488 J	0.043546 J	0.0543876 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000212128 J	0.000182656 J	0.000277584 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	1.03404e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	1.511e-05 J	1.58884e-05 J	1.9764e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00317628	0.0031886 J	0.0014513
E1699	Beta-BHC	319-85-7	mg/kg	5.5014e-05 J	6.7946e-05 J	8.6994e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00383634	0.00442026	0.0051616 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U		5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0033094	0.0066418	0.0025736
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	
E1699	Endosulfan II	33213-65-9	mg/kg		5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg		6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg		0.000131 U	
E1699	Endrin Ketone	53494-70-5	mg/kg		7.6e-05 U	
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	4.4488e-06 J	1.49726e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00250646	0.00296438	0.00362302
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00088758 J	0.0008865 J	0.00117182 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	
E1699	Mirex	2385-85-5	mg/kg	0.00011549 J	0.000139354	0.000136528 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00574054 J	0.006617 J	0.0099929 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00983492 J	0.010749 J	0.013528 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00022977 J	0.000163694	0.000242318 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00080776	0.00089618 J	0.0011476

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	6.237e-05 J	4.71052e-05 J	3.54052e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00011194 J	0.00011016 J	9.739e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	5.3694e-05 J	4.0492e-05 J	3.1938e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0181912 J	0.0204032 J	0.0170196 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.066624 J	0.0731416 J	0.0621492 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00029634 J	0.000145002 J	0.00029414 J
E1699	Aldrin	309-00-2	mg/kg	8.289e-06 J	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	2.30972e-05 J	2.9285e-05 J	3.17822e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00190788	0.00134472	0.00186822
E1699	Beta-BHC	319-85-7	mg/kg	8.562e-05 J	0.000103374 J	0.000101814 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0058208	0.0048424 J	0.00712236 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.008688 J	0.00795838 J	0.00175592 J
E1699	Endosulfan I	959-98-8	mg/kg			
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg		6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg			
E1699	Endrin Ketone	53494-70-5	mg/kg			
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.38806e-05 J	1.40886e-05 J	1.34126e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.0040096	0.0033313	0.00482894
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.0012685 J	0.00164154 J	0.00097504 J
E1699	Methoxychlor	72-43-5	mg/kg			
E1699	Mirex	2385-85-5	mg/kg	0.000191338 J		
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0120096 J	0.00805356 J	0.01698898 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0182788 J	0.0156452 J	0.0186174 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000232976	0.000280538 J	0.000246478 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00122066	0.00109158 J	0.00153022

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N007	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	9.10452e-05 J	2.75532e-05 J	0.0008915
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000184216 J	8.3076e-05 J	0.000281612 J
E1699	2,4'-DDT	789-02-6	mg/kg	6.1812e-05 J	2.7336e-05 J	0.00103096
E1699	4,4'-DDD	72-54-8	mg/kg	0.0586286 J	0.035032 J	0.035824 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.158968 J	0.073458 J	0.093474 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00031032 J	0.000209572 J	0.00366796 J
E1699	Aldrin	309-00-2	mg/kg	1.09644e-05 J	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	4.12316e-05 J		3.0982e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00332078	0.00086168	0.00094804
E1699	Beta-BHC	319-85-7	mg/kg	0.000160206 J	6.7114e-05 J	5.1374e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0114702 J	0.00559944 J	0.00351018
E1699	Delta-BHC	319-86-8	mg/kg	8.9332e-06 J		5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0088934 J	0.007729 J	0.00228478
E1699	Endosulfan I	959-98-8	mg/kg			5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg		6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg			
E1699	Endrin Ketone	53494-70-5	mg/kg		7.6e-05 U	
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	2.05106e-05 J	1.26846e-05 J	1.30486e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	2.496e-05 J	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.0105431 J	0.003554	0.00173264
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.0024639 J	0.00128784 J	0.0007594 J
E1699	Methoxychlor	72-43-5	mg/kg		3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg		0.00018167 J	0.000190394 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0237432 J	0.0107814 J	0.0054613 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0345118 J	0.013423 J	0.0085358 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000428738 J		0.000224378 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00254252	0.00064576	0.00074838 J

Notes:
J - Estimated Concentration
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	8.819e-05 J	3.58388e-05 J	2.07106e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000129546 J		5.22824e-05 J
E1699	2,4'-DDT	789-02-6	mg/kg	7.5532e-05 J	1.89298e-05 J	1.08e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.0325678 J	0.0130626 J	0.0139792 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.116274 J	0.05108 J	0.0463138 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00046096 J	0.000114896 J	0.000117188 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U		9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	2.7312e-05 J	2.18788e-05 J	1.87936e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00178194	0.00038014	0.00340696
E1699	Beta-BHC	319-85-7	mg/kg	6.7754e-05 J	3.8235e-05 J	4.6174e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00554774 J	0.00467534	0.00354654
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.0052034	0.0063336	0.0018823
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.2572e-05 J	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg			0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.16706e-05 J	1.05266e-05 J	1.00586e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00386674	0.00302744	0.0021208
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00096732 J	0.00071834 J	0.00053892 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000234614 J	0.000196796 J	0.000178 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0127654 J	0.0102534 J	0.004687696 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0206122 J	0.0130746 J	0.0097244 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000178852 J		0.000174978 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00133996 J	0.00053906	0.00082596

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S005	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	4.98e-06 U	4.55452e-05 J	7.98652e-05 J
E1699	2,4'-DDE	3424-82-6	mg/kg	9.95e-06 U	0.00011103 J	0.000182863 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	3.303e-05 J	0.000111992 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.022539 J	0.0382582 J	0.0384308 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.06976 J	0.094592 J	0.097586 J
E1699	4,4'-DDT	50-29-3	mg/kg		0.000207958 J	0.000563356 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U		1.02104e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	2.9124e-05 J	1.9521e-05 J	2.9826e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00153892	0.0006561	0.00262914 J
E1699	Beta-BHC	319-85-7	mg/kg	6.4634e-05 J	3.87012e-05 J	5.2674e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00473272 J	0.00259158	0.00468314 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00622526 J	0.00403372	0.00492754 J
E1699	Endosulfan I	959-98-8	mg/kg		5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg		6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg		0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg		7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.51026e-05 J	8.9666e-06 J	1.15406e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00266976	0.001481992	0.00313645 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00091514 J	0.00046722 J	0.00057538 J
E1699	Methoxychlor	72-43-5	mg/kg		3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg		0.000114136 J	0.0001748642 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.008587696 J	0.0057988	0.00730054 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0119348 J	0.00583862 J	0.01381218 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000230618 J		1.37e-05 U
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.00094784	0.00045388	0.00126838 J

Notes:
J - Estimated Concentration
R - Rejected data
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02
			Sample Date			12/10/15	12/10/15
			Sample Type	Calc	Calc	N	N
Method	Analyte	CAS	Unit				
E1699	2,4'-DDD	53-19-0	mg/kg	3.66158e-05 J	0.0001123468 J	0.00119 J	0.000408 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000102384 J	0.0006772 J	0.00151 J	0.000557 J
E1699	2,4'-DDT	789-02-6	mg/kg	6.2268e-05 J	3.6584e-05 J	0.000135	0.000226
E1699	4,4'-DDD	72-54-8	mg/kg	0.0515518 J	0.052059 J	0.0067 J	0.00339 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.100802 J	0.152686 J	0.0125 J	0.0115 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000932908 J	0.000155712 J	0.000597 J	0.00132 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U		1.46e-05 J	5.98e-06 J
E1699	Alpha-BHC	319-84-6	mg/kg	2.77716e-05 J	3.37588e-05 J	3.05e-05 J	2.45e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0009344 J	0.00149134 J	0.00472	0.00155
E1699	Beta-BHC	319-85-7	mg/kg	6.7606e-05 J	9.7976e-06 J	3.19e-05 J	3.34e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00346868 J	0.00329532 J	0.00114	0.000718
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.004985 J	0.00236312 J	0.00295	0.00101
E1699	Endosulfan I	959-98-8	mg/kg			5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	5.09e-05 J
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	2.33e-05 J	9.37e-06 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg			0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg			7.6e-05 U	3.62e-05 J
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	9.2706e-06 J	9.4418e-06 J	1.74e-05 J	1.88e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00210592 J	0.00244742 J	0.000739	0.000309
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00067462 J	0.0006355 J	0.000727 J	0.000446 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U		3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000177836 J	0.00020649 J	8.49e-05	8.57e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.006433 J	0.005545696 J	0.00337	0.00191
E1699	Oxychlordane	27304-13-8	mg/kg	0.0087386 J	0.0120576 J	0.000311	0.000219
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000159898 J	0.000197858 J	0.00237	0.000622
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	0.0008398 J	0.00102824 J	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471
			Sample Date	12/10/15	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.000445 J	8.82e-05	0.000195	0.000339 J	0.000259 J	0.000147 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000816 J	0.00015 J	0.000622	0.000997 J	0.000419 J	0.000401 J
E1699	2,4'-DDT	789-02-6	mg/kg	9.05e-05	1.08e-05 U	8.14e-05	0.000125 J	5.73e-05 J	4.13e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00347 J	0.000607	0.00258	0.00392 J	0.00208 J	0.00125 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0129 J	0.0037 J	0.0103 J	0.0198 J	0.0114 J	0.00886 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000467 J	9.44e-05	0.000332	0.00068 J	0.000323 J	0.000237 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	5.35e-06 J	9.16e-06 U	9.16e-06 U	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	2.96e-05 J	1.63e-05 J	1.51e-05 J	2.38e-05 J	2.56e-05 J	1.56e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00186	0.000369	0.00209	0.00237 J	0.00122 J	0.000862 J
E1699	Beta-BHC	319-85-7	mg/kg	3.63e-05 J	1.16e-05 J	1.44e-05 J	2.79e-05 J	2.94e-05 J	2.05e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000688	0.000192	0.000739	0.00104 J	0.000656 J	0.000457 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00139	0.000393	0.000879	0.00184 J	0.000983 J	0.000791 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.6e-05 J	1.21e-05 J	8.27e-06 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	2.09e-05 J	9.68e-06 J	1.15e-05 J	1.95e-05 J	2.17e-05 J	1.44e-05 J
E1699	Heptachlor	76-44-8	mg/kg	9.43e-06 J	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000477	0.00011	0.000248	0.000482 J	0.000268 J	0.000194 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000535 J	0.000127 J	0.000254 J	0.000433 J	0.00036 J	0.000295 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000183	9.33e-06 U	6.48e-05	0.000116 J	7.37e-05 J	0.000143 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.002	0.000445 J	0.00205	0.00255 J	0.00144 J	0.00119 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.000317	1e-05 U	0.000221	0.000294 J	0.000174 J	0.000123 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000811	0.000186	0.000734	0.000984 J	0.000559 J	0.000385 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR
			Sample ID	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	12/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	5.83e-05 J	0.000158 J	0.000432 J	5.74e-05 J	0.000127 J	0.000802
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000223 J	0.000397 J	0.000537 J	0.000211 J	0.000303 J	0.000927 J
E1699	2,4'-DDT	789-02-6	mg/kg	6.12e-05 J	5.75e-05 J	1.08e-05 U	4.31e-05 J	3.41e-05 J	0.000193
E1699	4,4'-DDD	72-54-8	mg/kg	0.00076 J	0.00197 J	0.00416 J	0.00143 J	0.000961 J	0.00617
E1699	4,4'-DDE	72-55-9	mg/kg	0.0122 J	0.00955 J	0.0142 J	0.00864 J	0.0047 J	0.0116 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000244 J	0.000396 J	0.000537 J	0.00026 J	0.000172 J	0.000768
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	5.3e-06 J	8.78e-06 J	9.16e-06 U	9.16e-06 U	2.91e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	7.45e-06 J	1.48e-05 J	2.06e-05 J	1.65e-05 J	1.09e-05 J	1.61e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000703 J	0.00114 J	0.00151 J	0.000714 J	7e-04 J	0.0055
E1699	Beta-BHC	319-85-7	mg/kg	8.97e-06 J	1.95e-05 J	2.42e-05 J	1.7e-05 J	1.01e-05 J	1.98e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000587 J	0.000595 J	0.000782 J	0.000491 J	0.000298 J	0.00127
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000491 J	0.000963 J	0.0017 J	0.000544 J	0.000573 J	0.0037 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.11e-05 J	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.85e-06 J	1.2e-05 J	1.67e-05 J	7.69e-06 U	7.41e-06 J	1.6e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	1.35e-05 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	8.98e-05 J	0.000253 J	0.00041 J	0.000111 J	0.000163 J	0.000949
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000133 J	0.00037 J	0.000785 J	0.00025 J	0.000222 J	0.000595 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	6.44e-05 J	0.000122 J	8.57e-05 J	0.000117 J	8.14e-05 J	8.45e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00123 J	0.00141 J	0.00157 J	0.00117 J	0.000778 J	0.00342 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.000131 J	0.000195 J	0.000199 J	0.000137 J	0.000105 J	0.000403
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000299 J	0.000489 J	0.000697 J	0.000222 J	0.000318 J	0.00209
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/13/16
			Sample Type	N	N	N	N	FD	FD
Method	Analyte	CAS	Unit						
E1699	2,4'-DDD	53-19-0	mg/kg	0.00012	0.00108 J	0.000342 J	0.00044 J	0.00794 J	0.00205
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000388	0.00118 J	0.00305 J	0.000753 J	0.00446 J	0.00111
E1699	2,4'-DDT	789-02-6	mg/kg	7.22e-05	0.00015 J	0.000637 J	0.000106 J	0.000464 J	0.000236
E1699	4,4'-DDD	72-54-8	mg/kg	0.00182	0.00771 J	0.0224 J	0.00356 J	0.0657 J	0.00846
E1699	4,4'-DDE	72-55-9	mg/kg	0.00609 J	0.0296 J	0.0695 J	0.0135 J	0.119 J	0.0235 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000329	0.00088 J	0.0688 J	0.000481 J	0.00364 J	0.00124
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	5.5e-05 J	9.16e-06 U	8.15e-06 J	0.000148 J	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	6.41e-05	4.31e-05 J	6.4e-06 U	2.88e-05 J	2.33e-05 J	5.89e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0024	0.0143 J	0.00217 J	0.00171 J	0.0803 J	0.00341
E1699	Beta-BHC	319-85-7	mg/kg	1.08e-05 J	5.72e-05 J	9.91e-06 J	3.67e-05 J	3.03e-05 J	3.31e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000682	0.00344 J	0.00186 J	0.000771 J	0.0212 J	0.00249
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	4.78e-06 J	5.08e-06 U	3.67e-06 J
E1699	Dieldrin	60-57-1	mg/kg	0.00106	0.0117 J	0.000663 J	0.00152 J	0.02 J	0.00142
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	8.41e-05 J	6.33e-05 U	3.31e-05 J	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.6e-05 J	4.09e-05 J	1.57e-05 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	4.46e-05 J
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	3.77e-05 J	8.6e-06 J	2.4e-05 J	2.18e-05 J	4.34e-05
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	1.79e-05 J	3.25e-05 U	3.25e-05 U	2.69e-05 J	4.87e-06 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000273	0.00314 J	0.000153 J	0.000481 J	0.00336 J	0.000272
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000338 J	0.00112 J	0.000259 J	0.000541 J	0.00145 J	0.000514 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	8.93e-05	0.000135 J	0.000171 J	0.000215 J	0.000152 J	0.000146
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00199	0.00858 J	0.00333 J	0.00188 J	0.0545 J	0.0061
E1699	Oxychlordane	27304-13-8	mg/kg	0.000212	0.000789 J	0.000438 J	0.000197 J	0.00616 J	0.000486
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000645	0.00526 J	0.000739 J	0.000895 J	0.0146 J	0.000432
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-21
Analytical Data for Pesticides
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00405 J	0.00523	0.0018 J	0.00207 J	0.000957 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00328 J	0.00273 J	0.000664 J	0.000693 J	0.00058 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000295 J	0.000504	0.000216	0.000145	0.00013
E1699	4,4'-DDD	72-54-8	mg/kg	0.0173 J	0.0213 J	0.00628 J	0.00649 J	0.00378 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0522 J	0.0758 J	0.0196 J	0.0143 J	0.0165 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00199 J	0.00251 J	0.00124 J	0.000828 J	0.000757 J
E1699	Aldrin	309-00-2	mg/kg	1.46e-05 J	1.07e-05 J	5.84e-06 J	9.16e-06 U	2.32e-06 J
E1699	Alpha-BHC	319-84-6	mg/kg	2.15e-05 J	0.000103	6.57e-05	1.87e-05 J	2.36e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00664 J	0.0093 J	0.00252	0.00136	0.00139
E1699	Beta-BHC	319-85-7	mg/kg	2.86e-05 J	4.38e-05	4.08e-05	1.11e-05 J	1.43e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.0034 J	0.00509 J	0.00197	0.00105	0.00118
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	3.09e-06 J	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00516 J	0.00494 J	0.00183	0.000672	0.000598
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	3.38e-05 J	4.09e-05	2.21e-05 J	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	2.7e-05 J	2.93e-05 J	3.47e-05 J	1.48e-05 J	1.61e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	5.64e-06 J	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00165 J	0.00099	0.000335	0.000186	0.000139
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000839 J	0.000841 J	0.000665 J	0.000224 J	0.000202 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000185 J	0.00051	0.000147	8.56e-05	7.96e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00842 J	0.0129 J	0.00465	0.00269	0.00291
E1699	Oxychlordane	27304-13-8	mg/kg	0.0011 J	0.000949	0.000428	0.000172	0.000206
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00169 J	0.00153 J	0.000394	0.000244	0.000186
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329
			Sample Date	01/13/16	01/13/16	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.0017	0.00158	0.00129 J	0.00341 J	0.000939 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00093	0.000693	0.000497 J	0.00112 J	0.000315 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000192	0.000231	0.000147	0.000385	7.68e-05
E1699	4,4'-DDD	72-54-8	mg/kg	0.00755	0.00603 J	0.00441 J	0.0108 J	0.00311 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.021 J	0.0207 J	0.013 J	0.0293 J	0.00887 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00106	0.00138 J	0.000725 J	0.0018 J	0.000395 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	3.38e-06 J	7.58e-06 J	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	5.59e-05	4.57e-05	4.2e-05	9.34e-05	2.02e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00329	0.00238 J	0.00146	0.00371	0.00083
E1699	Beta-BHC	319-85-7	mg/kg	3.32e-05 J	2.47e-05 J	2.64e-05 J	6.14e-05	1.21e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00226	0.00201 J	0.00118	0.00231	0.000735
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	3.87e-06 J	5.08e-06 U	4.99e-06 J	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00128	0.00145	0.000958	0.00286	0.000501
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.82e-05 J	1.66e-05 J	1.26e-05 J	3.75e-05 J	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	4e-05	3.3e-05 J	2.62e-05 J	5.38e-05	1.02e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000257	0.000263	0.000239	0.000696	0.000132
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000482 J	0.000643 J	0.00032 J	0.000912 J	0.000178 J
E1699	Methoxychlor	72-43-5	mg/kg	R	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000154 J	0.000133	9.95e-05	0.000159	5.5e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0056	0.0052 J	0.00311	0.00603	0.00163
E1699	Oxychlordane	27304-13-8	mg/kg	0.000443	0.000513	0.000263	0.000691	0.000144
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000417	0.000315	0.000247	0.000814	0.000172 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS330	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334
			Sample Date	12/10/15	01/12/16	12/10/15	01/12/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00272 J	0.013 J	0.000286 J	0.00138 J	0.00269
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00139 J	0.00777 J	0.00013 J	0.000833 J	0.00073
E1699	2,4'-DDT	789-02-6	mg/kg	0.000151	0.000798 J	3.67e-05 J	0.000296 J	0.000229
E1699	4,4'-DDD	72-54-8	mg/kg	0.00947 J	0.113 J	0.00236 J	0.00632 J	0.00914
E1699	4,4'-DDE	72-55-9	mg/kg	0.0172 J	0.201 J	0.0107 J	0.0309 J	0.0166 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000816 J	0.00605 J	0.000293 J	0.0016 J	0.000972 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	0.00024 J	7.93e-06 J	9.16e-06 U	4.56e-06 J
E1699	Alpha-BHC	319-84-6	mg/kg	9.96e-06 J	3.31e-05 J	8.89e-06 J	4.79e-05 J	4.92e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00198	0.132 J	0.00221	0.0029 J	0.00217
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	5.71e-05 J	5.91e-06 J	2.8e-05 J	3.45e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000929	0.0363 J	0.000988	0.00213 J	0.00135
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	2.69e-06 J	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000782	0.036 J	0.00115	0.00177 J	0.00175
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	5.24e-05 J	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	6.75e-05 J	1.39e-05 U	2.19e-05 J	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	R
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	8.29e-06 J	3.37e-05 J	7.81e-06 J	2.24e-05 J	4.34e-05
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	4.26e-05 J	3.25e-05 U	3.25e-05 U	8.24e-06 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000205	0.00526 J	0.000177	0.000309 J	0.000387
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000243 J	0.0024 J	0.000192 J	0.000715 J	0.000649 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	R
E1699	Mirex	2385-85-5	mg/kg	5.21e-05	0.00026 J	4.78e-05	0.00014 J	R
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00244	0.087 J	0.00208	0.0057 J	0.00363
E1699	Oxychlordane	27304-13-8	mg/kg	0.000551	0.0103 J	0.000285	0.000574 J	0.000342
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000333	0.0225 J	0.000601 J	0.000498 J	0.000476
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN
			Sample ID	NB03FSBS335	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486
			Sample Date	01/13/16	01/20/16	01/20/16	12/01/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00191	0.103 J	0.00331 J	0.0031	0.00074 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000743	0.0397 J	0.00249 J	0.00135	0.00102 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000182	0.00838 J	0.000245 J	0.000322	3.28e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00778	0.418 J	0.0145 J	0.0116	0.00379 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0188 J	0.423 J	0.0403 J	0.0235 J	0.0085 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.001 J	0.041 J	0.00155 J	0.00164	0.000134 J
E1699	Aldrin	309-00-2	mg/kg	3.41e-06 J	3.77e-05 J	1.31e-05 J	1.23e-05 J	7.19e-06 J
E1699	Alpha-BHC	319-84-6	mg/kg	6.13e-05	7.9e-05 J	1.65e-05 J	5.3e-05	2.68e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00229	0.0258 J	0.00602 J	0.00361	0.00198
E1699	Beta-BHC	319-85-7	mg/kg	3.9e-05	5.78e-05 J	2.33e-05 J	6.16e-05	2.32e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00147	0.0132 J	0.00264 J	0.00178	0.000734
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.18e-06 J	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00165	0.0131 J	0.00405 J	0.00328	0.00173
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	2.27e-05 J	3.7e-05 J	1.16e-05 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg	R	R	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	R	R	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	5.12e-05	7.69e-06 U	2.53e-05 J	6.53e-05	8.71e-06 J
E1699	Heptachlor	76-44-8	mg/kg	8.98e-06 J	3.21e-05 J	3.25e-05 U	1.36e-05 J	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000342	0.00226 J	0.00137 J	0.00101	0.000532
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000673 J	0.00263 J	0.000707 J	0.000682 J	0.000608 J
E1699	Methoxychlor	72-43-5	mg/kg	R	R	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000121 J	0.000457 J	0.000135 J	0.000106	3.58e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0036	0.0271 J	0.00667 J	0.00477	0.00186
E1699	Oxychlordane	27304-13-8	mg/kg	0.000463	0.0081 J	0.000871 J	0.000723	0.000946
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000337	0.00546 J	0.00133 J	0.000965	0.00083 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC487	NB03FSFC488	NB03FSFC489	NB03FSFC490
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1699	2,4'-DDD	53-19-0	mg/kg	0.000569 J	0.000792 J	0.000117 J	0.00121 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000708 J	0.00199 J	0.000169 J	0.000919 J
E1699	2,4'-DDT	789-02-6	mg/kg	2.33e-05 J	0.00014	1.08e-05 U	4.02e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00326 J	0.0117 J	0.000454 J	0.00407 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00752 J	0.031 J	0.00117 J	0.00719 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000167 J	0.000943 J	2.11e-05 J	0.000155 J
E1699	Aldrin	309-00-2	mg/kg	4.2e-06 J	6.74e-06 J	9.16e-06 U	5.39e-06 J
E1699	Alpha-BHC	319-84-6	mg/kg	1.62e-05 J	1.79e-05 J	6.4e-06 U	1.17e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00109	0.00256	0.000234 J	0.0018 J
E1699	Beta-BHC	319-85-7	mg/kg	1.1e-05 J	1.79e-05 J	1.11e-05 U	1.81e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000456	0.00168	9.15e-05 J	0.000792 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00114	0.00158	0.000264 J	0.00169 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.15e-05 J	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	6.95e-06 J	7.83e-06 J	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000314	0.000376	5.85e-05 J	0.000351 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000406 J	0.000536 J	0.000101 J	0.000551 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	2.62e-05 J	8.89e-05	9.33e-06 U	4.12e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00116	0.00446	0.000203 J	0.00181 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00072	0.000933	0.000105 J	0.000857 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000423	0.000725	0.000124 J	0.000775 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC491	NB03FSFN407	NB03FSFN408	NB03FSFN409
			Sample Date	12/01/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1699	2,4'-DDD	53-19-0	mg/kg	0.00148	0.000455	0.000165	0.000572 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.002	0.000569	0.000263	0.00157 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.000287	2.21e-05 J	1.08e-05 U	9.2e-05
E1699	4,4'-DDD	72-54-8	mg/kg	0.0166	0.00317	0.00215	0.00905 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.035 J	0.00877 J	0.00532 J	0.0342 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00213	0.000196 J	0.000132 J	0.000815 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	4.69e-06 J	9.16e-06 U	6.76e-06 J
E1699	Alpha-BHC	319-84-6	mg/kg	1.43e-05 J	7.99e-06 J	5.47e-06 J	1.54e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00194	0.000991	0.000542	0.00365
E1699	Beta-BHC	319-85-7	mg/kg	1.05e-05 J	7.12e-06 J	1.11e-05 U	1.57e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00114	0.000459	0.000326	0.0021
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00101	0.000775	0.000545	0.00166
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	R	R	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	R	R	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	6.35e-06 J	3.29e-06 J	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000273	0.000175	0.000132	0.000551
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00031 J	0.000294 J	0.000206 J	0.000586 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	R	R	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	6.76e-05	R	R	7.6e-05
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00276	0.00104	0.000651	0.00485
E1699	Oxychlordane	27304-13-8	mg/kg	0.000967	0.000758	0.00065	0.0027
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000514	0.000341	0.000206	0.000766 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1699	2,4'-DDD	53-19-0	mg/kg	0.000142	0.000388 J	0.00079 J	0.000626 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00021 J	0.000592 J	0.00143 J	0.00143 J
E1699	2,4'-DDT	789-02-6	mg/kg	1.08e-05 U	1.8e-05 J	2.62e-05 J	5.03e-05 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.00185	0.00183 J	0.00457 J	0.00398 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00578 J	0.00589 J	0.0113 J	0.00987 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000114	0.000136 J	0.000287 J	0.000231 J
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	9.16e-06 U	5.41e-06 J	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	6.5e-05	6.4e-06 U	1.13e-05 J	1.52e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.000486	0.00113	0.00218	0.00119 J
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	1.11e-05 U	1.12e-05 J	1.11e-05 U
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000318	0.000485	0.000824	0.000695 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000576 J	0.000529	0.00131	0.00152 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.39e-05 U	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	6.18e-06 J	7.36e-06 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000166	0.000123	0.000367	0.000295 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000214 J	0.000168 J	0.000492 J	0.000409 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	9.33e-06 U	2.87e-05 J	3.14e-05 J	3.86e-05 J
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.000636 J	0.00107	0.00216	0.00152 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.000551	0.00035	0.000797	0.000625 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000186	3e-04 J	0.000896	0.000517 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1699	2,4'-DDD	53-19-0	mg/kg	0.000529 J	0.00918 J	0.00148 J	0.000527 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.000703 J	0.00561 J	0.00752 J	0.00106 J
E1699	2,4'-DDT	789-02-6	mg/kg	2.76e-05 J	0.000613 J	0.000169 J	1.08e-05 U
E1699	4,4'-DDD	72-54-8	mg/kg	0.00206 J	0.045 J	0.00849 J	0.00184 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.00594 J	0.0631 J	0.0486 J	0.00776 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.000109 J	0.00254 J	0.000617 J	9.4e-06 U
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	8.77e-06 J	6.59e-06 J	9.16e-06 U
E1699	Alpha-BHC	319-84-6	mg/kg	7.71e-06 J	1.69e-05 J	2.07e-05 J	5.71e-06 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00085 J	0.00462 J	0.00157 J	4e-04 J
E1699	Beta-BHC	319-85-7	mg/kg	7.22e-06 J	1.96e-05 J	1.11e-05 U	5.42e-06 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.000361 J	0.00245 J	0.00101 J	0.000174 J
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.000716 J	0.00253 J	0.00194 J	0.000344 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	2.62e-05 J	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	1.37e-05 J	1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	7.69e-06 U	7.69e-06 U	7.69e-06 U
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.25e-05 U	3.25e-05 U	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000118 J	0.000439 J	0.000407 J	6.52e-05 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000203 J	0.000812 J	0.00076 J	0.000144 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	2.98e-05 J	9.74e-05 J	3.68e-05 J	R
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.000865 J	0.00672 J	0.00231 J	0.000417 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.000338 J	0.00208 J	0.000978 J	0.000208 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000316 J	0.00121 J	0.00113 J	0.000173 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10
			Sample Date	12/01/15	04/27/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.00208	0.0131	0.0343 J	0.00466	0.00571
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00321	0.00655	0.0123 J	0.00337	0.00339
E1699	2,4'-DDT	789-02-6	mg/kg	0.000149	0.000675	0.00242	0.000115	0.000218
E1699	4,4'-DDD	72-54-8	mg/kg	0.0192	0.0599 J	0.102 J	0.0192	0.0188
E1699	4,4'-DDE	72-55-9	mg/kg	0.0601 J	0.098 J	0.153 J	0.0567 J	0.0469 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0022	0.00416	0.0087	0.000961	0.00126
E1699	Aldrin	309-00-2	mg/kg	9.16e-06 U	0.000109	4.66e-05	5.1e-05	1.52e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	2.07e-05 J	6.4e-06 U	4.33e-05	2.56e-05 J	2.43e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.00196	0.0552 J	0.0237 J	0.0186	0.0103
E1699	Beta-BHC	319-85-7	mg/kg	1.46e-05 J	4.42e-05	4.12e-05	1.81e-05 J	2.23e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00124	0.0118	0.00925 J	0.00653 J	0.00421
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00109	0.0117	0.0103 J	0.00636 J	0.00394
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	6.93e-05	3.65e-05 J	2.15e-05 J	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U	7.6e-05 U	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.12e-05 J	2.12e-05 J	2.47e-05 J	1.1e-05 J	9.17e-06 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	3.65e-05 J	3.13e-05 J	3.25e-05 U	1.04e-05 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.000287	0.0047	0.00207	0.00123	0.000676
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000433 J	0.00222 J	0.00123 J	0.000955 J	0.000581 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	5.89e-05	0.000147	0.00023	9.49e-05	0.000111
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.00308	0.03 J	0.0184 J	0.0174 J	0.0102 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00166	0.00289	0.00299	0.00162	0.00127
E1699	trans-Chlordane	5103-74-2	mg/kg	0.000516	0.0113	0.00415 J	0.00498	0.00174
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.0167	0.0122		0.0437 J	0.0752 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.01	0.00519		0.0213	0.0159
E1699	2,4'-DDT	789-02-6	mg/kg	0.000354	0.00063		0.0012	0.0023
E1699	4,4'-DDD	72-54-8	mg/kg	0.0634 J	0.0547 J		0.125 J	0.393 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0932 J	0.0823 J		0.182 J	0.249 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00264	0.00384		0.00589	0.0128
E1699	Aldrin	309-00-2	mg/kg	2.98e-05 J	3.17e-05 J		2.18e-05 J	2.65e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	2.48e-05 J	2.85e-05 J		4.27e-05 J	3.48e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0135	0.0167		0.0154	0.0172
E1699	Beta-BHC	319-85-7	mg/kg	2.89e-05 J	2.91e-05 J		3.62e-05 J	5.37e-05
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00571 J	0.00671		0.00599	0.00674
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U		5.16e-06 J	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.006 J	0.0056		0.00562	0.00714
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U		5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U		5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U		6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	2.91e-05 J	1.39e-05 U		1.39e-05 U	1.39e-05 U
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U		0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	7.6e-05 U		7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.92e-05 J	1.76e-05 J		2.53e-05 J	1.58e-05 J
E1699	Heptachlor	76-44-8	mg/kg	2.12e-05 J	8.12e-06 J		3.25e-05 U	1.86e-05 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00143	0.00177		0.00115	0.00114
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00119 J	0.00131 J		0.00149 J	0.00149 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U		3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	8.4e-05	0.000273		0.000107	0.000177
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0132 J	0.0177		0.014 J	0.0189
E1699	Oxychlordane	27304-13-8	mg/kg	0.0016	0.00346		0.00397	0.00242
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00362	0.00247		0.00305	0.00321
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U		1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11
			Sample Date	04/27/16	04/26/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.0101	0.0214 J	0.0718 J	0.00271	0.0636 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00649	0.00566	0.0147	0.00173	0.00867
E1699	2,4'-DDT	789-02-6	mg/kg	0.000502	0.00272	0.002	0.000104	0.0304 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.0372 J	0.0602 J	0.344 J	0.00973	0.162 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.0829 J	0.0543 J	0.225 J	0.0272 J	0.0967 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00251	0.0103	0.0119	0.000602	0.0553 J
E1699	Aldrin	309-00-2	mg/kg	3.93e-05	3.2e-05 J	2.44e-05 J	1.35e-05 J	1.57e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	6.4e-06 U	2.25e-05 J	2.92e-05 J	5.5e-05 J	0.000196 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0219 J	0.017	0.0176	0.00603	0.0113
E1699	Beta-BHC	319-85-7	mg/kg	1.11e-05 U	3.41e-05 J	5.3e-05	1.37e-05 J	2.57e-05 J
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00656	0.00535	0.00615	0.00241	0.0049
E1699	Delta-BHC	319-86-8	mg/kg	5.08e-06 U	5.08e-06 U	5.08e-06 U	5.08e-06 U	4.77e-06 J
E1699	Dieldrin	60-57-1	mg/kg	0.00603	0.00719	0.00651	0.0027	0.00645
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	1.39e-05 U	2.56e-05 J	1.39e-05 U	1.33e-05 J	2.97e-05 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	9.17e-05 J	7.6e-05 U	7.6e-05 U	7.6e-05 U
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	7.69e-06 U	1.39e-05 J	7.69e-06 U	7.69e-06 U	2.01e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U	1.46e-05 J	3.25e-05 U	8.21e-06 J	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00133	0.00123	0.00106	0.00054	0.00152
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00123 J	0.000914 J	0.00138 J	0.000565 J	0.000823 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000149	0.000153	0.000175	0.000942	0.000193
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.016	0.0134 J	0.0185	0.00591 J	0.0122 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.0016	0.00268	0.00216	0.00108	0.0036
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00507	0.00405	0.003	0.00111	0.00176
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09
			Sample Date	04/26/16	04/27/16	04/27/16	04/27/16	04/27/16
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
E1699	2,4'-DDD	53-19-0	mg/kg	0.0386 J		0.0176	0.0834 J	0.101 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.0182		0.00745	0.00795	0.0166
E1699	2,4'-DDT	789-02-6	mg/kg	0.00105		0.00125	0.0131	0.021
E1699	4,4'-DDD	72-54-8	mg/kg	0.116 J		0.0668 J	0.202 J	0.255 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.167 J		0.104 J	0.089 J	0.135 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.00495		0.0059	0.0494 J	0.0635 J
E1699	Aldrin	309-00-2	mg/kg	1.86e-05 J		5.72e-05	5.44e-05	7.03e-05
E1699	Alpha-BHC	319-84-6	mg/kg	3.58e-05 J		3.43e-05 J	3.92e-05	5.01e-05
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.0139		0.0211	0.0216	0.0293 J
E1699	Beta-BHC	319-85-7	mg/kg	3.48e-05 J		3.39e-05 J	3.15e-05 J	4.91e-05
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00507		0.00744	0.00917	0.00979
E1699	Delta-BHC	319-86-8	mg/kg	4.35e-06 J		5.08e-06 U	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00494		0.0047	0.00535	0.00665
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U		5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U		5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	5.51e-05 J		6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	2.35e-05 J		3.55e-05 J	1.39e-05 U	7.54e-05
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U		0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U		7.6e-05 U	7.6e-05 U	R
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	2.35e-05 J		7.69e-06 U	2.06e-05 J	2.17e-05 J
E1699	Heptachlor	76-44-8	mg/kg	3.25e-05 U		2.91e-05 J	3.25e-05 U	2.19e-05 J
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00103		0.0017	0.00227	0.00284
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.00136 J		0.00134 J	0.000708 J	0.00143 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U		3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	9.81e-05		0.000259	0.000372	0.000521
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0125 J		0.0232	0.0222	0.0251 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00352		0.00269	0.0034	0.00328
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00266		0.00454	0.0039	0.00704
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U		1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-21
Analytical Data for Pesticides
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1699	2,4'-DDD	53-19-0	mg/kg	0.0407 J	0.019	0.028 J
E1699	2,4'-DDE	3424-82-6	mg/kg	0.00928	0.004	0.0063 J
E1699	2,4'-DDT	789-02-6	mg/kg	0.0117	0.00177	0.00242 J
E1699	4,4'-DDD	72-54-8	mg/kg	0.111 J	0.0523 J	0.0773 J
E1699	4,4'-DDE	72-55-9	mg/kg	0.12 J	0.0455 J	0.0627 J
E1699	4,4'-DDT	50-29-3	mg/kg	0.0286 J	0.00774	0.0097 J
E1699	Aldrin	309-00-2	mg/kg	2.95e-05 J	3.54e-05 J	2.38e-05 J
E1699	Alpha-BHC	319-84-6	mg/kg	4.67e-05 J	6.4e-06 U	6.37e-05 J
E1699	Alpha-Chlordane	5103-71-9	mg/kg	0.017	0.0128	0.0126 J
E1699	Beta-BHC	319-85-7	mg/kg	3.28e-05 J	3.48e-05 J	4.03e-05
E1699	cis-Nonachlor	5103-73-1	mg/kg	0.00755 J	0.00437	0.00411 J
E1699	Delta-BHC	319-86-8	mg/kg	4.62e-06 J	5.08e-06 U	5.08e-06 U
E1699	Dieldrin	60-57-1	mg/kg	0.00672 J	0.00528	0.00602 J
E1699	Endosulfan I	959-98-8	mg/kg	5.74e-05 U	5.74e-05 U	5.74e-05 U
E1699	Endosulfan II	33213-65-9	mg/kg	5.83e-05 U	5.83e-05 U	5.83e-05 U
E1699	Endosulfan Sulfate	1031-07-8	mg/kg	6.33e-05 U	6.33e-05 U	6.33e-05 U
E1699	Endrin	72-20-8	mg/kg	3.03e-05 J	1.39e-05 U	3.02e-05 J
E1699	Endrin Aldehyde	7421-93-4	mg/kg	0.000131 U	0.000131 U	0.000131 U
E1699	Endrin Ketone	53494-70-5	mg/kg	7.6e-05 U	R	1e-04 J
E1699	Gamma-BHC (Lindane)	58-89-9	mg/kg	1.81e-05 J	7.69e-06 U	2.17e-05 J
E1699	Heptachlor	76-44-8	mg/kg	1.37e-05 J	2.39e-05 J	3.25e-05 U
E1699	Heptachlor Epoxide	1024-57-3	mg/kg	0.00165	0.00142	0.00149 J
E1699	Hexachlorobenzene	118-74-1	mg/kg	0.000891 J	0.000502 J	0.000739 J
E1699	Methoxychlor	72-43-5	mg/kg	3.89e-05 U	3.89e-05 U	3.89e-05 U
E1699	Mirex	2385-85-5	mg/kg	0.000333	0.000452	0.000302
E1699	Nonachlor, trans-	39765-80-5	mg/kg	0.0191 J	0.013	0.0136 J
E1699	Oxychlordane	27304-13-8	mg/kg	0.00453	0.00263	0.00334 J
E1699	trans-Chlordane	5103-74-2	mg/kg	0.00347	0.00217	0.00227 J
E1699	trans-Heptachlor Epoxide	28044-83-9	mg/kg	1.7e-05 U	1.7e-05 U	1.7e-05 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502	NB03FAEC508
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16	09/29/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.134	0.0982	0.101	0.103	0.0598	0.157
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.206	0.8838	0.909	0.927	0.5382	1.413
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.311	0.325	0.284	0.513 J	0.194	0.533
E1631B	Mercury	7439-97-6	mg/kg	0.294	0.274	0.249	0.511	0.205	0.529
SW6010C	Titanium	7440-32-6	mg/kg	0.257 U	0.259 U	0.266 U	0.363 U	0.363 U	0.168 U
SW6020	Aluminum	7429-90-5	mg/kg	3.89 U	3.92 U	4.03 U	5.49 U	5.49 U	5.54 U
SW6020	Antimony	7440-36-0	mg/kg	0.0458 U	0.0462 U	0.0475 U	0.0647 U	0.0647 U	0.0653 U
SW6020	Arsenic	7440-38-2	mg/kg	1.34	0.982	1.01	1.03	0.598	1.57
SW6020	Barium	7440-39-3	mg/kg	0.128 U	0.129 U	0.132 U	0.18 U	0.18 U	0.182 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0099 U	0.0099 U	0.0102 U	0.0139 U	0.0139 U	0.0141 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0319 U	0.0322 U	0.0331 U	0.0451 U	0.0451 U	0.0455 U
SW6020	Calcium	7440-70-2	mg/kg	147	190	191	139	145	233
SW6020	Chromium	7440-47-3	mg/kg	0.0694 U	0.0699 U	0.0719 U	0.098 U	0.098 U	0.099 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0139 U	0.014 U	0.0144 U	0.0196 U	0.0196 U	0.0198 U
SW6020	Copper	7440-50-8	mg/kg	0.217 J	0.238 J	0.214 J	0.265 J	0.323 J	0.0792 U
SW6020	Iron	7439-89-6	mg/kg	4.46 J	3.23 U	3.36 J	4.53 U	4.53 U	7.7 J
SW6020	Lead	7439-92-1	mg/kg	0.0181 U	0.0182 U	0.0187 U	0.0255 U	0.0255 U	0.0339 J
SW6020	Magnesium	7439-95-4	mg/kg	262	290	283	169	230	371
SW6020	Manganese	7439-96-5	mg/kg	0.117 U	0.117 U	0.121 U	0.165 U	0.165 U	0.399
SW6020	Nickel	7440-02-0	mg/kg	0.131 U	0.131 U	0.135 U	0.184 U	0.184 U	0.186 U
SW6020	Potassium	7440-09-7	mg/kg	3590	3970	3860	3210	3330	5750
SW6020	Selenium	7782-49-2	mg/kg	0.53	0.514	0.457	0.383 J	0.531	0.555
SW6020	Silver	7440-22-4	mg/kg	0.0139 U	0.014 U	0.0144 U	0.0196 U	0.0196 U	0.0198 U
SW6020	Sodium	7440-23-5	mg/kg	473	550	554	455	486	748
SW6020	Thallium	7440-28-0	mg/kg	0.0208 U	0.021 U	0.0216 U	0.0294 U	0.0294 U	0.0297 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0208 U	0.0211 J	0.0216 U	0.0294 U	0.0294 U	0.0297 U
SW6020	Zinc	7440-66-6	mg/kg	26.1	22.9	25.8	23.5	22.5	43.1

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04	NB03FAEN-COMP05	NB03FAEN-COMP06
			Sample Date	10/01/15	10/01/15	01/12/16	01/12/16	09/29/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.077	0.177	0.0774	0.0695	0.0771	0.0653
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.693	1.593	0.6966	0.6255	0.6939	0.5877
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.373 J	0.249	0.564	0.764	0.481	0.7
E1631B	Mercury	7439-97-6	mg/kg	0.342	0.368	0.482	0.638	0.466	0.635
SW6010C	Titanium	7440-32-6	mg/kg	0.168 U	0.168 U	0.255 U	0.363 U	0.162 U	0.252 U
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.54 U	3.86 U	5.49 U	5.33 U	6.27 J
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0653 U	0.0455 U	0.0647 U	0.0629 U	0.0449 U
SW6020	Arsenic	7440-38-2	mg/kg	0.77	1.77	0.774	0.695	0.771	0.653
SW6020	Barium	7440-39-3	mg/kg	0.182 U	0.182 U	0.127 U	0.18 U	0.175 U	0.125 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0141 U	0.0098 U	0.0139 U	0.0135 U	0.0097 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0455 U	0.0455 U	0.0317 U	0.0451 U	0.0438 U	0.0313 U
SW6020	Calcium	7440-70-2	mg/kg	213	284	306	377	276	180
SW6020	Chromium	7440-47-3	mg/kg	2.42	0.099 U	0.069 U	0.098 U	0.0952 U	0.068 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0286 J	0.0198 U	0 J	0.0196 U	0.0233 J	0.0136 U
SW6020	Copper	7440-50-8	mg/kg	0.0792 U	0.0792 U	0.0552 U	0.193 J	0.0762 U	0.265 J
SW6020	Iron	7439-89-6	mg/kg	21.4	4.57 U	5.03 J	4.53 U	4.4 U	4.8 J
SW6020	Lead	7439-92-1	mg/kg	0.0257 U	0.0268 J	0.0272 J	0.0255 U	0.028 J	0.0177 U
SW6020	Magnesium	7439-95-4	mg/kg	235	295	265	264	284	261
SW6020	Manganese	7439-96-5	mg/kg	0.369 J	0.409	0.566	0.59	0.699	0.114 U
SW6020	Nickel	7440-02-0	mg/kg	0.203 J	0.186 U	0.13 U	0.184 U	0.179 U	0.128 U
SW6020	Potassium	7440-09-7	mg/kg	3430	4670	3520	3560	4460	3450
SW6020	Selenium	7782-49-2	mg/kg	0.456	0.472	0.4	0.433	0.398	0.421
SW6020	Silver	7440-22-4	mg/kg	0.0198 U	0.0198 U	0.0138 U	0.0196 U	0.019 U	0.0136 U
SW6020	Sodium	7440-23-5	mg/kg	509	550	663	418	536	581
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0297 U	0.0207 U	0.0294 U	0.0286 U	0.0204 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0297 U	0.0297 U	0.0207 U	0.0294 U	0.0286 U	0.0204 U
SW6020	Zinc	7440-66-6	mg/kg	15.3	18	34.2	29.1	20.5	32.5

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAES-COMP01	NB03FAES018	NB03FAES019	NB03FAES347	NB03FAES364	NB03FAES365
			Sample Date	01/13/16	10/01/15	10/01/15	01/13/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.196	0.0653	0.0726	0.102	0.0699	0.131
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.764	0.5877	0.6534	0.918	0.6291	1.179
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.184	0.329	0.334	0.418 J	0.252 J	0.17
E1631B	Mercury	7439-97-6	mg/kg	0.184	0.199	0.193	0.396	0.264	0.172
SW6010C	Titanium	7440-32-6	mg/kg	0.359 U	0.163 U	0.168 U	0.366 U	0.366 U	0.356 U
SW6020	Aluminum	7429-90-5	mg/kg	5.44 U	5.38 U	5.54 U	5.54 U	5.54 U	5.38 U
SW6020	Antimony	7440-36-0	mg/kg	0.0641 U	0.0635 U	0.0653 U	0.0653 U	0.0653 U	0.0635 U
SW6020	Arsenic	7440-38-2	mg/kg	1.96	0.653	0.726	1.02	0.699	1.31
SW6020	Barium	7440-39-3	mg/kg	0.179 U	0.177 U	0.182 U	0.182 U	0.182 U	0.177 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0138 U	0.0137 U	0.0141 U	0.0141 U	0.0141 U	0.0137 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0447 U	0.0442 U	0.0455 U	0.0455 U	0.0455 U	0.0442 U
SW6020	Calcium	7440-70-2	mg/kg	269	152	140	306	151	187
SW6020	Chromium	7440-47-3	mg/kg	0.0971 U	0.0962 U	0.099 U	0.099 U	0.099 U	0.0962 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0194 U	0.0192 U	0.0198 U	0.0198 U	0.0198 U	0.0192 U
SW6020	Copper	7440-50-8	mg/kg	0.231 J	0.0769 U	0.0792 U	0.266 J	0.221 J	0.231 J
SW6020	Iron	7439-89-6	mg/kg	4.49 U	4.44 U	4.57 U	4.57 U	4.57 U	4.44 U
SW6020	Lead	7439-92-1	mg/kg	0.0259 J	0.025 U	0.0257 U	0.0257 U	0.0257 U	0.025 U
SW6020	Magnesium	7439-95-4	mg/kg	263	279	236	242	254	198
SW6020	Manganese	7439-96-5	mg/kg	0.163 U	0.246 J	0.19 J	0.166 U	0.166 U	0.162 U
SW6020	Nickel	7440-02-0	mg/kg	0.183 U	0.181 U	0.186 U	0.186 U	0.186 U	0.181 U
SW6020	Potassium	7440-09-7	mg/kg	4100	4080	3800	3990	3610	2790
SW6020	Selenium	7782-49-2	mg/kg	0.529	0.365 J	0.346 J	0.338 J	0.385 J	0.848
SW6020	Silver	7440-22-4	mg/kg	0.0194 U	0.0192 U	0.0198 U	0.0198 U	0.0198 U	0.0192 U
SW6020	Sodium	7440-23-5	mg/kg	504	625	502	387	450	454
SW6020	Thallium	7440-28-0	mg/kg	0.0291 U	0.0288 U	0.0297 U	0.0297 U	0.0297 U	0.0288 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0291 U	0.0317 J	0.0297 U	0.0297 U	0.0297 U	0.0288 U
SW6020	Zinc	7440-66-6	mg/kg	17.9	36.5	26.6	24.6	23.1	32.6

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03CRB-HEP122	NB03CRB-HEP123	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127
			Sample Date	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.17	0.22	0.23	0.383	0.231	0.373
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.53	1.98	2.07	3.447	2.079	3.357
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0465 J	0.0329	0.051	0.0342	0.0795	0.0304
E1631B	Mercury	7439-97-6	mg/kg	0.0594	0.1	0.0696	0.0497	0.134	0.0488
SW6010C	Titanium	7440-32-6	mg/kg	0.454 J	0.236 J	0.226 J	0.36 J	0.22 J	0.327 J
SW6020	Aluminum	7429-90-5	mg/kg	91.6	5.54 U	5.6 U	8.21 J	5.54 U	6.68 J
SW6020	Antimony	7440-36-0	mg/kg	0.0629 U	0.0653 U	0.066 U	0.066 U	0.0653 U	0.066 U
SW6020	Arsenic	7440-38-2	mg/kg	1.7	2.2	2.3	3.83	2.31	3.73
SW6020	Barium	7440-39-3	mg/kg	4.43	0.597	0.277 J	1.59	0.182 U	0.824
SW6020	Beryllium	7440-41-7	mg/kg	0.0135 U	0.0141 U	0.0142 U	0.0142 U	0.0141 U	0.0142 U
SW6020	Cadmium	7440-43-9	mg/kg	0.165	0.539	0.984	2.01	0.728	2.99
SW6020	Calcium	7440-70-2	mg/kg	3010	5030	3270	19500	2410	24200
SW6020	Chromium	7440-47-3	mg/kg	0.661	0.099 U	0.1 U	0.208 J	0.099 U	0.211 J
SW6020	Cobalt	7440-48-4	mg/kg	0.159	0.215	0.149	0.283	0.151	0.196
SW6020	Copper	7440-50-8	mg/kg	34.4	48.2	40.9	114	48.5	95.1
SW6020	Iron	7439-89-6	mg/kg	277	35.6	34.2	76.3	25.5	82.6
SW6020	Lead	7439-92-1	mg/kg	2.52	0.249	0.111 J	0.445	0.161 J	0.396
SW6020	Magnesium	7439-95-4	mg/kg	652	662	456	1220	439	2020
SW6020	Manganese	7439-96-5	mg/kg	44.7	3.75	2.96	13	2.25	19.5
SW6020	Nickel	7440-02-0	mg/kg	0.527	0.326 J	0.188 U	0.387 J	0.206 J	0.465
SW6020	Potassium	7440-09-7	mg/kg	1760	2540	2510	3700	2400	3320
SW6020	Selenium	7782-49-2	mg/kg	0.749	1.3	1.59	2.5	1.51	2.15
SW6020	Silver	7440-22-4	mg/kg	1	1.49	1.23	3.87	1.38	2.99
SW6020	Sodium	7440-23-5	mg/kg	5170	5010	4090	6020	4720	5520
SW6020	Thallium	7440-28-0	mg/kg	0.0286 U	0.0297 U	0.03 U	0.03 U	0.0297 U	0.03 U
SW6020	Vanadium	7440-62-2	mg/kg	0.117	0.0986 J	0.0954 J	0.241	0.0893 J	0.189
SW6020	Zinc	7440-66-6	mg/kg	22.6	29.8	32.6	77.6	23.6	78.5

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP129	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	08/19/15	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.336	0.536	0.324	0.437	0.202	0.372
CALC	Arsenic - organic	7440-38-2O	mg/kg	3.024	4.824	2.916	3.933	1.818	3.348
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0511 J	0.0335	0.0518	0.0361	0.0565	0.012
E1631B	Mercury	7439-97-6	mg/kg	0.0312	0.0581	0.0806	0.056	0.1	0.0417
SW6010C	Titanium	7440-32-6	mg/kg	0.507 J	0.167 U	0.216 J	0.245 J	0.428 J	0.165 U
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.49 U	5.38 U	8.42 J	12.1 J	5.44 U
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0647 U	0.0635 U	0.0641 U	0.0629 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	3.36	5.36	3.24	4.37	2.02	3.72
SW6020	Barium	7440-39-3	mg/kg	0.409	0.608	0.246 J	0.599	0.572	0.409
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0139 U	0.0137 U	0.0138 U	0.0135 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	0.838	2.07	0.91	1.53	0.378	0.535
SW6020	Calcium	7440-70-2	mg/kg	4650	2520	3440	4640	3060	3600
SW6020	Chromium	7440-47-3	mg/kg	0.118 J	0.197 J	0.0992 J	0.154 J	0.146 J	0.118 J
SW6020	Cobalt	7440-48-4	mg/kg	0.136	0.371	0.157	0.301	0.174	0.29
SW6020	Copper	7440-50-8	mg/kg	52.5	103	51.6	64	33.9	68
SW6020	Iron	7439-89-6	mg/kg	39.6	69	42.3	62.7	41.5	78.6
SW6020	Lead	7439-92-1	mg/kg	0.0257 U	0.359	0.156 J	0.25	0.172 J	0.41
SW6020	Magnesium	7439-95-4	mg/kg	588	487	569	927	490	596
SW6020	Manganese	7439-96-5	mg/kg	3.61	4.65	2.57	3.3	3.8	1.96
SW6020	Nickel	7440-02-0	mg/kg	0.484	0.561	0.318 J	0.461	0.228 J	0.518
SW6020	Potassium	7440-09-7	mg/kg	2660	2690	2890	4180	2030	2930
SW6020	Selenium	7782-49-2	mg/kg	1.69	2.58	1.54	2.34	1.11	1.54
SW6020	Silver	7440-22-4	mg/kg	1.21	2.11	1.29	2.15	1.08	0.711
SW6020	Sodium	7440-23-5	mg/kg	4610	4210	4330	6250	4080	5630
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0294 U	0.0288 U	0.0291 U	0.0286 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0978 J	0.161	0.132	0.182	0.118	0.186
SW6020	Zinc	7440-66-6	mg/kg	27.1	56.5	25.3	61.7	32.1	47.8

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005	NB03CRB-HEP-C006
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.279	0.348	0.077	0.274	0.333	0.362
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.511	3.132	0.693	2.466	2.997	3.258
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0536	0.0841	0.0457 J	0.0878	0.0649	0.0672
E1631B	Mercury	7439-97-6	mg/kg	0.0518	0.0928	0.0473	0.102	0.0801	0.0863
SW6010C	Titanium	7440-32-6	mg/kg	0.502 J	0.179 J	0.532 J	0.283 J	0.168 J	0.167 J
SW6020	Aluminum	7429-90-5	mg/kg	14.4 J	5.49 U	80.6	5.6 U	5.49 U	5.38 U
SW6020	Antimony	7440-36-0	mg/kg	0.0635 U	0.0647 U	0.0653 U	0.066 U	0.0647 U	0.0635 U
SW6020	Arsenic	7440-38-2	mg/kg	2.79	3.48	0.77	2.74	3.33	3.62
SW6020	Barium	7440-39-3	mg/kg	6.4	0.312 J	1.55	0.292 J	0.197 J	0.375 J
SW6020	Beryllium	7440-41-7	mg/kg	0.0137 U	0.0139 U	0.0141 U	0.0142 U	0.0139 U	0.0137 U
SW6020	Cadmium	7440-43-9	mg/kg	1.09	0.822	0.0455 U	0.487	0.831	1.16
SW6020	Calcium	7440-70-2	mg/kg	14100	4100	14200	2800	2840	4180
SW6020	Chromium	7440-47-3	mg/kg	0.172 J	0.098 U	0.736	0.1 U	0.098 U	0.0962 U
SW6020	Cobalt	7440-48-4	mg/kg	0.182	0.19	0.13	0.126	0.21	0.173
SW6020	Copper	7440-50-8	mg/kg	50.9	39	3.55	31.4	37.7	49.1
SW6020	Iron	7439-89-6	mg/kg	67.1	40.6	165	21.6	30.4	36.5
SW6020	Lead	7439-92-1	mg/kg	0.25	0.122 J	0.65	0.079 J	0.0806 J	0.105 J
SW6020	Magnesium	7439-95-4	mg/kg	1240	541	568	411	513	609
SW6020	Manganese	7439-96-5	mg/kg	28.1	2.78	5.31	4.03	2.83	3.34
SW6020	Nickel	7440-02-0	mg/kg	0.32 J	0.293 J	1.2	0.228 J	0.468	0.435
SW6020	Potassium	7440-09-7	mg/kg	2880	2990	2940	2420	2890	3270
SW6020	Selenium	7782-49-2	mg/kg	1.77	1.76	0.71	1.62	1.96	1.79
SW6020	Silver	7440-22-4	mg/kg	1.78	1.11	0.0686 J	0.778	0.94	1.43
SW6020	Sodium	7440-23-5	mg/kg	4490	3770	1640	3750	4200	3770
SW6020	Thallium	7440-28-0	mg/kg	0.0288 U	0.0294 U	0.0297 U	0.03 U	0.0294 U	0.0288 U
SW6020	Vanadium	7440-62-2	mg/kg	0.159	0.101	0.0988 J	0.0794 J	0.0678 J	0.107
SW6020	Zinc	7440-66-6	mg/kg	56.7	34.6	34.4	23.7	28.9	40

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002	NB03CRB-HEP-N003	NB03CRB-HEP-N004
			Sample Date	09/01/15	08/30/15	08/30/15	08/30/15	08/25/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.369	0.306	0.284	0.188	0.189	0.244
CALC	Arsenic - organic	7440-38-2O	mg/kg	3.321	2.754	2.556	1.692	1.701	2.196
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0466	0.0516	0.0484	0.0385	0.0601	0.0991
E1631B	Mercury	7439-97-6	mg/kg	0.0637	0.0589	0.0524	0.0525	0.0562	0.0709
SW6010C	Titanium	7440-32-6	mg/kg	0.17 U	0.42 J	0.604 J	2.3	0.618 J	0.165 U
SW6020	Aluminum	7429-90-5	mg/kg	5.6 U	8.49 J	18.5 J	57.7	16.9 J	8.34 J
SW6020	Antimony	7440-36-0	mg/kg	0.066 U	0.0653 U	0.0641 U	0.0635 U	0.066 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	3.69	3.06	2.84	1.88	1.89	2.44
SW6020	Barium	7440-39-3	mg/kg	0.601	1.37	4.94	5.4	0.877	0.68
SW6020	Beryllium	7440-41-7	mg/kg	0.0142 U	0.0141 U	0.0138 U	0.0137 U	0.0142 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	1.33	1.55	1.08	1.02	0.391	0.47
SW6020	Calcium	7440-70-2	mg/kg	5060	15900	17900	71200	3030	2730
SW6020	Chromium	7440-47-3	mg/kg	0.1 U	0.126 J	0.325 J	0.443	0.211 J	0.109 J
SW6020	Cobalt	7440-48-4	mg/kg	0.159	0.212	0.342	0.236	0.17	0.263
SW6020	Copper	7440-50-8	mg/kg	47.2	45.5	74.7	55.8	42.5	53.7
SW6020	Iron	7439-89-6	mg/kg	36.3	59.6	112	196	79.6	39.7
SW6020	Lead	7439-92-1	mg/kg	0.131 J	0.293	1.56	0.701	0.577	0.107 J
SW6020	Magnesium	7439-95-4	mg/kg	588	1180	1000	1830	537 J	533
SW6020	Manganese	7439-96-5	mg/kg	5.02	12.1	45.4	52.8	9.87	3.84
SW6020	Nickel	7440-02-0	mg/kg	0.256 J	0.323 J	0.387 J	0.35 J	0.233 J	0.389
SW6020	Potassium	7440-09-7	mg/kg	3000	3280	2930	1940	1990 J	2530
SW6020	Selenium	7782-49-2	mg/kg	1.88	1.87	1.89	1.17	1.05	1.47
SW6020	Silver	7440-22-4	mg/kg	1.77	1.64	2.12	2.59	1.49	1.47
SW6020	Sodium	7440-23-5	mg/kg	3850	3750	5300	3920	4800 J	4930
SW6020	Thallium	7440-28-0	mg/kg	0.03 U	0.0297 U	0.0291 U	0.0288 U	0.03 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0894 J	0.221	0.449	0.374	0.173	0.171
SW6020	Zinc	7440-66-6	mg/kg	42.4	73.1	69.4	53.7	27	25.5

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002
			Sample Date	08/26/15	08/24/15	08/24/15	09/01/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.372	0.205	0.248	0.304	0.457	0.392
CALC	Arsenic - organic	7440-38-2O	mg/kg	3.348	1.845	2.232	2.736	4.113	3.528
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0354	0.0518	0.0449	0.113	0.0566	0.0629
E1631B	Mercury	7439-97-6	mg/kg	0.099	0.0655	0.0907	0.0578	0.087	0.084
SW6010C	Titanium	7440-32-6	mg/kg	0.163 U	0.238 J	0.196 J	0.168 U	0.179 J	0.167 U
SW6020	Aluminum	7429-90-5	mg/kg	5.38 U	5.54 U	5.38 U	5.54 U	5.49 U	5.49 U
SW6020	Antimony	7440-36-0	mg/kg	0.0635 U	0.0653 U	0.0635 U	0.0653 U	0.0647 U	0.0647 U
SW6020	Arsenic	7440-38-2	mg/kg	3.72	2.05	2.48	3.04	4.57	3.92
SW6020	Barium	7440-39-3	mg/kg	0.591	0.538	0.677	0.49	0.25 J	0.278 J
SW6020	Beryllium	7440-41-7	mg/kg	0.0137 U	0.0141 U	0.0137 U	0.0141 U	0.0139 U	0.0139 U
SW6020	Cadmium	7440-43-9	mg/kg	0.806	0.65	0.547	0.663	1.7	0.658
SW6020	Calcium	7440-70-2	mg/kg	2910	3350	3090	3570	3900	3260
SW6020	Chromium	7440-47-3	mg/kg	0.104 J	0.099 U	0.125 J	0.099 U	0.134 J	0.136 J
SW6020	Cobalt	7440-48-4	mg/kg	0.264	0.187	0.246	0.23	0.241	0.261
SW6020	Copper	7440-50-8	mg/kg	59.5	55.9	50.5	57.4	61.2	55.1
SW6020	Iron	7439-89-6	mg/kg	44.1	28.1	37.2	32.4	44	39.2
SW6020	Lead	7439-92-1	mg/kg	0.236	0.158 J	2.33	0.0816 J	0.177 J	0.106 J
SW6020	Magnesium	7439-95-4	mg/kg	719	502	518	582	550	515
SW6020	Manganese	7439-96-5	mg/kg	4.44	3.95	3.31	3.03	3.29	2.55
SW6020	Nickel	7440-02-0	mg/kg	0.485	0.29 J	0.619	0.492	0.633	0.451
SW6020	Potassium	7440-09-7	mg/kg	3300	2250	2350	2690	3530	3280
SW6020	Selenium	7782-49-2	mg/kg	1.8	1.3	1.42	1.71	2.35	1.89
SW6020	Silver	7440-22-4	mg/kg	1.59	1.64	1.62	1.64	1.48	1.29
SW6020	Sodium	7440-23-5	mg/kg	5130	3960	3950	5040	5270	4570
SW6020	Thallium	7440-28-0	mg/kg	0.0288 U	0.0297 U	0.0288 U	0.0297 U	0.0294 U	0.0294 U
SW6020	Vanadium	7440-62-2	mg/kg	0.119	0.0931 J	0.115	0.103	0.127	0.121
SW6020	Zinc	7440-66-6	mg/kg	43.1	26	35.3	31.6	43.7	26.7

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-S003	NB03CRB-HEP-S004	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.338	0.369	0.351	0.291	0.343	0.395
CALC	Arsenic - organic	7440-38-2O	mg/kg	3.042	3.321	3.159	2.619	3.087	3.555
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0797	0.035	0.051	0.0671	0.0351	0.0303
E1631B	Mercury	7439-97-6	mg/kg	0.066	0.0535	0.0653	0.0578	0.0504	0.0487
SW6010C	Titanium	7440-32-6	mg/kg	0.163 U	0.601 J	0.163 U	0.321 J	0.165 U	0.59 J
SW6020	Aluminum	7429-90-5	mg/kg	5.38 U	19.5	10.8 J	5.6 U	9.23 J	21.2
SW6020	Antimony	7440-36-0	mg/kg	0.0635 U	0.0635 U	0.0635 U	0.066 U	0.0641 U	0.0647 U
SW6020	Arsenic	7440-38-2	mg/kg	3.38	3.69	3.51	2.91	3.43	3.95
SW6020	Barium	7440-39-3	mg/kg	0.177 U	1.14	0.402	0.651	0.583	3.52
SW6020	Beryllium	7440-41-7	mg/kg	0.0137 U	0.0137 U	0.0137 U	0.0142 U	0.0138 U	0.0139 U
SW6020	Cadmium	7440-43-9	mg/kg	0.956	2.22	0.839	0.49	0.672	2.05
SW6020	Calcium	7440-70-2	mg/kg	2830	19100	3510	3010	7310	20300
SW6020	Chromium	7440-47-3	mg/kg	0.102 J	0.162 J	0.158 J	0.1 U	0.119 J	0.308 J
SW6020	Cobalt	7440-48-4	mg/kg	0.158	0.199	0.191	0.158	0.14	0.189
SW6020	Copper	7440-50-8	mg/kg	28.5	63.7	59.9	50.9	61.7	127
SW6020	Iron	7439-89-6	mg/kg	27.6	82.1	48.2	30.8	48.9	102
SW6020	Lead	7439-92-1	mg/kg	0.0721 J	0.357	0.232	0.124 J	0.258	0.876
SW6020	Magnesium	7439-95-4	mg/kg	583	1250	640	362	683	1740
SW6020	Manganese	7439-96-5	mg/kg	0.162 U	13.4	3.74	2.04	4.86	13.8
SW6020	Nickel	7440-02-0	mg/kg	0.377 J	0.341 J	0.539	0.264 J	0.293 J	0.428
SW6020	Potassium	7440-09-7	mg/kg	2850	3440	3020	2190	2870	3620
SW6020	Selenium	7782-49-2	mg/kg	1.84	2.04	1.74	1.45	1.64	1.81
SW6020	Silver	7440-22-4	mg/kg	0.635	2.02	1.68	1.12	1.7	3.56
SW6020	Sodium	7440-23-5	mg/kg	4050	4520	5040	3540	4130	6170
SW6020	Thallium	7440-28-0	mg/kg	0.0288 U	0.0288 U	0.0288 U	0.03 U	0.0291 U	0.0294 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0775 J	0.216	0.117	0.0892 J	0.0291 U	0.271
SW6020	Zinc	7440-66-6	mg/kg	24.8	63.9	54.2	25.6	32.8	82.4

Notes:
J - Estimated Concentration
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03CRB-HEP-S009	NB03CRB-MUS122	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127
			Sample Date	08/24/15	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.616	0.27	0.234	0.205	0.288	0.205	0.267 J
CALC	Arsenic - organic	7440-38-2O	mg/kg	5.544	2.43	2.106	1.845	2.592	1.845	2.403 J
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0431	0.144 J	0.181	R	R	0.333	0.158
E1631B	Mercury	7439-97-6	mg/kg	0.0635	0.237	0.222	0.19	0.163	0.189	0.166
SW6010C	Titanium	7440-32-6	mg/kg	0.299 J	0.181 J	0.168 U	0.209 J	0.168 U	0.163 U	0.168 U
SW6020	Aluminum	7429-90-5	mg/kg	8 J	5.38 U	5.54 U	5.49 U	5.54 U	5.38 U	5.54 U
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0635 U	0.0653 U	0.0647 U	0.0653 U	0.0635 U	0.0653 U
SW6020	Arsenic	7440-38-2	mg/kg	6.16	2.7	2.34	2.05	2.88	2.05	2.67 J
SW6020	Barium	7440-39-3	mg/kg	0.613	0.675	1.71	1.12	0.182 U	0.177 U	0.182 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0137 U	0.0141 U	0.0139 U	0.0141 U	0.0137 U	0.0141 U
SW6020	Cadmium	7440-43-9	mg/kg	2.39	0.795	0.0455 U	0.0451 U	0.0455 U	0.0442 U	0.0455 U
SW6020	Calcium	7440-70-2	mg/kg	8900	3630	7140	3980	1210	749	549 J
SW6020	Chromium	7440-47-3	mg/kg	0.159 J	0.116 J	0.099 U	0.098 U	0.099 U	0.0962 U	0.099 U
SW6020	Cobalt	7440-48-4	mg/kg	0.241	0.259	0.0244 J	0.0196 U	0.0198 U	0.0192 U	0.0198 U
SW6020	Copper	7440-50-8	mg/kg	105	62.2	16	8.79	13.4	9.17	8.85 J
SW6020	Iron	7439-89-6	mg/kg	58.9	37.1	7.69 J	5.83 J	22.4	5.97 J	7.61 J
SW6020	Lead	7439-92-1	mg/kg	0.286	0.336	0.123 J	0.0402 J	0.0263 J	0.0275 J	0.0279 J
SW6020	Magnesium	7439-95-4	mg/kg	830	599	842	514	525	367	409 J
SW6020	Manganese	7439-96-5	mg/kg	3.29	4.43	6.9	6.3	1.39	1.27	1.06 J
SW6020	Nickel	7440-02-0	mg/kg	0.533	0.404	0.186 U	0.184 U	0.186 U	0.181 U	0.186 U
SW6020	Potassium	7440-09-7	mg/kg	4690	2480	7090	4070	5340	3820	4220 J
SW6020	Selenium	7782-49-2	mg/kg	2.38	1.46	0.874	0.66	1.05	0.739	0.945 J
SW6020	Silver	7440-22-4	mg/kg	2.55	1.81	0.347	0.231	0.316	0.256	0.227
SW6020	Sodium	7440-23-5	mg/kg	6210	4180	2720	2020	2590	1770	1900 J
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0288 U	0.0297 U	0.0294 U	0.0297 U	0.0288 U	0.0297 U
SW6020	Vanadium	7440-62-2	mg/kg	0.172	0.0288 U	0.0406 J	0.0294 U	0.0299 J	0.0525 J	0.0297 U
SW6020	Zinc	7440-66-6	mg/kg	57.6	32	60.7	34.5	40.6	33.2	37.3 J

Notes:
J - Estimated Concentration
R - Rejected data
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN
			Sample ID	NB03CRB-MUS129	NB03CRB-MUS130	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001
			Sample Date	08/19/15	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
CALC	Arsenic - inorganic	7440-38-2I	mg/kg		0.211	0.257	0.18	0.154	0.209 J	0.165
CALC	Arsenic - organic	7440-38-2O	mg/kg		1.899	2.313	1.62	1.386	1.881 J	1.485
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.148 J	0.169	0.145	0.114	0.191	0.0476	0.0718 J
E1631B	Mercury	7439-97-6	mg/kg	0.146	0.112	0.114	0.156	0.181	0.0495	0.169
SW6010C	Titanium	7440-32-6	mg/kg		0.167 U	0.176 J	0.17 U	0.163 U	0.168 U	0.176 J
SW6020	Aluminum	7429-90-5	mg/kg		5.49 U	5.6 U	5.6 U	5.38 U	5.54 U	5.38 U
SW6020	Antimony	7440-36-0	mg/kg		0.0647 U	0.066 U	0.066 U	0.0635 U	0.0653 U	0.0635 U
SW6020	Arsenic	7440-38-2	mg/kg		2.11	2.57	1.8	1.54	2.09 J	1.65
SW6020	Barium	7440-39-3	mg/kg		0.721	0.762	1.66	0.363 J	0.272 J	0.488
SW6020	Beryllium	7440-41-7	mg/kg		0.0139 U	0.0142 U	0.0142 U	0.0137 U	0.0141 U	0.0137 U
SW6020	Cadmium	7440-43-9	mg/kg		0.0451 U	0.046 U	0.046 U	0.0442 U	0.0455 U	0.0442 U
SW6020	Calcium	7440-70-2	mg/kg		4370	5050	3070	937	1310 J	900
SW6020	Chromium	7440-47-3	mg/kg		0.098 U	0.1 U	0.1 U	0.0962 U	0.099 U	0.0962 U
SW6020	Cobalt	7440-48-4	mg/kg		0.0196 U	0.02 U	0.02 U	0.0213 J	0.0198 U	0.0192 U
SW6020	Copper	7440-50-8	mg/kg		13.2	8.93	14.8	12.9	12.8 J	10.7
SW6020	Iron	7439-89-6	mg/kg		4.55 J	6.87 J	9.74 J	9.97 J	6.35 J	8.03 J
SW6020	Lead	7439-92-1	mg/kg		0.0363 J	0.049 J	0.0452 J	0.0481 J	0.083 J	0.025 U
SW6020	Magnesium	7439-95-4	mg/kg		576	533	639	471	500 J	389
SW6020	Manganese	7439-96-5	mg/kg		4.86	6.13	4.9	1.81	0.796 J	3.04
SW6020	Nickel	7440-02-0	mg/kg		0.184 U	0.188 U	0.188 U	0.181 U	0.186 U	0.181 U
SW6020	Potassium	7440-09-7	mg/kg		4110	4000	5770	4850	4920 J	4120
SW6020	Selenium	7782-49-2	mg/kg		0.691	0.724	0.837	0.642	0.579	0.668
SW6020	Silver	7440-22-4	mg/kg		0.302	0.22	0.375	0.322	0.127	0.274
SW6020	Sodium	7440-23-5	mg/kg		2000	2030	2750	2200	2910 J	1820
SW6020	Thallium	7440-28-0	mg/kg		0.0294 U	0.03 U	0.03 U	0.0288 U	0.0297 U	0.0288 U
SW6020	Vanadium	7440-62-2	mg/kg		0.0294 U	0.03 U	0.037 J	0.0288 U	0.0297 U	0.0288 U
SW6020	Zinc	7440-66-6	mg/kg		47.5	38	54.4	50.7	48.9 J	32.1

Notes:
J - Estimated Concentration
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS-C002	NB03CRB-MUS-C003	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008
			Sample Date	08/26/15	08/19/15	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.217	0.286	0.201	0.306	0.239	0.231 J	0.265
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.953	2.574	1.809	2.754	2.151	2.079 J	2.385
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.217	0.12 J	0.322	0.152	0.212 J	0.148 J	0.196
E1631B	Mercury	7439-97-6	mg/kg	0.209	0.168	0.14	0.185	0.205	0.175	0.189
SW6010C	Titanium	7440-32-6	mg/kg	0.167 U	0.272 J	0.165 U	0.165 U	0.249 J	0.162 U	0.165 U
SW6020	Aluminum	7429-90-5	mg/kg	5.49 U	5.33 U	5.44 U	5.44 U	5.44 U	5.33 U	5.44 U
SW6020	Antimony	7440-36-0	mg/kg	0.0647 U	0.0629 U	0.0641 U	0.0641 U	0.0641 U	0.0629 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	2.17	2.86	2.01	3.06	2.39	2.31 J	2.65
SW6020	Barium	7440-39-3	mg/kg	0.383 J	0.722	0.623	0.316 J	0.474 J	0.443 J	0.384 J
SW6020	Beryllium	7440-41-7	mg/kg	0.0139 U	0.0135 U	0.0138 U	0.0138 U	0.0138 U	0.0135 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0451 U	0.933	0.0447 U	0.0447 U	0.0447 U	0.0438 U	0.0447 U
SW6020	Calcium	7440-70-2	mg/kg	1140	5590	2180	1410	1130 J	2010 J	1600
SW6020	Chromium	7440-47-3	mg/kg	0.098 U	0.116 J	0.0971 U	0.0971 U	0.0971 U	0.0952 U	0.0971 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0196 U	0.212	0.0194 U	0.0194 U	0.0194 U	0.019 U	0.0194 U
SW6020	Copper	7440-50-8	mg/kg	12.7	39.3	10.3	9.72	14.5	14.8 J	15.3
SW6020	Iron	7439-89-6	mg/kg	4.75 J	45.1	4.49 U	5.38 J	13.3 J	6.47 J	8.84 J
SW6020	Lead	7439-92-1	mg/kg	0.0255 U	0.0248 U	0.028 J	0.0252 U	0.0365 J	0.0335 J	0.0295 J
SW6020	Magnesium	7439-95-4	mg/kg	413	577	444	484	438 J	445 J	512
SW6020	Manganese	7439-96-5	mg/kg	2.07	6.23	3.96	2.8	2.43 J	6.15 J	3.02
SW6020	Nickel	7440-02-0	mg/kg	0.184 U	0.379 J	0.183 U	0.183 U	0.183 U	0.179 U	0.183 U
SW6020	Potassium	7440-09-7	mg/kg	4450	2970	4390	4970	4620	4390 J	5530
SW6020	Selenium	7782-49-2	mg/kg	0.814	1.61	0.793	0.99	0.872	0.833 J	1.07
SW6020	Silver	7440-22-4	mg/kg	0.333	1.43	0.262	0.251	0.314	0.364 J	0.396
SW6020	Sodium	7440-23-5	mg/kg	2180	3850	1710	1850	2030 J	1910 J	2340
SW6020	Thallium	7440-28-0	mg/kg	0.0294 U	0.0286 U	0.0291 U	0.0291 U	0.0291 U	0.0286 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0318 J	0.0286 U	0.0522 J	0.0313 J	0.0291 U	0.0286 U	0.0299 J
SW6020	Zinc	7440-66-6	mg/kg	32.8	35.8	47.2	47.9	48.6 J	40.2 J	46.5

Notes:
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007
			Sample Date	08/25/15	08/30/15	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.181	0.21	0.137	0.164	0.169	0.233	0.259
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.629	1.89	1.233	1.476	1.521	2.097	2.331
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.231	0.304	0.222	R	0.151	0.215	0.211
E1631B	Mercury	7439-97-6	mg/kg	0.173	0.284	0.219	0.183	0.132	0.254	0.195
SW6010C	Titanium	7440-32-6	mg/kg	0.168 U	0.163 U	0.163 U	0.165 U	0.165 U	0.185 J	0.17 U
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.38 U	5.38 U	5.49 J	5.44 U	5.6 U	5.6 U
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0635 U	0.0635 U	0.286	0.0641 U	0.066 U	0.066 U
SW6020	Arsenic	7440-38-2	mg/kg	1.81	2.1	1.37	1.64	1.69	2.33	2.59
SW6020	Barium	7440-39-3	mg/kg	0.514	0.684	0.277 J	0.375 J	0.873	5.15	1.7
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0137 U	0.0137 U	0.0138 U	0.0138 U	0.0142 U	0.0142 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0455 U	0.0442 U	0.0442 U	0.0447 U	0.0447 U	0.046 U	0.046 U
SW6020	Calcium	7440-70-2	mg/kg	1080	1590	864	796	2020	12400	3150
SW6020	Chromium	7440-47-3	mg/kg	0.099 U	0.0962 U	0.0962 U	0.285 J	0.0971 U	0.1 U	0.1 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0198 U	0.0204 J	0.0192 U	0.02 J	0.0194 U	0.0222 J	0.0306 J
SW6020	Copper	7440-50-8	mg/kg	13	16.9	11.1	16.4	14	19.2	22.8
SW6020	Iron	7439-89-6	mg/kg	8.13 J	8.22 J	7.44 J	39.6	7.41 J	21.9	11.1 J
SW6020	Lead	7439-92-1	mg/kg	0.0301 J	0.0323 J	0.0308 J	0.0639 J	0.0641 J	0.109 J	0.126 J
SW6020	Magnesium	7439-95-4	mg/kg	651 J	608	398 J	479	481	1060	758
SW6020	Manganese	7439-96-5	mg/kg	2.39	5.27	2.09	8.96	4.82	35.1	3.87
SW6020	Nickel	7440-02-0	mg/kg	0.186 U	0.181 U	0.181 U	0.183 U	0.183 U	0.226 J	0.342 J
SW6020	Potassium	7440-09-7	mg/kg	5090 J	5640	3800 J	4990	4610	6710	7040
SW6020	Selenium	7782-49-2	mg/kg	0.77	0.835	0.519	0.64	0.641	0.999	0.99
SW6020	Silver	7440-22-4	mg/kg	0.345	0.362	0.312	0.365	0.314	0.406	0.489
SW6020	Sodium	7440-23-5	mg/kg	3000 J	2790	2470 J	2590	2320	3220	3550
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0288 U	0.0288 U	0.0291 U	0.0291 U	0.03 U	0.03 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0333 J	0.0288 U	0.0288 U	0.158	0.0291 J	0.0334 J	0.0548 J
SW6020	Zinc	7440-66-6	mg/kg	31.2	59.5	37.9	49.7	50.9	63.2	65

Notes:
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			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006
			Sample Date	09/08/15	08/26/15	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.185	0.299 J	0.367	0.316	0.356	0.241	0.294
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.665	2.691 J	3.303	2.844	3.204	2.169	2.646
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.287	0.136 J	0.188	0.272	0.171	0.224	0.285
E1631B	Mercury	7439-97-6	mg/kg	0.151	0.15	0.159	0.135	0.168	0.129	0.125
SW6010C	Titanium	7440-32-6	mg/kg	0.162 U	0.168 U	0.163 U	0.165 U	0.184 J	0.167 U	0.163 U
SW6020	Aluminum	7429-90-5	mg/kg	5.33 U	5.54 U	5.38 U	5.44 U	5.44 U	5.49 U	5.38 U
SW6020	Antimony	7440-36-0	mg/kg	0.0629 U	0.0653 U	0.0635 U	0.0641 U	0.0641 U	0.0647 U	0.0635 U
SW6020	Arsenic	7440-38-2	mg/kg	1.85	2.99 J	3.67	3.16	3.56	2.41	2.94
SW6020	Barium	7440-39-3	mg/kg	0.37 J	0.594 J	0.652	0.375 J	1.16	0.372 J	0.367 J
SW6020	Beryllium	7440-41-7	mg/kg	0.0135 U	0.0141 U	0.0137 U	0.0138 U	0.0138 U	0.0139 U	0.0137 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0438 U	0.0455 U	0.0442 U	0.0447 U	0.0447 U	0.0451 U	0.0442 U
SW6020	Calcium	7440-70-2	mg/kg	813	1090 J	1770	1470	2880	1280	1340
SW6020	Chromium	7440-47-3	mg/kg	0.0952 U	0.099 U	0.347 J	0.0971 U	0.0971 U	0.098 U	0.0962 U
SW6020	Cobalt	7440-48-4	mg/kg	0.019 U	0.0198 U	0.0192 U	0.0194 U	0.0194 U	0.0196 U	0.0192 U
SW6020	Copper	7440-50-8	mg/kg	10.7	11.9 J	15.7	15	17.6	15.7	11.2
SW6020	Iron	7439-89-6	mg/kg	6.26 J	8.2 J	10.7 J	8.26 J	14.6 J	7.72 J	6.44 J
SW6020	Lead	7439-92-1	mg/kg	0.0248 U	0.0315 J	0.0348 J	0.0348 J	0.0507 J	0.0296 J	0.0298 J
SW6020	Magnesium	7439-95-4	mg/kg	359	396 J	502	509	600	512	359
SW6020	Manganese	7439-96-5	mg/kg	1.62	2.6 J	3.16	3.3	6.7	2.43	2.04
SW6020	Nickel	7440-02-0	mg/kg	0.179 U	0.186 U	0.181 U	0.183 U	0.183 U	0.184 U	0.181 U
SW6020	Potassium	7440-09-7	mg/kg	3720	4450 J	5070	5470	5620	5200	3520
SW6020	Selenium	7782-49-2	mg/kg	0.715	0.856 J	0.969	1	1.06	0.909	0.802
SW6020	Silver	7440-22-4	mg/kg	0.222	0.28 J	0.344	0.336	0.396	0.367	0.25
SW6020	Sodium	7440-23-5	mg/kg	2060	1880 J	2310	2340	2600	2530	1520
SW6020	Thallium	7440-28-0	mg/kg	0.0286 U	0.0297 U	0.0288 U	0.0291 U	0.0291 U	0.0294 U	0.0288 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0528 J	0.0297 U	0.0288 U	0.0291 U	0.0359 J	0.0294 U	0.0288 U
SW6020	Zinc	7440-66-6	mg/kg	37.3	39.2 J	50.9	53.6	55.6	48.7	39.1

Notes:
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			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123
			Sample Date	10/06/15	10/06/15	10/06/15		
			Sample Type	N	N	N	Calc	Calc
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.381	0.307	0.323	0.244	0.23036
CALC	Arsenic - organic	7440-38-2O	mg/kg	3.429	2.763	2.907	2.196	2.07324
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.244	0.218	0.169	0.11865 J	0.142494
E1631B	Mercury	7439-97-6	mg/kg	0.123	0.149	0.157	0.190824	0.19028
SW6010C	Titanium	7440-32-6	mg/kg	0.168 U	0.162 U	0.162 U	0.25198 J	0.18568 J
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.33 U	5.33 U	27.7972 J	5.54 U
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0629 U	0.0629 U	0.063344 U	0.0653 U
SW6020	Arsenic	7440-38-2	mg/kg	3.81	3.07	3.23	2.44	2.3036
SW6020	Barium	7440-39-3	mg/kg	0.41	2.08	0.41	1.6513	1.42062
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0135 U	0.0135 U	0.013648 U	0.0141 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0455 U	0.0438 U	0.0438 U	0.6312	0.17381 J
SW6020	Calcium	7440-70-2	mg/kg	1490	18800	809	3468.8	6591.4
SW6020	Chromium	7440-47-3	mg/kg	0.169 J	0.544	0.178 J	0.2577 J	0.099 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0198 U	0.019 U	0.019 U	0.233	0.073956 J
SW6020	Copper	7440-50-8	mg/kg	13.4	11.2	10.8	54.972	24.372
SW6020	Iron	7439-89-6	mg/kg	10.5 J	13.4 J	6.07 J	99.474	14.9466 J
SW6020	Lead	7439-92-1	mg/kg	0.0633 J	0.126 J	0.041 J	0.90384	0.15576 J
SW6020	Magnesium	7439-95-4	mg/kg	542	1290	408	612.78	795.2
SW6020	Manganese	7439-96-5	mg/kg	3.82	13.7	1.85	14.9002	6.081
SW6020	Nickel	7440-02-0	mg/kg	0.186 U	0.179 U	0.179 U	0.43598	0.2224 J
SW6020	Potassium	7440-09-7	mg/kg	5590	4610	4720	2292.8	5907
SW6020	Selenium	7782-49-2	mg/kg	0.913	0.901	0.854	1.27514	0.98476
SW6020	Silver	7440-22-4	mg/kg	0.286	0.275	0.238	1.5994	0.64418
SW6020	Sodium	7440-23-5	mg/kg	2180	2390	1860	4437.4	3315.4
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0286 U	0.0286 U	0.028748 U	0.0297 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0297 U	0.0286 U	0.0286 U	0.051732 J	0.05568 J
SW6020	Zinc	7440-66-6	mg/kg	44.9	39.5	40.5	29.556	52.666

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-124	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.2115	0.3127	0.21176
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.9035	2.8143	1.90584
E1630M	Methyl Mercury	22967-92-6	mg/kg			0.26709
E1631B	Mercury	7439-97-6	mg/kg	0.158696	0.133542	0.1747
SW6010C	Titanium	7440-32-6	mg/kg	0.21342 J	0.21792 J	0.17782 J
SW6020	Aluminum	7429-90-5	mg/kg	5.5186 U	6.2342 J	5.4216 U
SW6020	Antimony	7440-36-0	mg/kg	0.065038 U	0.065482 U	0.063968 U
SW6020	Arsenic	7440-38-2	mg/kg	2.115	3.127	2.1176
SW6020	Barium	7440-39-3	mg/kg	0.90082 J	0.54808 J	0.1783 U
SW6020	Beryllium	7440-41-7	mg/kg	0.013978 U	0.014126 U	0.013804 U
SW6020	Cadmium	7440-43-9	mg/kg	0.289214 J	0.55627 J	0.221988 J
SW6020	Calcium	7440-70-2	mg/kg	3795.4	5965.4	1180.86
SW6020	Chromium	7440-47-3	mg/kg	0.09852 U	0.12734 J	0.096928 U
SW6020	Cobalt	7440-48-4	mg/kg	0.053244 J	0.088232 J	0.053468 J
SW6020	Copper	7440-50-8	mg/kg	17.1386	39.556	19.3958
SW6020	Iron	7439-89-6	mg/kg	13.2062 J	36.414	11.0478 J
SW6020	Lead	7439-92-1	mg/kg	0.058608 J	0.135162 J	0.06221 J
SW6020	Magnesium	7439-95-4	mg/kg	498.92	705.7	385.72
SW6020	Manganese	7439-96-5	mg/kg	5.4316	4.4086	1.5248
SW6020	Nickel	7440-02-0	mg/kg	0.18504 U	0.23826 J	0.1875 J
SW6020	Potassium	7440-09-7	mg/kg	3664.4	4913.6	3450.8
SW6020	Selenium	7782-49-2	mg/kg	0.9018	1.427	0.93946
SW6020	Silver	7440-22-4	mg/kg	0.49074	1.24004	0.54824
SW6020	Sodium	7440-23-5	mg/kg	2558.2	3481.8	2537
SW6020	Thallium	7440-28-0	mg/kg	0.029556 U	0.029778 U	0.029034 U
SW6020	Vanadium	7440-62-2	mg/kg	0.04656 J	0.084786 J	0.062068 J
SW6020	Zinc	7440-66-6	mg/kg	34.006	50.22	30.704

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.29456 J		0.2955
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.65104 J		2.6595
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.124824	0.122806 J	0.13377
E1631B	Mercury	7439-97-6	mg/kg	0.135528	0.116152	0.097986
SW6010C	Titanium	7440-32-6	mg/kg	0.20934 J		0.167 U
SW6020	Aluminum	7429-90-5	mg/kg	5.8364 J		5.49 U
SW6020	Antimony	7440-36-0	mg/kg	0.065482 U		0.0647 U
SW6020	Arsenic	7440-38-2	mg/kg	2.9456 J		2.955
SW6020	Barium	7440-39-3	mg/kg	0.34892 J		0.69162
SW6020	Beryllium	7440-41-7	mg/kg	0.014126 U		0.0139 U
SW6020	Cadmium	7440-43-9	mg/kg	0.81107 J		0.571574 J
SW6020	Calcium	7440-70-2	mg/kg	6698.26 J		3889
SW6020	Chromium	7440-47-3	mg/kg	0.12812 J		0.12374 J
SW6020	Cobalt	7440-48-4	mg/kg	0.065612 J		0.110964 J
SW6020	Copper	7440-50-8	mg/kg	31.275 J		36.548
SW6020	Iron	7439-89-6	mg/kg	27.1074 J		21.307 J
SW6020	Lead	7439-92-1	mg/kg	0.123606 J		0.120202 J
SW6020	Magnesium	7439-95-4	mg/kg	827.86 J		552.86
SW6020	Manganese	7439-96-5	mg/kg	5.8544 J		4.8054
SW6020	Nickel	7440-02-0	mg/kg	0.25854 J		0.28202 J
SW6020	Potassium	7440-09-7	mg/kg	3986 J		3740.8
SW6020	Selenium	7782-49-2	mg/kg	1.2583 J		1.18214
SW6020	Silver	7440-22-4	mg/kg	0.94538		0.77208
SW6020	Sodium	7440-23-5	mg/kg	2841.2 J		2574.6
SW6020	Thallium	7440-28-0	mg/kg	0.029778 U		0.0294 U
SW6020	Vanadium	7440-62-2	mg/kg	0.071118 J		0.063616 J
SW6020	Zinc	7440-66-6	mg/kg	48.012 J		49.84

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-131	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.27442	0.24682	0.16648
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.46978	2.22138	1.49832
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.120768	0.093746	0.15603
E1631B	Mercury	7439-97-6	mg/kg	0.105316	0.13	0.15994
SW6010C	Titanium	7440-32-6	mg/kg	0.1864 J	0.1895 J	0.2319 J
SW6020	Aluminum	7429-90-5	mg/kg	5.5428 U	6.3332 J	7.1272 J
SW6020	Antimony	7440-36-0	mg/kg	0.06535 U	0.065506 U	0.063344 U
SW6020	Arsenic	7440-38-2	mg/kg	2.7442	2.4682	1.6648
SW6020	Barium	7440-39-3	mg/kg	0.62784 J	1.38414	0.41734 J
SW6020	Beryllium	7440-41-7	mg/kg	0.01407 U	0.014096 U	0.013648 U
SW6020	Cadmium	7440-43-9	mg/kg	0.27064 J	0.43184 J	0.130988 J
SW6020	Calcium	7440-70-2	mg/kg	4631.4	3478.2	1488.98
SW6020	Chromium	7440-47-3	mg/kg	0.099792 J	0.11404 J	0.109148 J
SW6020	Cobalt	7440-48-4	mg/kg	0.05562 J	0.09306 J	0.061002 J
SW6020	Copper	7440-50-8	mg/kg	20.0242	27.592	18.36
SW6020	Iron	7439-89-6	mg/kg	16.0818 J	23.5096 J	18.1678 J
SW6020	Lead	7439-92-1	mg/kg	0.07682 J	0.098448 J	0.080314 J
SW6020	Magnesium	7439-95-4	mg/kg	542.36	713.88	475.94
SW6020	Manganese	7439-96-5	mg/kg	5.2044	4.484	2.3274
SW6020	Nickel	7440-02-0	mg/kg	0.2218 J	0.25898 J	0.19322 J
SW6020	Potassium	7440-09-7	mg/kg	3711.4	5356.6	4116.8
SW6020	Selenium	7782-49-2	mg/kg	0.93616	1.22778	0.76368
SW6020	Silver	7440-22-4	mg/kg	0.4982	0.8365	0.51908
SW6020	Sodium	7440-23-5	mg/kg	2628	3660	2688.8
SW6020	Thallium	7440-28-0	mg/kg	0.029688 U	0.029766 U	0.028748 U
SW6020	Vanadium	7440-62-2	mg/kg	0.05652 J	0.0747 J	0.051992 J
SW6020	Zinc	7440-66-6	mg/kg	34.698	56.298	45.864

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.25138 J	0.19464	0.25106
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.26242 J	1.75176	2.25954
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.038344	0.067068 J	0.182446
E1631B	Mercury	7439-97-6	mg/kg	0.047472	0.138528	0.178788
SW6010C	Titanium	7440-32-6	mg/kg	0.16722 U	0.26076 J	0.17012 J
SW6020	Aluminum	7429-90-5	mg/kg	5.514 U	7.7252 J	5.49 U
SW6020	Antimony	7440-36-0	mg/kg	0.064988 U	0.0635 U	0.0647 U
SW6020	Arsenic	7440-38-2	mg/kg	2.5138 J	1.9464	2.5106
SW6020	Barium	7440-39-3	mg/kg	0.30762 J	2.02512	0.36454 J
SW6020	Beryllium	7440-41-7	mg/kg	0.014022 U	0.0137 U	0.0139 U
SW6020	Cadmium	7440-43-9	mg/kg	0.17277 J	0.316108 J	0.247094 J
SW6020	Calcium	7440-70-2	mg/kg	1905.4 J	4332	1909.6
SW6020	Chromium	7440-47-3	mg/kg	0.10394 J	0.115908 J	0.098 U
SW6020	Cobalt	7440-48-4	mg/kg	0.090052 J	0.061528 J	0.063904 J
SW6020	Copper	7440-50-8	mg/kg	27.152 J	21.152	19.538
SW6020	Iron	7439-89-6	mg/kg	25.135 J	23.3882 J	14.071 J
SW6020	Lead	7439-92-1	mg/kg	0.16802 J	0.0835 J	0.05059 J
SW6020	Magnesium	7439-95-4	mg/kg	524.96 J	610.26	446.28
SW6020	Manganese	7439-96-5	mg/kg	1.09864 J	9.5556	2.2546
SW6020	Nickel	7440-02-0	mg/kg	0.27232 J	0.21714 J	0.21234 J
SW6020	Potassium	7440-09-7	mg/kg	4402.6 J	3797.6	4070.4
SW6020	Selenium	7782-49-2	mg/kg	0.82886	0.95452	1.05996
SW6020	Silver	7440-22-4	mg/kg	0.27884	0.66556	0.53502
SW6020	Sodium	7440-23-5	mg/kg	3617.2 J	2514.2	2593.4
SW6020	Thallium	7440-28-0	mg/kg	0.029544 U	0.0288 U	0.0294 U
SW6020	Vanadium	7440-62-2	mg/kg	0.070338 J	0.062652 J	0.049792 J
SW6020	Zinc	7440-66-6	mg/kg	48.614 J	38.496	33.268

Notes:
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C003	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.23166	0.21998	0.31302
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.08494	1.97982	2.81718
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.100682 J	0.261108	0.129354
E1631B	Mercury	7439-97-6	mg/kg	0.136618	0.13012	0.157726
SW6010C	Titanium	7440-32-6	mg/kg	0.3396 J	0.19568 J	0.16578 J
SW6020	Aluminum	7429-90-5	mg/kg	24.9002 J	5.4816 U	5.453 U
SW6020	Antimony	7440-36-0	mg/kg	0.063524 U	0.064594 U	0.064256 U
SW6020	Arsenic	7440-38-2	mg/kg	2.3166	2.1998	3.1302
SW6020	Barium	7440-39-3	mg/kg	0.93728	0.53694 J	0.28506 J
SW6020	Beryllium	7440-41-7	mg/kg	0.013656 U	0.013904 U	0.013826 U
SW6020	Cadmium	7440-43-9	mg/kg	0.70225 J	0.159698 J	0.249138 J
SW6020	Calcium	7440-70-2	mg/kg	7828.6	2341.2	1781.8
SW6020	Chromium	7440-47-3	mg/kg	0.2772 J	0.097854 U	0.097334 U
SW6020	Cobalt	7440-48-4	mg/kg	0.19068	0.047116 J	0.068956 J
SW6020	Copper	7440-50-8	mg/kg	30.005	15.786	16.9948
SW6020	Iron	7439-89-6	mg/kg	76.274	8.9386 J	11.8852 J
SW6020	Lead	7439-92-1	mg/kg	0.187352 J	0.04126 J	0.039604 J
SW6020	Magnesium	7439-95-4	mg/kg	574.66	435.42	491.54
SW6020	Manganese	7439-96-5	mg/kg	5.9908	3.9782	2.8078
SW6020	Nickel	7440-02-0	mg/kg	0.59246 J	0.1947 J	0.2571 J
SW6020	Potassium	7440-09-7	mg/kg	2962.2	3877.8	4429.2
SW6020	Selenium	7782-49-2	mg/kg	1.376	1.00802	1.2422
SW6020	Silver	7440-22-4	mg/kg	1.076036 J	0.39616	0.43014
SW6020	Sodium	7440-23-5	mg/kg	3275.4	2240.4	2461
SW6020	Thallium	7440-28-0	mg/kg	0.028886 U	0.029334 U	0.029178 U
SW6020	Vanadium	7440-62-2	mg/kg	0.046852 J	0.059272 J	0.04079 J
SW6020	Zinc	7440-66-6	mg/kg	35.436	41.09	42.96

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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.27098	0.26688 J	0.27566
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.43882	2.40192 J	2.48094
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.174352 J	0.121636 J	0.158456
E1631B	Mercury	7439-97-6	mg/kg	0.174138	0.146062	0.155174
SW6010C	Titanium	7440-32-6	mg/kg	0.22768 J	0.16408 U	0.2313 J
SW6020	Aluminum	7429-90-5	mg/kg	5.4244 U	5.4002 U	6.233 J
SW6020	Antimony	7440-36-0	mg/kg	0.063944 U	0.063706 U	0.064412 U
SW6020	Arsenic	7440-38-2	mg/kg	2.7098	2.6688 J	2.7566
SW6020	Barium	7440-39-3	mg/kg	0.44826 J	0.48408 J	0.64036 J
SW6020	Beryllium	7440-41-7	mg/kg	0.013774 U	0.013682 U	0.013878 U
SW6020	Cadmium	7440-43-9	mg/kg	0.334678 J	0.378212 J	0.436078 J
SW6020	Calcium	7440-70-2	mg/kg	1923 J	2803 J	5318
SW6020	Chromium	7440-47-3	mg/kg	0.096866 U	0.096448 U	0.104614 J
SW6020	Cobalt	7440-48-4	mg/kg	0.059336 J	0.0554 J	0.069476 J
SW6020	Copper	7440-50-8	mg/kg	23.496	23.224 J	23.152
SW6020	Iron	7439-89-6	mg/kg	19.332 J	14.2258 J	22.0376 J
SW6020	Lead	7439-92-1	mg/kg	0.05431 J	0.05885 J	0.09801 J
SW6020	Magnesium	7439-95-4	mg/kg	482.46 J	482.18 J	685.68
SW6020	Manganese	7439-96-5	mg/kg	2.6666 J	5.8562 J	5.3808
SW6020	Nickel	7440-02-0	mg/kg	0.24852 J	0.19902 J	0.2194 J
SW6020	Potassium	7440-09-7	mg/kg	4269	4028.6 J	4945
SW6020	Selenium	7782-49-2	mg/kg	1.11068	1.10522 J	1.278
SW6020	Silver	7440-22-4	mg/kg	0.60416	0.72956 J	0.71944
SW6020	Sodium	7440-23-5	mg/kg	2482.4 J	2414.4 J	2706.6
SW6020	Thallium	7440-28-0	mg/kg	0.029022 U	0.028964 U	0.029256 U
SW6020	Vanadium	7440-62-2	mg/kg	0.049354 J	0.044408 J	0.079586 J
SW6020	Zinc	7440-66-6	mg/kg	46.364 J	40.772 J	53.416

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Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N001	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.20778	0.20428	0.15052
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.87002	1.83852	1.35468
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.183524	0.23497	0.179906
E1631B	Mercury	7439-97-6	mg/kg	0.141644	0.22381	0.176672
SW6010C	Titanium	7440-32-6	mg/kg	0.28136 J	0.71862 J	0.2813 J
SW6020	Aluminum	7429-90-5	mg/kg	8.9096 J	18.9832 J	8.3752 J
SW6020	Antimony	7440-36-0	mg/kg	0.064988 U	0.0635 U	0.06415 U
SW6020	Arsenic	7440-38-2	mg/kg	2.0778	2.0428	1.5052
SW6020	Barium	7440-39-3	mg/kg	1.66476	1.91016	0.433 J
SW6020	Beryllium	7440-41-7	mg/kg	0.014022 U	0.0137 U	0.01383 U
SW6020	Cadmium	7440-43-9	mg/kg	0.31447 J	0.297908 J	0.134368 J
SW6020	Calcium	7440-70-2	mg/kg	5453.2	19688.6	1427.16
SW6020	Chromium	7440-47-3	mg/kg	0.15776 J	0.186368 J	0.126048 J
SW6020	Cobalt	7440-48-4	mg/kg	0.103572 J	0.076456 J	0.058408 J
SW6020	Copper	7440-50-8	mg/kg	29.042	27.014	19.264
SW6020	Iron	7439-89-6	mg/kg	35.1362 J	57.0428 J	26.2016 J
SW6020	Lead	7439-92-1	mg/kg	0.427874 J	0.206162 J	0.172812 J
SW6020	Magnesium	7439-95-4	mg/kg	741.74 J	925.72	434.14 J
SW6020	Manganese	7439-96-5	mg/kg	13.5726	17.6278	4.1128
SW6020	Nickel	7440-02-0	mg/kg	0.23826 J	0.22494 J	0.19452 J
SW6020	Potassium	7440-09-7	mg/kg	4528.4 J	4678	3329.4 J
SW6020	Selenium	7782-49-2	mg/kg	1.0612	0.9221	0.65706
SW6020	Silver	7440-22-4	mg/kg	0.8065	0.94128	0.61828
SW6020	Sodium	7440-23-5	mg/kg	3598 J	3083.8	3075.8 J
SW6020	Thallium	7440-28-0	mg/kg	0.029544 U	0.0288 U	0.029112 U
SW6020	Vanadium	7440-62-2	mg/kg	0.141382 J	0.118552 J	0.066292 J
SW6020	Zinc	7440-66-6	mg/kg	41.132	57.992	35.066

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Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.1848	0.22178	0.22572
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.6632	1.99602	2.03148
E1630M	Methyl Mercury	22967-92-6	mg/kg		0.120944	0.172568
E1631B	Mercury	7439-97-6	mg/kg	0.153854	0.12342	0.20499
SW6010C	Titanium	7440-32-6	mg/kg	0.165 U	0.16448 U	0.19878 J
SW6020	Aluminum	7429-90-5	mg/kg	6.231 J	5.4244 U	5.5844 U
SW6020	Antimony	7440-36-0	mg/kg	0.228306 J	0.063944 U	0.065818 U
SW6020	Arsenic	7440-38-2	mg/kg	1.848	2.2178	2.2572
SW6020	Barium	7440-39-3	mg/kg	0.4543 J	0.79968	3.95088
SW6020	Beryllium	7440-41-7	mg/kg	0.0138 U	0.013774 U	0.014174 U
SW6020	Cadmium	7440-43-9	mg/kg	0.155278 J	0.242638 J	0.20304 J
SW6020	Calcium	7440-70-2	mg/kg	1298.84	2251.4	10047
SW6020	Chromium	7440-47-3	mg/kg	0.23924 J	0.098894 J	0.09974 U
SW6020	Cobalt	7440-48-4	mg/kg	0.08318 J	0.082996 J	0.065048 J
SW6020	Copper	7440-50-8	mg/kg	26.098	25.83	28.742
SW6020	Iron	7439-89-6	mg/kg	39.626	16.9494 J	23.512
SW6020	Lead	7439-92-1	mg/kg	0.075106 J	0.108794 J	0.12174 J
SW6020	Magnesium	7439-95-4	mg/kg	493.04	542.88	914.92
SW6020	Manganese	7439-96-5	mg/kg	7.6288	4.7212	27.001
SW6020	Nickel	7440-02-0	mg/kg	0.23656 J	0.26152 J	0.24264 J
SW6020	Potassium	7440-09-7	mg/kg	4350.4	4269.4	5550.4
SW6020	Selenium	7782-49-2	mg/kg	0.8558	0.94234	1.07726
SW6020	Silver	7440-22-4	mg/kg	0.6523	0.64576	0.72684
SW6020	Sodium	7440-23-5	mg/kg	3198.4	3050.6	3412.4
SW6020	Thallium	7440-28-0	mg/kg	0.0291 U	0.029022 U	0.029922 U
SW6020	Vanadium	7440-62-2	mg/kg	0.16138	0.052474 J	0.048922 J
SW6020	Zinc	7440-66-6	mg/kg	43.408	48.872	53.528

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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N007	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.25614	0.21594	0.34008 J
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.30526	1.94346	3.06072 J
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.167814	0.24176	0.115356 J
E1631B	Mercury	7439-97-6	mg/kg	0.167882	0.126768	0.13362
SW6010C	Titanium	7440-32-6	mg/kg	0.17676 J	0.16356 U	0.17086 J
SW6020	Aluminum	7429-90-5	mg/kg	5.5428 U	5.3846 U	5.527 U
SW6020	Antimony	7440-36-0	mg/kg	0.06535 U	0.063524 U	0.065144 U
SW6020	Arsenic	7440-38-2	mg/kg	2.5614	2.1594	3.4008 J
SW6020	Barium	7440-39-3	mg/kg	1.43402	0.4012 J	0.50456 J
SW6020	Beryllium	7440-41-7	mg/kg	0.01407 U	0.013656 U	0.014048 U
SW6020	Cadmium	7440-43-9	mg/kg	0.17626 J	0.204792 J	0.47567 J
SW6020	Calcium	7440-70-2	mg/kg	3134.4	1529.82	1820.6 J
SW6020	Chromium	7440-47-3	mg/kg	0.1065 J	0.096188 U	0.1081 J
SW6020	Cobalt	7440-48-4	mg/kg	0.086604 J	0.07386 J	0.077312 J
SW6020	Copper	7440-50-8	mg/kg	30.002	22.842	24.718 J
SW6020	Iron	7439-89-6	mg/kg	17.886 J	13.0564 J	17.508 J
SW6020	Lead	7439-92-1	mg/kg	0.69904 J	0.039568 J	0.06933 J
SW6020	Magnesium	7439-95-4	mg/kg	695.6	416.98	436.04 J
SW6020	Manganese	7439-96-5	mg/kg	3.7244	1.9866	2.7794 J
SW6020	Nickel	7440-02-0	mg/kg	0.41402 J	0.26038 J	0.30222 J
SW6020	Potassium	7440-09-7	mg/kg	5820.6	3452.2	4210.8 J
SW6020	Selenium	7782-49-2	mg/kg	1.1018	0.9737	1.24444 J
SW6020	Silver	7440-22-4	mg/kg	0.78306	0.59068	0.592 J
SW6020	Sodium	7440-23-5	mg/kg	3654	2834.8	2761.4 J
SW6020	Thallium	7440-28-0	mg/kg	0.029688 U	0.028886 U	0.029622 U
SW6020	Vanadium	7440-62-2	mg/kg	0.070452 J	0.065852 J	0.054998 J
SW6020	Zinc	7440-66-6	mg/kg	57.278	35.818	40.37 J

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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.3735	0.32172	0.35938
CALC	Arsenic - organic	7440-38-2O	mg/kg	3.3615	2.89548	3.23442
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.155474	0.222002	0.13564
E1631B	Mercury	7439-97-6	mg/kg	0.1395	0.11706	0.13823
SW6010C	Titanium	7440-32-6	mg/kg	0.16404 U	0.16448 U	0.29242 J
SW6020	Aluminum	7429-90-5	mg/kg	5.4086 U	5.4244 U	9.0956 J
SW6020	Antimony	7440-36-0	mg/kg	0.063812 U	0.063944 U	0.063944 U
SW6020	Arsenic	7440-38-2	mg/kg	3.735	3.2172	3.5938
SW6020	Barium	7440-39-3	mg/kg	0.55476 J	0.32352 J	1.1548
SW6020	Beryllium	7440-41-7	mg/kg	0.013752 U	0.013774 U	0.013774 U
SW6020	Cadmium	7440-43-9	mg/kg	0.203788 J	0.281638 J	0.610278 J
SW6020	Calcium	7440-70-2	mg/kg	2157.4	1823.6	7097.2
SW6020	Chromium	7440-47-3	mg/kg	0.29214 J	0.098374 J	0.113974 J
SW6020	Cobalt	7440-48-4	mg/kg	0.082068 J	0.055436 J	0.066096 J
SW6020	Copper	7440-50-8	mg/kg	25.944	18.51	29.586
SW6020	Iron	7439-89-6	mg/kg	18.11 J	13.2884 J	32.15 J
SW6020	Lead	7439-92-1	mg/kg	0.053312 J	0.044498 J	0.130338 J
SW6020	Magnesium	7439-95-4	mg/kg	505.38	528.24	769
SW6020	Manganese	7439-96-5	mg/kg	3.0014	2.48412 J	8.442
SW6020	Nickel	7440-02-0	mg/kg	0.2512 J	0.23344 J	0.22408 J
SW6020	Potassium	7440-09-7	mg/kg	4604.6	4788.8	5053.2
SW6020	Selenium	7782-49-2	mg/kg	1.20846	1.2184	1.3148
SW6020	Silver	7440-22-4	mg/kg	0.58996	0.41374	0.81824
SW6020	Sodium	7440-23-5	mg/kg	2897.6	2784.6	3099.2
SW6020	Thallium	7440-28-0	mg/kg	0.028956 U	0.029022 U	0.029022 U
SW6020	Vanadium	7440-62-2	mg/kg	0.052772 J	0.041684 J	0.082726 J
SW6020	Zinc	7440-66-6	mg/kg	44.608	46.112	57.758

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NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S005	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.2696	0.29322	0.37112
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.4264	2.63898	3.34008
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.17902	0.228346	0.189686
E1631B	Mercury	7439-97-6	mg/kg	0.112438	0.107528	0.104124
SW6010C	Titanium	7440-32-6	mg/kg	0.16596 U	0.20408 J	0.16722 U
SW6020	Aluminum	7429-90-5	mg/kg	6.8706 J	5.4372 U	6.4994 J
SW6020	Antimony	7440-36-0	mg/kg	0.064388 U	0.06415 U	0.064988 U
SW6020	Arsenic	7440-38-2	mg/kg	2.696	2.9322	3.7112
SW6020	Barium	7440-39-3	mg/kg	0.3798 J	0.44084 J	0.45498
SW6020	Beryllium	7440-41-7	mg/kg	0.013848 U	0.01383 U	0.014022 U
SW6020	Cadmium	7440-43-9	mg/kg	0.251514 J	0.160108 J	0.20839 J
SW6020	Calcium	7440-70-2	mg/kg	1859.8	1774.2	3003.2
SW6020	Chromium	7440-47-3	mg/kg	0.1136 J	0.097188 U	0.156 J
SW6020	Cobalt	7440-48-4	mg/kg	0.064164 J	0.055288 J	0.051052 J
SW6020	Copper	7440-50-8	mg/kg	27.192	21.522	25.958
SW6020	Iron	7439-89-6	mg/kg	18.2448 J	12.7736 J	20.484 J
SW6020	Lead	7439-92-1	mg/kg	0.082224 J	0.054292 J	0.113922 J
SW6020	Magnesium	7439-95-4	mg/kg	545.28	359.78	578.66
SW6020	Manganese	7439-96-5	mg/kg	2.7706	2.04	4.0904
SW6020	Nickel	7440-02-0	mg/kg	0.2763 J	0.20258 J	0.21382 J
SW6020	Potassium	7440-09-7	mg/kg	4633.2	3174.2	4882.8
SW6020	Selenium	7782-49-2	mg/kg	1.12506	0.97048	1.10202
SW6020	Silver	7440-22-4	mg/kg	0.70838	0.4762	0.65364
SW6020	Sodium	7440-23-5	mg/kg	3182.6	2045.2	2687
SW6020	Thallium	7440-28-0	mg/kg	0.029244 U	0.029112 U	0.029544 U
SW6020	Vanadium	7440-62-2	mg/kg	0.052176 J	0.044504 J	0.029544 U
SW6020	Zinc	7440-66-6	mg/kg	50.13	35.59	41.754

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02
			Sample Date			12/10/15	12/10/15
			Sample Type	Calc	Calc	N	N
Method	Analyte	CAS	Unit				
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.32988	0.39918	0.0667	0.051
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.96892	3.59262	0.6003	0.459
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.169198	0.136266	0.276	0.224
E1631B	Mercury	7439-97-6	mg/kg	0.122922	0.13269	0.219	0.219
SW6010C	Titanium	7440-32-6	mg/kg	0.27328 J	0.19762 J	0.163 U	0.165 U
SW6020	Aluminum	7429-90-5	mg/kg	9.4562 J	6.0242 J	5.38 U	5.44 U
SW6020	Antimony	7440-36-0	mg/kg	0.063368 U	0.063524 U	0.0635 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	3.2988	3.9918	0.667	0.51
SW6020	Barium	7440-39-3	mg/kg	2.4544	0.46278	0.177 U	0.179 U
SW6020	Beryllium	7440-41-7	mg/kg	0.013604 U	0.013656 U	0.0137 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	0.565412 J	0.653812 J	0.0442 U	0.0447 U
SW6020	Calcium	7440-70-2	mg/kg	19190	2912.66	246	323
SW6020	Chromium	7440-47-3	mg/kg	0.48264 J	0.17306 J	0.0962 U	0.167 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0632 J	0.07672 J	0.0192 U	0.223
SW6020	Copper	7440-50-8	mg/kg	41.308	35.292	0.77	0.649
SW6020	Iron	7439-89-6	mg/kg	36.436 J	19.8058 J	10.7 J	7.52 J
SW6020	Lead	7439-92-1	mg/kg	0.321 J	0.1047 J	0.025 U	0.0252 U
SW6020	Magnesium	7439-95-4	mg/kg	1407	517.72	316	294
SW6020	Manganese	7439-96-5	mg/kg	13.726	2.2244	0.178 J	0.163 U
SW6020	Nickel	7440-02-0	mg/kg	0.24374 J	0.27104 J	0.181 U	0.183 U
SW6020	Potassium	7440-09-7	mg/kg	4352.6	4712.2	4390	4170
SW6020	Selenium	7782-49-2	mg/kg	1.13734	1.25076	0.67	0.56
SW6020	Silver	7440-22-4	mg/kg	1.1291	0.83912	0.0192 U	0.0194 U
SW6020	Sodium	7440-23-5	mg/kg	3372.8	2991	353	431
SW6020	Thallium	7440-28-0	mg/kg	0.028808 U	0.028886 U	0.0288 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.091624 J	0.065884 J	0.0288 U	0.0291 U
SW6020	Zinc	7440-66-6	mg/kg	50.654	44.946	14.3	15.8

Notes:
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471
			Sample Date	12/10/15	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0262 J	0.0317 J	0.0387	0.0672	0.0656	0.065
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.2358 J	0.2853 J	0.3483	0.6048	0.5904	0.585
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.336	0.337 J	0.372	0.272	0.366	0.463
E1631B	Mercury	7439-97-6	mg/kg	0.293	0.286	0.294	0.275	0.36	0.388
SW6010C	Titanium	7440-32-6	mg/kg	0.167 U	0.17 U	0.163 U	0.319 U	0.257 U	0.255 U
SW6020	Aluminum	7429-90-5	mg/kg	5.49 U	5.38 U	5.49 U	4.83 U	3.89 U	3.86 U
SW6020	Antimony	7440-36-0	mg/kg	0.0647 U	0.066 U	0.0635 U	0.0569 U	0.0458 U	0.0455 U
SW6020	Arsenic	7440-38-2	mg/kg	0.262 J	0.317 J	0.387	0.672	0.656	0.65
SW6020	Barium	7440-39-3	mg/kg	0.18 U	0.184 U	0.177 U	0.159 U	0.128 U	0.127 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0139 U	0.0142 U	0.0137 U	0.0122 U	0.0099 U	0.0098 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0451 U	0.046 U	0.0442 U	0.0397 U	0.0319 U	0.0317 U
SW6020	Calcium	7440-70-2	mg/kg	432	109	141	327	176	257
SW6020	Chromium	7440-47-3	mg/kg	0.107 J	0.1 U	0.0962 U	0.0862 U	0.0694 U	0.069 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0196 U	0.02 U	0.0192 U	0.0172 U	0.0139 U	0.0138 U
SW6020	Copper	7440-50-8	mg/kg	0.78	0.575	0.701	1.06	0.723	0.767
SW6020	Iron	7439-89-6	mg/kg	8.16 J	4.62 U	7.78 J	9.33 J	7.75 J	11.2 J
SW6020	Lead	7439-92-1	mg/kg	0.0255 U	0.026 U	0.025 U	0.0439 J	0.0181 U	0.0179 U
SW6020	Magnesium	7439-95-4	mg/kg	315	308	294	331	321	367
SW6020	Manganese	7439-96-5	mg/kg	0.227 J	0.192 J	0.179 J	0.145 U	0.117 U	0.116 U
SW6020	Nickel	7440-02-0	mg/kg	0.184 U	0.188 U	0.181 U	0.162 U	0.131 U	0.13 U
SW6020	Potassium	7440-09-7	mg/kg	4270	4610	4340	4420	4320	5070
SW6020	Selenium	7782-49-2	mg/kg	0.525	0.482	0.446	0.333 J	0.482	0.584
SW6020	Silver	7440-22-4	mg/kg	0.0196 U	0.02 U	0.0192 U	0.0172 U	0.0139 U	0.0138 U
SW6020	Sodium	7440-23-5	mg/kg	489	397	392	429	484	487
SW6020	Thallium	7440-28-0	mg/kg	0.0294 U	0.03 U	0.0288 U	0.0259 U	0.0208 U	0.0207 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0294 U	0.03 U	0.0288 U	0.0319 J	0.0208 U	0.0207 U
SW6020	Zinc	7440-66-6	mg/kg	16.7	13.1	15.5	13.8	16.6	19.2

Notes:
J - Estimated Concentration
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			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR
			Sample ID	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	12/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0733	0.0527	0.0463	0.127	0.0502	0.0435
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.6597	0.4743	0.4167	1.143	0.4518	0.3915
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.205	0.417	0.367	0.467	0.348	0.122
E1631B	Mercury	7439-97-6	mg/kg	0.158	0.353	0.294	0.347	0.287	0.101
SW6010C	Titanium	7440-32-6	mg/kg	0.356 U	0.247 U	0.336 U	0.253 U	0.322 U	0.165 U
SW6020	Aluminum	7429-90-5	mg/kg	5.38 U	6.72 J	5.09 U	12.3 J	7.01 J	5.6 U
SW6020	Antimony	7440-36-0	mg/kg	0.0635 U	0.044 U	0.06 U	0.0452 U	0.0574 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	0.733	0.527	0.463	1.27	0.502	0.435
SW6020	Barium	7440-39-3	mg/kg	0.177 U	0.245 J	0.167 U	0.126 U	0.16 U	0.179 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0137 U	0.0095 U	0.0129 U	0.0097 U	0.0123 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0442 U	0.0307 U	0.0418 U	0.0315 U	0.04 U	0.0447 U
SW6020	Calcium	7440-70-2	mg/kg	229	514	287	305	160	344
SW6020	Chromium	7440-47-3	mg/kg	0.0962 U	0.0667 U	0.0909 U	0.0685 U	0.087 U	0.0971 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0192 U	0.0133 U	0.0182 U	0.0137 U	0.0174 U	0.0194 U
SW6020	Copper	7440-50-8	mg/kg	0.784	0.855	0.792	0.714	0.632	0.646
SW6020	Iron	7439-89-6	mg/kg	13.2 J	9.69 J	11.8 J	7.14 J	9.89 J	8.32 J
SW6020	Lead	7439-92-1	mg/kg	0.025 U	0.0175 J	0.0236 U	0.0178 U	0.0226 U	0.0252 U
SW6020	Magnesium	7439-95-4	mg/kg	325	336	335	367	334	300
SW6020	Manganese	7439-96-5	mg/kg	0.162 U	0.112 U	0.153 U	0.115 U	0.146 U	0.271 J
SW6020	Nickel	7440-02-0	mg/kg	0.181 U	0.125 U	0.171 U	0.129 U	0.163 U	0.183 U
SW6020	Potassium	7440-09-7	mg/kg	5130	4380	4740	5200	4470	4260
SW6020	Selenium	7782-49-2	mg/kg	0.492	0.439	0.453	0.494	0.566	0.678
SW6020	Silver	7440-22-4	mg/kg	0.0192 U	0.0133 U	0.0182 U	0.0137 U	0.0174 U	0.0194 U
SW6020	Sodium	7440-23-5	mg/kg	710	497	526	447	338	474
SW6020	Thallium	7440-28-0	mg/kg	0.0288 U	0.02 U	0.0273 U	0.0205 U	0.0261 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0288 U	0.0219 J	0.0273 U	0.0205 U	0.0261 U	0.0291 U
SW6020	Zinc	7440-66-6	mg/kg	14.2	18.8	18.2	17.8	21.4	18.7

Notes:
J - Estimated Concentration
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/13/16
			Sample Type	N	N	N	N	FD	FD
Method	Analyte	CAS	Unit						
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.027 J	0.0554	0.0459	0.121	0.0431	0.111
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.243 J	0.4986	0.4131	1.089	0.3879	0.999
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.414	0.449	0.371	0.463	0.39	0.218
E1631B	Mercury	7439-97-6	mg/kg	0.32	0.382	0.316	0.396	0.325	0.209
SW6010C	Titanium	7440-32-6	mg/kg	0.168 U	0.252 U	0.339 U	0.349 U	0.262 J	0.359 U
SW6020	Aluminum	7429-90-5	mg/kg	5.49 U	4.09 J	5.59 J	5.35 J	3.92 U	5.44 U
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0449 U	0.0606 U	0.0623 U	0.0462 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	0.27 J	0.554	0.459	1.21	0.431	1.11
SW6020	Barium	7440-39-3	mg/kg	0.182 U	0.125 U	0.169 U	0.174 U	0.367	0.179 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0097 U	0.013 U	0.0134 U	0.0099 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0455 U	0.0313 U	0.0422 U	0.0434 U	0.0322 U	0.0447 U
SW6020	Calcium	7440-70-2	mg/kg	415	375	310	529	2800 J	86.4 J
SW6020	Chromium	7440-47-3	mg/kg	0.099 U	0.068 U	0.0917 U	0.0943 U	0.0699 U	0.0971 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0198 U	0.0136 U	0.0183 U	0.0189 U	0.014 U	0.0194 U
SW6020	Copper	7440-50-8	mg/kg	0.883	0.651	0.696	0.719	0.341	0.492
SW6020	Iron	7439-89-6	mg/kg	11.7 J	6.06 J	7.19 J	9.78 J	5.29 J	5.91 J
SW6020	Lead	7439-92-1	mg/kg	0.152	0.0177 U	0.0239 U	0.0245 U	0.0182 U	0.0252 U
SW6020	Magnesium	7439-95-4	mg/kg	304	342	303	348	336	253
SW6020	Manganese	7439-96-5	mg/kg	0.175 J	0.323	0.154 U	0.158 U	0.636 J	0.163 U
SW6020	Nickel	7440-02-0	mg/kg	0.186 U	0.128 U	0.172 U	0.177 U	0.131 U	0.183 U
SW6020	Potassium	7440-09-7	mg/kg	4180	4400	4050	4720	3930	4050
SW6020	Selenium	7782-49-2	mg/kg	0.478	0.485	0.411	0.506	0.315	0.312 J
SW6020	Silver	7440-22-4	mg/kg	0.0198 U	0.0136 U	0.0183 U	0.0189 U	0.014 U	0.0194 U
SW6020	Sodium	7440-23-5	mg/kg	496	497	703	556	752	436
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0204 U	0.0275 U	0.0283 U	0.021 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0297 U	0.0204 U	0.0275 U	0.0283 U	0.021 U	0.0291 U
SW6020	Zinc	7440-66-6	mg/kg	16.6	15	16.9	14.2	8.92	5.79

Notes:
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0808	0.141 J	0.114	0.11	0.105
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.7272	1.269 J	1.026	0.99	0.945
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.375	R	0.282	0.329	0.32
E1631B	Mercury	7439-97-6	mg/kg	0.315	0.257	0.213	0.289	0.283
SW6010C	Titanium	7440-32-6	mg/kg	0.322 U	0.163 U	0.167 U	0.165 U	0.163 U
SW6020	Aluminum	7429-90-5	mg/kg	4.87 U	5.44 U	5.49 U	5.44 U	5.38 U
SW6020	Antimony	7440-36-0	mg/kg	0.0574 U	0.0635 U	0.0647 U	0.0641 U	0.0635 U
SW6020	Arsenic	7440-38-2	mg/kg	0.808	1.41 J	1.14	1.1	1.05
SW6020	Barium	7440-39-3	mg/kg	0.16 U	0.177 U	0.18 U	0.179 U	0.177 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0123 U	0.0137 U	0.0139 U	0.0138 U	0.0137 U
SW6020	Cadmium	7440-43-9	mg/kg	0.04 U	0.0442 U	0.0451 U	0.0447 U	0.0442 U
SW6020	Calcium	7440-70-2	mg/kg	61	102	107	115	65.9
SW6020	Chromium	7440-47-3	mg/kg	0.087 U	0.0962 U	0.098 U	0.125 J	0.0962 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0174 U	0.0192 U	0.0196 U	0.0194 U	0.0192 U
SW6020	Copper	7440-50-8	mg/kg	0.348	0.782 J	0.489	0.564	0.435
SW6020	Iron	7439-89-6	mg/kg	4.02 U	9.82 J	6.31 J	6.1 J	6.12 J
SW6020	Lead	7439-92-1	mg/kg	0.0226 U	0.025 U	0.0255 U	0.0252 U	0.025 U
SW6020	Magnesium	7439-95-4	mg/kg	247	242 J	284	259	245
SW6020	Manganese	7439-96-5	mg/kg	0.236 J	0.162 U	0.165 U	0.163 U	0.162 U
SW6020	Nickel	7440-02-0	mg/kg	0.163 U	0.181 U	0.184 U	0.183 U	0.181 U
SW6020	Potassium	7440-09-7	mg/kg	3940	4460 J	4420	4190	4030
SW6020	Selenium	7782-49-2	mg/kg	0.247 J	0.444	0.393	0.339 J	0.426
SW6020	Silver	7440-22-4	mg/kg	0.0174 U	0.0192 U	0.0196 U	0.0194 U	0.0192 U
SW6020	Sodium	7440-23-5	mg/kg	573	593 J	539	575	503
SW6020	Thallium	7440-28-0	mg/kg	0.0261 U	0.0288 U	0.0294 U	0.0291 U	0.0288 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0261 U	0.0288 U	0.0294 U	0.0291 U	0.0288 U
SW6020	Zinc	7440-66-6	mg/kg	5.53	6.05 J	8.6	6.69	6.5

Notes:
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			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329
			Sample Date	01/13/16	01/13/16	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.121	0.13	0.16	0.155	0.103
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.089	1.17	1.44	1.395	0.927
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.224	R	0.257	0.23	0.27
E1631B	Mercury	7439-97-6	mg/kg	0.203	0.287	0.209	0.213	0.21
SW6010C	Titanium	7440-32-6	mg/kg	0.366 U	0.363 U	0.162 U	0.162 U	0.167 U
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.49 U	5.33 U	5.33 U	5.49 U
SW6020	Antimony	7440-36-0	mg/kg	0.0653 U	0.0755 J	0.0629 U	0.0629 U	0.0647 U
SW6020	Arsenic	7440-38-2	mg/kg	1.21	1.3	1.6	1.55	1.03
SW6020	Barium	7440-39-3	mg/kg	0.182 U	0.18 U	0.175 U	0.175 U	0.18 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0141 U	0.0139 U	0.0135 U	0.0135 U	0.0139 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0455 U	0.0451 U	0.0438 U	0.0438 U	0.0451 U
SW6020	Calcium	7440-70-2	mg/kg	195 J	65.5	79	87.5	72.2
SW6020	Chromium	7440-47-3	mg/kg	0.099 U	0.098 U	0.0952 U	0.143 J	0.228 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0198 U	0.0196 U	0.019 U	0.019 U	0.0196 U
SW6020	Copper	7440-50-8	mg/kg	0.459	0.707	0.694	0.584	0.488
SW6020	Iron	7439-89-6	mg/kg	6.9 J	8.05 J	8.56 J	7.08 J	6.35 J
SW6020	Lead	7439-92-1	mg/kg	0.0257 U	0.0255 U	0.0248 U	0.0248 U	0.0255 U
SW6020	Magnesium	7439-95-4	mg/kg	251	250	262	280	317
SW6020	Manganese	7439-96-5	mg/kg	0.166 U	0.165 U	0.16 U	0.164 J	0.165 U
SW6020	Nickel	7440-02-0	mg/kg	0.186 U	0.184 U	0.179 U	0.179 U	0.184 U
SW6020	Potassium	7440-09-7	mg/kg	3990	4090	4150	4400	4940
SW6020	Selenium	7782-49-2	mg/kg	0.309 J	0.357 J	0.344 J	0.376 J	0.415
SW6020	Silver	7440-22-4	mg/kg	0.0198 U	0.0196 U	0.019 U	0.019 U	0.0196 U
SW6020	Sodium	7440-23-5	mg/kg	433	491	592	543	585
SW6020	Thallium	7440-28-0	mg/kg	0.0297 U	0.0294 U	0.0286 U	0.0286 U	0.0294 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0297 U	0.0294 U	0.0286 U	0.0286 U	0.0294 U
SW6020	Zinc	7440-66-6	mg/kg	6.67	7.22 J	6.51	5.64	6.75

Notes:
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			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS330	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334
			Sample Date	12/10/15	01/12/16	12/10/15	01/12/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.111	0.038	0.136	0.119 J	0.118
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.999	0.342	1.224	1.071 J	1.062
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.288	0.403	0.301	0.257 J	0.246
E1631B	Mercury	7439-97-6	mg/kg	0.228	0.301	0.245	0.198	0.254
SW6010C	Titanium	7440-32-6	mg/kg	0.17 U	0.298 U	0.165 U	0.253 U	0.366 U
SW6020	Aluminum	7429-90-5	mg/kg	5.6 U	4.52 U	5.44 U	3.84 U	5.54 U
SW6020	Antimony	7440-36-0	mg/kg	0.066 U	0.0532 U	0.0641 U	0.0452 U	0.0653 U
SW6020	Arsenic	7440-38-2	mg/kg	1.11	0.38	1.36	1.19 J	1.18
SW6020	Barium	7440-39-3	mg/kg	0.184 U	0.148 U	0.179 U	0.126 U	0.182 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0142 U	0.0115 U	0.0138 U	0.0097 U	0.0141 U
SW6020	Cadmium	7440-43-9	mg/kg	0.046 U	0.0371 U	0.0447 U	0.0315 U	0.0455 U
SW6020	Calcium	7440-70-2	mg/kg	99.2	81.5 J	104	160 J	73
SW6020	Chromium	7440-47-3	mg/kg	0.192 J	0.0806 U	0.204 J	0.0685 U	0.099 U
SW6020	Cobalt	7440-48-4	mg/kg	0.02 U	0.0161 U	0.0194 U	0.0137 U	0.0198 U
SW6020	Copper	7440-50-8	mg/kg	0.305 J	0.328	0.587	0.545 J	0.626
SW6020	Iron	7439-89-6	mg/kg	4.62 U	4.7 J	5.3 J	4.91 J	7.43 J
SW6020	Lead	7439-92-1	mg/kg	0.026 U	0.021 U	0.0252 U	0.0178 U	0.0257 U
SW6020	Magnesium	7439-95-4	mg/kg	214	249	290	291 J	270
SW6020	Manganese	7439-96-5	mg/kg	0.168 U	0.135 U	0.163 J	0.115 U	0.166 U
SW6020	Nickel	7440-02-0	mg/kg	0.188 U	0.152 U	0.183 U	0.129 U	0.186 U
SW6020	Potassium	7440-09-7	mg/kg	3140	3560	4500	4650 J	4270
SW6020	Selenium	7782-49-2	mg/kg	0.35 J	0.316 J	0.361 J	0.302 J	0.325 J
SW6020	Silver	7440-22-4	mg/kg	0.02 U	0.0161 U	0.0194 U	0.0137 U	0.0198 U
SW6020	Sodium	7440-23-5	mg/kg	468	647	567	492 J	502
SW6020	Thallium	7440-28-0	mg/kg	0.03 U	0.0242 U	0.0291 U	0.0205 U	0.0297 U
SW6020	Vanadium	7440-62-2	mg/kg	0.03 U	0.0242 U	0.0291 U	0.0218 J	0.0297 U
SW6020	Zinc	7440-66-6	mg/kg	5.8	5.85	5.82	6.6 J	8.02

Notes:
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			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN
			Sample ID	NB03FSBS335	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486
			Sample Date	01/13/16	01/20/16	01/20/16	12/01/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.14	0.108 J	0.0787	0.0934	0.102
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.26	0.972 J	0.7083	0.8406	0.918
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.208	0.576	0.413	0.129	0.124
E1631B	Mercury	7439-97-6	mg/kg	0.19	0.485	0.329	0.104	0.112
SW6010C	Titanium	7440-32-6	mg/kg	0.359 U	0.282 U	0.314 U	0.338 J	0.165 U
SW6020	Aluminum	7429-90-5	mg/kg	5.44 U	4.27 U	4.75 U	5.44 U	5.44 U
SW6020	Antimony	7440-36-0	mg/kg	0.0641 U	0.0504 U	0.0559 U	0.0641 U	0.0641 U
SW6020	Arsenic	7440-38-2	mg/kg	1.4	1.08 J	0.787	0.934	1.02
SW6020	Barium	7440-39-3	mg/kg	0.179 U	0.14 U	0.156 U	0.179 U	0.179 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0138 U	0.0108 U	0.012 U	0.0138 U	0.0138 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0447 U	0.0351 U	0.039 U	0.0447 U	0.0447 U
SW6020	Calcium	7440-70-2	mg/kg	82.3	93.9	84.7	137	2100
SW6020	Chromium	7440-47-3	mg/kg	0.0971 U	0.0763 U	0.0847 U	0.0971 U	0.14 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0194 U	0.0153 U	0.0169 U	0.0194 U	0.0194 U
SW6020	Copper	7440-50-8	mg/kg	0.329 J	0.403	0.407	0.395	0.159 J
SW6020	Iron	7439-89-6	mg/kg	4.49 U	3.53 U	4.34 J	4.49 U	4.49 U
SW6020	Lead	7439-92-1	mg/kg	0.0358 J	0.0198 U	0.022 U	0.0252 U	0.0252 U
SW6020	Magnesium	7439-95-4	mg/kg	287	276	251	260	370
SW6020	Manganese	7439-96-5	mg/kg	0.163 U	0.128 U	0.236 J	0.163 U	0.274 J
SW6020	Nickel	7440-02-0	mg/kg	0.183 U	0.144 U	0.159 U	0.183 U	0.183 U
SW6020	Potassium	7440-09-7	mg/kg	4340	4490	4070	4400	4540
SW6020	Selenium	7782-49-2	mg/kg	0.388 J	0.406	0.282 J	0.349 J	0.566
SW6020	Silver	7440-22-4	mg/kg	0.0194 U	0.0153 U	0.0169 U	0.0194 U	0.0194 U
SW6020	Sodium	7440-23-5	mg/kg	440	546	590	494	425
SW6020	Thallium	7440-28-0	mg/kg	0.0291 U	0.0229 U	0.0254 U	0.0291 U	0.0291 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0291 U	0.0229 U	0.0254 U	0.0291 U	0.0291 U
SW6020	Zinc	7440-66-6	mg/kg	6.26	4.76 J	5.47	10.7	7.85

Notes:
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			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC487	NB03FSFC488	NB03FSFC489	NB03FSFC490
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.144	0.204	0.162	0.113
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.296	1.836	1.458	1.017
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.0659	0.158	0.149	0.157 J
E1631B	Mercury	7439-97-6	mg/kg	0.0671	0.17	0.11	0.128
SW6010C	Titanium	7440-32-6	mg/kg	0.165 U	0.17 U	0.272 U	0.346 U
SW6020	Aluminum	7429-90-5	mg/kg	5.44 U	5.6 U	4.12 U	5.23 U
SW6020	Antimony	7440-36-0	mg/kg	0.0641 U	0.066 U	0.0485 U	0.0617 U
SW6020	Arsenic	7440-38-2	mg/kg	1.44	2.04	1.62	1.13
SW6020	Barium	7440-39-3	mg/kg	0.179 U	0.184 U	0.135 U	0.172 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0138 U	0.0142 U	0.0104 U	0.0133 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0447 U	0.046 U	0.0338 U	0.043 U
SW6020	Calcium	7440-70-2	mg/kg	540	1060	683	540
SW6020	Chromium	7440-47-3	mg/kg	0.0971 U	0.106 J	0.0735 U	0.0935 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0194 U	0.02 U	0.0147 U	0.0187 U
SW6020	Copper	7440-50-8	mg/kg	0.164 J	0.135 J	0.177 J	0.228 J
SW6020	Iron	7439-89-6	mg/kg	4.49 U	4.62 U	3.4 U	4.32 U
SW6020	Lead	7439-92-1	mg/kg	0.0252 U	0.026 U	0.0191 U	0.0243 U
SW6020	Magnesium	7439-95-4	mg/kg	338	360	361	366
SW6020	Manganese	7439-96-5	mg/kg	0.221 J	0.413	0.181 J	0.333 J
SW6020	Nickel	7440-02-0	mg/kg	0.183 U	0.188 U	0.138 U	0.176 U
SW6020	Potassium	7440-09-7	mg/kg	4650	4770	4660	4830
SW6020	Selenium	7782-49-2	mg/kg	0.698	0.694	0.443	0.431
SW6020	Silver	7440-22-4	mg/kg	0.0194 U	0.02 U	0.0147 U	0.0187 U
SW6020	Sodium	7440-23-5	mg/kg	416	435	481	418
SW6020	Thallium	7440-28-0	mg/kg	0.0291 U	0.03 U	0.0221 U	0.028 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0291 U	0.03 U	0.0221 U	0.028 U
SW6020	Zinc	7440-66-6	mg/kg	7.25	6.23	5.47	5.29

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			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC491	NB03FSFN407	NB03FSFN408	NB03FSFN409
			Sample Date	12/01/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.166	0.161	0.132	0.116
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.494	1.449	1.188	1.044
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.4	0.129	0.175	0.268
E1631B	Mercury	7439-97-6	mg/kg	0.348	0.0998	0.133	0.218
SW6010C	Titanium	7440-32-6	mg/kg	0.17 U	0.366 U	0.356 U	0.168 U
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.54 U	5.38 U	5.54 U
SW6020	Antimony	7440-36-0	mg/kg	0.066 U	0.0653 U	0.0635 U	0.0653 U
SW6020	Arsenic	7440-38-2	mg/kg	1.66	1.61	1.32	1.16
SW6020	Barium	7440-39-3	mg/kg	0.184 U	0.182 U	0.177 U	0.182 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0142 U	0.0141 U	0.0137 U	0.0141 U
SW6020	Cadmium	7440-43-9	mg/kg	0.046 U	0.0455 U	0.0442 U	0.0455 U
SW6020	Calcium	7440-70-2	mg/kg	1160	693	332	207
SW6020	Chromium	7440-47-3	mg/kg	0.1 U	0.099 U	0.0962 U	0.099 U
SW6020	Cobalt	7440-48-4	mg/kg	0.02 U	0.0198 U	0.0192 U	0.0198 U
SW6020	Copper	7440-50-8	mg/kg	0.132 J	0.192 J	0.154 J	0.155 J
SW6020	Iron	7439-89-6	mg/kg	4.62 U	4.57 U	4.44 U	4.57 U
SW6020	Lead	7439-92-1	mg/kg	0.026 U	0.0257 U	0.025 U	0.0257 U
SW6020	Magnesium	7439-95-4	mg/kg	364	353	338	375
SW6020	Manganese	7439-96-5	mg/kg	0.361 J	0.166 U	0.162 U	0.349 J
SW6020	Nickel	7440-02-0	mg/kg	0.188 U	0.186 U	0.181 U	0.186 U
SW6020	Potassium	7440-09-7	mg/kg	4840	4750	4500	5160
SW6020	Selenium	7782-49-2	mg/kg	0.683	0.575	0.68	0.819
SW6020	Silver	7440-22-4	mg/kg	0.02 U	0.0198 U	0.0192 U	0.0198 U
SW6020	Sodium	7440-23-5	mg/kg	381	466	454	363
SW6020	Thallium	7440-28-0	mg/kg	0.03 U	0.0297 U	0.0288 U	0.0297 U
SW6020	Vanadium	7440-62-2	mg/kg	0.03 U	0.0297 U	0.0288 U	0.0297 U
SW6020	Zinc	7440-66-6	mg/kg	4.77	7.41	6.57	5.11

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			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.132	0.108	0.0597	0.155
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.188	0.972	0.5373	1.395
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.218	0.118	0.097	0.144
E1631B	Mercury	7439-97-6	mg/kg	0.195	0.0994	0.101	0.0995
SW6010C	Titanium	7440-32-6	mg/kg	0.167 U	0.168 U	0.163 U	0.37 U
SW6020	Aluminum	7429-90-5	mg/kg	5.6 U	5.54 U	5.38 U	5.6 U
SW6020	Antimony	7440-36-0	mg/kg	0.0647 U	0.0653 U	0.0635 U	0.066 U
SW6020	Arsenic	7440-38-2	mg/kg	1.32	1.08	0.597	1.55
SW6020	Barium	7440-39-3	mg/kg	0.18 U	0.182 U	0.177 U	0.184 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0139 U	0.0141 U	0.0137 U	0.0142 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0451 U	0.0455 U	0.0442 U	0.046 U
SW6020	Calcium	7440-70-2	mg/kg	525	701	1100	1050
SW6020	Chromium	7440-47-3	mg/kg	0.098 U	1.23	0.178 J	0.1 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0196 U	2.16	0.184	0.02 U
SW6020	Copper	7440-50-8	mg/kg	0.176 J	0.171 J	0.151 J	0.209 J
SW6020	Iron	7439-89-6	mg/kg	4.53 U	5.13 J	4.44 U	4.62 U
SW6020	Lead	7439-92-1	mg/kg	0.0255 U	0.0257 U	0.025 U	0.026 U
SW6020	Magnesium	7439-95-4	mg/kg	366	333	365	390
SW6020	Manganese	7439-96-5	mg/kg	0.274 J	0.285 J	0.33 J	0.293 J
SW6020	Nickel	7440-02-0	mg/kg	0.184 U	0.459	0.181 U	0.188 U
SW6020	Potassium	7440-09-7	mg/kg	5010	5070	4690	4800
SW6020	Selenium	7782-49-2	mg/kg	0.681	0.577	0.546	0.504
SW6020	Silver	7440-22-4	mg/kg	0.0196 U	0.0198 U	0.0192 U	0.02 U
SW6020	Sodium	7440-23-5	mg/kg	426	485	450	529
SW6020	Thallium	7440-28-0	mg/kg	0.0294 U	0.0297 U	0.0288 U	0.03 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0294 U	0.0297 U	0.0288 U	0.03 U
SW6020	Zinc	7440-66-6	mg/kg	5.64	6.79	7.43	7.06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.228	0.36	0.103	0.119
CALC	Arsenic - organic	7440-38-2O	mg/kg	2.052	3.24	0.927	1.071
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.133	0.261	0.238	0.167
E1631B	Mercury	7439-97-6	mg/kg	0.113	0.216	0.167	0.121
SW6010C	Titanium	7440-32-6	mg/kg	0.319 U	0.268 U	0.37 U	0.356 U
SW6020	Aluminum	7429-90-5	mg/kg	4.83 U	4.06 U	5.6 U	5.38 U
SW6020	Antimony	7440-36-0	mg/kg	0.0569 U	0.0478 U	0.066 U	0.0635 U
SW6020	Arsenic	7440-38-2	mg/kg	2.28	3.6	1.03	1.19
SW6020	Barium	7440-39-3	mg/kg	0.159 U	0.133 U	0.184 U	0.177 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0122 U	0.0103 U	0.0142 U	0.0137 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0397 U	0.0333 U	0.046 U	0.0442 U
SW6020	Calcium	7440-70-2	mg/kg	445	631	933	679
SW6020	Chromium	7440-47-3	mg/kg	0.0862 U	0.0725 U	0.1 U	0.0962 U
SW6020	Cobalt	7440-48-4	mg/kg	0.0172 U	0.0145 U	0.02 U	0.0192 U
SW6020	Copper	7440-50-8	mg/kg	0.176 J	0.391	0.188 J	0.202 J
SW6020	Iron	7439-89-6	mg/kg	3.98 U	3.35 U	4.62 U	4.44 U
SW6020	Lead	7439-92-1	mg/kg	0.0224 U	0.0188 U	0.026 U	0.025 U
SW6020	Magnesium	7439-95-4	mg/kg	361	367	371	387
SW6020	Manganese	7439-96-5	mg/kg	0.182 J	0.214 J	0.38 J	0.419
SW6020	Nickel	7440-02-0	mg/kg	0.162 U	0.136 U	0.188 U	0.181 U
SW6020	Potassium	7440-09-7	mg/kg	4840	4820	4600	5110
SW6020	Selenium	7782-49-2	mg/kg	0.528	0.646	0.497	0.492
SW6020	Silver	7440-22-4	mg/kg	0.0172 U	0.0145 U	0.02 U	0.0192 U
SW6020	Sodium	7440-23-5	mg/kg	475	398	454	449
SW6020	Thallium	7440-28-0	mg/kg	0.0259 U	0.0217 U	0.03 U	0.0288 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0259 U	0.0217 U	0.03 U	0.0288 U
SW6020	Zinc	7440-66-6	mg/kg	7.04	5.52	7.23	7.93

Notes:
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			Tissue Type	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10
			Sample Date	12/01/15	04/27/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.174	0.03 J	0.0796	0.0354 J	0.0578
CALC	Arsenic - organic	7440-38-2O	mg/kg	1.566	0.27 J	0.7164	0.3186 J	0.5202
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.242	0.317	0.421	0.489	0.438
E1631B	Mercury	7439-97-6	mg/kg	0.194	0.195	0.341	0.359	0.354
SW6010C	Titanium	7440-32-6	mg/kg	0.163 U	0.352 U	0.359 U	0.33 U	0.327 U
SW6020	Aluminum	7429-90-5	mg/kg	5.54 U	5.33 U	5.44 U	5 U	5.79 J
SW6020	Antimony	7440-36-0	mg/kg	0.0635 U	0.0629 U	0.0641 U	0.0589 U	0.0584 U
SW6020	Arsenic	7440-38-2	mg/kg	1.74	0.3 J	0.796	0.354 J	0.578
SW6020	Barium	7440-39-3	mg/kg	0.177 U	0.175 U	0.24 J	0.164 U	0.163 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0137 U	0.0135 U	0.0138 U	0.0127 U	0.0126 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0442 U	0.0438 U	0.0447 U	0.0411 U	0.0407 U
SW6020	Calcium	7440-70-2	mg/kg	213	329	1390	1440	408
SW6020	Chromium	7440-47-3	mg/kg	0.0962 U	0.278 J	0.0971 U	0.159 J	0.143 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0192 U	0.019 U	0.0194 U	0.0179 U	0.0177 U
SW6020	Copper	7440-50-8	mg/kg	0.187 J	0.623	0.546	0.648	0.579
SW6020	Iron	7439-89-6	mg/kg	4.44 U	6.4 J	4.49 U	6.09 J	5.48 J
SW6020	Lead	7439-92-1	mg/kg	0.025 U	0.103 J	0.0252 U	0.045 J	0.0257 J
SW6020	Magnesium	7439-95-4	mg/kg	341	310	328	309	251
SW6020	Manganese	7439-96-5	mg/kg	0.255 J	0.212 J	0.375 J	0.15 U	0.22 J
SW6020	Nickel	7440-02-0	mg/kg	0.181 U	0.179 U	0.183 U	0.168 U	0.166 U
SW6020	Potassium	7440-09-7	mg/kg	4800	3770	3840	3970	3890
SW6020	Selenium	7782-49-2	mg/kg	0.715	0.584	0.795	0.501	0.497
SW6020	Silver	7440-22-4	mg/kg	0.0192 U	0.019 U	0.0194 U	0.0179 U	0.0177 U
SW6020	Sodium	7440-23-5	mg/kg	389	828	833	1050	821
SW6020	Thallium	7440-28-0	mg/kg	0.0288 U	0.0286 U	0.0291 U	0.0268 U	0.0265 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0288 U	0.0286 U	0.0291 U	0.0268 U	0.0265 U
SW6020	Zinc	7440-66-6	mg/kg	4.47	8.28	11	10.7	16.7

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0588	0.0375 J	0.0386 J	0.0954	
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.5292	0.3375 J	0.3474 J	0.8586	
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.366	0.576	0.738	0.472	
E1631B	Mercury	7439-97-6	mg/kg	0.264	0.417	0.442	0.339	
SW6010C	Titanium	7440-32-6	mg/kg	0.339 U	0.349 U	0.366 U	0.285 U	
SW6020	Aluminum	7429-90-5	mg/kg	5.14 U	15.2 J	5.54 U	4.31 U	
SW6020	Antimony	7440-36-0	mg/kg	0.0606 U	0.0623 U	0.0653 U	0.0508 U	
SW6020	Arsenic	7440-38-2	mg/kg	0.588	0.375 J	0.386 J	0.954	
SW6020	Barium	7440-39-3	mg/kg	0.169 U	0.174 U	0.182 U	0.142 U	
SW6020	Beryllium	7440-41-7	mg/kg	0.013 U	0.0134 U	0.0141 U	0.0109 U	
SW6020	Cadmium	7440-43-9	mg/kg	0.0422 U	0.0434 U	0.0455 U	0.0354 U	
SW6020	Calcium	7440-70-2	mg/kg	1900	852	1190	1960 J	
SW6020	Chromium	7440-47-3	mg/kg	0.0979 J	0.161 J	0.099 U	0.0962 J	
SW6020	Cobalt	7440-48-4	mg/kg	0.0183 U	0.0189 U	0.0198 U	0.0154 U	
SW6020	Copper	7440-50-8	mg/kg	0.566	0.603	0.593	0.571	
SW6020	Iron	7439-89-6	mg/kg	4.87 J	5.41 J	5.21 J	6.32 J	
SW6020	Lead	7439-92-1	mg/kg	0.0542 J	0.0245 U	0.0273 J	0.0366 J	
SW6020	Magnesium	7439-95-4	mg/kg	266	296	271	288	
SW6020	Manganese	7439-96-5	mg/kg	0.154 U	0.25 J	0.287 J	0.129 U	
SW6020	Nickel	7440-02-0	mg/kg	0.172 U	0.177 U	0.186 U	0.145 U	
SW6020	Potassium	7440-09-7	mg/kg	3600	3930	3620	3680	
SW6020	Selenium	7782-49-2	mg/kg	0.497	0.569	0.58	0.472	
SW6020	Silver	7440-22-4	mg/kg	0.0183 U	0.0189 U	0.0198 U	0.0154 U	
SW6020	Sodium	7440-23-5	mg/kg	824	812	772	852	
SW6020	Thallium	7440-28-0	mg/kg	0.0275 U	0.0283 U	0.0297 U	0.0231 U	
SW6020	Vanadium	7440-62-2	mg/kg	0.0275 U	0.0283 U	0.0297 U	0.0231 U	
SW6020	Zinc	7440-66-6	mg/kg	12.3	11	13.8	13.1	

Notes:
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			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11
			Sample Date	04/27/16	04/26/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0505	0.0856	0.0584	0.0897	0.072
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.4545	0.7704	0.5256	0.8073	0.648
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.269	0.224	0.473	0.175	R
E1631B	Mercury	7439-97-6	mg/kg	0.161	0.199	0.32	0.175	0.246
SW6010C	Titanium	7440-32-6	mg/kg	0.33 U	0.316 U	0.37 U	0.33 U	0.311 U
SW6020	Aluminum	7429-90-5	mg/kg	5 U	4.79 U	5.6 U	5 U	4.71 U
SW6020	Antimony	7440-36-0	mg/kg	0.0589 U	0.0564 U	0.066 U	0.0589 U	0.0555 U
SW6020	Arsenic	7440-38-2	mg/kg	0.505	0.856	0.584	0.897	0.72
SW6020	Barium	7440-39-3	mg/kg	0.164 U	0.157 U	0.348 J	0.164 U	0.155 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0127 U	0.0121 U	0.0142 U	0.0127 U	0.0119 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0411 U	0.0393 U	0.046 U	0.0411 U	0.0387 U
SW6020	Calcium	7440-70-2	mg/kg	552	1060	4570	797	1280
SW6020	Chromium	7440-47-3	mg/kg	0.0893 U	0.102 J	0.103 J	0.0989 J	0.111 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0179 U	0.0171 U	0.02 U	0.0179 U	0.0168 U
SW6020	Copper	7440-50-8	mg/kg	0.613	0.801	0.677	0.551	0.619
SW6020	Iron	7439-89-6	mg/kg	6.95 J	5.13 J	7.55 J	4.86 J	4.87 J
SW6020	Lead	7439-92-1	mg/kg	0.0232 U	0.0397 J	0.044 J	0.0443 J	0.0458 J
SW6020	Magnesium	7439-95-4	mg/kg	291	280	433	256	296
SW6020	Manganese	7439-96-5	mg/kg	0.489	0.144 U	0.605	0.15 U	0.141 U
SW6020	Nickel	7440-02-0	mg/kg	0.168 U	0.161 U	0.188 U	0.168 U	0.158 U
SW6020	Potassium	7440-09-7	mg/kg	3940	3570	4490	3640	3970
SW6020	Selenium	7782-49-2	mg/kg	0.762	0.653	0.619	0.543	0.575
SW6020	Silver	7440-22-4	mg/kg	0.0179 U	0.0171 U	0.02 U	0.0179 U	0.0168 U
SW6020	Sodium	7440-23-5	mg/kg	554	835	730	803	749
SW6020	Thallium	7440-28-0	mg/kg	0.0268 U	0.0256 U	0.03 U	0.0268 U	0.0252 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0343 J	0.0256 U	0.03 U	0.0268 U	0.0252 U
SW6020	Zinc	7440-66-6	mg/kg	18.7	9.42	14.4	6.87	7.16

Notes:
J - Estimated Concentration
R - Rejected data
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09
			Sample Date	04/26/16	04/27/16	04/27/16	04/27/16	04/27/16
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0963		0.069	0.0413	0.0734
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.8667		0.621	0.3717	0.6606
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.455		0.44	0.21	0.153
E1631B	Mercury	7439-97-6	mg/kg	0.389		0.326	0.208	0.133
SW6010C	Titanium	7440-32-6	mg/kg	0.33 U		0.352 U	0.339 U	0.339 U
SW6020	Aluminum	7429-90-5	mg/kg	5 U		5.33 U	5.14 U	5.14 U
SW6020	Antimony	7440-36-0	mg/kg	0.0589 U		0.0629 U	0.0606 U	0.0606 U
SW6020	Arsenic	7440-38-2	mg/kg	0.963		0.69	0.413	0.734
SW6020	Barium	7440-39-3	mg/kg	0.164 U		0.23 J	0.169 U	0.169 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0127 U		0.0135 U	0.013 U	0.013 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0411 U		0.0438 U	0.0422 U	0.0422 U
SW6020	Calcium	7440-70-2	mg/kg	1040 J		2150	1310	1030
SW6020	Chromium	7440-47-3	mg/kg	0.113 J		0.0952 U	0.0917 U	0.143 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0179 U		0.019 U	0.0183 U	0.0183 U
SW6020	Copper	7440-50-8	mg/kg	0.663		0.61	0.541	0.555
SW6020	Iron	7439-89-6	mg/kg	5.16 J		6.77 J	5.3 J	5.65 J
SW6020	Lead	7439-92-1	mg/kg	0.0397 J		0.0263 J	0.0239 U	0.0257 J
SW6020	Magnesium	7439-95-4	mg/kg	250		349	301	297
SW6020	Manganese	7439-96-5	mg/kg	0.15 U		0.479	0.324 J	0.337 J
SW6020	Nickel	7440-02-0	mg/kg	0.168 U		0.179 U	0.172 U	0.172 U
SW6020	Potassium	7440-09-7	mg/kg	3490		3760	3750	3740
SW6020	Selenium	7782-49-2	mg/kg	0.496		0.619	0.591	0.811
SW6020	Silver	7440-22-4	mg/kg	0.0179 U		0.019 U	0.0183 U	0.0183 U
SW6020	Sodium	7440-23-5	mg/kg	815		917	787	803
SW6020	Thallium	7440-28-0	mg/kg	0.0268 U		0.0286 U	0.0275 U	0.0275 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0268 U		0.0286 U	0.0275 U	0.0275 U
SW6020	Zinc	7440-66-6	mg/kg	9.77		11	11.8	11.3

Notes:
J - Estimated Concentration
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Table A-22
Analytical Data for Metals and Inorganics
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
CALC	Arsenic - inorganic	7440-38-2I	mg/kg	0.0658	0.119 J	0.0872
CALC	Arsenic - organic	7440-38-2O	mg/kg	0.5922	1.071 J	0.7848
E1630M	Methyl Mercury	22967-92-6	mg/kg	0.253	R	0.283
E1631B	Mercury	7439-97-6	mg/kg	0.224	0.213	0.328
SW6010C	Titanium	7440-32-6	mg/kg	0.298 U	0.322 U	0.33 U
SW6020	Aluminum	7429-90-5	mg/kg	4.52 U	4.87 U	5 U
SW6020	Antimony	7440-36-0	mg/kg	0.0532 U	0.0574 U	0.0589 U
SW6020	Arsenic	7440-38-2	mg/kg	0.658	1.19 J	0.872
SW6020	Barium	7440-39-3	mg/kg	0.148 U	0.313 J	0.164 U
SW6020	Beryllium	7440-41-7	mg/kg	0.0115 U	0.0123 U	0.0127 U
SW6020	Cadmium	7440-43-9	mg/kg	0.0371 U	0.04 U	0.0411 U
SW6020	Calcium	7440-70-2	mg/kg	1180	3100	2300 J
SW6020	Chromium	7440-47-3	mg/kg	0.0806 U	0.105 J	0.128 J
SW6020	Cobalt	7440-48-4	mg/kg	0.0161 U	0.0174 U	0.0179 U
SW6020	Copper	7440-50-8	mg/kg	0.546	0.641	0.599 J
SW6020	Iron	7439-89-6	mg/kg	5.65 J	7.16 J	5.3 J
SW6020	Lead	7439-92-1	mg/kg	0.0333 J	0.0226 U	0.0659 J
SW6020	Magnesium	7439-95-4	mg/kg	275	349	302
SW6020	Manganese	7439-96-5	mg/kg	0.135 U	0.871	0.15 U
SW6020	Nickel	7440-02-0	mg/kg	0.152 U	0.163 U	0.168 U
SW6020	Potassium	7440-09-7	mg/kg	3750	3840	3910
SW6020	Selenium	7782-49-2	mg/kg	0.647	0.613	0.609 J
SW6020	Silver	7440-22-4	mg/kg	0.0161 U	0.0174 U	0.0179 U
SW6020	Sodium	7440-23-5	mg/kg	821	793	994
SW6020	Thallium	7440-28-0	mg/kg	0.0242 U	0.0261 U	0.0268 U
SW6020	Vanadium	7440-62-2	mg/kg	0.0242 U	0.0261 U	0.0268 U
SW6020	Zinc	7440-66-6	mg/kg	7.18	11 J	10.3 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0058 J	0.0054 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0055 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.008 J	0.0063 J	0.013 J	0.0099 J	0.02
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0072 J	0.0069 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0055 J	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0057 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0071 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0052 U	0.011 J	0.015	0.019
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.0055 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0052 U	0.0053 U	0.0053 U	0.012 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.029	0.013 U	0.0053 U	0.013 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.054	0.013 U	0.0053 U	0.015
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.0074	0.013 U	0.025	0.028
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.006 J	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.055	0.013 U	0.0053 U	0.018
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.0082	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.077	0.013 U	0.0053 U	0.0074 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.0085	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.056	0.013 U	0.0053 U	0.0053 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.025	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.0027 U	0.013 U	0.0071 J	0.0084 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.0037 J	0.013 U	0.0053 U	0.0056 J
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.016	0.013 U	0.0076 J	0.031
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.005 J	0.013 U	0.0053 U	0.0063 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.0027 U	0.013 U	0.0053 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.019 J	0.02	0.0053 U	0.0042 J	0.016
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.0069 J	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 J
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.0054 J	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.0052 U	0.0053 U	0.0027 U	0.0027 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0055 J	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 J	0.0026 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0053 U	0.02	0.038	0.018
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0048 J	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0083	0.0026 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0042 J	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.019 J	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.01
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.01
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0061 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0067 J	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0043 J	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0053 U	0.0063 J	0.014 J	0.0071
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0026 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.52 J	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0057 J	0.0029 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0091	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0074	0.0041 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.013 J	0.0058 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0065 J	0.0026 U	0.0026 U	0.0031 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0068	0.012	0.0045 J	0.0034 J	0.0043 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0078	0.0069	0.0052 J	0.0066	0.012
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0032 J	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0031 J	0.0028 J	0.0026 J	0.0038 J	0.0026 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0029 J	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0087 J
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.019	0.0026 U	0.012	0.011
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.015	0.0026 U	0.007	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0041 J	0.0048 J	0.0026 U	0.0028 J	0.0045 J
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0027 J
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.012 J	0.014 J	0.0041 J	0.0093	0.014 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0051 J	0.0026 U	0.0029 J	0.0028 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0077	0.004 J	0.006 J	0.0026 U	0.012
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0056 J	0.0038 J	0.0026 U	0.0068	0.004 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.012 J	0.0098 J	0.0068 J	0.0067	0.013 J

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0067	0.0027 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.0031 J	0.0027 U	0.0056 J	0.0027 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.007	0.016	0.065	0.0069
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0041 J	0.0027 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.0033 J	0.0031 J	0.0037 J	0.0027 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 J	0.0027 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0028 J	0.0027 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.013	0.01	0.014	0.0027 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.0026 U	0.0027 U	0.017	0.0027 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.0026 U	0.0027 U	0.014	0.0027 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.0026 U	0.0027 U	0.014	0.0027 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.0039 J	0.0027 U	0.0045 J	0.0027 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.014 J	0.0078 J	0.011	0.0054 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0027 U	0.0027 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0053 J	0.0027 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.0026 U	0.0027 U	0.0043 J	0.0027 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.0026 U	0.0047 J	0.0064 J	0.0027 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.0075 J	0.0086 J	0.011	0.0035 J

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0033 J	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0072	0.013	0.009	0.0051 J	0.0067
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0027 U	0.0027 J	0.0028 J	0.0027 U	0.0027 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0027 U	0.0031 J	0.0043 J	0.0027 U	0.0027 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0027 U	0.0027 U	0.0043 J	0.0027 U	0.0027 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0027 U	0.0027 U	0.0043 J	0.0027 U	0.0027 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.007	0.0099	0.0026 U	0.0027 U	0.0092
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0086 J	0.0064 J	0.0076 J	0.0027 U	0.0055 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0027 U	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0027 U	0.0027 U	0.5 J	0.0027 U	0.0027 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.003 J	0.0027 U	0.0026 U	0.0027 U	0.0027 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0037 J	0.0027 U	0.0026 U	0.0039 J	0.0027 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0027 J	0.0027 U	0.0029 J	0.0027 U	0.0027 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0041 J	0.0049 J	0.0067 J	0.0027 J	0.0033 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.028 J	0.0033 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.0026 U	0.0056 J	0.037 J	0.0058 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.007	0.0047 J	0.012	0.11 J	0.023
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0037 J
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0037 J	0.0026 U	0.0044 J	0.013 U	0.0053 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0053 J
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0039 J	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0031 J	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0042 J	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0026 U	0.0027 J	0.013 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.0062 J	0.0083	0.06	0.015
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.021	0.0089	0.013 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0059 J	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.085	0.15	0.013 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0057 J	0.0094	0.048	0.024
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.021	0.038	0.013 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0065 J	0.014	0.013 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0026 U	0.0041 J	0.013 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0026 U	0.012	0.013 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.014 J	0.0053 J
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0041 J	0.0064 J	0.0093 J	0.044 J	0.02 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.013 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.03 J	0.0058 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0026 U	0.0043 J	0.013 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.0026 U	0.003 J	0.024 J	0.0093
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.004 J	0.0046 J	0.0054 J	0.04 J	0.012 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0056 J	0.0031 J	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0081	0.0062 J	0.0046 J	0.0029 J	0.0029 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.045	0.022	0.015	0.018	0.014
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0058 J	0.0038 J	0.0039 J	0.0026 U	0.0027 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0081	0.0048 J	0.0051 J	0.0038 J	0.0033 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0036 J	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0052 J	0.0054 J	0.0037 J	0.0026 J	0.0027 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0027 J	0.0033 J	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0028 J	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0056 J	0.0027 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.024	0.016	0.014	0.011	0.0027 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0031 J	0.0027 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.051	0.0027 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.022	0.0027 U	0.0092	0.0027 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.016	0.0027 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.022	0.0027 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0047 J	0.0027 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0074 J	0.0066 J	0.0049 J	0.0035 J	0.0027 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0026 J	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.025 J	0.014 J	0.015 J	0.0096 J	0.0065 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0034 J	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0027 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0094	0.0043 J	0.0036 J	0.0031 J	0.0027 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0045 J	0.0027 U	0.0043 J	0.0027 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.018	0.0051 J	0.0027 U	0.006 J	0.0032 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.022 J	0.0087 J	0.012 J	0.009 J	0.0059 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.0037 J	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.0078	0.0048 J	0.0059 J	0.0038 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.0046 J	0.0098	0.0063 J	0.0053 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.0026 U	0.0032 J	0.003 J	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.0031 J	0.0034 J	0.0027 J	0.0026 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.0038 J	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.014	0.0026 U	0.0026 U	0.011
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.0026 U	0.011	0.0026 U	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.0032 J	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.0094 J	0.0087 J	0.011 J	0.0072 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0035 J	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.0041 J	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.0026 U	0.0084	0.0046 J	0.0041 J
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.0031 J	0.0028 J	0.0047 J	0.0026 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.0062 J	0.0045 J	0.0056 J	0.0047 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.007	0.0037 J	0.013 U	0.0026 U	0.025
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0076	0.0026 U	0.013 U	0.0026 U	0.0061 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0035 J	0.0026 U	0.013 U	0.0026 U	0.0026 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0075	0.0026 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0046 J	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0093 J	0.0026 U	0.013 U	0.0049 J	0.0032 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0048 J	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0088	0.004 J	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0029 J	0.0026 U	0.013 U	0.0026 U	0.0026 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0065 J	0.0026 U	0.013 U	0.0027 J	0.0034 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-MUS122	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129
			Sample Date	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.024 J	0.0028 J	0.0026 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0056 J	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.17	0.0027 U	0.0026 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0033 J	0.0027 U	0.013 U	0.0026 U	0.02 J	0.0033 J	0.0026 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0048 J	0.0027 U	0.013 U	0.0026 U	0.016 J	0.0042 J	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0041 J	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0032 J	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.45	0.0027 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.058	0.0027 U	0.0026 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0026 U	0.0027 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.0026 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS130	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0029 J	0.0026 U	0.0027 U	0.0072	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.003 J	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C003	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001
			Sample Date	08/19/15	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0068
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.014
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0037 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.013
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.009
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0065 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.011
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0026 U	0.0027 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0026 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-N002	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008
			Sample Date	08/30/15	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0026 U	0.0026 U	0.0031 J	0.0027 U	0.0026 U	0.004 J	0.0027 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0028 J	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0026 U	0.0026 U	0.0026 U	0.0027 U	0.0026 U	0.0026 U	0.0027 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S001	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007
			Sample Date	08/26/15	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0026 U	0.013 U	0.013 U	0.0026 U	0.013 U	0.0027 U	0.013 U

Notes:
J - Estimated Concentration
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			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03CRB-MUS-S008	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123
			Sample Date	10/06/15	10/06/15		
			Sample Type	N	N	Calc	Calc
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.013 U	0.003354 J	0.002674 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.013 U	0.003276 J	0.002674 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.013 U	0.014024 J	0.006678 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.013 U	0.003172 J	0.002674 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.013 U	0.004082 J	0.002674 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.013 U	0.003016 J	0.002674 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.013 U	0.006864 J	0.002674 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.013 U	0.003118 J	0.004598 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.013 U	0.004228 J	0.004598 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.013 U	0.00371 J	0.003584 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.013 U	0.003666 J	0.002674 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.013 U	0.003042 J	0.002674 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.013 U	0.005564 J	0.003844 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.013 U	0.0026 U	0.002674 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.013 U	0.137124 J	0.002674 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.013 U	0.003406 J	0.002752 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.013 U	0.00429 J	0.002674 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.013 U	0.003848 J	0.003064 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.013 U	0.005304 J	0.003506 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-124	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.010296 U	0.003614 J	0.010296 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.011388 J	0.005044 J	0.01893 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.011648 J	0.003718 J	0.010972 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.010452 J	0.0026 U	0.010296 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.010426 J	0.002652 J	0.126476 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.010296 U	0.002678 J	0.010296 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.010296 U	0.006864 J	0.015476 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.010296 U	0.005824 J	0.012516 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.010686 J	0.003172 J	0.010296 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.01274 J	0.005564 J	0.010686 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.010296 U	0.0026 U	0.333676 J
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.010296 U	0.0026 U	0.010296 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.010296 U	0.00325 J	0.010296 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.011622 J	0.002964 J	0.01118 J
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.011076 J	0.002912 J	0.043596 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.01274 J	0.004472 J	0.011388 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.002674 U	0.00273 J	0.005304 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.002956 J	0.003042 J	0.005304 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.003714 J	0.005044 J	0.005526 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.002986 J	0.0026 U	0.005304 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.002674 U	0.004186 J	0.005304 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.005562 J	0.004784 J	0.005304 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.004928 J	0.0026 U	0.005304 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.003044 J	0.0026 U	0.005304 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.002726 J	0.003094 J	0.005304 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.002674 U	0.002626 J	0.005304 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.004416 J	0.005564 J	0.005304 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.002674 U	0.0026 U	0.005304 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.002752 J	0.002652 J	0.005304 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.002674 U	0.005044 J	0.005304 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.003766 J	0.002964 J	0.005304 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.00374 J	0.005304 J	0.005304 U

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-131	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0027 U	0.003666 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.00273 J	0.0027 U	0.00338 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.003744 J	0.006158 J	0.022228
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0026 U	0.0027 U	0.00299 J
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.002782 J	0.002804 J	0.002886 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0027 U	0.002626 J
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0027 U	0.002652 J
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.005304 J	0.004598 J	0.005564 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0027 U	0.00664 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0027 U	0.005564 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0027 U	0.005564 J
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.002938 J	0.0027 U	0.003094 J
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.005564 J	0.004026 J	0.004784 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0027 U	0.003302 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.0027 U	0.003042 J
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0026 U	0.00322 J	0.003588 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.003874 J	0.004234 J	0.004784 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.002626 U	0.002782 J	0.002626 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.003718 J	0.003796 J	0.005304 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.002626 U	0.002626 U	0.002626 J
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.002626 U	0.002626 U	0.00273 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.002626 U	0.003744 J	0.004498 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.003328 J	0.00416 J	0.003588 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.002626 U	0.002626 U	0.002626 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.002626 U	0.002704 J	0.002626 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.002626 U	0.002886 J	0.002626 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.002626 U	0.002626 J	0.002626 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.002834 J	0.00299 J	0.003198 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C003	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.004264 J	0.003324 J	0.003666 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.002652 J	0.0027 U	0.002626 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.003042 J	0.0027 U	0.002626 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.003042 J	0.0027 U	0.002626 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.003042 J	0.0027 U	0.002626 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0026 U	0.0027 U	0.004316 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0039 J	0.0027 U	0.003354 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.131924 J	0.0027 U	0.002626 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0026 U	0.0027 U	0.002626 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0026 U	0.003012 J	0.002626 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.002678 J	0.0027 U	0.002626 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.003666 J	0.0027 J	0.002782 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.002674 U	0.0026 U	0.00338 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.003818 J	0.003146 J	0.005044 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.00296 J	0.0026 U	0.003068 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.003012 J	0.0026 U	0.002626 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.002804 J	0.0026 U	0.002626 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.00309 J	0.0026 U	0.002626 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.002674 U	0.0026 U	0.002626 J
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.002674 U	0.003536 J	0.004082 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.002674 U	0.007384 J	0.004238 J
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.002674 U	0.003458 J	0.002626 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.002674 U	0.024024 J	0.040924 J
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.002674 U	0.003406 J	0.004368 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.002674 U	0.007384 J	0.011804 J
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.002674 U	0.003614 J	0.005564 J
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.002674 U	0.0026 U	0.00299 J
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.002674 U	0.0026 U	0.005044 J
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.003064 J	0.003588 J	0.004342 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.002674 U	0.0026 U	0.002626 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.002674 U	0.0026 U	0.003042 J
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.002674 U	0.0026 U	0.002704 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.003038 J	0.00312 J	0.003328 J

Notes:
J - Estimated Concentration
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N001	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.012312 J	0.002782 J	0.00338 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.01998 J	0.003432 J	0.00403 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.031338 J	0.007904 J	0.013624 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.005304 U	0.002886 J	0.003432 J
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.005304 U	0.003302 J	0.00403 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.005304 U	0.0026 U	0.00286 J
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.005304 U	0.003302 J	0.003276 J
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.005304 U	0.0026 U	0.002626 J
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.02522	0.005824 J	0.008164 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.01914	0.008164 J	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.00819 J	0.0026 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.005564 J	0.003302 J	0.003848 J
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013364 J	0.007124 J	0.008424 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.005304 U	0.0026 U	0.002808 J
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.01594 J	0.003432 J	0.004516 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.005304 U	0.0026 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.008164 J	0.004342 J	0.006604 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.012324 J	0.005044 J	0.007644 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.00273 J	0.0027 U	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.003536 J	0.003194 J	0.002678 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.008014 J	0.005898 J	0.006604 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.002912 J	0.003012 J	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.003172 J	0.003324 J	0.002912 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.003328 J	0.00296 J	0.0026 J
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.002782 J	0.0027 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.002652 J	0.0027 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0026 U	0.0027 U	0.00338 J
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.006084 J	0.005638 J	0.004784 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0026 U	0.0027 U	0.00273 J
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0026 U	0.0027 U	0.015184 J
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.007644 J	0.0027 U	0.004316 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0026 U	0.0027 U	0.006084 J
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0026 U	0.0027 U	0.007644 J
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0026 U	0.0027 U	0.003146 J
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.00364 J	0.003272 J	0.002834 J
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0026 J	0.0027 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.005564 J	0.005898 J	0.00442 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0026 U	0.0027 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.003042 J	0.002934 J	0.00273 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.003094 J	0.0027 U	0.003042 J
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.00325 J	0.0027 U	0.003484 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.004186 J	0.005118 J	0.004264 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N007	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.002626 U	0.005378 U	0.002886 J
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.002678 J	0.005378 U	0.003952 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0066 J	0.005378 U	0.00312 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.002782 J	0.005378 U	0.00273 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.002626 U	0.005378 U	0.002912 J
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.002626 U	0.005378 U	0.005564 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.002626 U	0.005378 U	0.002756 J
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.003614 J	0.005378 U	0.004368 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.002626 U	0.005378 U	0.00299 J
SW8270D SIM	Perylene	198-55-0	mg/kg	0.002626 U	0.005378 U	0.0026 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.002756 J	0.005378 U	0.00273 J
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.003458 J	0.005378 U	0.003536 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.010868 J	0.011154 J	0.002912 J
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.012168 J	0.011258 J	0.003302 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.010452 J	0.0104 J	0.0026 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.010504 J	0.010322 J	0.0026 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.010296 U	0.010296 U	0.004784 J
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.01248 J	0.010296 U	0.0026 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.011882 J	0.01248 J	0.003796 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.010296 U	0.01053 J	0.0026 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.010296 U	0.010296 U	0.0026 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.011804 J	0.010816 J	0.00299 J
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.010348 J	0.010842 J	0.0026 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.01079 J	0.011076 J	0.003146 J

Notes:
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			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S005	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.01144 J	0.00296 J	0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.011596 J	0.002674 U	0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.01053 J	0.002674 U	0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.012038 J	0.002674 U	0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.010296 U	0.003246 J	0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.010296 U	0.002674 U	0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.011908 J	0.003038 J	0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.010374 J	0.002674 U	0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.01131 J	0.002674 U	0.013 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02
			Sample Date			12/10/15	12/10/15
			Sample Type	Calc	Calc	N	N
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.010296 U	0.01612 J	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.010296 U	0.011206 J	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.010296 U	0.010296 J	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.01157 J	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.010816 J	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.010894 J	0.010452 J	0.0053 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.010296 U	0.010296 U	0.0053 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.010322 J	0.010504 J	0.0053 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471
			Sample Date	12/10/15	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.022	0.0052 U	0.0052 U	0.0057 J	0.0058 J	0.0052 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.042	0.0052 U	0.0052 U	0.0057 J	0.0056 J	0.0052 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.012 J	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0055 J	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.042	0.0052 U	0.0052 U	0.0072 J	0.0071 J	0.0052 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.016	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0075 J	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0074 J	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.011 J	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.18	0.0052 U	0.0052 U	0.0064 J	0.0071 J	0.0052 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.02	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0056 J	0.0052 U	0.0052 U	0.0053 U	0.0053 U	0.0052 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR
			Sample ID	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	12/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0058 J	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0093 J	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.021	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.017	0.0052 U	0.0052 U	0.0052 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	FD
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0066 J	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.012 J	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-11	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322
			Sample Date	01/13/16	01/20/16	12/01/15	12/10/15	12/10/15
			Sample Type	FD	FD	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0063 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0053 U	0.0052 U	0.0053 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS323	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328
			Sample Date	12/10/15	01/13/16	01/13/16	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0057 J	0.0052 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0093 J	0.0052 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0076 J	0.0052 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0052 U	0.0052 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS329	NB03FSBS330	NB03FSBS331	NB03FSBS332	NB03FSBS333
			Sample Date	12/10/15	12/10/15	01/12/16	12/10/15	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0099 J	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.015	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.016	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.011 J	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0079 J	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0052 U	0.0053 U	0.0052 U	0.0052 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS334	NB03FSBS335	NB03FSBS336	NB03FSBS337	NB03FSBS338
			Sample Date	01/13/16	01/13/16	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.011 J	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.018	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.006 J
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.012 J	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0072 J	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.008 J	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0055 J	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0052 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC486	NB03FSFC487	NB03FSFC488	NB03FSFC489
			Sample Date	12/10/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.012 J	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.023	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0083 J	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.022	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0094 J	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0063 J	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.098	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.01 J	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC490	NB03FSFC491	NB03FSFN407	NB03FSFN408
			Sample Date	01/20/16	12/01/15	01/13/16	01/13/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0052 U	0.0053 U	0.0058 J	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0052 U	0.0053 U	0.0053 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFN409	NB03FSFN410	NB03FSFN411	NB03FSFN412
			Sample Date	12/10/15	12/01/15	12/10/15	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS351	NB03FSFS354	NB03FSFS355	NB03FSFS356
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.02
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.027
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.019
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0066 J
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.032
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0063 J
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.013 J
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0058 J
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0098 J
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.015
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.071
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0053 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.032
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0053 U	0.0053 U	0.0053 U	0.0057 J

Notes:
J - Estimated Concentration
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			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS357	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08
			Sample Date	01/20/16	12/01/15	04/27/16	04/27/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.0052 U	0.0053 U	0.013 U	0.013 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP09	NB03FWPC-COMP10	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15
			Sample Date	04/26/16	04/26/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	N	N	N	FD
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	FD	FD	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U		0.013 U	0.013 U	0.013 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07
			Sample Date	04/26/16	04/26/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	N	N	FD	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.013 U	0.013 U		0.013 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP08	NB03FWPS-COMP09	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/27/16	04/27/16	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D SIM	1-Methylnaphthalene	90-12-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	2-Methylnaphthalene	91-57-6	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthene	83-32-9	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Acenaphthylene	208-96-8	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Anthracene	120-12-7	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	BENZO(J,K)FLUORANTHENE	207-08-9-JK	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)anthracene	56-55-3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(a)pyrene	50-32-8	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(b)fluoranthene	205-99-2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(e)pyrene	192-97-2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Benzo(g,h,i)perylene	191-24-2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Chrysenes	30037	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluoranthenes/Pyrenes	30039	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Fluorenes	30040	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Naphthalenes	30041	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C1-Phenanthrenes/Anthracenes	30042	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Chrysenes	30058	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluoranthenes/Pyrenes	30367	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Fluorenes	30060	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Naphthalenes	30061	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C2-Phenanthrene/anthracenes	PHENANTHC2	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Chrysenes	30068	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluoranthenes/Pyrenes	30368	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Fluorenes	30070	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Naphthalene	30071	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C3-Phenanthrene/anthracenes	PHENANTHC3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Chrysenes	30074	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Naphthalene	30077	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	C4-Phenanthrenes/anthracenes	30078	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Chrysene	218-01-9	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Fluoranthene	206-44-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Fluorene	86-73-7	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Naphthalene	91-20-3	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Perylene	198-55-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Phenanthrene	85-01-8	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
SW8270D SIM	Pyrene	129-00-0	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	5.9 U	6 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.66 U	0.67 U	0.67 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.66 U	0.67 U	0.67 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.66 U	0.67 U	0.67 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.66 U	0.67 U	0.67 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.66 U	0.67 U	0.67 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	5.8 U	5.8 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	1.9 U	1.9 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.65 U	0.65 U	0.67 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.2 U	3.2 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.2 U	3.2 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.65 U	0.65 U	0.67 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.2 U	3.2 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.65 U	0.65 U	0.67 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.2 U	3.2 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.65 U	0.65 U	0.67 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.65 U	0.65 U	0.67 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.32 U	0.32 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.9 U	6 U	5.9 U	5.9 U	5.8 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U	1.9 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.028 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	5.9 U	6 U	1.2 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	0.4 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.66 U	0.66 U	0.13 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.66 U	0.66 U	0.13 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	4.5	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	2.8 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	5.8 J	3.3 U	11 J	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.66 U	0.66 U	0.13 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.66 U	0.66 U	0.13 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.66 U	0.66 U	0.13 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	1.2 J	0.33 U	0.066 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	0.41 J	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.14 U	0.13 U	0.14 U	0.028 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.8 U	5.8 U	6 U	5.8 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	1.9 U	1.9 U	2 U	1.9 U	0.4 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.65 U	0.66 U	0.65 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.092 J
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.2 U	3.2 U	3.3 U	3.2 U	0.66 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.2 U	3.2 U	3.3 U	3.2 U	0.66 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.65 U	0.66 U	0.65 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	2.3 J	1.3 U	3.5	0.36 J
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	2.8 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	12	3.2 U	4.9 J	3.2 U	0.66 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.65 U	0.66 U	0.65 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.2 U	3.2 U	3.3 U	3.2 U	0.66 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.65 U	0.66 U	0.65 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.066 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.65 U	0.66 U	0.65 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.32 U	0.32 U	0.33 U	0.32 U	0.64
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	0.26 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.086 J	0.33 U	0.067 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.028 U	0.14 U	0.028 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	1.2 U	6 U	1.2 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	0.4 U	2 U	0.4 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.13 U	0.67 U	0.13 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.13 U	0.67 U	0.13 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	0.38 J	1.6 J	2.8	1.9 J
SW8270D	Benzidine	92-87-5	mg/kg	14 U	2.8 U	14 U	2.8 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	1.5 J	3.3 U	5.5 J	4.3 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.13 U	0.67 U	0.13 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.13 U	0.67 U	0.13 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.13 U	0.67 U	0.13 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.25	0.33 U	0.18	0.4 J
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.2	1.3 U	0.27 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg		0.27 U	0.028 U	0.13 U	0.27 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2-Methylphenol	95-48-7	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg		12 U	1.2 U	5.8 U	12 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg		3.9 U	0.4 U	1.9 U	3.9 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg		1.3 U	0.13 U	0.65 U	1.3 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	4-Methylphenol	106-44-5	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg		6.5 U	0.66 U	3.2 U	6.5 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg		6.5 U	0.66 U	3.2 U	6.5 U
SW8270D	Acetophenone	98-86-2	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	Atrazine	1912-24-9	mg/kg		1.3 U	0.13 U	0.65 U	1.3 U
SW8270D	Benzaldehyde	100-52-7	mg/kg		2.6 U	3.9	1.3 U	2.6 U
SW8270D	Benzidine	92-87-5	mg/kg		27 U	2.8 U	14 U	27 U
SW8270D	Benzoic Acid	65-85-0	mg/kg		6.5 U	2.3 J	3.2 U	6.5 U
SW8270D	Biphenyl	92-52-4	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	Caprolactam	105-60-2	mg/kg		1.3 U	0.13 U	0.65 U	1.3 U
SW8270D	Carbazole	86-74-8	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	Dibenzofuran	132-64-9	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg		2.6 U	0.26 U	1.3 U	2.6 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg		6.5 U	0.66 U	3.2 U	6.5 U
SW8270D	Hexachloroethane	67-72-1	mg/kg		1.3 U	0.13 U	0.65 U	1.3 U
SW8270D	Isophorone	78-59-1	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	Nitrobenzene	98-95-3	mg/kg		0.65 U	0.066 U	0.32 U	0.65 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg		1.3 U	0.13 U	0.65 U	1.3 U
SW8270D	Phenol	108-95-2	mg/kg		0.65 U	0.3	0.32 U	0.65 U
SW8270D	Pyridine	110-86-1	mg/kg		2.6 U	0.85	1.3 U	2.6 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.028 U	0.13 U	0.14 U	0.14 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	6 U	6 U	5.9 U	5.8 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.4 U	2 U	2 U	2 U	1.9 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.66 U	0.67 U	0.66 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.67 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.67 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.067 U	0.33 U	1.2	0.33 U	0.32 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.66 U	0.67 U	0.66 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.8 J	4 J	3.8	5.2	1.9 J
SW8270D	Benzidine	92-87-5	mg/kg	2.8 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.5 J	3.3 U	3.7 J	3.3 U	3.2 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.66 U	0.67 U	0.66 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.67 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.66 U	0.67 U	0.66 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.66 U	0.67 U	0.66 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.067 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pyridine	110-86-1	mg/kg	0.85	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.028 U	0.13 U	0.028 U	0.14 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	6 U	1.2 U	5.9 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.39 U	2 U	0.4 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.66 U	0.13 U	0.65 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.66 U	3.3 U	0.67 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.66 U	3.3 U	0.67 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.12 J	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.66 U	0.13 U	0.65 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	4.1	1.8 J	0.73 J	1.4 J	1.7 J
SW8270D	Benzidine	92-87-5	mg/kg	2.8 U	14 U	2.8 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.66 U	3.3 U	6.1 J	5.1 J	7.2 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.66 U	0.13 U	0.65 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.26 U	1.3 U	0.27 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.66 U	3.3 U	0.67 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.66 U	0.13 U	0.65 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.66 U	0.13 U	0.65 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.066 U	0.33 U	0.067 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	0.26 U	1.3 U	0.7	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.028 U	0.13 U	0.13 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	1.2 U	6 U	5.9 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	0.4 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.13 U	0.67 U	0.66 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	0.66 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	0.66 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.13 U	0.67 U	0.66 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	4.1 J	0.81 J	1.3 U	1.3 U	5.2
SW8270D	Benzidine	92-87-5	mg/kg	14 U	2.8 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	1.7 J	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.13 U	0.67 U	0.66 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	0.26 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	0.66 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.13 U	0.67 U	0.66 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.13 U	0.67 U	0.66 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.066 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	0.62 J	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.27 U	0.14 U	0.027 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.9 U	5.8 U	5.9 U	12 U	6 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	1.9 U	2 U	3.9 U	2 U	0.39 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.65 U	0.66 U	1.3 U	0.67 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.2 U	3.3 U	6.5 U	3.3 U	0.65 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.2 U	3.3 U	6.5 U	3.3 U	0.65 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.65 U	0.66 U	1.3 U	0.67 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	4.4 J	1.3 U	3.3 J	2.6 U	2.6 J	0.26 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	27 U	14 U	2.7 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	7.4 J	4 J	3.7 J	6.5 U	3.3 U	0.65 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.65 U	0.66 U	1.3 U	0.67 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.2 U	3.3 U	6.5 U	3.3 U	0.65 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.65 U	0.66 U	1.3 U	0.67 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.32 U	0.33 U	0.65 U	0.33 U	0.065 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.65 U	0.66 U	1.3 U	0.67 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.32 U	0.33 U	0.67 J	0.39 J	0.065 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	0.26 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.028 U	0.13 U	0.14 U	0.13 U	0.027 U	0.028 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	5.9 U	5.9 U	5.8 U	1.2 U	1.2 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.4 U	2 U	2 U	1.9 U	0.39 U	0.39 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.66 U	0.66 U	0.65 U	0.13 U	0.13 U	0.66 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.67 U	3.3 U	3.3 U	3.2 U	0.65 U	0.66 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.67 U	3.3 U	3.3 U	3.2 U	0.65 U	0.66 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.66 U	0.66 U	0.65 U	0.13 U	0.13 U	0.66 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	2.8 U	14 U	14 U	14 U	2.7 U	2.8 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.67 U	3.3 U	3.3 U	3.2 U	0.65 U	0.66 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.66 U	0.66 U	0.65 U	0.13 U	0.13 U	0.66 U
SW8270D	Carbazole	86-74-8	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.67 U	3.3 U	3.3 U	3.2 U	0.65 U	0.66 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.66 U	0.66 U	0.65 U	0.13 U	0.13 U	0.66 U
SW8270D	Isophorone	78-59-1	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.66 U	0.66 U	0.65 U	0.13 U	0.13 U	0.66 U
SW8270D	Phenol	108-95-2	mg/kg	0.067 U	0.33 U	0.33 U	0.32 U	0.065 U	0.066 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	0.27 U	1.3 U	1.3 U	1.3 U	0.26 U	0.26 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003
			Sample Date	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.027 U	0.027 U	0.028 U	0.028 U	0.027 U	0.027 U	0.028 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.5 J	0.39 U	0.4 U	0.4 U	0.39 U	0.39 U	0.39 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.65 U	0.65 U	0.66 U	0.66 U	0.65 U	0.65 U	0.66 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.65 U	0.65 U	0.66 U	0.66 U	0.65 U	0.65 U	0.66 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Benzidine	92-87-5	mg/kg	2.7 U	2.7 U	2.8 U	2.8 U	2.7 U	2.7 U	2.8 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.65 U	0.65 U	0.66 U	0.66 U	0.65 U	0.65 U	0.66 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003
			Sample Date	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.65 U	0.65 U	0.66 U	0.66 U	0.65 U	0.65 U	0.66 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.065 U	0.065 U	0.066 U	0.066 U	0.065 U	0.065 U	0.066 U
SW8270D	Pyridine	110-86-1	mg/kg	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002
			Sample Date	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.028 U	0.028 U	0.13 U	0.14 U	0.028 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	1.2 U	1.2 U	5.9 U	6 U	1.2 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	0.39 U	0.39 U	2 U	2 U	0.39 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.13 U	0.13 U	0.66 U	0.66 U	0.13 U	0.66 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	0.66 U	0.66 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	0.66 U	0.66 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.13 U	0.13 U	0.66 U	0.66 U	0.13 U	0.66 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.32 J	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	2.8 U	2.8 U	14 U	14 U	2.8 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	0.66 U	0.66 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.13 U	0.13 U	0.66 U	0.66 U	0.13 U	0.66 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	0.26 U	0.26 U	1.3 U	1.3 U	0.26 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002
			Sample Date	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	0.66 U	0.66 U	3.3 U	3.3 U	0.66 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.13 U	0.13 U	0.66 U	0.66 U	0.13 U	0.66 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.13 U	0.13 U	0.66 U	0.66 U	0.13 U	0.66 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.066 U	0.066 U	0.33 U	0.33 U	0.066 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	0.26 U	1.1	1.3 U	1.3 U	0.26 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.027 U	R	0.028 U	0.028 U	0.028 U	0.13 U	0.027 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	R	1.2 U	1.2 U	1.2 U	6 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.39 U	R	0.4 U	0.4 U	0.4 U	2 U	0.39 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	R	0.13 U	0.13 U	0.13 U	0.67 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.65 U	R	0.67 U	0.67 U	0.67 U	3.3 U	0.65 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.65 U	R	0.67 U	0.67 U	0.67 U	3.3 U	0.65 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	R	0.13 U	0.13 U	0.13 U	0.67 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Benzidine	92-87-5	mg/kg	2.7 U	R	2.8 U	2.8 U	2.8 U	14 U	2.7 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.65 U	R	0.67 U	0.67 U	0.67 U	3.3 U	0.65 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	R	0.13 U	0.13 U	0.13 U	0.67 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.26 U	R	0.27 U	0.27 U	0.27 U	1.3 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.65 U	R	0.67 U	0.67 U	0.67 U	3.3 U	0.65 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	R	0.13 U	0.13 U	0.13 U	0.67 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	R	0.13 U	0.13 U	0.13 U	0.67 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.065 U	R	0.067 U	0.067 U	0.067 U	0.33 U	0.065 U
SW8270D	Pyridine	110-86-1	mg/kg	0.26 U	R	0.39 J	0.27 U	0.27 U	1.3 U	0.49 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008
			Sample Date	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.9 U	6 U	5.8 U	5.9 U	6 U	6 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	1.9 U	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.66 U	0.66 U	0.65 U	0.66 U	0.67 U	0.66 U	0.66 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.66 U	0.66 U	0.65 U	0.66 U	0.67 U	0.66 U	0.66 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.66 U	0.66 U	0.65 U	0.66 U	0.67 U	0.66 U	0.66 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008
			Sample Date	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.66 U	0.66 U	0.65 U	0.66 U	0.67 U	0.66 U	0.66 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.66 U	0.66 U	0.65 U	0.66 U	0.67 U	0.66 U	0.66 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123
			Sample Date	10/06/15		
			Sample Type	N	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.02726 U	0.05712 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.8 U	1.2 U	2.448 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	1.9 U	0.3926 U	0.816 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.13 U	0.2704 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.2 U	0.6526 U	1.3538 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.2 U	0.6526 U	1.3538 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.13 U	0.2704 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3624 J	0.5378 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	2.726 U	5.712 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.2 U	3.341 J	1.3538 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.13 U	0.2704 U
SW8270D	Carbazole	86-74-8	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	0.26 U	0.5378 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.32 U	0.06526 U	0.13538 U

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123
			Sample Date	10/06/15		
			Sample Type	N	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.2 U	0.6526 U	1.3538 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.13 U	0.2704 U
SW8270D	Isophorone	78-59-1	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.13 U	0.2704 U
SW8270D	Phenol	108-95-2	mg/kg	0.32 U	0.06526 U	0.13538 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	0.299 J	0.5378 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-124	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.14 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.874 U	5.874 U	5.852 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	1.974 U	1.974 U	1.926 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.6574 U	0.6574 U	0.6526 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.274 U	3.274 U	3.226 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.274 U	3.274 U	3.226 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.6574 U	0.6574 U	0.6526 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.56 J	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	5.562 J	3.274 U	3.642 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.6574 U	0.6574 U	0.6526 U
SW8270D	Carbazole	86-74-8	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.3274 U	0.3274 U	0.3226 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-124	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.274 U	3.274 U	3.226 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.6574 U	0.6574 U	0.6526 U
SW8270D	Isophorone	78-59-1	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.6574 U	0.6574 U	0.6526 U
SW8270D	Phenol	108-95-2	mg/kg	0.3274 U	0.3274 U	0.3226 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.05638 U	0.028 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	2.396 U	1.2 U	5.926 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.7826 U	0.3926 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.2652 U	0.13 U	0.6626 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.1313 U	0.07276 J	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	1.313 U	0.66 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	1.313 U	0.66 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.2652 U	0.13 U	0.6626 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.1024 J	0.286 J	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	5.638 U	2.8 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	1.313 U	0.66 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.2652 U	0.13 U	0.6626 U
SW8270D	Carbazole	86-74-8	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.5304 U	0.26 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.1313 U	0.066 U	0.33 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	1.313 U	0.66 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.2652 U	0.13 U	0.6626 U
SW8270D	Isophorone	78-59-1	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.1313 U	0.066 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.2652 U	0.13 U	0.6626 U
SW8270D	Phenol	108-95-2	mg/kg	0.1313 U	0.21524 J	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	0.5304 U	0.26 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-131	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.07046 J	0.1339 U	0.06626 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.02726 U	0.05638 U	0.028 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	2.448 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.474 J	0.8086 U	0.4 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.2704 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.6552 U	1.339 U	0.6626 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.6552 U	1.339 U	0.6626 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.2704 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.2912 J	0.6084 J	0.9204 J
SW8270D	Benzidine	92-87-5	mg/kg	2.726 U	5.638 U	2.8 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.871 J	1.339 U	1.9184 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.2704 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.2626 U	0.5304 U	0.2626 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.06552 U	0.1339 U	0.06626 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-131	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.6552 U	1.339 U	0.6626 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.2704 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.06552 U	0.1339 U	0.06626 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.2704 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.1131 J	0.1339 U	0.09564 J
SW8270D	Pyridine	110-86-1	mg/kg	0.5044 J	0.5304 U	0.2626 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.13464 U		0.2171 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.13464 U		0.2171 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.05712 U		0.09018 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.13464 U		0.2171 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.13464 U		0.2171 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.13464 U		0.2171 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.13464 U		0.2171 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.13464 U		0.2171 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.5304 U		0.8684 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.13464 U		0.2171 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.13464 U		0.2171 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	2.422 U		4.008 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.5304 U		0.8684 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.13464 U		0.2171 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.13464 U		0.2171 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.13464 U		0.2171 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.5304 U		0.8684 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.816 U		1.3026 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.13464 U		0.2171 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.13464 U		0.2171 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.2652 U		0.4342 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.13464 U		0.2171 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.13464 U		0.2171 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.5304 U		0.8684 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	1.3464 U		2.171 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	1.3464 U		2.171 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.13464 U		0.2171 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.2652 U		0.4342 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.6864 J		0.8684 U
SW8270D	Benzidine	92-87-5	mg/kg	5.712 U		9.018 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	1.6064 J		2.171 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.13464 U		0.2171 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.13464 U		0.2171 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.13464 U		0.2171 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.5304 U		0.8684 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.5304 U		0.8684 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.2652 U		0.4342 U
SW8270D	Carbazole	86-74-8	mg/kg	0.13464 U		0.2171 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.5304 U		0.8684 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.5304 U		0.8684 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.13464 U		0.2171 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.5304 U		0.8684 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.5304 U		0.8684 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.13464 U		0.2171 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	1.3464 U		2.171 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.2652 U		0.4342 U
SW8270D	Isophorone	78-59-1	mg/kg	0.13464 U		0.2171 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.13464 U		0.2171 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.13464 U		0.2171 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.13464 U		0.2171 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.2652 U		0.4342 U
SW8270D	Phenol	108-95-2	mg/kg	0.15284 J		0.2171 U
SW8270D	Pyridine	110-86-1	mg/kg	0.5304 U		0.8684 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C003	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.028 U	0.13 U	0.09092 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	5.948 U	4.008 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.3926 U	1.974 U	1.3026 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.6648 U	0.4342 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.66 U	3.274 U	2.1784 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.66 U	3.274 U	2.1784 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.6648 U	0.4342 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.2064 J	1.3 U	0.8684 U
SW8270D	Benzidine	92-87-5	mg/kg	2.8 U	14 U	9.092 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	1.0864 J	3.274 U	2.1784 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.6648 U	0.4342 U
SW8270D	Carbazole	86-74-8	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.26 U	1.3 U	0.8684 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.066 U	0.3274 U	0.21784 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C003	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.66 U	3.274 U	2.1784 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.6648 U	0.4342 U
SW8270D	Isophorone	78-59-1	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.066 U	0.3274 U	0.21784 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.6648 U	0.4342 U
SW8270D	Phenol	108-95-2	mg/kg	0.12684 J	0.3274 U	0.21784 U
SW8270D	Pyridine	110-86-1	mg/kg	0.4134 J	1.3 U	0.8684 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.028 U	0.13 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	5.926 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.3926 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.66 U	0.6626 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.6626 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.6626 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.06626 U	0.33 U	0.5562 J
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.66 U	0.6626 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.4004 J	2.002 J	1.95 J
SW8270D	Benzidine	92-87-5	mg/kg	2.8 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	1.3984 J	3.3 U	3.404 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.66 U	0.6626 U
SW8270D	Carbazole	86-74-8	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.2626 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.06626 U	0.33 U	0.33 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.6626 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.66 U	0.6626 U
SW8270D	Isophorone	78-59-1	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.66 U	0.6626 U
SW8270D	Phenol	108-95-2	mg/kg	0.06626 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.035	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N001	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.05712 U	0.14 U	0.02726 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	2.422 U	5.874 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.8086 U	1.974 U	0.39 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.2678 U	0.6574 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	1.3464 U	3.274 U	0.6526 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	1.3464 U	3.274 U	0.6526 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.13464 U	0.3274 U	0.0793 J
SW8270D	Atrazine	1912-24-9	mg/kg	0.2678 U	0.6574 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.5888 J	1.456 J	1.2584 J
SW8270D	Benzidine	92-87-5	mg/kg	5.712 U	14 U	2.726 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	1.3464 U	3.274 U	0.6526 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.2678 U	0.6574 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.5304 U	1.3 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.13464 U	0.3274 U	0.06526 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N001	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	1.3464 U	3.274 U	0.6526 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.2678 U	0.6574 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.2678 U	0.6574 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.13464 U	0.3274 U	0.06526 U
SW8270D	Pyridine	110-86-1	mg/kg	0.5304 U	1.3 U	0.26 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg		0.067 U	0.13538 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg		0.067 U	0.13538 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg		0.028 U	0.05712 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg		0.067 U	0.13538 U
SW8270D	2-Methylphenol	95-48-7	mg/kg		0.067 U	0.13538 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg		0.067 U	0.13538 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg		0.067 U	0.13538 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg		0.067 U	0.13538 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg		0.27 U	0.5378 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg		0.067 U	0.13538 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg		0.067 U	0.13538 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg		1.2 U	2.422 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg		0.27 U	0.5378 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg		0.067 U	0.13538 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg		0.067 U	0.13538 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg		0.067 U	0.13538 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg		0.27 U	0.5378 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg		0.4 U	0.816 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg		0.067 U	0.13538 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg		0.067 U	0.13538 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg		0.13 U	0.2652 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg		0.067 U	0.13538 U
SW8270D	4-Methylphenol	106-44-5	mg/kg		0.067 U	0.13538 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg		0.27 U	0.5378 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg		0.67 U	1.3538 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg		0.67 U	1.3538 U
SW8270D	Acetophenone	98-86-2	mg/kg		0.067 U	0.13538 U
SW8270D	Atrazine	1912-24-9	mg/kg		0.13 U	0.2652 U
SW8270D	Benzaldehyde	100-52-7	mg/kg		0.3896 J	0.5638 J
SW8270D	Benzidine	92-87-5	mg/kg		2.8 U	5.712 U
SW8270D	Benzoic Acid	65-85-0	mg/kg		2.0818 J	1.8218 J
SW8270D	Biphenyl	92-52-4	mg/kg		0.067 U	0.13538 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg		0.067 U	0.13538 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg		0.067 U	0.13538 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg		0.27 U	0.5378 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg		0.27 U	0.5378 U
SW8270D	Caprolactam	105-60-2	mg/kg		0.13 U	0.2652 U
SW8270D	Carbazole	86-74-8	mg/kg		0.067 U	0.13538 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg		0.27 U	0.5378 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg		0.27 U	0.5378 U
SW8270D	Dibenzofuran	132-64-9	mg/kg		0.067 U	0.13538 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg		0.27 U	0.5378 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg		0.27 U	0.5378 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg		0.067 U	0.13538 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg		0.67 U	1.3538 U
SW8270D	Hexachloroethane	67-72-1	mg/kg		0.13 U	0.2652 U
SW8270D	Isophorone	78-59-1	mg/kg		0.067 U	0.13538 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg		0.067 U	0.13538 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg		0.067 U	0.13538 U
SW8270D	Nitrobenzene	98-95-3	mg/kg		0.067 U	0.13538 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg		0.13 U	0.2652 U
SW8270D	Phenol	108-95-2	mg/kg		0.067 U	0.13538 U
SW8270D	Pyridine	110-86-1	mg/kg		0.4706 J	0.5378 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N007	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.05712 U	0.13 U	0.02726 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	2.448 U	6 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.816 U	2 U	0.3926 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.2704 U	0.67 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	1.3538 U	3.3 U	0.6526 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	1.3538 U	3.3 U	0.6526 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.2704 U	0.67 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.6418 J	2.028 J	0.403 J
SW8270D	Benzidine	92-87-5	mg/kg	5.712 U	14 U	2.726 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	2.3678 J	3.3 U	0.923 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.2704 U	0.67 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.5378 U	1.3 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.13538 U	0.33 U	0.06526 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N007	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	1.3538 U	3.3 U	0.6526 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.2704 U	0.67 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.2704 U	0.67 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.13538 U	0.33 U	0.06526 U
SW8270D	Pyridine	110-86-1	mg/kg	0.5378 U	1.3 U	0.5238 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.14 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.926 U	5.974 U	5.852 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	1.926 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.6626 U	0.66 U	0.6552 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.226 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.226 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.6626 U	0.66 U	0.6552 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	2.314 J
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.226 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.6626 U	0.66 U	0.6552 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.3226 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.226 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.6626 U	0.66 U	0.6552 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.6626 U	0.66 U	0.6552 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.3226 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S005	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.9 U	5.948 U	5.974 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	1.974 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.6574 U	0.6648 U	0.66 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.274 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.274 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.6574 U	0.6648 U	0.66 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	2.106 J	1.3 U	1.82 J
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	4.366 J	3.482 J	3.404 J
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.6574 U	0.6648 U	0.66 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.3274 U	0.33 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S005	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.274 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.6574 U	0.6648 U	0.66 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.6574 U	0.6648 U	0.66 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.3274 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02
			Sample Date			12/10/15	12/10/15
			Sample Type	Calc	Calc	N	N
Method	Analyte	CAS	Unit				
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.1664 U	0.1326 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	7.486 U	5.852 U	6 U	5.8 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2.494 U	1.926 U	2 U	1.9 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.8264 U	0.6552 U	0.66 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	4.132 U	3.226 U	3.3 U	3.2 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	4.132 U	3.226 U	3.3 U	3.2 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.8264 U	0.6552 U	0.66 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.638 U	1.638 J	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	17.38 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	4.132 U	3.226 U	3.3 U	3.2 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.8264 U	0.6552 U	0.66 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02
			Sample Date			12/10/15	12/10/15
			Sample Type	Calc	Calc	N	N
Method	Analyte	CAS	Unit				
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	4.132 U	3.226 U	3.3 U	3.2 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.8264 U	0.6552 U	0.66 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.4132 U	0.3226 U	0.33 U	0.32 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.8264 U	0.6552 U	0.66 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.4184 J	0.3382 J	0.33 U	0.32 U
SW8270D	Pyridine	110-86-1	mg/kg	1.638 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471
			Sample Date	12/10/15	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.8 U	6 U	6 U	6 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	1.9 U	2 U	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.66 U	0.67 U	0.67 U	0.67 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.66 U	0.67 U	0.67 U	0.67 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.66 U	0.67 U	0.67 U	0.67 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471
			Sample Date	12/10/15	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.66 U	0.67 U	0.67 U	0.67 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.66 U	0.67 U	0.67 U	0.67 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR
			Sample ID	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	12/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	5.8 U	6 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	1.9 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.67 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.67 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.67 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR
			Sample ID	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	12/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.67 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.67 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/13/16
			Sample Type	N	N	N	N	FD	FD
Method	Analyte	CAS	Unit						
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.8 U	5.8 U	5.9 U	6 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	1.9 U	1.9 U	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.65 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.2 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.2 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.65 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.2 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.65 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/13/16
			Sample Type	N	N	N	N	FD	FD
Method	Analyte	CAS	Unit						
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.2 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.65 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.65 U	0.65 U	0.67 U	0.67 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.32 U	0.32 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	5.9 U	5.9 U	5.8 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U	1.9 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.66 U	0.67 U	0.66 U	0.65 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.66 U	0.67 U	0.66 U	0.65 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.66 U	0.67 U	0.66 U	0.65 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.66 U	0.67 U	0.66 U	0.65 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.66 U	0.67 U	0.66 U	0.65 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329
			Sample Date	01/13/16	01/13/16	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	6 U	6 U	5.8 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U	1.9 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329
			Sample Date	01/13/16	01/13/16	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.2 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.67 U	0.66 U	0.66 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.32 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS330	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334
			Sample Date	12/10/15	01/12/16	12/10/15	01/12/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	5.8 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	1.9 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.66 U	0.66 U	0.65 U	0.67 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.66 U	0.66 U	0.65 U	0.67 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.66 U	0.66 U	0.65 U	0.67 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS330	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334
			Sample Date	12/10/15	01/12/16	12/10/15	01/12/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.2 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.66 U	0.66 U	0.65 U	0.67 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.66 U	0.66 U	0.65 U	0.67 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.32 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN
			Sample ID	NB03FSBS335	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486
			Sample Date	01/13/16	01/20/16	01/20/16	12/01/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	5.9 U	6 U	6 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN
			Sample ID	NB03FSBS335	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486
			Sample Date	01/13/16	01/20/16	01/20/16	12/01/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC487	NB03FSFC488	NB03FSFC489	NB03FSFC490
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	5.9 U	6 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.66 U	0.66 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.66 U	0.66 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.66 U	0.66 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC487	NB03FSFC488	NB03FSFC489	NB03FSFC490
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.66 U	0.66 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.66 U	0.66 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC491	NB03FSFN407	NB03FSFN408	NB03FSFN409
			Sample Date	12/01/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	6 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC491	NB03FSFN407	NB03FSFN408	NB03FSFN409
			Sample Date	12/01/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.8 U	5.9 U	5.9 U	6 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	1.9 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.66 U	0.65 U	0.67 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.66 U	0.65 U	0.67 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.66 U	0.65 U	0.67 U
SW8270D	Carbazole	86-74-8	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.2 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.66 U	0.65 U	0.67 U
SW8270D	Isophorone	78-59-1	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.66 U	0.65 U	0.67 U
SW8270D	Phenol	108-95-2	mg/kg	0.32 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	6 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	14 U	14 U	14 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.67 U	0.67 U	0.66 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10
			Sample Date	12/01/15	04/27/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.13 U	0.13 U	0.027 U	0.026 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	6 U	6 U	6 U	1.2 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	2 U	2 U	0.4 U	0.39 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.67 U	0.67 U	0.66 U	0.13 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	3.3 U	3.3 U	0.67 U	0.65 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	3.3 U	3.3 U	0.67 U	0.65 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.67 U	0.67 U	0.66 U	0.13 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Benzidine	92-87-5	mg/kg	14 U	5 U	5 U	1 U	0.97 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	3.3 U	3.3 U	0.67 U	0.65 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.67 U	0.67 U	0.66 U	0.13 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U

			Tissue Type	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10
			Sample Date	12/01/15	04/27/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	3.3 U	3.3 U	0.67 U	0.65 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.67 U	0.67 U	0.66 U	0.13 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.33 U	0.33 U	0.086 J	0.071 J
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.67 U	0.67 U	0.66 U	0.13 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.33 U	0.33 U	0.067 U	0.065 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	1.3 U	1.3 U	0.27 U	0.26 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.027 U	0.13 U	0.13 U	0.027 U	
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	5.9 U	5.9 U	1.2 U	
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.4 U	2 U	2 U	0.4 U	
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.65 U	0.66 U	0.13 U	
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.67 U	3.3 U	3.3 U	0.67 U	
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.67 U	3.3 U	3.3 U	0.67 U	
SW8270D	Acetophenone	98-86-2	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.65 U	0.66 U	0.13 U	
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Benzidine	92-87-5	mg/kg	1 U	4.9 U	4.9 U	1 U	
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.67 U	3.3 U	3.3 U	0.67 U	
SW8270D	Biphenyl	92-52-4	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.65 U	0.66 U	0.13 U	
SW8270D	Carbazole	86-74-8	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.67 U	3.3 U	3.3 U	0.67 U	
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.65 U	0.66 U	0.13 U	
SW8270D	Isophorone	78-59-1	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.65 U	0.66 U	0.13 U	
SW8270D	Phenol	108-95-2	mg/kg	0.067 U	0.33 U	0.33 U	0.067 U	
SW8270D	Pyridine	110-86-1	mg/kg	0.27 U	1.3 U	1.3 U	0.27 U	

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11
			Sample Date	04/27/16	04/26/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.13 U	0.027 U	0.13 U	0.027 U	0.027 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	5.9 U	1.2 U	6 U	1.2 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	2 U	0.4 U	2 U	0.4 U	0.4 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.65 U	0.13 U	0.66 U	0.13 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	0.67 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	0.67 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.65 U	0.13 U	0.66 U	0.13 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Benzidine	92-87-5	mg/kg	4.9 U	1 U	5 U	1 U	1 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	0.67 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.65 U	0.13 U	0.66 U	0.13 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11
			Sample Date	04/27/16	04/26/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	3.3 U	0.67 U	3.3 U	0.67 U	0.67 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.65 U	0.13 U	0.66 U	0.13 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.65 U	0.13 U	0.66 U	0.13 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.33 U	0.067 U	0.33 U	0.067 U	0.067 U
SW8270D	Pyridine	110-86-1	mg/kg	1.3 U	0.27 U	1.3 U	0.27 U	0.27 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09
			Sample Date	04/26/16	04/27/16	04/27/16	04/27/16	04/27/16
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.027 U		0.13 U	0.13 U	0.13 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U		6 U	5.8 U	5.9 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.4 U		2 U	1.9 U	2 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U		0.67 U	0.65 U	0.65 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.67 U		3.3 U	3.2 U	3.3 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.67 U		3.3 U	3.2 U	3.3 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U		0.67 U	0.65 U	0.65 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Benzidine	92-87-5	mg/kg	1 U		5 U	4.9 U	4.9 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.67 U		3.3 U	3.2 U	3.3 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U		0.67 U	0.65 U	0.65 U
SW8270D	Carbazole	86-74-8	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09
			Sample Date	04/26/16	04/27/16	04/27/16	04/27/16	04/27/16
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.67 U		3.3 U	3.2 U	3.3 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U		0.67 U	0.65 U	0.65 U
SW8270D	Isophorone	78-59-1	mg/kg	0.067 J		0.33 U	0.32 U	0.33 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U		0.67 U	0.65 U	0.65 U
SW8270D	Phenol	108-95-2	mg/kg	0.067 U		0.33 U	0.32 U	0.33 U
SW8270D	Pyridine	110-86-1	mg/kg	0.27 U		1.3 U	1.3 U	1.3 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
SW8270D	1,2-Diphenylhydrazine	122-66-7	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2-Chloronaphthalene	91-58-7	mg/kg	0.027 U	0.13 U	0.026 U
SW8270D	2-Chlorophenol	95-57-8	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2-Methylphenol	95-48-7	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2-Nitroaniline	88-74-4	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2-Nitrophenol	88-75-5	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2,2'-oxybis(1-Chloropropane)	108-60-1	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	2,4-Dichlorophenol	120-83-2	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2,4-Dimethylphenol	105-67-9	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2,4-Dinitrophenol	51-28-5	mg/kg	1.2 U	6 U	1.2 U
SW8270D	2,4-Dinitrotoluene	121-14-2	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	2,4,5-Trichlorophenol	95-95-4	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2,4,6-Trichlorophenol	88-06-2	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	2,6-Dinitrotoluene	606-20-2	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	3-Nitroaniline	99-09-2	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.4 U	2 U	0.39 U
SW8270D	4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	4-Chloro-3-Methylphenol	59-50-7	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	4-Chloroaniline	106-47-8	mg/kg	0.13 U	0.67 U	0.13 U
SW8270D	4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	4-Methylphenol	106-44-5	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	4-Nitroaniline	100-01-6	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	4-Nitrophenol	100-02-7	mg/kg	0.66 U	3.3 U	0.66 U
SW8270D	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.66 U	3.3 U	0.66 U
SW8270D	Acetophenone	98-86-2	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	Atrazine	1912-24-9	mg/kg	0.13 U	0.67 U	0.13 U
SW8270D	Benzaldehyde	100-52-7	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Benzidine	92-87-5	mg/kg	0.99 U	5 U	0.99 U
SW8270D	Benzoic Acid	65-85-0	mg/kg	0.66 U	3.3 U	0.66 U
SW8270D	Biphenyl	92-52-4	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Butyl benzyl phthalate	85-68-7	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Caprolactam	105-60-2	mg/kg	0.13 U	0.67 U	0.13 U
SW8270D	Carbazole	86-74-8	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	Di-n-Butylphthalate	84-74-2	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Di-n-Octylphthalate	117-84-0	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Dibenzofuran	132-64-9	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	Diethyl phthalate	84-66-2	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Dimethylphthalate	131-11-3	mg/kg	0.26 U	1.3 U	0.26 U
SW8270D	Hexachlorobutadiene	87-68-3	mg/kg	0.066 U	0.33 U	0.066 U

Table A-24
Analytical Data for Semivolatile Organic Compounds
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
SW8270D	Hexachlorocyclopentadiene	77-47-4	mg/kg	0.66 U	3.3 U	0.66 U
SW8270D	Hexachloroethane	67-72-1	mg/kg	0.13 U	0.67 U	0.13 U
SW8270D	Isophorone	78-59-1	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	N-Nitrosodiphenylamine	86-30-6	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	Nitrobenzene	98-95-3	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	Pentachlorophenol	87-86-5	mg/kg	0.13 U	0.67 U	0.13 U
SW8270D	Phenol	108-95-2	mg/kg	0.066 U	0.33 U	0.066 U
SW8270D	Pyridine	110-86-1	mg/kg	0.26 U	1.3 U	0.26 U

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502	NB03FAEC508
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16	09/29/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.036 U	0.0072 U	0.035 U	0.0072 U	0.036 U	0.0072 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.046 U	0.0092 U	0.045 U	0.0092 U	0.046 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.08 U	0.016 U	0.078 U	0.016 U	0.08 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.033 U	0.0066 U	0.032 U	0.0066 U	0.033 U	0.0066 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.033 U	0.0066 U	0.032 U	0.0066 U	0.033 U	0.0066 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.37	0.073	0.44	0.28 J	0.59 J	0.0066 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.049 U	0.14 J	0.048 U	0.16	0.41 J	0.069 J
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.033 U	0.0066 U	0.032 U	0.0066 U	0.033 U	0.0066 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.033 U	0.0066 U	0.032 U	0.0066 U	0.033 U	0.0066 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04	NB03FAEN-COMP05	NB03FAEN-COMP06
			Sample Date	10/01/15	10/01/15	01/12/16	01/12/16	09/29/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0072 U	0.036 U	0.036 U	0.036 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.0092 U	0.045 U	0.046 U	0.046 U	0.009 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.079 U	0.08 U	0.079 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0066 U	0.033 U	0.033 U	0.033 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0066 U	0.0066 U	0.033 U	0.033 U	0.033 U	0.0065 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.091	0.17	0.65	0.43	0.033 U	0.33
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.14 J	0.16 J	0.048 U	0.049 U	0.2 J	0.0096 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0066 U	0.033 U	0.033 U	0.033 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0066 U	0.033 U	0.033 U	0.033 U	0.0065 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAES-COMP01	NB03FAES018	NB03FAES019	NB03FAES347	NB03FAES364	NB03FAES365
			Sample Date	01/13/16	10/01/15	10/01/15	01/13/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.036 U	0.036 U	0.0072 U	0.0072 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0092 U	0.046 U	0.045 U	0.0092 U	0.0092 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.08 U	0.079 U	0.016 U	0.016 U	0.08 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0066 U	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.072 J	0.033 U	0.033 U	0.11 J	0.18 J	0.66 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.054 J	0.049 U	0.048 U	0.098	0.13 J	0.32
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03CRB-HEP122	NB03CRB-HEP123	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127
			Sample Date	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.036 U	0.072 U	0.36 U	0.036 U	0.36 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.046 U	0.092 U	0.46 U	0.046 U	0.46 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.079 U	0.16 U	0.8 U	0.079 U	0.8 U	0.079 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.033 U	0.066 U	0.33 U	0.033 U	0.33 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.033 U	0.066 U	0.33 U	0.033 U	0.33 U	0.033 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.033 U	0.066 U	0.33 U	0.033 U	0.33 U	0.033 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.049 U	0.098 U	0.49 U	0.049 U	0.49 U	0.049 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.41	0.25 J	0.33 U	0.14 J	0.33 U	0.033 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.033 U	0.066 U	0.33 U	0.033 U	0.33 U	0.033 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP129	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	08/19/15	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.071 U	0.14 U	0.035 U	0.072 U	0.072 U	0.071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.09 U	0.18 U	0.045 U	0.092 U	0.092 U	0.091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.16 U	0.32 U	0.078 U	0.16 U	0.16 U	0.16 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.065 U	0.13 U	0.032 U	0.066 U	0.066 U	0.065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.065 U	0.13 U	0.032 U	0.066 U	0.066 U	0.065 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.065 U	0.13 U	0.032 U	0.066 U	0.066 U	0.065 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.096 U	0.19 U	0.048 U	0.098 U	0.098 U	0.097 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.32 J	0.33 J	0.032 U	0.21 J	0.28 J	0.21 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.065 U	0.13 U	0.032 U	0.066 U	0.066 U	0.065 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005	NB03CRB-HEP-C006
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.036 U	0.036 U	0.072 U	0.14 U	0.035 U	0.035 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.046 U	0.046 U	0.092 U	0.18 U	0.045 U	0.045 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.079 U	0.079 U	0.16 U	0.32 U	0.078 U	0.077 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.033 U	0.033 U	0.066 U	0.13 U	0.032 U	0.032 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.033 U	0.033 U	0.066 U	0.13 U	0.032 U	0.032 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.033 U	0.033 U	0.066 U	0.13 U	0.032 U	0.032 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.049 U	0.049 U	0.098 U	0.2 U	0.048 U	0.047 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.27	0.33 J	0.48 J	0.13 U	0.14 J	0.25 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.033 U	0.033 U	0.066 U	0.13 U	0.032 U	0.032 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002	NB03CRB-HEP-N003	NB03CRB-HEP-N004
			Sample Date	09/01/15	08/30/15	08/30/15	08/30/15	08/25/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.072 U	0.036 U	0.035 U	0.036 U	0.072 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.091 U	0.046 U	0.045 U	0.046 U	0.092 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.16 U	0.08 U	0.078 U	0.08 U	0.16 U	0.079 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.066 U	0.033 U	0.032 U	0.033 U	0.066 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.066 U	0.033 U	0.032 U	0.033 U	0.066 U	0.033 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.066 U	0.033 U	0.032 U	0.033 U	0.066 U	0.033 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.097 U	0.049 U	0.048 U	0.049 U	0.098 U	0.049 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.21 J	0.21	0.18	0.27	0.066 U	0.23
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.066 U	0.033 U	0.032 U	0.033 U	0.066 U	0.033 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002
			Sample Date	08/26/15	08/24/15	08/24/15	09/01/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.035 U	0.071 U	0.072 U	0.072 U	0.036 U	0.072 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.045 U	0.091 U	0.091 U	0.092 U	0.046 U	0.092 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.077 U	0.16 U	0.16 U	0.16 U	0.08 U	0.16 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.032 U	0.065 U	0.066 U	0.066 U	0.033 U	0.066 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.032 U	0.065 U	0.066 U	0.066 U	0.033 U	0.066 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.032 U	0.065 U	0.066 U	0.066 U	0.033 U	0.066 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.047 U	0.097 U	0.097 U	0.098 U	0.049 U	0.098 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.21	0.22 J	0.27 J	0.23 J	0.033 U	0.26 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.032 U	0.065 U	0.066 U	0.066 U	0.033 U	0.066 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-S003	NB03CRB-HEP-S004	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.072 U	0.036 U	0.072 U	0.36 U	0.071 U	0.035 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.092 U	0.046 U	0.091 U	0.46 U	0.091 U	0.045 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.16 U	0.079 U	0.16 U	0.8 U	0.16 U	0.078 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.066 U	0.033 U	0.066 U	0.33 U	0.065 U	0.032 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.066 U	0.033 U	0.066 U	0.33 U	0.065 U	0.032 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.066 U	0.033 U	0.066 U	0.33 U	0.065 U	0.032 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.098 U	0.049 U	0.097 U	0.49 U	0.097 U	0.048 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.22 J	0.21	0.27 J	0.33 U	0.065 U	0.15 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.066 U	0.033 U	0.066 U	0.33 U	0.065 U	0.032 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP-S009	NB03CRB-MUS122	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129
			Sample Date	08/24/15	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.071 U	0.007 U	0.0072 U	0.036 U	0.007 U	0.036 U	0.0072 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.09 U	0.0089 U	0.0092 U	0.046 U	0.009 U	0.046 U	0.0091 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.16 U	0.015 U	0.016 U	0.08 U	0.016 U	0.08 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.065 U	0.0064 U	0.0066 U	0.033 U	0.0064 U	0.033 U	0.0066 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.065 U	0.0064 U	0.0066 U	0.033 U	0.0064 U	0.033 U	0.0066 U	0.0065 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.065 U	0.0064 U	0.0066 U	0.033 U	0.0064 U	0.033 U	0.0066 U	0.0065 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.096 U	0.0095 U	0.0098 U	0.049 U	0.0095 U	0.049 U	0.0097 U	0.067
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.2 J	0.016 J	0.0066 U	0.033 U	0.0064 U	0.033 U	0.0066 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.065 U	0.0064 U	0.0066 U	0.033 U	0.0064 U	0.033 U	0.0066 U	0.0065 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS130	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0071 U	0.0071 U	0.0072 U	0.0072 U	0.0071 U	0.0071 U	0.007 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.009 U	0.0092 U	0.0092 U	0.0091 U	0.0091 U	0.009 U	0.009 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0065 U	0.0065 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0065 U	0.0065 U	0.0066 U	0.019 J	0.0065 U	0.0065 U	0.0064 U	0.0065 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.0065 U	0.0065 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U	0.0065 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0097 U	0.0096 U	0.043	0.0098 U	0.0097 U	0.0097 U	0.0095 U	0.0096 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0065 U	0.0065 U	0.0066 U	0.0066 U	0.0065 U	0.013 J	0.0064 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0065 U	0.0065 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U	0.0065 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003
			Sample Date	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15	08/25/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.072 U	0.0071 U	0.007 U	0.0071 U	0.0072 U	0.0072 U	0.007 U	0.0072 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.092 U	0.009 U	0.0089 U	0.0091 U	0.0092 U	0.0092 U	0.009 U	0.0092 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.16 U	0.016 U	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.066 U	0.0065 U	0.0064 U	0.0065 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.066 U	0.0065 U	0.0064 U	0.0065 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.066 U	0.0065 U	0.0064 U	0.0065 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.098 U	0.0096 U	0.0095 U	0.0097 U	0.0098 U	0.0098 U	0.0095 U	0.0098 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.066 U	0.0065 U	0.0064 U	0.0065 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.066 U	0.0065 U	0.0064 U	0.0065 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002	NB03CRB-MUS-S003
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15	09/01/15	09/01/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0071 U	0.007 U	0.0072 U	0.0072 U	0.0072 U	0.007 U	0.0072 U	0.0072 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.0089 U	0.0092 U	0.0092 U	0.0092 U	0.0089 U	0.0092 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.015 U	0.016 U	0.016 U	0.016 U	0.015 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0065 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0065 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.0065 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0097 U	0.0095 U	0.0098 U	0.0098 U	0.0098 U	0.0095 U	0.0098 U	0.0097 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.01 J	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0065 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U	0.0066 U	0.0066 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009
			Sample Date	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.007 U	0.0072 U	0.0072 U	0.0071 U	0.0071 U	0.007 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.009 U	0.0092 U	0.0092 U	0.009 U	0.0091 U	0.009 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0095 U	0.0098 U	0.04	0.0096 U	0.0097 U	0.0095 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U	0.0064 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124
			Sample ID	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123	NB03-CRB-COMBHEPMUS-124
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.01454 U	0.024048 U	0.12024 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.018546 U	0.030728 U	0.15364 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.03164 U	0.05344 U	0.2672 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.013316 U	0.022044 U	0.11022 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.013316 U	0.022044 U	0.11022 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.013316 U	0.022044 U	0.11022 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.01977 U	0.032732 U	0.16366 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.11844 J	0.069884 J	0.11022 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.013316 U	0.022044 U	0.11022 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126	NB03-CRB-COMBHEPMUS-127
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.01454 U	0.12024 U	0.014688 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.01862 U	0.15364 U	0.018694 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.03238 U	0.2672 U	0.03238 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.013316 U	0.11022 U	0.013464 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.013316 U	0.11022 U	0.013464 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.013316 U	0.11022 U	0.013464 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.01977 U	0.16366 U	0.019918 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.041136 J	0.11022 U	0.013464 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.013316 U	0.11022 U	0.013464 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130	NB03-CRB-COMBHEPMUS-131
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.023714 U	0.041654 U	0.014354 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.030134 U	0.053534 U	0.01836 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.05344 U	0.09504 U	0.03212 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.02171 U	0.03861 U	0.01313 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.02171 U	0.03861 U	0.01313 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.02171 U	0.03861 U	0.01313 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.07454 J	0.056578 U	0.019584 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.08801 J	0.09061 J	0.01313 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.02171 U	0.03861 U	0.01313 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133	NB03-CRB-COMBHEPMUS-134
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.024048 U	0.024048 U	0.023714 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.030728 U	0.030728 U	0.030394 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.05344 U	0.05344 U	0.05344 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.022044 U	0.022044 U	0.02171 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.022044 U	0.03122 J	0.02171 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.022044 U	0.022044 U	0.02171 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0573 J	0.032732 U	0.032398 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.059484 J	0.077684 J	0.05941 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.022044 U	0.022044 U	0.02171 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002	NB03-CRB-COMBHEPMUS-C003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.014614 U	0.01454 U	0.023974 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.018694 U	0.01862 U	0.03058 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.03238 U	0.03238 U	0.05344 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.01339 U	0.013316 U	0.02197 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.01339 U	0.013316 U	0.02197 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.01339 U	0.013316 U	0.02197 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.019918 U	0.01977 U	0.032584 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.07982 J	0.090536 J	0.12961 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.01339 U	0.013316 U	0.02197 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005	NB03-CRB-COMBHEPMUS-C006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.08968 U	0.014354 U	0.01428 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.11488 U	0.01836 U	0.018286 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.2016 U	0.03212 U	0.03112 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.08264 U	0.01313 U	0.013056 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.08264 U	0.01313 U	0.013056 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.08264 U	0.01313 U	0.013056 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.12452 U	0.019584 U	0.01925 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.08264 U	0.04121 J	0.069736 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.08264 U	0.01313 U	0.013056 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008	NB03-CRB-COMBHEPMUS-N001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.023974 U	0.014688 U	0.014428 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.030394 U	0.018768 U	0.018508 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.05344 U	0.03264 U	0.03212 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.02197 U	0.013464 U	0.013204 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.02197 U	0.013464 U	0.013204 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.02197 U	0.013464 U	0.013204 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.032398 U	0.019992 U	0.019732 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.05941 J	0.059484 J	0.051684 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.02197 U	0.013464 U	0.013204 U

Notes:
J - Estimated Concentration
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003	NB03-CRB-COMBHEPMUS-N004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.01454 U	0.024048 U	0.014614 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.01862 U	0.030728 U	0.018694 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.03264 U	0.05344 U	0.03238 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.013316 U	0.022044 U	0.01339 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.013316 U	0.022044 U	0.01339 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.013316 U	0.022044 U	0.01339 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.01977 U	0.032732 U	0.019918 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.074936 J	0.022044 U	0.0672 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.013316 U	0.022044 U	0.01339 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006	NB03-CRB-COMBHEPMUS-N007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.01428 U	0.023788 U	0.024048 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.018286 U	0.030468 U	0.030468 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.03112 U	0.05344 U	0.05344 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.013056 U	0.021784 U	0.022044 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.013056 U	0.021784 U	0.022044 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.013056 U	0.021784 U	0.022044 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.01925 U	0.032472 U	0.032472 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.059336 J	0.062084 J	0.075084 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.013056 U	0.021784 U	0.022044 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001	NB03-CRB-COMBHEPMUS-S002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.024048 U	0.01454 U	0.024048 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.030728 U	0.018546 U	0.030728 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.05344 U	0.0319 U	0.05344 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.022044 U	0.013316 U	0.022044 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.022044 U	0.013316 U	0.022044 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.022044 U	0.013316 U	0.022044 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.032732 U	0.01977 U	0.032732 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.064684 J	0.013316 U	0.072484 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.022044 U	0.013316 U	0.022044 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004	NB03-CRB-COMBHEPMUS-S005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.024048 U	0.01454 U	0.024048 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.030654 U	0.01862 U	0.030468 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.05344 U	0.03238 U	0.05344 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.022044 U	0.013316 U	0.022044 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.022044 U	0.013316 U	0.022044 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.022044 U	0.013316 U	0.022044 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.032658 U	0.01977 U	0.032472 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.062084 J	0.059336 J	0.075084 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.022044 U	0.013316 U	0.022044 U

Notes:
J - Estimated Concentration
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007	NB03-CRB-COMBHEPMUS-S008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.098928 U	0.023714 U	0.014354 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.126408 U	0.03032 U	0.018434 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.21984 U	0.05344 U	0.03212 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.090684 U	0.02171 U	0.01313 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.090684 U	0.02171 U	0.01313 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.090684 U	0.02171 U	0.01313 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.157 J	0.032324 U	0.019658 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.090684 U	0.02171 U	0.04381 J
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.090684 U	0.02171 U	0.01313 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05
			Sample Date		12/10/15	12/10/15	12/10/15	12/01/15	12/01/15
			Sample Type	Calc	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.02364 U	0.0072 U	0.0072 U	0.0071 U	0.0072 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.03006 U	0.0091 U	0.0092 U	0.0091 U	0.0091 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.05344 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.021636 U	0.0066 U	0.0066 U	0.0065 U	0.0066 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.021636 U	0.06	0.028 J	0.032 J	0.0066 U	0.096
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.021636 U	0.05	0.054	0.057	0.013 J	0.17
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.03199 U	0.018 J	0.019 J	0.034	0.0097 U	0.056
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.056736 J	0.0066 U	0.0066 U	0.0065 U	0.0066 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.021636 U	0.0066 U	0.0066 U	0.0065 U	0.0066 U	0.0065 U

Notes:
J - Estimated Concentration
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBLC468	NB03FBLC469	NB03FBLC471	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.007 U	0.0072 U	0.0072 U	0.0072 U	0.0072 U	0.0072 U	0.007 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0089 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0089 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.015 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.016 J	0.0064 U
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.034	0.021 J	0.019 J	0.025 J	0.044 J	0.0098 U	0.028 J
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0064 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLC481	NB03FBLN404	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10
			Sample Date	01/12/16	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N	FD
Method	Analyte	CAS	Unit							
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0071 U	0.0071 U	0.0071 U	0.0071 U	0.0072 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0092 U	0.009 U	0.009 U	0.0091 U	0.009 U	0.0092 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.08 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0065 U	0.0065 U	0.0065 U	0.0065 U	0.0066 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0066 U	0.065	0.0065 U	0.078	0.0065 U	0.0066 U	0.83
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.016 J	0.096	0.04 J	0.0065 U	0.14	0.0066 U	0.61
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0098 U	0.045	0.033 J	0.025 J	0.0096 U	0.025 J	0.049 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0065 U	0.0065 U	0.0065 U	0.0065 U	0.0066 U	0.033 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.031 J	0.0065 U	0.0065 U	0.0065 U	0.016 J	0.033 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-11	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323
			Sample Date	01/13/16	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	FD	FD	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0071 U	0.007 U	0.007 U	0.0072 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.009 U	0.0089 U	0.0089 U	0.0091 U	0.009 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.015 U	0.015 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0064 U	0.0066 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0066 U	0.14	0.11	0.044 J	0.066	0.026 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.12 J	0.2	0.18 J	0.14	0.2	0.085
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.054	0.079	0.13	0.049	0.075	0.029 J
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0064 U	0.0066 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0064 U	0.0066 U	0.0065 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329	NB03FSBS330
			Sample Date	01/13/16	01/13/16	12/10/15	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0071 U	0.007 U	0.0071 U	0.0071 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0092 U	0.0091 U	0.009 U	0.009 U	0.0091 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0065 U	0.0065 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0066 U	0.0065 U	0.044	0.02 J	0.021 J	0.026 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.11 J	0.081 J	0.13	0.067 J	0.085	0.029 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.052	0.034 J	0.048	0.018 J	0.036	0.0097 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0065 U	0.0065 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0065 U	0.0065 U	0.0065 U

Notes:
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U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334	NB03FSBS335	NB03FSBS336
			Sample Date	01/12/16	12/10/15	01/12/16	01/13/16	01/13/16	01/20/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.035 U	0.007 U	0.0072 U	0.0072 U	0.0072 U	0.14 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.045 U	0.0089 U	0.0092 U	0.0092 U	0.0092 U	0.18 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.078 U	0.015 U	0.016 U	0.016 U	0.016 U	0.31 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.032 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.13 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.96	0.094	0.0066 U	0.0066 U	0.0066 U	0.58 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.7	0.13	0.11 J	0.075 J	0.073 J	0.83 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.048 U	0.032 J	0.032 J	0.041	0.03 J	0.36 J
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.032 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.13 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.032 U	0.0064 U	0.0066 U	0.0066 U	0.0066 U	0.13 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSBS337	NB03FSBS338	NB03FSFC486	NB03FSFC487	NB03FSFC488
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0071 U	0.007 U	0.007 U	0.0072 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.0091 U	0.009 U	0.009 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0064 U	0.0066 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.16	0.075	0.031 J	0.022 J	0.08
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.22	0.12	0.027 J	0.022 J	0.13
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.088	0.034	0.0095 U	0.0095 U	0.037
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0064 U	0.0066 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0065 U	0.0064 U	0.0064 U	0.0066 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC489	NB03FSFC490	NB03FSFC491	NB03FSFN407	NB03FSFN408
			Sample Date	01/20/16	01/20/16	12/01/15	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.007 U	0.007 U	0.0072 U	0.0072 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.009 U	0.0089 U	0.0092 U	0.0092 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.015 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0064 U	0.0064 U	0.0066 U	0.0066 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.0066 U	0.03 J	0.19	0.0066 U	0.0066 U
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.023 J	0.048 J	0.34	0.024 J	0.017 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0097 U	0.0095 U	0.21 J	0.0098 U	0.0098 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0064 U	0.0064 U	0.0066 U	0.0066 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0064 U	0.0064 U	0.0066 U	0.0066 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN409	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/10/15	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0071 U	0.0071 U	0.0071 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0091 U	0.009 U	0.0091 U	0.0091 U	0.0091 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0065 U	0.0065 U	0.0065 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.055	0.025 J	0.034	0.035	0.055
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.099	0.05	0.037	0.032 J	0.099 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.029 J	0.0096 U	0.011 J	0.0097 U	0.0097 U
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0065 U	0.0065 U	0.0065 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0065 U	0.0065 U	0.0065 U	0.0065 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357	NB03FSFS359
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.007 U	0.0071 U	0.007 U	0.0071 U	0.0071 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0089 U	0.009 U	0.009 U	0.0091 U	0.009 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0064 U	0.0065 U	0.0064 U	0.0065 U	0.0065 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.049	0.18	0.085	0.035	0.091 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.042 J	0.14	0.081	0.039 J	0.15
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.0095 U	0.064	0.033 J	0.0097 U	0.053
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0064 U	0.0065 U	0.0064 U	0.0065 U	0.0065 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0064 U	0.0065 U	0.0064 U	0.0065 U	0.0065 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10	NB03FWPC-COMP11	NB03FWPC-COMP12
			Sample Date	04/27/16	04/27/16	04/26/16	04/26/16	04/26/16	04/27/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.036 U	0.036 U	0.0072 U	0.0072 U	0.036 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.046 U	0.046 U	0.0092 U	0.0092 U	0.046 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.08 U	0.08 U	0.016 U	0.016 U	0.08 U	0.08 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.58	0.48	0.21 J	0.15 J	0.23	0.3
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.43	0.5	0.22	0.16	0.24 J	0.31 J
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.24 J	0.26 J	0.072	0.055	0.12 J	0.17
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U	0.033 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.033 U	0.033 U	0.0066 U	0.0066 U	0.033 U	0.033 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09
			Sample Date	04/27/16	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	FD	FD	FD	N	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.036 U	0.0072 U		0.036 U	0.0072 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.046 U	0.0092 U		0.046 U	0.0092 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.08 U	0.016 U		0.08 U	0.016 U	0.08 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.033 U	0.0066 U		0.033 U	0.0066 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.27	0.13 J		0.32	0.14	0.28
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.32	0.14		0.31	0.15	0.35
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.16 J	0.056		0.17	0.043	0.2
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.033 U	0.0066 U		0.033 U	0.0066 U	0.033 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.033 U	0.0066 U		0.033 U	0.0066 U	0.033 U

Notes:
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Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08
			Sample Date	04/26/16	04/26/16	04/26/16	04/27/16	04/27/16	04/27/16
			Sample Type	N	N	N	FD	N	N
Method	Analyte	CAS	Unit						
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.0072 U	0.0072 U	0.0072 U		0.036 U	0.036 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.0092 U	0.0092 U	0.0092 U		0.046 U	0.046 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.016 U	0.016 U	0.016 U		0.08 U	0.08 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.0066 U	0.0066 U	0.0066 U		0.033 U	0.033 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.095	0.095 J	0.092		0.42	0.31
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.13	0.11	0.097		0.39	0.34
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.041	0.045	0.041		0.18 J	0.19 J
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.0066 U	0.0066 U	0.0066 U		0.033 U	0.033 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.0066 U	0.0066 U	0.0066 U		0.033 U	0.033 U

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.

Table A-25
Analytical Data for Polychlorinated Biphenyls (as Aroclors)
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP09	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/27/16	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
SW8082	Aroclor-1016	12674-11-2	mg/kg	0.036 U	0.036 U	0.0072 U	0.022 U
SW8082	Aroclor-1221	11104-28-2	mg/kg	0.046 U	0.046 U	0.0092 U	0.028 U
SW8082	Aroclor-1232	11141-16-5	mg/kg	0.08 U	0.08 U	0.016 U	0.048 U
SW8082	Aroclor-1242	53469-21-9	mg/kg	0.033 U	0.033 U	0.0066 U	0.02 U
SW8082	Aroclor-1248	12672-29-6	mg/kg	0.44	0.2	0.14	0.34 J
SW8082	Aroclor-1254	11097-69-1	mg/kg	0.42	0.25 J	0.15	0.42
SW8082	Aroclor-1260	11096-82-5	mg/kg	0.24 J	0.14 J	0.089 J	0.17
SW8082	Aroclor-1262	37324-23-5	mg/kg	0.033 U	0.033 U	0.0066 U	0.02 U
SW8082	Aroclor-1268	11100-14-4	mg/kg	0.033 U	0.033 U	0.0066 U	0.02 U

Notes:
J - Estimated Concentration
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			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	8.61e-06 J	R	R	6.87e-06 J	1.09e-05
E1668A	PCB-2	2051-61-8	mg/kg	3.5e-06 U	3.36e-06 U	3.48e-06 U	3.46e-06 U	3.49e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.5e-06 U	5.27e-06 U	5.47e-06 U	R	R
E1668A	PCB-4	13029-08-8	mg/kg	0.000107 J	6.4e-05 J	5.64e-05 J	4.51e-05	0.000196
E1668A	PCB-5	16605-91-7	mg/kg	4e-06 U	3.84e-06 U	3.98e-06 U	3.95e-06 U	3.99e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	8.19e-06 J	5.14e-06 J	5e-06 J	3.46e-06 U	1.19e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	4e-06 U	3.84e-06 U	3.98e-06 U	3.95e-06 U	3.99e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	2.88e-05 J	1.9e-05 J	1.71e-05 J	7.41e-06 U	3.53e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	3.5e-06 U	3.36e-06 U	3.48e-06 U	3.46e-06 U	3.65e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	1.03e-05 J	6.35e-06 J	6.46e-06 U	6.42e-06 U	2.14e-05 J
E1668A	PCB-11	2050-67-1	mg/kg	7.55e-05 J	4.88e-05 J	4.35e-05 J	1.68e-05 U	0.000114 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.5e-06 U	9.11e-06 U	9.44e-06 U	9.39e-06 U	1.29e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	4e-06 U	3.84e-06 U	3.98e-06 U	3.95e-06 U	3.99e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	5.67e-05	5.33e-05	5.01e-05	2.04e-05 J	0.000102
E1668A	PCB-16	38444-78-9	mg/kg	4.73e-05 J	2.93e-05 J	2.41e-05 J	1.75e-05	9.43e-05
E1668A	PCB-17	37680-66-3	mg/kg	0.000103 J	5.48e-05 J	4.81e-05 J	3.61e-05 J	0.000191 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000254 J	0.000148 J	0.000135 J	0.000113 J	0.00071 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000103	5.53e-05	4.47e-05	3.12e-05	0.000252
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00555 J	0.00397 J	0.00512 J	0.0112 J	0.0111 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	4.2e-05	2.61e-05	2.45e-05 J	2.28e-05 J	5.87e-05
E1668A	PCB-22	38444-85-8	mg/kg	0.000343 J	0.000148 J	0.000115 J	8.95e-05 J	0.000546 J
E1668A	PCB-23	55720-44-0	mg/kg	3.5e-06 U	3.36e-06 U	3.48e-06 U	3.46e-06 U	3.49e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	5e-06 U	4.79e-06 U	4.97e-06 U	4.94e-06 U	1.3e-05
E1668A	PCB-25	55712-37-3	mg/kg	8.12e-05	3.45e-05	2.95e-05	2.44e-05	0.000159
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000887	0.000519	0.00064	0.00106	0.00168
E1668A	PCB-27	38444-76-7	mg/kg	4.48e-05	2.29e-05	1.96e-05	2.1e-05	0.000103
E1668A	PCB-31	16606-02-3	mg/kg	0.00208 J	0.00122 J	0.00148 J	0.00284 J	0.00408 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000277 J	0.000108 J	9.17e-05 J	8.68e-05 J	0.000457 J
E1668A	PCB-34	37680-68-5	mg/kg	1.38e-05	5.21e-06 J	6.45e-06 J	4.48e-06 J	4.78e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.5e-06 U	4.31e-06 U	4.47e-06 U	4.45e-06 U	4.49e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	4e-06 U	3.84e-06 U	3.98e-06 U	3.95e-06 U	3.99e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000114	7.87e-05	9.66e-05	0.000155	0.000239
E1668A	PCB-38	53555-66-1	mg/kg	1.6e-05	1.09e-05	1.36e-05	2.58e-05	3.6e-05
E1668A	PCB-39	38444-88-1	mg/kg	4e-06 U	3.84e-06 U	3.98e-06 U	3.95e-06 U	3.99e-06 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00107	0.000346	0.000403	0.000698	0.00213
E1668A	PCB-41	52663-59-9	mg/kg	2.1e-05 U	2.01e-05 U	2.09e-05 U	2.08e-05 U	2.09e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.0023	0.00097	0.00133	0.00174	
E1668A	PCB-43	70362-46-8	mg/kg	6.94e-05	6.71e-06 U	4.91e-05	3.64e-05	0.00011
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0184 J	0.0131 J	0.0184 J	0.0342 J	0.0489 J
E1668A	PCB-45	70362-45-7	mg/kg	0.00012	8.39e-05	0.000102	0.000154	0.000927
E1668A	PCB-46	41464-47-5	mg/kg	5.05e-05	1.73e-05	1.65e-05	1.81e-05	8.46e-05
E1668A	PCB-48	70362-47-9	mg/kg	7e-06 U	2.12e-05 J	2.18e-05 J	2.09e-05 J	7.38e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00346	0.00162	0.00214	0.00266	
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000225	0.000115	0.000141	0.00017	0.0011
E1668A	PCB-51	68194-04-7	mg/kg	0.000131	5.7e-05	8.62e-05	0.000121	0.000451
E1668A	PCB-52	35693-99-3	mg/kg	0.0233 J	0.0169 J	0.0242 J	0.0364 J	0.07 J

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	1.2e-05 J	6.71e-06 U	6.96e-06 U	6.92e-06 U	3.65e-05
E1668A	PCB-55	74338-24-2	mg/kg	6e-06 U	5.75e-06 U	1.96e-05 J	3.58e-05	4.73e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.000109	3.6e-05	3.21e-05	3.08e-05	0.000162
E1668A	PCB-57	70424-67-8	mg/kg	3.61e-05	1.53e-05 J	1.86e-05 J	4.21e-05	5.48e-06 U
E1668A	PCB-58	41464-49-7	mg/kg	8.62e-05	4.46e-05	6.48e-05	9.77e-05	0.000207
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00176	0.00134	0.00188	0.00316	0.00499
E1668A	PCB-60	33025-41-1	mg/kg	0.00174	0.00115	0.0019		
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00858	0.0053	0.00944		
E1668A	PCB-63	74472-34-7	mg/kg	0.00063	0.000355	0.000614	0.000983	0.00122
E1668A	PCB-64	52663-58-8	mg/kg	0.00756 J	0.00505 J	0.00826 J	0.0125 J	0.0199 J
E1668A	PCB-66	32598-10-0	mg/kg	0.012 J	0.00734 J	0.0116 J	0.0251 J	0.0282 J
E1668A	PCB-67	73575-53-8	mg/kg	5.85e-05	1.99e-05 J	2.11e-05 J	3.9e-05	0.000134
E1668A	PCB-68	73575-52-7	mg/kg	0.00015	8.24e-05	0.000137	0.000269	0.000307
E1668A	PCB-72	41464-42-0	mg/kg	0.000276	0.000161	0.000243	0.000595	0.000647
E1668A	PCB-73	74338-23-1	mg/kg	7e-06 U	6.71e-06 U	2.75e-05	4.94e-05	0.000124
E1668A	PCB-77	32598-13-3	mg/kg	4.72e-05	4.49e-05	4.54e-05	7.81e-05	0.000119
E1668A	PCB-78	70362-49-1	mg/kg	8e-06 U	7.67e-06 U	7.95e-06 U	7.91e-06 U	7.98e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	7.65e-05	2.68e-05	4.15e-05	4.83e-05	0.000195
E1668A	PCB-80	33284-52-5	mg/kg	5.5e-06 U	5.27e-06 U	5.47e-06 U	5.43e-06 U	5.48e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	R	8.63e-06 U	9.05e-06 J	1.46e-05 J	1.7e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	0.000825	0.000242	0.000447	0.000482	0.00194
E1668A	PCB-83	60145-20-2	mg/kg	0.000934	0.000568	0.000787	0.00133	0.00269
E1668A	PCB-84	52663-60-2	mg/kg	0.00172	0.000956	0.00175	0.00224	
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00541	0.00457	0.00687		
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00549	0.00285	0.00505	0.00632	
E1668A	PCB-88	55215-17-3	mg/kg	1.1e-05 U	1.05e-05 U	1.09e-05 U	1.09e-05 U	1.1e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	6.5e-06 U	6.23e-06 U	6.46e-06 U	6.42e-06 U	1.62e-05 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00879 J	0.00599 J	0.0126 J	0.0143 J	0.0571 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00154	0.000751	0.00148	0.00166	
E1668A	PCB-92	52663-61-3	mg/kg	0.00471 J	0.0036 J	0.00512 J	0.00799 J	0.0117 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00119	0.00119	0.00153	0.00245	0.00312
E1668A	PCB-94	73575-55-0	mg/kg	2.8e-05	6.23e-06 U	1.44e-05 J	2.86e-05	6.17e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00507 J	0.00254	0.00441 J		
E1668A	PCB-96	73575-54-9	mg/kg	2e-05 U	1.92e-05 U	1.99e-05 U	1.98e-05 U	6.66e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	6.46e-05 J	3.69e-05 U	3.83e-05 U	5.82e-05 J	0.000178
E1668A	PCB-99	38380-01-7	mg/kg	0.0225 J	0.0182 J	0.0247 J	0.0508 J	0.0525 J
E1668A	PCB-103	60145-21-3	mg/kg	1.84e-05 J	5.27e-06 U	8.01e-06 J	1.05e-05 J	4.84e-05
E1668A	PCB-104	56558-16-8	mg/kg	7e-06 U	6.71e-06 U	6.96e-06 U	6.92e-06 U	6.98e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00955 J	0.00772 J	0.0118 J	0.0193 J	0.0161 J
E1668A	PCB-106	70424-69-0	mg/kg	8.5e-06 U	8.15e-06 U	8.45e-06 U	8.4e-06 U	8.47e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00071	0.000392	0.000806	0.00138	0.00131
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000116	5.65e-05	8.95e-05	0.000196	0.000223
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0166 J	0.0118 J	0.0207 J	0.0268 J	0.0506 J
E1668A	PCB-111	39635-32-0	mg/kg	6.36e-05	6.6e-05	9.3e-05	0.000133	0.000129
E1668A	PCB-112	74472-36-9	mg/kg	7e-06 U	3.7e-05	8.17e-05	0.000111	0.000132
E1668A	PCB-114	74472-37-0	mg/kg	0.000785	0.000543	0.000756	0.00132	0.00131

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0375 J	0.029 J	0.0428 J	0.0725 J	0.0655 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000208	0.000192	0.000292	0.000517	0.000498
E1668A	PCB-121	56558-18-0	mg/kg	3.47e-05	3.92e-05	4.9e-05	7.77e-05	8.39e-05
E1668A	PCB-122	76842-07-4	mg/kg	6e-06 U	5.75e-06 U	2.46e-05 J	4.86e-05	0.000124
E1668A	PCB-123	65510-44-3	mg/kg	0.000662	R	R	0.00115	0.00124
E1668A	PCB-126	57465-28-8	mg/kg	8e-06 U	7.67e-06 U	7.95e-06 U	7.91e-06 U	7.98e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	6.11e-05	R	R	7.6e-05	9.71e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00355	0.00344	0.00588		
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0373 J	0.0351 J	0.0558 J	0.0702 J	0.0825 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00177	0.00174	0.0023	0.00231	
E1668A	PCB-131	61798-70-7	mg/kg	3.39e-05	1.32e-05 J	3.15e-05	3.79e-05	0.000325
E1668A	PCB-132	38380-05-1	mg/kg	0.00211	0.000952	0.00225	0.00274 J	0.00843 J
E1668A	PCB-133	35694-04-3	mg/kg	0.00109	0.00103	0.00144	0.00189	0.00213
E1668A	PCB-134	52704-70-8	mg/kg	0.000852	0.000605	0.000748	0.00117	0.00246
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00351	0.00192	0.00325	0.00568	
E1668A	PCB-136	38411-22-2	mg/kg	0.000593	0.000255	0.000571	0.000738	0.00268
E1668A	PCB-137	35694-06-5	mg/kg	0.00159	0.0014	0.00192		
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000518	0.00044	0.000653	0.00115	0.00128
E1668A	PCB-141	52712-04-6	mg/kg	0.00307 J	0.00253	0.00307 J	0.00364 J	0.00679 J
E1668A	PCB-142	41411-61-4	mg/kg	8.5e-06 U	8.15e-06 U	8.45e-06 U	8.4e-06 U	8.47e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.65e-05 U	1.58e-05 U	1.64e-05 U	1.63e-05 U	1.65e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000103	5.07e-05	0.000144	0.000142	0.0014
E1668A	PCB-145	74472-40-5	mg/kg	8e-06 U	7.67e-06 U	7.95e-06 U	7.91e-06 U	7.98e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00778 J	0.00757 J	0.0116 J	0.0138 J	0.0162 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00936 J	0.00625 J	0.0117 J	0.0118 J	0.039 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000164	0.000133	0.000218	0.00038	0.000417
E1668A	PCB-150	68194-08-1	mg/kg	7.5e-06 U	7.19e-06 U	7.46e-06 U	7.41e-06 U	1.52e-05 J
E1668A	PCB-152	68194-09-2	mg/kg	7e-06 U	6.71e-06 U	6.96e-06 U	6.92e-06 U	7.24e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0456 J	0.0435 J	0.0709 J	0.0953 J	0.0996 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00124	0.000957	0.00143	0.00218	
E1668A	PCB-155	33979-03-2	mg/kg	0.00034	0.000333	0.000508	0.000623	0.000697
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00432	0.00378	0.00511		
E1668A	PCB-158	74472-42-7	mg/kg	0.00277	0.00267	0.00402 J		
E1668A	PCB-159	39635-35-3	mg/kg	8.34e-06 J	6.71e-06 U	9.31e-06 J	1.32e-05 J	1.1e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	3.15e-05 U	3.02e-05 U	3.13e-05 U	3.11e-05 U	3.14e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	6.5e-06 U	6.23e-06 U	6.46e-06 U	7.89e-06 J	8.2e-06 J
E1668A	PCB-162	39635-34-2	mg/kg	0.000295	0.000235	0.000342	0.00038	0.000497
E1668A	PCB-164	74472-45-0	mg/kg	0.00087	0.000662	0.00122	0.00117	0.0023
E1668A	PCB-165	74472-46-1	mg/kg	5.08e-05	4.73e-05	7.14e-05	0.000105	0.000112
E1668A	PCB-167	52663-72-6	mg/kg	0.00182	0.00159	0.00219	0.00284	
E1668A	PCB-169	32774-16-6	mg/kg	7.5e-06 U	7.19e-06 U	7.46e-06 U	7.94e-06 J	7.48e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00614 J	0.00685 J	0.00902 J		
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00208	0.0019	0.00283	0.00326	0.00431
E1668A	PCB-172	52663-74-8	mg/kg	0.00135	0.00158	0.00207	0.00184	0.00262
E1668A	PCB-174	38411-25-5	mg/kg	0.00175	0.00109	0.00167	0.002	
E1668A	PCB-175	40186-70-7	mg/kg	0.000363	0.000338	0.000542	0.000603	0.000842

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	6.72e-05	1.81e-05 J	6.89e-05	6.39e-05	0.000724
E1668A	PCB-177	52663-70-4	mg/kg	0.00389 J	0.00388 J	0.00539 J		
E1668A	PCB-178	52663-67-9	mg/kg	0.00296	0.00294 J	0.0042 J		
E1668A	PCB-179	52663-64-6	mg/kg	0.000954	0.000323	0.000758	0.00124	0.00275
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0227 J	0.0242 J	0.034 J	0.0328 J	0.0425 J
E1668A	PCB-181	74472-47-2	mg/kg	7.87e-05	7.98e-05	0.000111	0.000126	0.00016
E1668A	PCB-182	60145-23-5	mg/kg	7.07e-05	5.93e-05	9.03e-05	0.000111	0.000141
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00661 J	0.00603 J	0.00957 J		
E1668A	PCB-184	74472-48-3	mg/kg	6.02e-05	5.12e-05	8.18e-05	9.59e-05	0.000134
E1668A	PCB-186	74472-49-4	mg/kg	7.5e-06 U	7.19e-06 U	7.46e-06 U	7.41e-06 U	7.48e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0184 J	0.0178 J	0.0287 J	0.026 J	0.036 J
E1668A	PCB-188	74487-85-7	mg/kg	7.06e-05	5e-05	7.9e-05	0.000142	0.000193
E1668A	PCB-189	39635-31-9	mg/kg	0.000352	0.000339	0.000456	0.000449	0.000577
E1668A	PCB-190	41411-64-7	mg/kg	0.00154	0.00179	0.0022	0.00236	
E1668A	PCB-191	74472-50-7	mg/kg	0.000335	0.000361	0.000519	0.000524	0.000647
E1668A	PCB-192	74472-51-8	mg/kg	6.5e-06 U	6.23e-06 U	6.46e-06 U	6.42e-06 U	1.07e-05 J
E1668A	PCB-194	35694-08-7	mg/kg	0.00355	0.00461 J	0.0052 J		
E1668A	PCB-195	52663-78-2	mg/kg	0.00103	0.00128	0.00149	0.00134	0.00222
E1668A	PCB-196	42740-50-1	mg/kg	0.00209	0.00226	0.00298	0.00308	0.00424
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000268	0.000231	0.000344	0.000382	0.000798
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00574	0.00658	0.00795	0.00738	
E1668A	PCB-201	40186-71-8	mg/kg	0.00065	0.000593	0.000853	0.000967	0.00153
E1668A	PCB-202	2136-99-4	mg/kg	0.00241	0.00241	0.00344	0.00368	
E1668A	PCB-203	52663-76-0	mg/kg	0.00404	0.00447 J	0.00536 J		
E1668A	PCB-204	74472-52-9	mg/kg	1.05e-05 U	1.01e-05 U	1.04e-05 U	1.04e-05 U	1.59e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	0.000152	0.000202	0.000205	0.000197	0.000354
E1668A	PCB-206	40186-72-9	mg/kg	0.00294	0.0032	0.00293	0.00384	
E1668A	PCB-207	52663-79-3	mg/kg	0.000303	0.000282	0.000315	0.000424	0.00075
E1668A	PCB-208	52663-77-1	mg/kg	0.00126	0.00128	0.00134	0.0017	0.00311
E1668A	PCB-209	2051-24-3	mg/kg	0.00167	0.00146	0.00135	0.00207 J	0.00426 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.389 J	0.325 J	0.492 J	0.564 J	0.758 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.444 J	0.368 J	0.555 J	0.662 J	0.843 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.77e-06 J	1.39e-06 J	2.03e-06 J	3.3e-06 J	2.67e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	2.38e-05 J	5.15e-06 J	9.71e-07 U	8e-06 J	7.69e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	4.19e-06 J	6.82e-07 U	1.13e-06 J	3.48e-06 U	3.39e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	9.89e-06 J	R	1.07e-06 U	5.46e-06 U	5.32e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.000269 J	4.12e-05 J	3.34e-05 J	7.24e-05 J	0.000103 J
E1668A	PCB-5	16605-91-7	mg/kg	3.81e-06 U	7.79e-07 U	7.77e-07 U	3.97e-06 U	3.87e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	R	4.77e-06 J	4.84e-06 J	7.82e-06 J	9.77e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	R	7.79e-07 U	1.35e-06 J	3.97e-06 U	3.87e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	4.66e-05 J	R	1.46e-06 U	2.76e-05 J	3.42e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	R	1.81e-06 J	1.53e-06 J	3.48e-06 U	3.61e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	1.68e-05 J	2.92e-06 J	2.53e-06 J	6.45e-06 U	6.29e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000116 J	3.31e-06 U	3.3e-06 U	6.47e-05 J	8.2e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.5e-05 J	4.91e-06 J	4.81e-06 J	9.81e-06 J	1.19e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	3.81e-06 U	7.79e-07 U	7.77e-07 U	3.97e-06 U	3.87e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00014 J	3.01e-05 J	3.82e-05 J	7.01e-05	7.74e-05
E1668A	PCB-16	38444-78-9	mg/kg	6.42e-05 J	R	1.92e-05 J	3.26e-05 J	6.57e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000131 J	3.33e-05 J	3.16e-05 J	6.61e-05 J	0.00011 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000393 J	0.000103 J	8.97e-05 J	0.000208 J	0.000366 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000188 J	3.43e-05 J	2.94e-05 J	6.73e-05	0.000121
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0189 J	0.00577 J	0.00513 J	0.00782 J	0.00966 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	7.4e-05 J	2.04e-06 U	2.5e-05 J	3.81e-05	5.49e-05
E1668A	PCB-22	38444-85-8	mg/kg	0.000405 J	0.000164 J	0.000143 J	0.000315 J	0.000606 J
E1668A	PCB-23	55720-44-0	mg/kg	3.34e-06 U	6.82e-07 U	6.8e-07 U	3.48e-06 U	3.39e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.05e-06 J	9.74e-07 U	1.87e-06 J	4.97e-06 U	7.48e-06 J
E1668A	PCB-25	55712-37-3	mg/kg	8.27e-05 J	3.22e-05 J	2.48e-05 J	5.33e-05	0.000109
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00129 J	0.000565 J	0.000507 J	0.000808	0.00101
E1668A	PCB-27	38444-76-7	mg/kg	5.45e-05 J	1.3e-05 J	R	2.53e-05	4e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00372 J	0.00133 J	0.00156 J	0.00201 J	0.00276 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000304 J	9.87e-05 J	9.04e-05 J	0.000159 J	0.000272 J
E1668A	PCB-34	37680-68-5	mg/kg	1.65e-05 J	5.22e-06 J	4.93e-06 J	1.29e-05	1.92e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.29e-06 U	8.76e-07 U	8.74e-07 U	4.47e-06 U	4.36e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	3.81e-06 U	7.79e-07 U	7.77e-07 U	3.97e-06 U	3.87e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000139 J	4.76e-05 J	5.56e-05 J	0.000159	0.000162
E1668A	PCB-38	53555-66-1	mg/kg	3.61e-05 J	6.82e-07 U	7.95e-06 J	2.96e-05	2.79e-05
E1668A	PCB-39	38444-88-1	mg/kg	3.81e-06 U	7.79e-07 U	1.04e-06 J	3.97e-06 U	3.87e-06 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00109 J	0.000351 J	0.000299 J	0.000682	0.00124
E1668A	PCB-41	52663-59-9	mg/kg	2e-05 U	4.09e-06 U	4.08e-06 U	2.09e-05 U	2.03e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.00283 J	0.0012 J	0.000979 J	0.00197	0.00312 J
E1668A	PCB-43	70362-46-8	mg/kg	6.04e-05 J	1.36e-06 U	2.3e-05 J	4.9e-05	0.000101
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.06 J	0.013 J	0.00903 J	0.0412 J	0.0392 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000233 J	5.03e-05 J	7e-05 J	0.000141	0.000242
E1668A	PCB-46	41464-47-5	mg/kg	4.61e-05 J	1.35e-05 J	1.22e-05 J	2.31e-05	4.74e-05
E1668A	PCB-48	70362-47-9	mg/kg	5.15e-05 J	1.56e-05 J	1.56e-05 J	3.16e-05	8.21e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00405 J	0.00152 J	0.00142 J	0.00264	0.00474
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000343 J	8.47e-05 J	9.76e-05 J	0.000218	0.000391
E1668A	PCB-51	68194-04-7	mg/kg	0.000172 J	6.46e-05 J	6.15e-05 J	0.000138	0.000251
E1668A	PCB-52	35693-99-3	mg/kg	0.0386 J	0.015 J	0.014 J	0.0376 J	0.0279 J

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	2.11e-05 J	5.99e-06 J	5.42e-06 J	6.95e-06 U	2.26e-05 J
E1668A	PCB-55	74338-24-2	mg/kg	5.72e-06 U	1.17e-06 U	9.64e-06 J	5.96e-06 U	5.81e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	8.88e-05 J	3.56e-05 J	4.62e-05 J	6.95e-05	0.000165
E1668A	PCB-57	70424-67-8	mg/kg	5.24e-06 U	1.62e-05 J	1.8e-05 J	2.29e-05 J	3.06e-05
E1668A	PCB-58	41464-49-7	mg/kg	0.000108 J	6.25e-05 J	4.85e-05 J	0.000106	0.000136
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00538 J	0.00109 J	0.000953 J	0.00347	0.0035
E1668A	PCB-60	33025-41-1	mg/kg	0.0057 J	0.00114 J	0.0011 J	0.00342 J	0.00428 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0274 J	0.0063 J	0.00558 J	0.0151 J	0.02 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000571 J	0.000379 J	0.000407 J	0.000569	0.00067
E1668A	PCB-64	52663-58-8	mg/kg	0.0142 J	0.00584 J	0.00558 J	0.0134 J	0.0119 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0445 J	0.0104 J	0.00859 J	0.0278 J	0.0341 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000139 J	3.15e-05 J	3.08e-05 J	2.84e-05	5.7e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.000162 J	8.61e-05 J	9.65e-05 J	0.000141	0.000188
E1668A	PCB-72	41464-42-0	mg/kg	0.000199 J	0.000148 J	0.000154 J	0.000231	0.000277
E1668A	PCB-73	74338-23-1	mg/kg	4.3e-05 J	1.36e-06 U	1.27e-05 J	2.16e-05 J	4.2e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.000102 J	1.59e-05 J	1.86e-05 J	6.17e-05	5.49e-05
E1668A	PCB-78	70362-49-1	mg/kg	7.63e-06 U	1.56e-06 U	1.55e-06 U	7.94e-06 U	7.74e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	9.47e-05 J	2.63e-05 J	3.1e-05 J	6.68e-05	8.87e-05
E1668A	PCB-80	33284-52-5	mg/kg	5.24e-06 U	1.07e-06 U	1.07e-06 U	5.46e-06 U	5.32e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	8.58e-06 U	1.75e-06 U	1.75e-06 U	R	R
E1668A	PCB-82	52663-62-4	mg/kg	0.000672 J	0.000259 J	0.000247 J	0.000572	0.000885
E1668A	PCB-83	60145-20-2	mg/kg	0.00107 J	0.000364 J	0.000384 J	0.00115	0.00102
E1668A	PCB-84	52663-60-2	mg/kg	0.00239 J	0.000654 J	0.00084 J	0.00177	0.00189
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0202 J	0.003 J	0.00235 J	0.0103 J	0.0102 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00866 J	0.00221 J	0.00249 J	0.00676	0.00772
E1668A	PCB-88	55215-17-3	mg/kg	1.05e-05 U	2.14e-06 U	2.14e-06 U	1.09e-05 U	1.06e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	7.72e-06 J	1.27e-06 U	2.72e-06 J	6.45e-06 U	1.21e-05 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0103 J	0.00389 J	0.00502 J	0.0113 J	0.0127 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00169 J	0.000617 J	0.000706 J	0.00172	0.00199
E1668A	PCB-92	52663-61-3	mg/kg	0.00426 J	0.00228 J	0.00228 J	0.0063 J	0.0041 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00383 J	0.000807 J	0.000459 J	0.00389	0.0026
E1668A	PCB-94	73575-55-0	mg/kg	2.33e-05 J	1.27e-06 U	6.8e-06 J	1.91e-05 J	4.66e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00714 J	0.00206 J	0.00312 J	0.00518 J	0.00546 J
E1668A	PCB-96	73575-54-9	mg/kg	1.57e-05 J	3.95e-06 J	5e-06 J	1.99e-05 U	2.27e-05 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	6.01e-05 J	7.5e-06 U	1.63e-05 J	3.82e-05 U	0.000105
E1668A	PCB-99	38380-01-7	mg/kg	0.0849 J	0.0125 J	0.00829 J	0.0435 J	0.0453 J
E1668A	PCB-103	60145-21-3	mg/kg	9.95e-06 J	4.44e-06 J	5.3e-06 J	8.33e-06 J	2.04e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	6.67e-06 U	1.36e-06 U	1.36e-06 U	6.95e-06 U	6.78e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0308 J	0.00726 J	0.00554 J	0.0246 J	0.0203 J
E1668A	PCB-106	70424-69-0	mg/kg	8.1e-06 U	1.66e-06 U	1.65e-06 U	8.44e-06 U	8.23e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000972 J	0.000378 J	0.000429 J	0.000589	0.000793
E1668A	PCB-108/124	PCB-108/124	mg/kg	6.33e-05 J	6.03e-05 J	7.51e-05 J	7.27e-05	0.00013
E1668A	PCB-110/115	PCB-110/115	mg/kg		0.0109 J	0.0113 J	0.0287 J	0.0209 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000182 J	3.45e-05 J	3.13e-05 J	0.000112	9.39e-05
E1668A	PCB-112	74472-36-9	mg/kg	6.51e-05 J	1.36e-06 U	3.79e-05 J	6.95e-06 U	6.78e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00211 J	0.000363 J	0.000292 J	0.00138	0.00148

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.127 J	0.0258 J	0.02 J	0.0842 J	0.0762 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000632 J	0.000106 J	0.000111 J	0.000338	0.000357
E1668A	PCB-121	56558-18-0	mg/kg	0.000108 J	1.89e-05 J	1.68e-05 J	8.03e-05	6.25e-05
E1668A	PCB-122	76842-07-4	mg/kg	5.72e-06 U	1.44e-05 J	2.53e-05 J	4.8e-05	5.81e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00228 J	0.00049 J	0.000294 J	0.00153	0.0015
E1668A	PCB-126	57465-28-8	mg/kg	1e-04 J	1.56e-06 U	R	7.94e-06 U	7.74e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	0.000131 J	2.11e-05 J	2.19e-05 J	7.89e-05	6.78e-06 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0144 J	0.00276 J	0.00224 J	0.00734 J	0.00572
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.125 J	0.0319 J	0.0224 J	0.0763 J	0.054 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00202 J	0.00135 J	0.00108 J	0.0025	0.00155
E1668A	PCB-131	61798-70-7	mg/kg	3.14e-05 J	1.66e-06 U	1.78e-05 J	2.56e-05	4.79e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.00177 J	0.00088 J	0.00129 J	0.0027	0.00205
E1668A	PCB-133	35694-04-3	mg/kg	0.00255 J		0.000618 J	0.00201	0.00138
E1668A	PCB-134	52704-70-8	mg/kg	0.000748 J	0.000547 J	0.000425 J	0.00129	0.000768
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00163 J	0.000975 J	0.00159 J	0.00414	0.00289
E1668A	PCB-136	38411-22-2	mg/kg	0.000434 J	0.000172 J	0.000253 J	0.00063	0.000714
E1668A	PCB-137	35694-06-5	mg/kg	0.00564 J	0.000837 J	0.000674 J	0.00279	0.00263
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00217 J	0.000384 J	0.000254 J	0.00115	0.000973
E1668A	PCB-141	52712-04-6	mg/kg	0.00293 J	0.00198 J	0.00179 J	0.00508 J	0.00205
E1668A	PCB-142	41411-61-4	mg/kg	8.1e-06 U	1.66e-06 U	1.65e-06 U	8.44e-06 U	8.23e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.57e-05 U	3.21e-06 U	3.2e-06 U	1.64e-05 U	1.6e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	5.07e-05 J	1.91e-05 J	4.82e-05 J	6.03e-05	0.000115
E1668A	PCB-145	74472-40-5	mg/kg	7.63e-06 U	1.56e-06 U	1.55e-06 U	7.94e-06 U	7.74e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.00577 J	0.00474 J	0.0137 J	0.00979 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0093 J	0.00531 J	0.00572 J	0.0139 J	0.0106 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000515 J	R	7.14e-05 J	0.000381	0.000301
E1668A	PCB-150	68194-08-1	mg/kg	7.15e-06 U	1.46e-06 U	2.1e-06 J	7.45e-06 U	7.36e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	6.67e-06 U	1.36e-06 U	1.36e-06 U	6.95e-06 U	6.78e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.174 J	0.0395 J	0.0331 J	0.099 J	0.077 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00378 J	0.000524 J	0.000441 J	0.00263	0.00235
E1668A	PCB-155	33979-03-2	mg/kg	0.00133 J	0.000324 J	0.000242 J	0.00114	0.000742
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0109 J	0.00241 J	0.00195 J	0.00764 J	0.00608 J
E1668A	PCB-158	74472-42-7	mg/kg	0.012 J	0.00221 J	0.00155 J	0.00655 J	0.00499 J
E1668A	PCB-159	39635-35-3	mg/kg	6.67e-06 U	1.36e-06 U	1.36e-06 U	1.75e-05 J	1.31e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	3e-05 U	6.13e-06 U	6.12e-06 U	3.13e-05 U	3.05e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	6.2e-06 U	1.27e-06 U	1.26e-06 U	6.45e-06 U	6.29e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000454 J	1.27e-06 U	0.000174 J	0.000475	0.000291
E1668A	PCB-164	74472-45-0	mg/kg	0.00122 J	0.000827 J	0.000676 J	0.00217	0.00102
E1668A	PCB-165	74472-46-1	mg/kg	R	2.92e-05 J	3.14e-05 J	7.56e-05	6.3e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.00473 J		0.000947 J	0.00303 J	0.00251
E1668A	PCB-169	32774-16-6	mg/kg	7.15e-06 U	1.46e-06 U	2.49e-06 J	7.45e-06 U	7.26e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0162 J	0.00517 J	0.00365 J	0.0108 J	0.00609 J
E1668A	PCB-171/173	PCB-171/173	mg/kg		0.0017 J	0.00108 J	0.00434	0.00276
E1668A	PCB-172	52663-74-8	mg/kg	0.00316 J	0.00123 J	0.00078 J	0.00247	0.00136
E1668A	PCB-174	38411-25-5	mg/kg	0.00119 J	0.00109 J	0.00102 J	0.00371 J	0.00124
E1668A	PCB-175	40186-70-7	mg/kg	0.000854 J	0.000206 J	0.000203 J	0.000693	0.000465

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEC508	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04
			Sample Date	09/29/15	10/01/15	10/01/15	01/12/16	01/12/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	2.77e-05 J	1.95e-05 J	3.57e-05 J	4.51e-05	7.06e-05
E1668A	PCB-177	52663-70-4	mg/kg		0.00354 J	0.00235 J	0.00689 J	0.00342 J
E1668A	PCB-178	52663-67-9	mg/kg	0.00611 J		0.00171 J	0.00537 J	0.00376 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000384 J	0.000327 J	0.000453 J	0.00135	0.000754
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0665 J	0.0193 J	0.014 J	0.0436 J	0.0276 J
E1668A	PCB-181	74472-47-2	mg/kg	R	6.26e-05 J	5.04e-05 J	0.00018	0.000123
E1668A	PCB-182	60145-23-5	mg/kg	0.000211 J	R	3.41e-05 J	0.000157	0.000111
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.0227 J	0.00512 J	0.00403 J	0.0137 J	0.00926 J
E1668A	PCB-184	74472-48-3	mg/kg	0.000186 J	3.52e-05 J	3.39e-05 J	0.000144	9.71e-05
E1668A	PCB-186	74472-49-4	mg/kg	7.15e-06 U	1.46e-06 U	1.46e-06 U	7.45e-06 U	7.26e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0399 J	0.0147 J	0.0112 J	0.0351 J	0.022 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000243 J	3.93e-05 J	5.68e-05 J	0.000143	0.000143
E1668A	PCB-189	39635-31-9	mg/kg	0.000805 J	0.000225 J	0.000186 J	0.00058	0.000379
E1668A	PCB-190	41411-64-7	mg/kg	0.00479 J	0.00131 J	0.000922 J	0.00303 J	0.00181
E1668A	PCB-191	74472-50-7	mg/kg	0.00107 J	0.000276 J	0.000212 J	0.000656	0.000428
E1668A	PCB-192	74472-51-8	mg/kg	1.57e-05 J	4.08e-06 J	6.82e-06 J	8.9e-06 J	9.77e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.00916 J	0.00239 J	0.00216 J	0.00549 J	0.00327
E1668A	PCB-195	52663-78-2	mg/kg	0.00254 J	0.00102 J	0.00064 J	0.0019	0.000981
E1668A	PCB-196	42740-50-1	mg/kg	0.00593 J	0.00153 J	0.00135 J	0.00412	0.00269
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000649 J	0.000175 J	0.00018 J	0.000453	0.000323
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0143 J	0.00438 J	0.00357 J	0.00962 J	0.00629
E1668A	PCB-201	40186-71-8	mg/kg	0.00166 J	0.000421 J	0.00041 J	0.00112	0.000828
E1668A	PCB-202	2136-99-4	mg/kg	0.00554 J	0.00153 J	0.00165 J	0.00339	0.0026
E1668A	PCB-203	52663-76-0	mg/kg	0.00889 J	0.0027 J	0.00248 J	0.00631 J	0.00369
E1668A	PCB-204	74472-52-9	mg/kg	2.75e-05 J	4.97e-06 J	7.13e-06 J	1.44e-05 J	1.3e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	0.000278 J	0.000126 J	0.000108 J	0.000202	0.000109
E1668A	PCB-206	40186-72-9	mg/kg	0.00658 J	0.00175 J	0.00217 J	0.00268	0.00196
E1668A	PCB-207	52663-79-3	mg/kg	0.00076 J	0.000191 J	0.000249 J	0.000352	0.00029
E1668A	PCB-208	52663-77-1	mg/kg	0.00311 J	0.000663 J	0.000926 J	0.00119	0.001
E1668A	PCB-209	2051-24-3	mg/kg	0.00371 J	0.000796 J	0.00124 J	0.00126	0.00103
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.969 J	0.273 J	0.233 J	0.701 J	0.574 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.15 J	0.31 J	0.262 J	0.824 J	0.682 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.54e-05 J	1.12e-06 J	9.53e-07 J	3.89e-06 J	3.45e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	9.94e-07 U	9.24e-06 J	4.85e-06 U	9.51e-06 J	4.52e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	6.96e-07 U	3.46e-06 U	3.39e-06 U	1.77e-06 J	1.2e-06 J
E1668A	PCB-3	2051-62-9	mg/kg	1.09e-06 U	5.44e-06 U	R	R	R
E1668A	PCB-4	13029-08-8	mg/kg	6e-05 J	0.000101 J	2.86e-05	6.19e-05 J	5.22e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	7.95e-07 U	3.96e-06 U	3.88e-06 U	8e-07 U	7.98e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	6.96e-07 U	9.55e-06 J	3.39e-06 U	4.25e-06 J	4.01e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	1.56e-06 J	3.96e-06 U	6.82e-06 J	8e-07 U	7.98e-07 U
E1668A	PCB-8	34883-43-7	mg/kg	1.49e-06 U	3.25e-05 J	7.27e-06 U	R	R
E1668A	PCB-9	34883-39-1	mg/kg	6.96e-07 U	3.46e-06 U	3.39e-06 U	7e-07 U	1.38e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	3.64e-06 J	8.71e-06 J	6.3e-06 U	1.3e-06 U	4.44e-06 J
E1668A	PCB-11	2050-67-1	mg/kg	4.34e-05 J	7.42e-05 J	1.65e-05 U	5.18e-05 J	4.14e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	5.79e-06 J	1.16e-05 J	9.21e-06 U	5.77e-06 J	5.84e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.95e-07 U	3.96e-06 U	3.88e-06 U	8e-07 U	7.98e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	3.77e-05 J	7.76e-05	1.74e-05 J	3.18e-05 J	2.67e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	2.59e-05 J	4.6e-05 J	1.31e-05	R	R
E1668A	PCB-17	37680-66-3	mg/kg	5.1e-05 J	9.36e-05 J	2.46e-05 J	3.47e-05 J	6.41e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000155 J	0.000294 J	6.69e-05 J	0.000108 J	0.000229 J
E1668A	PCB-19	38444-73-4	mg/kg	4.46e-05 J	1e-04	2.13e-05	4.91e-05 J	7.73e-05 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00364 J	0.00834 J	0.0023 J	0.0143 J	0.00767 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	2.46e-05 J	5.18e-05	1.18e-05 J	2.1e-06 U	2.09e-06 U
E1668A	PCB-22	38444-85-8	mg/kg	0.000195 J	0.000384 J	9.52e-05 J	0.000202 J	0.000444 J
E1668A	PCB-23	55720-44-0	mg/kg	6.96e-07 U	3.46e-06 U	3.39e-06 U	7e-07 U	6.98e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	3.81e-06 J	7.23e-06 J	4.85e-06 U	2.17e-06 J	9.97e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	3.5e-05 J	8.82e-05	1.53e-05	2.66e-05 J	5.4e-05 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00045 J	0.00109	0.000182	0.000635 J	0.000494 J
E1668A	PCB-27	38444-76-7	mg/kg	1.79e-05 J	3.55e-05	9.42e-06 J	1.54e-05 J	2.91e-05 J
E1668A	PCB-31	16606-02-3	mg/kg	0.00131 J	0.00269 J	0.000554 J	0.00179 J	0.00138 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000108 J	0.000222 J	6.3e-05 J	0.000146 J	0.000234 J
E1668A	PCB-34	37680-68-5	mg/kg	6.09e-06 J	1.82e-05	3.39e-06 U	5.74e-06 J	9.16e-06 J
E1668A	PCB-35	37680-69-6	mg/kg	8.95e-07 U	4.45e-06 U	4.36e-06 U	9e-07 U	8.97e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.95e-07 U	3.96e-06 U	3.88e-06 U	8e-07 U	7.98e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	5.7e-05 J	0.000186	4.25e-05	7.26e-05 J	6.99e-05 J
E1668A	PCB-38	53555-66-1	mg/kg	1.15e-05 J	2.89e-05	5.72e-06 J	1.78e-05 J	1.18e-05 J
E1668A	PCB-39	38444-88-1	mg/kg	1.2e-06 J	3.96e-06 U	3.88e-06 U	8e-07 U	1.1e-06 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000479 J	0.000768	0.000215	0.000426 J	0.000589 J
E1668A	PCB-41	52663-59-9	mg/kg	4.17e-06 U	2.08e-05 U	2.04e-05 U	4.2e-06 U	4.19e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	0.00103 J	0.00266	0.000632	0.00128 J	0.00244 J
E1668A	PCB-43	70362-46-8	mg/kg	2.88e-05 J	6.39e-05	1e-05 J	1.4e-06 U	1.4e-06 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0133 J	0.0293 J	0.0062 J	0.0235 J	0.0184 J
E1668A	PCB-45	70362-45-7	mg/kg	8.16e-05 J	0.000227	2.74e-05	7.28e-05 J	0.00016 J
E1668A	PCB-46	41464-47-5	mg/kg	1.95e-05 J	3.87e-05	9.44e-06 J	1.42e-05 J	2.87e-05 J
E1668A	PCB-48	70362-47-9	mg/kg	2.82e-05 J	6.92e-06 U	1.1e-05 J	1.54e-05 J	4.1e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0015 J	0.00416	0.000983	0.00169 J	0.00359 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000135 J	0.000328	4.87e-05	7.61e-05 J	0.000219 J
E1668A	PCB-51	68194-04-7	mg/kg	9.75e-05 J	0.00021	2.37e-05 J	4.48e-05 J	7.2e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.0104 J	0.032 J	0.00464 J	0.013 J	0.0153 J

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	7.81e-06 J	2.08e-05 J	6.79e-06 U	3.86e-06 J	7.36e-06 J
E1668A	PCB-55	74338-24-2	mg/kg	1.17e-05 J	5.93e-06 U	8.05e-06 J	1.2e-06 U	1.2e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	5e-05 J	0.000111	2.19e-05 J	3.05e-05 J	8.34e-05 J
E1668A	PCB-57	70424-67-8	mg/kg	1.37e-05 J	3.99e-05	5.33e-06 U	1.1e-06 U	1.1e-06 U
E1668A	PCB-58	41464-49-7	mg/kg	4.42e-05 J	0.000135	2.47e-05	0.000107 J	6.33e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00124 J	0.00282	0.000579	0.00184 J	0.00153 J
E1668A	PCB-60	33025-41-1	mg/kg	0.00115 J	0.00293	0.000741	0.00408 J	0.00281 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00579 J	0.0134 J	0.00319	0.0176 J	0.0116 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000229 J	0.000659	0.000192	0.000375 J	0.000393 J
E1668A	PCB-64	52663-58-8	mg/kg	0.00533 J	0.0117 J	0.00263 J	0.00639 J	0.00701 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00962 J	0.0229 J	0.00448 J	0.0324 J	0.0228 J
E1668A	PCB-67	73575-53-8	mg/kg	3.23e-05 J	9.44e-05	8.73e-06 J	3.5e-05 J	2.67e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	5.54e-05 J	0.000182	4.04e-05	1.4e-06 U	6.47e-05 J
E1668A	PCB-72	41464-42-0	mg/kg	8.23e-05 J	0.00033	6.08e-05	1.3e-06 U	9.68e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	1.45e-05 J	3.49e-05	6.79e-06 U	1.4e-06 U	1.4e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	1.01e-05 J	9.28e-05	2.44e-05	4.07e-05 J	3.08e-05 J
E1668A	PCB-78	70362-49-1	mg/kg	1.59e-06 U	7.91e-06 U	7.76e-06 U	1.6e-06 U	1.6e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	2.58e-05 J	7.58e-05	2.24e-05 J	3.87e-05 J	1.1e-06 U
E1668A	PCB-80	33284-52-5	mg/kg	1.09e-06 U	5.44e-06 U	5.33e-06 U	1.1e-06 U	1.1e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	1.79e-06 U	R	8.73e-06 U	1.8e-06 U	1.79e-06 U
E1668A	PCB-82	52663-62-4	mg/kg	0.000339 J	0.000563	0.000224	0.000324 J	0.000759 J
E1668A	PCB-83	60145-20-2	mg/kg	0.000507 J	0.00113	0.00032	2.9e-06 U	2.89e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000846 J	0.00196	0.000419	0.000961 J	0.0013 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00342 J	0.00728	0.00277	0.00939 J	0.00726 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00274 J	0.00565	0.0019	0.00366 J	0.00616 J
E1668A	PCB-88	55215-17-3	mg/kg	2.19e-06 U	1.09e-05 U	1.07e-05 U	2.2e-06 U	2.19e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	4.54e-06 J	6.43e-06 U	6.3e-06 U	1.3e-06 U	4.26e-06 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00467 J	0.014 J	0.00332 J	0.00389 J	0.0112 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000719 J	0.00171	0.000479	0.000594 J	0.00127 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00198 J	0.00508 J	0.00154 J	0.00208 J	0.00298 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	8.77e-06 J	0.00229	0.00035	0.000757 J	0.000623 J
E1668A	PCB-94	73575-55-0	mg/kg	1.42e-05 J	2.6e-05	6.3e-06 U	5.95e-06 J	7.82e-06 J
E1668A	PCB-95	38379-99-6	mg/kg	0.00235 J	0.00567 J	0.00122	0.0031 J	0.00399 J
E1668A	PCB-96	73575-54-9	mg/kg	7.21e-06 J	1.98e-05 U	1.94e-05 U	4.17e-06 J	8.14e-06 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000853 J	5.23e-05 J	3.73e-05 U	7.7e-06 U	7.68e-06 U
E1668A	PCB-99	38380-01-7	mg/kg	0.0145 J	0.0293 J	0.0094 J	0.0379 J	0.0279 J
E1668A	PCB-103	60145-21-3	mg/kg	5.41e-06 J	1.67e-05 J	5.33e-06 U	2.24e-06 J	6.51e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	1.39e-06 U	6.92e-06 U	6.79e-06 U	1.4e-06 U	1.4e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00567 J	0.0173 J	0.00614 J	0.0278 J	0.0163 J
E1668A	PCB-106	70424-69-0	mg/kg	1.69e-06 U	8.41e-06 U	8.24e-06 U	1.7e-06 U	1.69e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000227 J	0.000717	0.000284	0.000716 J	0.000523 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	3.74e-05 J	0.000134	3.23e-05 J	3.33e-05 J	7.19e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00962 J	0.02 J	0.00761 J	0.0141 J	0.0231 J
E1668A	PCB-111	39635-32-0	mg/kg	3.87e-05 J	9.02e-05	2.85e-05	4.28e-05 J	3.82e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	4.34e-05 J	6.92e-06 U	6.79e-06 U	1.4e-06 U	1.4e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000313 J	0.00096	0.000334	0.00145 J	0.000863 J

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0189 J	0.0592 J	0.0172 J	0.0901 J	0.047 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000117 J	0.000287	9.27e-05	0.000189 J	0.000144 J
E1668A	PCB-121	56558-18-0	mg/kg	2.23e-05 J	5.77e-05	1.31e-05 J	2.3e-05 J	1.76e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	2.41e-05 J	6.29e-05	1.75e-05 J	1.2e-06 U	1.2e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000352 J	0.00102	0.000305	0.00155 J	0.00123 J
E1668A	PCB-126	57465-28-8	mg/kg	1.34e-05 J	7.91e-06 U	7.76e-06 U	1.6e-06 U	1.6e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	1.91e-05 J	5.58e-05	1.98e-05 J	7.34e-05 J	4.81e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00207 J	0.00525	0.00272	0.0103 J	0.00726 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0193 J	0.0526 J	0.0207 J	0.0923 J	0.0655 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000786 J	0.00216	0.000854	0.00149 J	0.0022 J
E1668A	PCB-131	61798-70-7	mg/kg	1.61e-05 J	4.25e-05	1.06e-05 J	1.7e-06 U	5.67e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	0.000826 J	0.00176	0.000657 J	0.00116 J	0.00237 J
E1668A	PCB-133	35694-04-3	mg/kg	0.00048 J	0.00169	0.000489		
E1668A	PCB-134	52704-70-8	mg/kg	0.000349 J	0.00081	0.000321	0.000432 J	0.000844 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.001 J	0.00294	0.00118	0.000793 J	0.00165 J
E1668A	PCB-136	38411-22-2	mg/kg	0.000221 J	0.000639	0.000161	0.000181 J	0.000372 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000722 J	0.00192	0.000849	0.0035 J	0.00257 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000321 J	0.000759	0.000268	0.00121 J	0.000887 J
E1668A	PCB-141	52712-04-6	mg/kg	0.000845 J	0.0034 J	0.00114 J	1.7e-06 U	0.00412 J
E1668A	PCB-142	41411-61-4	mg/kg	1.69e-06 U	8.41e-06 U	8.24e-06 U	1.7e-06 U	1.69e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.28e-06 U	1.63e-05 U	1.6e-05 U	3.3e-06 U	3.29e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	3.26e-05 J	0.000141	3.25e-05	1.44e-05 J	8.29e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	1.59e-06 U	7.91e-06 U	7.76e-06 U	1.6e-06 U	1.6e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00371 J	0.0109 J	0.00387 J	0.0108 J	0.00872 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00429 J	0.0113 J	0.00377 J	0.00501 J	0.0128 J
E1668A	PCB-148	74472-41-6	mg/kg	8.43e-05 J	0.00027	6.25e-05	R	R
E1668A	PCB-150	68194-08-1	mg/kg	1.75e-06 J	7.42e-06 U	7.27e-06 U	1.5e-06 U	2e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	1.39e-06 U	6.92e-06 U	6.79e-06 U	1.4e-06 U	1.4e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0253 J	0.0692 J	0.0258 J	0.113 J	0.0668 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000612 J	0.00178	0.000429	0.000811 J	0.000786 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000262 J	0.00073	0.000155	0.000359 J	0.000292 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00154 J	0.00527	0.00219	0.00839 J	0.00545 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0016 J	0.00437 J	0.00178	0.00818 J	0.00563 J
E1668A	PCB-159	39635-35-3	mg/kg	3.53e-06 J	1.19e-05 J	6.79e-06 U	1.4e-06 U	1.4e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.26e-06 U	3.12e-05 U	3.06e-05 U	6.3e-06 U	6.28e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.29e-06 U	6.43e-06 U	6.3e-06 U	1.3e-06 U	1.3e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.00012 J	0.000406	0.00011	0.000263 J	0.000268 J
E1668A	PCB-164	74472-45-0	mg/kg	0.000517 J	0.00129	0.000424	0.000938 J	0.00165 J
E1668A	PCB-165	74472-46-1	mg/kg	2.68e-05 J	6.56e-05	2.31e-05 J	2.81e-05 J	2.82e-05 J
E1668A	PCB-167	52663-72-6	mg/kg	0.000711 J	0.00238	0.000955		
E1668A	PCB-169	32774-16-6	mg/kg	1.49e-06 U	7.42e-06 U	7.27e-06 U	1.5e-06 U	1.5e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00207 J	0.00859 J		0.00975 J	0.00763 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000992 J	0.00319	0.00102	0.00359 J	0.00293 J
E1668A	PCB-172	52663-74-8	mg/kg	0.000499 J	0.00203	0.000564	0.00191 J	0.00169 J
E1668A	PCB-174	38411-25-5	mg/kg	0.000465 J	0.00131	0.000558	0.000766 J	0.00217 J
E1668A	PCB-175	40186-70-7	mg/kg	0.000167 J	0.000546	0.000173	0.000415 J	0.000402 J

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAEN-COMP05	NB03FAEN-COMP06	NB03FAES-COMP01	NB03FAES018	NB03FAES019
			Sample Date	09/29/15	01/12/16	01/13/16	10/01/15	10/01/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	2.7e-05 J	6.43e-05	2.16e-05 J	1.59e-05 J	6.7e-05 J
E1668A	PCB-177	52663-70-4	mg/kg	0.00173 J	0.0058 J	0.0018	0.00304 J	0.00416 J
E1668A	PCB-178	52663-67-9	mg/kg	0.00157 J	0.00466 J	0.00127		
E1668A	PCB-179	52663-64-6	mg/kg	0.000277 J	0.000672	0.000324	0.000208 J	0.000579 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00821 J	0.0345 J	0.0104 J	0.0356 J	0.026 J
E1668A	PCB-181	74472-47-2	mg/kg	3.96e-05 J	0.000128	4.19e-05	0.000163 J	0.000113 J
E1668A	PCB-182	60145-23-5	mg/kg	3.82e-05 J	0.000108	2.7e-05	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00323 J	0.0101 J	0.00357	0.0109 J	2.79e-06 U
E1668A	PCB-184	74472-48-3	mg/kg	3.29e-05 J	8.88e-05	2.77e-05	4.46e-05 J	3.92e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	1.49e-06 U	7.42e-06 U	7.27e-06 U	1.5e-06 U	1.5e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00854 J	0.0278 J	0.00907 J	0.0184 J	0.0169 J
E1668A	PCB-188	74487-85-7	mg/kg	3.31e-05 J	9.94e-05	3.25e-05	6.14e-05 J	6.04e-05 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000105 J	0.000487	0.000153	0.000445 J	0.000328 J
E1668A	PCB-190	41411-64-7	mg/kg	0.00057 J	0.00239	0.000749	0.00239 J	0.00185 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000146 J	0.000527	0.000178	0.000583 J	0.000463 J
E1668A	PCB-192	74472-51-8	mg/kg	1.29e-06 U	1.06e-05 J	6.3e-06 U	1.3e-06 U	1.3e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000905 J	0.00502 J	0.00161	0.00378 J	0.00319 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000292 J	0.00164	0.000464	0.00133 J	0.00119 J
E1668A	PCB-196	42740-50-1	mg/kg	0.000828 J	0.0034	0.00101	0.00275 J	0.00235 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000111 J	0.00038	0.000129	0.000262 J	0.000283 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00219 J	0.00867	0.0027	0.00577 J	0.0052 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000276 J	0.000954	0.000336	0.000647 J	0.000676 J
E1668A	PCB-202	2136-99-4	mg/kg	0.000998 J	0.00299	0.00131	0.00188 J	0.00178 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00112 J	0.00541 J	0.00203	0.00419 J	0.00374 J
E1668A	PCB-204	74472-52-9	mg/kg	4.33e-06 J	1.04e-05 U	1.02e-05 U	7.16e-06 J	7.61e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	3.82e-05 J	0.000214	7.98e-05	0.000125 J	0.000126 J
E1668A	PCB-206	40186-72-9	mg/kg	0.000622 J	0.00262	0.0015	0.00269 J	0.00239 J
E1668A	PCB-207	52663-79-3	mg/kg	8.16e-05 J	0.000315	0.000146	0.000328 J	0.000336 J
E1668A	PCB-208	52663-77-1	mg/kg	R	0.00107	0.000641	0.0011 J	0.00103 J
E1668A	PCB-209	2051-24-3	mg/kg	0.000314 J	0.0011	0.000772 J	0.00142 J	0.00131 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.2 J	0.546 J	0.167 J	0.563 J	0.459 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.228 J	0.633 J	0.194 J	0.693 J	0.53 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	2.18e-06 J	2.77e-06 J	1.64e-06 J	3.93e-06 J	2.17e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	4.86e-06 U	1.2e-05	1.4e-05	1.04e-05	6.84e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	3.4e-06 U	3.41e-06 U	3.38e-06 U	3.47e-06 U	3.49e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.35e-06 U	R	5.31e-06 U	5.45e-06 U	5.48e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	3.6e-05	0.000154	0.000194	0.000144	7.53e-05
E1668A	PCB-5	16605-91-7	mg/kg	3.89e-06 U	3.9e-06 U	3.86e-06 U	3.96e-06 U	3.99e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	3.4e-06 U	2.8e-05 J	1.4e-05 J	3.76e-05	3.14e-05
E1668A	PCB-7	33284-50-3	mg/kg	3.89e-06 U	8.22e-06 J	3.86e-06 U	3.96e-06 U	3.99e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	7.3e-06 U	6.45e-05 J	4.47e-05 J	0.00012 J	7.48e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	3.4e-06 U	4.97e-06 J	4.25e-06 J	5.2e-06 J	3.49e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	6.32e-06 U	1.08e-05 J	2.42e-05	1.83e-05 J	9.33e-06 J
E1668A	PCB-11	2050-67-1	mg/kg	1.65e-05 U	7.25e-05 J	0.000144 J	0.000353 J	0.000305 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.24e-06 U	2.07e-05 J	1.53e-05 J	0.000114	8.15e-05
E1668A	PCB-14	34883-41-5	mg/kg	3.89e-06 U	3.9e-06 U	3.86e-06 U	3.96e-06 U	3.99e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	R	0.000122	R	0.00225 J	0.0018 J
E1668A	PCB-16	38444-78-9	mg/kg	2.54e-05	0.000107	8.66e-05	4.46e-06 U	3.39e-05
E1668A	PCB-17	37680-66-3	mg/kg	4.68e-05 J	0.000182 J	2e-04 J	0.000259 J	0.000192
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000125 J	0.000641 J	0.000471 J	0.000483 J	3e-04
E1668A	PCB-19	38444-73-4	mg/kg	3.1e-05	0.000165	0.000179	3.96e-06 U	2.83e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00749 J	0.016 J	0.0114 J	0.0765 J	0.0628 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	2.21e-05 J	0.000103	6.15e-05	0.00033	0.000283
E1668A	PCB-22	38444-85-8	mg/kg	7.84e-05 J	0.000713 J	0.000495 J	0.000472	0.00052
E1668A	PCB-23	55720-44-0	mg/kg	3.4e-06 U	3.41e-06 U	3.38e-06 U	3.47e-06 U	3.49e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	4.86e-06 U	7.7e-06 J	4.83e-06 U	4.96e-06 U	4.99e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	2.85e-05	0.000112	0.000117	0.000406	0.00035
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000222	0.00142	0.00159	0.000591	0.000372
E1668A	PCB-27	38444-76-7	mg/kg	1.94e-05	6.45e-05	7.44e-05	9.11e-05	7.29e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00166 J	0.00393 J	0.00401 J	0.00203 J	0.00173 J
E1668A	PCB-32	38444-77-8	mg/kg	8.28e-05 J	0.000492 J	0.000406 J	0.000432	0.000409
E1668A	PCB-34	37680-68-5	mg/kg	3.4e-06 U	2.34e-05	2.04e-05	0.000105	6.96e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.38e-06 U	4.39e-06 U	4.35e-06 U	5.02e-05	4.07e-05
E1668A	PCB-36	38444-87-0	mg/kg	3.08e-05	3.9e-06 U	0.000158	2.06e-05	1.89e-05
E1668A	PCB-37	38444-90-5	mg/kg	8.81e-05	0.000246	0.000266	0.0073 J	0.00579 J
E1668A	PCB-38	53555-66-1	mg/kg	1.23e-05	3.66e-05	3.21e-05	9.48e-05	8.24e-05
E1668A	PCB-39	38444-88-1	mg/kg	3.89e-06 U	3.9e-06 U	3.86e-06 U	0.00022	0.00018
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000142	0.0015	0.00173	0.00273	0.00223
E1668A	PCB-41	52663-59-9	mg/kg	2.04e-05 U	2.05e-05 U	2.03e-05 U	2.08e-05 U	2.09e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000782			0.000697	0.000758
E1668A	PCB-43	70362-46-8	mg/kg	2.37e-05 J	7.48e-05	6.76e-06 U	0.000204	0.000121
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0161 J	0.049 J	0.0495 J	0.11 J	0.0901 J
E1668A	PCB-45	70362-45-7	mg/kg	2.45e-05	0.000434	0.000214	3.26e-05	2.39e-05 J
E1668A	PCB-46	41464-47-5	mg/kg	9.86e-06	7.17e-05	6.23e-05	3.05e-05	2.32e-05
E1668A	PCB-48	70362-47-9	mg/kg	2.64e-05	8.63e-05	8.81e-05	0.000294	0.000211
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00142	0.00562		0.00135	0.00121
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000111	0.000502	0.000369	0.000167	0.000133
E1668A	PCB-51	68194-04-7	mg/kg	3.39e-05	0.000167	0.000187	0.000157	0.000142
E1668A	PCB-52	35693-99-3	mg/kg	0.00779 J	0.0547 J	0.0387 J	0.00183 J	0.00145

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.81e-06 U	1.1e-05 J	1.75e-05 J	6.94e-06 U	6.98e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	5.84e-06 U	6.81e-05	5.8e-06 U	6.46e-05	0.000141
E1668A	PCB-56	41464-43-1	mg/kg	5.06e-05	0.000188	0.000148	0.00104	0.001
E1668A	PCB-57	70424-67-8	mg/kg	2.42e-05 J	4.31e-05	0.000398	5.76e-05	3.74e-05
E1668A	PCB-58	41464-49-7	mg/kg	1.39e-05 J	0.00012	0.000299	6.68e-05	5.43e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00144	0.00497	0.00436	0.00684	0.00646
E1668A	PCB-60	33025-41-1	mg/kg	0.00273			0.0129 J	0.012 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0109			0.101 J	0.0962 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000364	0.000982	0.00152	0.00164	0.00164
E1668A	PCB-64	52663-58-8	mg/kg	0.00574 J	0.0195 J	0.0256 J	0.00178	0.00139
E1668A	PCB-66	32598-10-0	mg/kg	0.0171 J	0.0452 J	0.034 J	0.115 J	0.157 J
E1668A	PCB-67	73575-53-8	mg/kg	3.98e-05	8.58e-05	8.99e-05	0.000456	0.000391
E1668A	PCB-68	73575-52-7	mg/kg	0.000104	0.000132	0.000401	0.000965	0.00103
E1668A	PCB-72	41464-42-0	mg/kg	0.000159	0.000214	0.000767	0.000443	0.000321
E1668A	PCB-73	74338-23-1	mg/kg	6.81e-06 U	2.49e-05	6e-05	7.49e-05	9.03e-05
E1668A	PCB-77	32598-13-3	mg/kg	5.27e-05	0.00014	9.39e-05	0.00769 J	0.00628 J
E1668A	PCB-78	70362-49-1	mg/kg	0.000167	7.8e-06 U	7.73e-06 U	7.93e-06 U	7.98e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	3.69e-05	0.000101	0.000185	0.000451	0.000388
E1668A	PCB-80	33284-52-5	mg/kg	5.35e-06 U	5.36e-06 U	5.31e-06 U	2.72e-05	2.95e-05
E1668A	PCB-81	70362-50-4	mg/kg	8.75e-06 U	3.47e-05	8.7e-06 U	0.000369	0.000314
E1668A	PCB-82	52663-62-4	mg/kg	8.27e-05	0.00123	0.00227	7.43e-06 U	8.59e-05
E1668A	PCB-83	60145-20-2	mg/kg	1.41e-05 U	0.00132		0.000143	8.45e-05
E1668A	PCB-84	52663-60-2	mg/kg	0.000213	0.0029		0.000345	0.000185
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00683			0.0292 J	0.0238 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00275	0.0106		0.0125	0.00998
E1668A	PCB-88	55215-17-3	mg/kg	1.07e-05 U	1.07e-05 U	1.06e-05 U	1.09e-05 U	1.1e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	6.32e-06 U	1.41e-05 J	6.28e-06 U	1.44e-05 J	8.88e-06 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00654 J	0.0186 J	0.0334 J	0.0073	0.00487
E1668A	PCB-91	68194-05-8	mg/kg	R	0.00233		0.00115	0.000619
E1668A	PCB-92	52663-61-3	mg/kg	0.0021 J	0.00537 J	0.0153 J	0.00102	0.000484
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00107	0.00136	0.00296	0.00637 J	0.00642 J
E1668A	PCB-94	73575-55-0	mg/kg	1.25e-05 J	2.44e-05 J	4.22e-05	0.000237	0.00019
E1668A	PCB-95	38379-99-6	mg/kg	0.00117			0.00181	0.00111
E1668A	PCB-96	73575-54-9	mg/kg	1.95e-05 U	2.88e-05	2.26e-05 J	7.43e-06 U	7.48e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00115	5.95e-05 J	0.000138	0.000259	0.000147
E1668A	PCB-99	38380-01-7	mg/kg	0.0278 J	0.0638 J	0.0688 J	0.186 J	0.122 J
E1668A	PCB-103	60145-21-3	mg/kg	1.26e-05 J	1.08e-05 J	3.35e-05	6.02e-05	3.75e-05
E1668A	PCB-104	56558-16-8	mg/kg	6.81e-06 U	6.82e-06 U	6.76e-06 U	6.94e-06 U	9.42e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.0119 J	0.0402 J	0.0219 J	0.0488 J	0.0407 J
E1668A	PCB-106	70424-69-0	mg/kg	8.27e-06 U	8.28e-06 U	8.21e-06 U	8.42e-06 U	8.47e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00067	0.000767	0.00166	0.00877 J	0.00911 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	9.59e-05	0.000132	0.000288	0.000297	0.000233
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00966 J	0.0374 J	0.0714 J	0.00809 J	0.00593
E1668A	PCB-111	39635-32-0	mg/kg	6.82e-05	9.5e-05	0.00018	0.000202	0.000167
E1668A	PCB-112	74472-36-9	mg/kg	3.41e-05	7.31e-05	6.76e-06 U	6.94e-06 U	0.000112
E1668A	PCB-114	74472-37-0	mg/kg	0.000791	0.00252	0.00152	0.00382 J	0.00388 J

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0373 J	0.11 J	0.0791 J	0.173 J	0.206 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000303	0.000302	7e-04	0.00139	0.00128
E1668A	PCB-121	56558-18-0	mg/kg	3.31e-05	4.33e-05	9.57e-05	0.000156	0.000145
E1668A	PCB-122	76842-07-4	mg/kg	5.84e-06 U	9.04e-05	0.00021	5.95e-06 U	5.98e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000794	0.00217	0.00166	0.00364 J	0.00363 J
E1668A	PCB-126	57465-28-8	mg/kg	0.000268	7.8e-06 U	0.000519	0.000306	0.000354
E1668A	PCB-127	39635-33-1	mg/kg	5.14e-05	0.00011	7.42e-05	0.000261	0.00027
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00511			0.0164 J	0.0168 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0414 J	0.0954 J	0.11 J	0.202 J	0.172 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000658			0.00211	0.00236
E1668A	PCB-131	61798-70-7	mg/kg	1.35e-05 J	4.77e-05	0.000108	0.000106	9.14e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.000345 J	0.00204 J	0.00683 J	7.93e-06 U	0.000174
E1668A	PCB-133	35694-04-3	mg/kg	0.00096	0.00172	0.00243	0.00315 J	0.00387 J
E1668A	PCB-134	52704-70-8	mg/kg	0.000136	0.00106		7.2e-05	5.38e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg	R	0.00259		0.00125	0.000863
E1668A	PCB-136	38411-22-2	mg/kg	R	0.000569	R	0.00015	7.89e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00195			0.00742 J	0.00887 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000775	0.00137	0.00164	0.00341	0.00355
E1668A	PCB-141	52712-04-6	mg/kg	0.00062 J	0.00547 J	0.00654 J	0.000536	0.000517
E1668A	PCB-142	41411-61-4	mg/kg	8.27e-06 U	8.28e-06 U	8.21e-06 U	8.42e-06 U	8.47e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.61e-05 U	1.61e-05 U	1.59e-05 U	1.76e-05 J	1.65e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	R	0.000108	R	0.000312	0.000269
E1668A	PCB-145	74472-40-5	mg/kg	R	7.8e-06 U	R	7.93e-06 U	7.98e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00762 J	0.0142 J	0.0209 J	0.0306 J	0.0329 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0034 J	0.0127 J	0.0376 J	0.00849 J	0.00682 J
E1668A	PCB-148	74472-41-6	mg/kg	R	0.000197	R	0.000811	0.000774
E1668A	PCB-150	68194-08-1	mg/kg	R	7.31e-06 U	R	1.8e-05 J	9.49e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	R	6.82e-06 U	R	8.71e-06 J	6.98e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0553 J	0.11 J	0.131 J	0.242 J	0.284 J
E1668A	PCB-154	60145-22-4	mg/kg	R	0.00159		0.00754 J	0.00778 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000346	0.000487	0.000638	0.00191	0.00199
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00396			0.0151 J	0.0155 J
E1668A	PCB-158	74472-42-7	mg/kg				0.0157 J	0.0168 J
E1668A	PCB-159	39635-35-3	mg/kg	8.42e-06 J	8.76e-06 J	6.76e-06 U	7.8e-05	5.26e-05
E1668A	PCB-160	41411-62-5	mg/kg	3.06e-05 U	3.07e-05 U	3.04e-05 U	3.12e-05 U	3.14e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	6.32e-06 U	6.34e-06 U	6.28e-06 U	6.44e-06 U	6.48e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000176	0.000365	0.00065	6.44e-06 U	0.000975
E1668A	PCB-164	74472-45-0	mg/kg	0.000574	0.00174		0.00042	0.000432
E1668A	PCB-165	74472-46-1	mg/kg	5.42e-05	6.46e-05	0.000152	0.000155	0.000192
E1668A	PCB-167	52663-72-6	mg/kg	0.00172			0.00622 J	0.00672 J
E1668A	PCB-169	32774-16-6	mg/kg	7.3e-06 U	7.31e-06 U	7.25e-06 U	1.93e-05 J	7.48e-06 U
E1668A	PCB-170	35065-30-6	mg/kg				0.0148 J	0.017 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00233	0.0039	0.00511	0.00774 J	0.0103 J
E1668A	PCB-172	52663-74-8	mg/kg	0.00116	0.00238	0.00261	0.00482 J	0.0051 J
E1668A	PCB-174	38411-25-5	mg/kg	0.000469	0.00164		0.000564	0.000493
E1668A	PCB-175	40186-70-7	mg/kg	R	0.000581	R	0.00137	0.00165

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03FAES347	NB03FAES364	NB03FAES365	NB03CRB-HEP122	NB03CRB-HEP123
			Sample Date	01/13/16	01/13/16	01/13/16	08/19/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	3e-05	6.03e-05	0.000233	0.000148	0.000113
E1668A	PCB-177	52663-70-4	mg/kg	0.00146			0.0048 J	0.00588 J
E1668A	PCB-178	52663-67-9	mg/kg				0.0104 J	0.0119 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000253	0.000634		0.000168	0.000121
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0208 J	0.0424 J	0.0422 J	0.0895 J	0.0913 J
E1668A	PCB-181	74472-47-2	mg/kg	8.27e-05	0.000183	0.000156	0.000382	0.000486
E1668A	PCB-182	60145-23-5	mg/kg	7.86e-05	0.000104	0.00016	0.000384	0.000459
E1668A	PCB-183/185	PCB-183/185	mg/kg				0.0284 J	0.0362 J
E1668A	PCB-184	74472-48-3	mg/kg	7.14e-05	6.44e-05	0.000173	0.000303	0.000361
E1668A	PCB-186	74472-49-4	mg/kg	7.3e-06 U	7.31e-06 U	7.25e-06 U	7.43e-06 U	7.48e-06 U
E1668A	PCB-187	52663-68-0	mg/kg		0.0272 J		0.0655 J	0.0703 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000103	8.12e-05	0.000216	0.000422	0.000434
E1668A	PCB-189	39635-31-9	mg/kg	0.000294	0.000545	0.000638	0.00108	0.00129
E1668A	PCB-190	41411-64-7	mg/kg	0.00147			0.00235	0.00438 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000348	0.000672	0.00066	0.00114	0.0013
E1668A	PCB-192	74472-51-8	mg/kg	6.32e-06 U	6.34e-06 U	9.28e-06 J	2.27e-05 J	2.35e-05 J
E1668A	PCB-194	35694-08-7	mg/kg	0.00291			0.00926 J	0.0104 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000823	0.0018	0.00201	0.00221	0.00215
E1668A	PCB-196	42740-50-1	mg/kg	0.00226	0.00372		0.00713 J	0.0111 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000275	0.000361	0.000714	0.001	0.00117
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0052			0.0152 J	0.0252 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00065	0.000892	0.00207	0.00297	0.00378
E1668A	PCB-202	2136-99-4	mg/kg	0.00215	0.00322		0.00574 J	0.00627 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00381			0.00953 J	0.013 J
E1668A	PCB-204	74472-52-9	mg/kg	1.02e-05 U	1.02e-05 U	1.58e-05 J	5.82e-05	5.8e-05
E1668A	PCB-205	74472-53-0	mg/kg	0.000121	0.000246	0.000386	0.000171	0.000166
E1668A	PCB-206	40186-72-9	mg/kg	0.00296	0.00412		0.00507 J	0.00591 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000332	0.000373	0.000758	0.000881	0.00106
E1668A	PCB-208	52663-77-1	mg/kg	0.0013	0.00164	0.00349	0.00319	0.00337
E1668A	PCB-209	2051-24-3	mg/kg	0.00172 J	0.00195 J	0.00453 J	0.00341	0.00371
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.309 J	0.705 J	0.76 J	1.56 J	1.54 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.366 J	0.861 J	0.866 J	1.82 J	1.83 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	2.85e-05	4.76e-06 J	5.51e-05	3.96e-05	4.46e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	4.76e-06 U	9.89e-07 U	9.75e-07 U	1.27e-05 J	7.14e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	3.33e-06 U	1.64e-06 J	6.82e-07 U	6.78e-07 U	6.6e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.24e-06 U	R	1.07e-06 U	5e-06	5.01e-05 J
E1668A	PCB-4	13029-08-8	mg/kg	0.000227	9.18e-05 J	0.000135	0.000158 J	0.000259 J
E1668A	PCB-5	16605-91-7	mg/kg	3.81e-06 U	7.91e-07 U	7.8e-07 U	7.74e-07 U	7.55e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	3.33e-06 U	6.92e-07 U	6.82e-07 U	6.78e-07 U	0.000134
E1668A	PCB-7	33284-50-3	mg/kg	3.81e-06 U	7.91e-07 U	7.8e-07 U	2.62e-06	7.55e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	7.14e-06 U	9.53e-05	1.46e-06 U	0.000116	0.000498 J
E1668A	PCB-9	34883-39-1	mg/kg	3.33e-06 U	6.92e-07 U	6.82e-07 U	4.06e-06	6.6e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	4.32e-05	9.81e-06	2.02e-05	1.78e-05	1.3e-05 J
E1668A	PCB-11	2050-67-1	mg/kg	0.000477 J	0.000315 J	3.31e-06 U	0.000467 J	0.00127 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.05e-06 U	5.49e-05	1.85e-06 U	6.9e-05	0.000259
E1668A	PCB-14	34883-41-5	mg/kg	3.81e-06 U	7.91e-07 U	7.8e-07 U	7.74e-07 U	7.55e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00153 J	0.00094 J	0.00118 J	0.00117 J	0.00344 J
E1668A	PCB-16	38444-78-9	mg/kg	7.68e-05	8.9e-07 U	4.17e-05	8.71e-07 U	8.49e-06 U
E1668A	PCB-17	37680-66-3	mg/kg	0.000359	0.000225 J	0.000215	0.000312 J	0.000427 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000523 J	0.000304 J	0.000354 J	0.000414 J	0.000584 J
E1668A	PCB-19	38444-73-4	mg/kg	6.61e-05	3.48e-05	4.09e-05	4.54e-05	7.55e-06 U
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0385 J	0.0239 J	0.0338 J	0.0357 J	0.0707 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000281	0.000178	0.000175	0.000263	0.000585 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000534	0.000377 J	0.000352 J	0.000554 J	0.00113 J
E1668A	PCB-23	55720-44-0	mg/kg	3.33e-06 U	6.92e-07 U	6.82e-07 U	6.78e-07 U	6.6e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	4.76e-06 U	9.89e-07 U	9.75e-07 U	9.68e-07 U	9.43e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000301	0.000215	0.000208	0.000311 J	0.000517
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000445	0.000286	0.000321	0.000553	0.000695
E1668A	PCB-27	38444-76-7	mg/kg	0.000155	8.61e-05	9.69e-05	0.000147	0.000154
E1668A	PCB-31	16606-02-3	mg/kg	0.00174 J	0.00128 J	0.00137 J	0.00174 J	0.00299 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000531	0.00047 J	0.000415 J	0.000521 J	0.000966 J
E1668A	PCB-34	37680-68-5	mg/kg	6.04e-05	3.64e-05	3.54e-05	5.04e-05	0.000115
E1668A	PCB-35	37680-69-6	mg/kg	4.29e-06 U	2.33e-05	8.77e-07 U	3.36e-05	5.69e-05
E1668A	PCB-36	38444-87-0	mg/kg	3.81e-06 U	2.13e-05	7.8e-07 U	3.76e-05	5.95e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.00428 J	0.0021 J	0.00328 J	0.00265 J	0.0073 J
E1668A	PCB-38	53555-66-1	mg/kg	3.33e-06 U	6.92e-07 U	1.9e-05	6.78e-07 U	6.6e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	0.000104	6.68e-05	7.58e-05	0.000109	0.00018
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00256	0.00168 J	0.00189 J	0.0045 J	0.00339
E1668A	PCB-41	52663-59-9	mg/kg	2.49e-05 J	2.32e-05	4.09e-06 U	2.48e-05	3.96e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000928	0.000555	0.000589 J	0.00144 J	0.000864
E1668A	PCB-43	70362-46-8	mg/kg	0.000125	8.78e-05	0.000102	0.000233	0.00014
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0675 J	0.0327 J	0.0525 J	0.0987 J	0.0728 J
E1668A	PCB-45	70362-45-7	mg/kg	4.66e-05	2.62e-05	2.14e-06 U	3.28e-05	2.08e-05 U
E1668A	PCB-46	41464-47-5	mg/kg	3.63e-05	2.48e-05	2.1e-05	4.31e-05	9.43e-06 U
E1668A	PCB-48	70362-47-9	mg/kg	0.000284	0.000181	0.000186	0.000381	0.000216
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00191 J	0.00116	0.00135 J	0.00333 J	0.00167
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000202	0.000138	0.000147	0.000322	0.000132
E1668A	PCB-51	68194-04-7	mg/kg	0.000169	0.000114	0.000136	0.000231	0.000104
E1668A	PCB-52	35693-99-3	mg/kg	0.00208	0.00127 J	0.00146 J	0.0027 J	0.00177 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.67e-06 U	1.38e-06 U	1.36e-06 U	1.36e-06 U	1.32e-05 U
E1668A	PCB-55	74338-24-2	mg/kg	9.58e-05	6.35e-05	1.17e-06 U	0.000261	0.000155
E1668A	PCB-56	41464-43-1	mg/kg	0.00125	0.000825 J	0.00066 J	0.00191 J	0.00152
E1668A	PCB-57	70424-67-8	mg/kg	5.76e-05	3.37e-05	3.48e-05	9.88e-05	6.99e-05
E1668A	PCB-58	41464-49-7	mg/kg	7.84e-05	7.7e-05	3.68e-05	0.000167	0.000152
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00458	0.00219 J	0.00325 J	0.00646 J	0.00527
E1668A	PCB-60	33025-41-1	mg/kg	0.00859 J	0.00498 J	0.00563 J	0.00676 J	0.014 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0606 J	0.0356 J	0.0499 J	0.116 J	0.088 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00115	0.000768 J	0.000839 J	0.00222 J	0.0019
E1668A	PCB-64	52663-58-8	mg/kg	0.00176	0.00109 J	0.00156 J	0.00278 J	0.00203
E1668A	PCB-66	32598-10-0	mg/kg	0.0997 J	0.0506 J	0.0744 J	0.158 J	0.127 J
E1668A	PCB-67	73575-53-8	mg/kg	0.00026	0.000154	0.00019	0.000437	0.000292
E1668A	PCB-68	73575-52-7	mg/kg	0.000681	0.000414	0.000447	0.00125 J	0.001
E1668A	PCB-72	41464-42-0	mg/kg	0.00036	0.000185	0.000229	0.00068 J	0.000477
E1668A	PCB-73	74338-23-1	mg/kg	0.000103	9.41e-05	1.36e-06 U	1.36e-06 U	1.32e-05 U
E1668A	PCB-77	32598-13-3	mg/kg	0.00437 J	0.00241 J			0.00715 J
E1668A	PCB-78	70362-49-1	mg/kg	7.62e-06 U	1.58e-06 U	1.56e-06 U	1.55e-06 U	1.51e-05 U
E1668A	PCB-79	41464-48-6	mg/kg	0.00022	0.000144	0.000173	0.000454	0.000344
E1668A	PCB-80	33284-52-5	mg/kg	1.73e-05 J	1.7e-05	1.31e-05	4.08e-05	3.53e-05 J
E1668A	PCB-81	70362-50-4	mg/kg	0.000225	0.000134	0.000177	0.000212 J	0.000412
E1668A	PCB-82	52663-62-4	mg/kg	7.14e-06 U	8.62e-05	1.46e-06 U	9.06e-05	1.42e-05 U
E1668A	PCB-83	60145-20-2	mg/kg	0.000154	8.2e-05	2.83e-06 U	2.81e-06 U	0.00014
E1668A	PCB-84	52663-60-2	mg/kg	0.00027	0.000149	0.000194	0.000201	0.000197
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0243 J	0.00976 J	0.0156 J	0.0144 J	0.0271 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0102	0.00464 J	0.0071 J	0.00704 J	0.0109
E1668A	PCB-88	55215-17-3	mg/kg	1.05e-05 U	2.18e-06 U	2.14e-06 U	2.13e-06 U	2.08e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	1.74e-05 J	9.13e-06	9.76e-06	9.31e-06	1.23e-05 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00765 J	0.00336 J	0.00525 J	0.005 J	0.00662
E1668A	PCB-91	68194-05-8	mg/kg	0.000928	0.000433	0.000737 J	0.000703 J	0.000754
E1668A	PCB-92	52663-61-3	mg/kg	0.00105 J	0.000474	0.000752 J	0.000881 J	0.000752
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00461	0.00233 J	0.00363 J	0.00337 J	0.00485
E1668A	PCB-94	73575-55-0	mg/kg	0.000187	0.000117	0.000142	0.000165	0.000244
E1668A	PCB-95	38379-99-6	mg/kg	0.0015			0.00146 J	0.00126
E1668A	PCB-96	73575-54-9	mg/kg	7.14e-06 U	1.98e-06 J	2.36e-06 J	1.63e-06 J	1.42e-05 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000226	0.000103	0.000138	0.000146	0.000177 J
E1668A	PCB-99	38380-01-7	mg/kg	0.12 J	0.0475 J	0.0862 J	0.0754 J	0.123 J
E1668A	PCB-103	60145-21-3	mg/kg	7.53e-05	2.6e-05	5.01e-05	2.85e-05	3.52e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	8.9e-06 J	6.27e-06	5.86e-06	5.23e-06	1.32e-05 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0333 J	0.0135 J	0.0214 J	0.0184 J	0.0423 J
E1668A	PCB-106	70424-69-0	mg/kg	8.1e-06 U	1.68e-06 U	1.66e-06 U	1.65e-06 U	1.6e-05 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00647 J	0.00366 J	0.00458 J	0.00594 J	0.00982 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000296	0.000159	0.000206	0.000297	0.000361
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00811 J	0.00373 J	0.00601 J	0.00578 J	0.00864
E1668A	PCB-111	39635-32-0	mg/kg	0.000202	9.06e-05	0.000132	0.000133	0.000213
E1668A	PCB-112	74472-36-9	mg/kg	0.000112	5.19e-05	1.36e-06 U	1.36e-06 U	1.32e-05 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00289 J	0.00139 J	0.00203 J	0.00202 J	0.00415

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.152 J	0.0718 J	0.122 J	0.135 J	0.188 J
E1668A	PCB-120	68194-12-7	mg/kg	0.00104	0.000453	0.000708 J	0.000691 J	0.00112
E1668A	PCB-121	56558-18-0	mg/kg	0.000122	6.15e-05	8.81e-05	8.98e-05	1.13e-05 U
E1668A	PCB-122	76842-07-4	mg/kg	5.96e-05	3.02e-05	3.2e-05	3.51e-05	7.71e-05
E1668A	PCB-123	65510-44-3	mg/kg	0.00282	0.0014 J	0.00188 J	0.00207 J	0.00385
E1668A	PCB-126	57465-28-8	mg/kg	0.000309	0.00014	1.56e-06 U	0.000225 J	0.00051
E1668A	PCB-127	39635-33-1	mg/kg	0.000135	6.84e-05	9.51e-05	8.91e-05	0.000154
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0122 J	0.00644 J	0.00813 J	0.0103 J	0.0135 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.124 J	0.0612 J	0.0861 J	0.117 J	0.128 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00209	0.00133 J	0.00147 J		0.00281
E1668A	PCB-131	61798-70-7	mg/kg	6.52e-05	4.75e-05	5.61e-05	R	8.83e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.000314	0.000146	0.000165	R	1.51e-05 U
E1668A	PCB-133	35694-04-3	mg/kg	0.00271	0.00185 J	0.00218 J	0.00323 J	0.00415
E1668A	PCB-134	52704-70-8	mg/kg	9.34e-05	5.35e-05	4.88e-05	R	3.11e-05 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00145	0.000596	9e-04	0.000973	0.00103
E1668A	PCB-136	38411-22-2	mg/kg	0.000113	5.08e-05	6.28e-05	6.29e-05	4.33e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00579 J	0.00319 J	0.00438 J		0.00731 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00223	0.00125 J	0.00169 J	0.00212 J	0.00277
E1668A	PCB-141	52712-04-6	mg/kg	0.000516	0.00035	0.000452	0.000513	0.000564
E1668A	PCB-142	41411-61-4	mg/kg	R	1.68e-06 U	1.66e-06 U	R	1.6e-05 U
E1668A	PCB-143	68194-15-0	mg/kg	1.57e-05 U	4.45e-06 J	3.22e-06 U	R	3.11e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	0.00022	9.57e-05	0.000176	R	0.00021
E1668A	PCB-145	74472-40-5	mg/kg	7.62e-06 U	1.58e-06 U	1.56e-06 U	1.55e-06 U	1.51e-05 U
E1668A	PCB-146	51908-16-8	mg/kg		0.0124 J	0.016 J		
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00623 J	0.00346 J	0.00463 J	0.00594 J	0.00643
E1668A	PCB-148	74472-41-6	mg/kg	0.000593	0.000297	0.000433	0.000408	0.000503
E1668A	PCB-150	68194-08-1	mg/kg	1.84e-05 J	5.28e-06	7.9e-06	7.85e-06	1.42e-05 U
E1668A	PCB-152	68194-09-2	mg/kg	6.67e-06 U	3.05e-06 J	4.12e-06 J	2.52e-06 J	1.32e-05 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.201 J	0.0934 J	0.148 J	0.205 J	0.189 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00514 J	0.00234 J	0.0038 J		0.0045
E1668A	PCB-155	33979-03-2	mg/kg	0.00151	0.000865 J	0.00121 J	0.00125 J	0.00189 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0127 J	0.006 J	0.00906 J	0.0103 J	0.0178 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0118 J	0.00643 J	0.00862 J	1.55e-06 U	0.0157 J
E1668A	PCB-159	39635-35-3	mg/kg	5.47e-05	1.38e-06 U	1.36e-06 U	1.83e-05	5.37e-05
E1668A	PCB-160	41411-62-5	mg/kg	4.88e-05 J	6.23e-06 U	6.14e-06 U	6.1e-06 U	5.94e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	R	6.15e-06	1.27e-06 U	R	1.23e-05 U
E1668A	PCB-162	39635-34-2	mg/kg	R	0.000443	R	0.000615 J	0.000929
E1668A	PCB-164	74472-45-0	mg/kg	0.000475	0.000307	0.000334	0.000411	0.000563
E1668A	PCB-165	74472-46-1	mg/kg	R	9.51e-05	0.000109	R	0.000171
E1668A	PCB-167	52663-72-6	mg/kg	0.00548 J	0.00263 J	0.00366 J	0.00518 J	0.00734 J
E1668A	PCB-169	32774-16-6	mg/kg	7.14e-06 U	8.79e-06	1.46e-06 U	1.45e-06 U	1.42e-05 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0127 J	0.00576 J	0.00835 J	0.00851 J	0.0135 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	0.00303 J	0.00419 J		R
E1668A	PCB-172	52663-74-8	mg/kg	0.00367 J	0.00158 J	0.00257 J	0.00134 J	0.00463
E1668A	PCB-174	38411-25-5	mg/kg	R	R	0.000426	R	R
E1668A	PCB-175	40186-70-7	mg/kg	R	0.000587	0.000842 J		0.00157

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127	NB03CRB-HEP129
			Sample Date	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000107	5.04e-05	7.55e-05	8.42e-05	8.29e-05
E1668A	PCB-177	52663-70-4	mg/kg		0.00269 J			
E1668A	PCB-178	52663-67-9	mg/kg	0.00828 J	0.0043 J	0.00648 J		0.0116 J
E1668A	PCB-179	52663-64-6	mg/kg	2e-04	8.19e-05	0.000107	0.000111	R
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0683 J	0.0305 J	0.0481 J	0.0546 J	0.0821 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	0.000133	0.000205	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.0116 J	0.0149 J		0.0292 J
E1668A	PCB-184	74472-48-3	mg/kg	0.000183	9.88e-05	0.00014	0.000177	0.00017
E1668A	PCB-186	74472-49-4	mg/kg	7.14e-06 U	1.48e-06 U	1.46e-06 U	R	1.42e-05 U
E1668A	PCB-187	52663-68-0	mg/kg		0.0242 J	0.0346 J		
E1668A	PCB-188	74487-85-7	mg/kg	0.000346	0.000242	0.00031	0.000422	0.000535
E1668A	PCB-189	39635-31-9	mg/kg	0.000911	0.000414	0.000609 J	0.000535	0.00112
E1668A	PCB-190	41411-64-7	mg/kg	0.00409 J	0.00193 J	0.00275 J	0.00303 J	0.00511
E1668A	PCB-191	74472-50-7	mg/kg	0.000965	0.000479	0.000679 J	0.000818 J	0.00131
E1668A	PCB-192	74472-51-8	mg/kg	1.7e-05 J	1.29e-06 U	6.09e-06	5.39e-06	1.23e-05 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00822 J	0.00426 J	0.00565 J	0.00501 J	0.00954 J
E1668A	PCB-195	52663-78-2	mg/kg	0.0016	0.000878	0.00112 J	0.000907 J	0.00173
E1668A	PCB-196	42740-50-1	mg/kg	0.00646 J	0.00312 J	0.00488 J	0.00371 J	0.00858 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000593	0.000344	0.00052	R	0.000732
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0146 J	0.00719 J	0.0113 J	0.0099 J	0.019 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00187	0.00109 J	0.00162 J	0.0017 J	0.00249
E1668A	PCB-202	2136-99-4	mg/kg	0.00468 J	0.0032 J	0.00408 J	0.00566 J	0.0074
E1668A	PCB-203	52663-76-0	mg/kg	0.00815 J	0.00388 J	0.00568 J	0.00186 J	0.0093 J
E1668A	PCB-204	74472-52-9	mg/kg	2.16e-05 J	1.25e-05	1.76e-05	1.72e-05	1.98e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000104	6.09e-05	6.94e-05	5.97e-05	8.32e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00571 J	0.00303 J	0.00407 J	0.00393 J	0.00642
E1668A	PCB-207	52663-79-3	mg/kg	0.000723	0.000418	0.000598	0.000669	0.00084
E1668A	PCB-208	52663-77-1	mg/kg	0.0026	0.0015 J	0.00198 J	0.00207 J	0.00353
E1668A	PCB-209	2051-24-3	mg/kg	0.00327	0.00197 J	0.00245 J		0.00402
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	1.03 J	0.559 J	0.827 J	1.03 J	1.22 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.24 J	0.658 J	0.988 J	1.2 J	1.49 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	3.78e-05	1.75e-05	4.94e-06 J	2.78e-05 J	5.99e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	4.96e-06 U	2.52e-05	4.98e-06 U	6.98e-06 J	7.14e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	3.47e-06 U	3.39e-06 U	3.49e-06 U	3.49e-06 U	3.49e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	R	R	5.48e-06 U	R	R
E1668A	PCB-4	13029-08-8	mg/kg	6.45e-06 U	0.000114 J	2.6e-05	6.48e-06 U	3.85e-05
E1668A	PCB-5	16605-91-7	mg/kg	3.97e-06 U	3.88e-06 U	3.98e-06 U	3.99e-06 U	3.99e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	3.28e-05 J	6.68e-05 J	1.6e-05	2.94e-05	3.49e-06 U
E1668A	PCB-7	33284-50-3	mg/kg	4.34e-06 J	3.88e-06 U	3.98e-06 U	3.99e-06 U	3.99e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	0.000127 J	0.000198 J	7.47e-06 U	0.000144	7.48e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	3.47e-06 U	3.39e-06 U	3.49e-06 U	3.49e-06 U	3.49e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	6.45e-06 U	6.3e-06 U	6.47e-06 U	6.48e-06 U	6.48e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000424	0.000671 J	0.000312 J	0.000465 J	0.000291 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000106	0.000125	8.36e-05	0.000148	7.22e-05
E1668A	PCB-14	34883-41-5	mg/kg	3.97e-06 U	3.88e-06 U	3.98e-06 U	3.99e-06 U	3.99e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.0021 J	0.00203 J	0.00304 J	0.0029 J	0.0015 J
E1668A	PCB-16	38444-78-9	mg/kg	4.46e-06 U	7.13e-05 J	1.98e-05	2.88e-05	2.33e-05
E1668A	PCB-17	37680-66-3	mg/kg	0.000243	0.000368 J	0.000127	0.00015	6.94e-05
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000306	0.000567 J	0.00019	0.000199	9.81e-05
E1668A	PCB-19	38444-73-4	mg/kg	2.49e-05	4.7e-05	1.06e-05	1.87e-05	1.06e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0495 J	0.053 J	0.0999 J	0.0781 J	0.0248 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000343 J	0.000587	0.000239	0.000373	0.000146
E1668A	PCB-22	38444-85-8	mg/kg	0.000539 J	0.00101	0.000335	0.000553	0.000294
E1668A	PCB-23	55720-44-0	mg/kg	3.47e-06 U	3.39e-06 U	3.49e-06 U	3.49e-06 U	3.49e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	4.96e-06 U	4.85e-06 U	4.98e-06 U	4.99e-06 U	4.99e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000282	0.00049	0.000258	0.000392	0.000137
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00034 J	0.000788	0.000246	0.000254	0.000115
E1668A	PCB-27	38444-76-7	mg/kg	7.63e-05	0.000142	4.38e-05	3.94e-05	1.87e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00197 J	0.00346 J	0.00132	0.00153 J	0.000911
E1668A	PCB-32	38444-77-8	mg/kg	0.000554 J	0.000734 J	0.000232	0.000309	0.000142
E1668A	PCB-34	37680-68-5	mg/kg	5.4e-05	7.89e-05	4.91e-05	4.25e-05	7.4e-06 J
E1668A	PCB-35	37680-69-6	mg/kg	5.25e-05	6.88e-05	3.57e-05	6.08e-05	2.79e-05
E1668A	PCB-36	38444-87-0	mg/kg	2.4e-05	3.53e-05	1.83e-05	2.5e-05	1.15e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.00689 J	0.00602 J	0.0091 J	0.0079 J	0.0036 J
E1668A	PCB-38	53555-66-1	mg/kg	2.97e-05	3.39e-06 U	8.31e-05	3.49e-06 U	3.49e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	0.000109	0.000132	0.000205	0.000202	4.03e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00277	0.00309	0.00107	0.0013	4e-04
E1668A	PCB-41	52663-59-9	mg/kg	2.08e-05 U	3.25e-05 J	2.09e-05 U	2.09e-05 U	2.09e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000732	0.00104	0.000398	0.000653	0.000233
E1668A	PCB-43	70362-46-8	mg/kg	0.000195	0.000244	6.73e-05	7.43e-05	2.81e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0562 J	0.055 J	0.0748 J	0.1 J	0.0207 J
E1668A	PCB-45	70362-45-7	mg/kg	1.72e-05 J	4.05e-05	1.1e-05 U	1.45e-05 J	1.1e-05 U
E1668A	PCB-46	41464-47-5	mg/kg	1.48e-05	4.31e-05	7.45e-06 J	1.43e-05	5.01e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	0.000256	0.000386	0.000109	0.000181	5.67e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0012 J	0.00216	0.000837	0.00112	0.00045
E1668A	PCB-50/53	PCB-50/53	mg/kg	7.58e-05	0.000231	5.56e-05	7.89e-05	2.83e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	8e-05	0.000174	5.96e-05	9.88e-05	2.52e-05
E1668A	PCB-52	35693-99-3	mg/kg	0.00113	0.00304 J	0.000849	0.000902	0.000299

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.94e-06 U	6.79e-06 U	6.97e-06 U	6.98e-06 U	6.98e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	9.42e-05	5.82e-06 U	0.000204	5.98e-06 U	5.98e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.00126	0.00197	0.000622	0.00137	0.000523
E1668A	PCB-57	70424-67-8	mg/kg	4.52e-05	7.91e-05	2.28e-05 J	3.06e-05	8.86e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	4.3e-05	6.79e-06 U	3.57e-05	5.18e-05	9.23e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00425	0.0038	0.00477	0.00616	0.00147
E1668A	PCB-60	33025-41-1	mg/kg	0.0112 J	0.0123 J	0.0136 J	0.0151 J	0.00647 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0682 J	0.0748 J	0.0967 J	0.102 J	0.0296 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00151	0.00168	0.00123	0.00205	0.000459
E1668A	PCB-64	52663-58-8	mg/kg	0.0018 J	0.00239	0.000835	0.00138	0.000595
E1668A	PCB-66	32598-10-0	mg/kg	0.0967 J	0.0944 J	0.124 J	0.159 J	0.0435 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000257	0.000354	0.000223	0.000482	0.000118
E1668A	PCB-68	73575-52-7	mg/kg	0.000612	0.000717	0.000695	0.00107	0.000218
E1668A	PCB-72	41464-42-0	mg/kg	0.000255	0.000396	0.000197	0.00024	4.8e-05
E1668A	PCB-73	74338-23-1	mg/kg	6.97e-05	0.000105	3.05e-05	3.68e-05	6.98e-06 U
E1668A	PCB-77	32598-13-3	mg/kg			0.0078 J		
E1668A	PCB-78	70362-49-1	mg/kg	7.94e-06 U	7.76e-06 U	7.97e-06 U	7.98e-06 U	7.98e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000224	0.000295	0.000329	0.000315	0.000149
E1668A	PCB-80	33284-52-5	mg/kg	1.78e-05 J	2.04e-05 J	1.94e-05 J	2.1e-05 J	1.03e-05 J
E1668A	PCB-81	70362-50-4	mg/kg	0.00032	0.000364	0.000303	0.000324	0.000175
E1668A	PCB-82	52663-62-4	mg/kg	8.18e-05	0.000291	7.21e-05	0.000125	7.48e-06 U
E1668A	PCB-83	60145-20-2	mg/kg	1.44e-05 U	1.41e-05 U	1.44e-05 U	1.45e-05 U	3.08e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	0.000348	0.000871	0.000134	0.000312	8.49e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0215 J	0.044 J	0.0221 J	0.0429 J	0.0168 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00922	0.0188 J	0.00844	0.0187 J	0.00585
E1668A	PCB-88	55215-17-3	mg/kg	1.09e-05 U	1.07e-05 U	1.1e-05 U	1.1e-05 U	1.1e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	7.52e-06 J	4.47e-05	6.47e-06 U	1.43e-05 J	6.48e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00666 J	0.0114 J	0.00421	0.00839	0.00246
E1668A	PCB-91	68194-05-8	mg/kg	0.000738	0.00182	0.000443	0.00101	0.000268
E1668A	PCB-92	52663-61-3	mg/kg	0.000751	0.00243	0.000484	0.000762	0.000213
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00445	0.00866 J	0.0041	0.0183 J	0.00231
E1668A	PCB-94	73575-55-0	mg/kg	0.000182	0.000447	9.1e-05	0.000211	3.21e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00162	0.00194	0.00071	0.000672	0.000348
E1668A	PCB-96	73575-54-9	mg/kg	7.44e-06 U	7.32e-06 J	7.47e-06 U	7.48e-06 U	7.48e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000222	0.000444	8.86e-05 J	0.000238	4.97e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.109 J	0.187 J	0.121 J	0.188 J	0.0706 J
E1668A	PCB-103	60145-21-3	mg/kg	2.89e-05	0.00011	2.74e-05	5.48e-06 U	2.11e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	6.94e-06 U	7.51e-06 J	6.97e-06 U	6.98e-06 U	6.98e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0335 J	0.0372 J	0.0412 J	0.0419 J	0.0302 J
E1668A	PCB-106	70424-69-0	mg/kg	8.43e-06 U	8.24e-06 U	8.47e-06 U	8.47e-06 U	8.47e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00656 J	0.0219 J	0.00689 J	0.0209 J	0.00544 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000327	0.00108	0.00018	0.000556	0.000143
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00733 J	0.0192 J	0.00601 J	0.0114 J	0.00508
E1668A	PCB-111	39635-32-0	mg/kg	0.000166	0.000343 J	0.000156	0.000297	6.75e-05
E1668A	PCB-112	74472-36-9	mg/kg	6.94e-06 U	6.79e-06 U	6.54e-05	6.98e-06 U	8.65e-05
E1668A	PCB-114	74472-37-0	mg/kg	0.003 J	0.0035 J	0.00293	0.00354 J	0.00234 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.133 J	0.174 J	0.165 J	0.189 J	0.12 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000933	0.00196	0.00105	0.0018	0.000521
E1668A	PCB-121	56558-18-0	mg/kg	0.00012	0.000208	0.000108	0.000298	5.27e-05
E1668A	PCB-122	76842-07-4	mg/kg	6.01e-05	0.000222	4.38e-05	5.98e-06 U	5.98e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00245	0.00295 J	0.00279	0.00317 J	0.00218
E1668A	PCB-126	57465-28-8	mg/kg	0.000354	0.000305 J	0.000301	4e-04 J	0.00028
E1668A	PCB-127	39635-33-1	mg/kg	0.000112	0.000208 J	0.00019	0.000194 J	0.000186 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0102 J	0.0122 J	0.0141 J	0.0154 J	0.0121 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.107 J	0.109 J	0.143 J	0.128 J	0.0985 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00197	0.0022	0.00166	0.0021	0.000877
E1668A	PCB-131	61798-70-7	mg/kg	8.01e-05	R	6.38e-05	6.99e-05	3.05e-05
E1668A	PCB-132	38380-05-1	mg/kg	6.81e-05	0.000265	0.000182	0.000157	0.000111
E1668A	PCB-133	35694-04-3	mg/kg	0.00222	0.00333 J	0.00208	0.00266	0.0014
E1668A	PCB-134	52704-70-8	mg/kg	3.46e-05 J	0.000116	4.62e-05 J	4.95e-05 J	2.28e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000836	2.23e-05 U	0.000924	0.000612	0.000289
E1668A	PCB-136	38411-22-2	mg/kg	6.17e-05	0.000112	6.91e-05	5.29e-05	2.87e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00579 J	0.0066 J	0.00562 J	0.00734 J	0.00625 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00212	0.00286	0.00253	0.00324	0.00202
E1668A	PCB-141	52712-04-6	mg/kg	0.00047	0.000728	0.000311	0.00037	0.000301
E1668A	PCB-142	41411-61-4	mg/kg	8.43e-06 U	8.24e-06 U	8.47e-06 U	8.47e-06 U	8.47e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.98e-05 J	1.6e-05 U	1.64e-05 U	1.65e-05 U	1.65e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000301	0.000252	0.000204	0.00015	8.85e-05
E1668A	PCB-145	74472-40-5	mg/kg	7.94e-06 U	7.76e-06 U	7.97e-06 U	7.98e-06 U	7.98e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0213 J	0.0229 J	0.0236 J		
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00568 J	0.00706 J	0.00507	0.00588	0.00266
E1668A	PCB-148	74472-41-6	mg/kg	0.000603	0.000588	0.000668	0.000517	0.000253
E1668A	PCB-150	68194-08-1	mg/kg	7.44e-06 U	7.46e-06 J	1.14e-05 J	8.7e-06 J	7.48e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	6.94e-06 U	6.79e-06 U	6.97e-06 U	6.98e-06 U	6.98e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.185 J	0.152 J	0.236 J	0.192 J	0.133 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00496 J	0.00544 J	0.00572 J	0.00473 J	0.00313 J
E1668A	PCB-155	33979-03-2	mg/kg	0.00113	0.00126	0.00143	0.00193	0.000362
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.012 J	0.0146 J	0.0112 J	0.0156 J	0.0137 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0118 J	0.0142 J	0.011 J	0.0152 J	0.0125 J
E1668A	PCB-159	39635-35-3	mg/kg	3.39e-05	3.8e-05	3.62e-05	7.49e-05	2.82e-05
E1668A	PCB-160	41411-62-5	mg/kg	3.13e-05 U	3.06e-05 U	3.14e-05 U	3.14e-05 U	3.14e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	6.45e-06 U	6.3e-06 U	2.26e-05 J	R	R
E1668A	PCB-162	39635-34-2	mg/kg	0.000642	0.000879	0.00062	0.000767	0.000529
E1668A	PCB-164	74472-45-0	mg/kg	0.000432	0.000513	0.000275	0.000319	0.000153
E1668A	PCB-165	74472-46-1	mg/kg	R	0.000147	1e-04	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.00482 J	0.00555 J	0.00467 J	0.00642 J	0.00537 J
E1668A	PCB-169	32774-16-6	mg/kg	7.44e-06 U	7.27e-06 U	7.47e-06 U	0.000207	1.7e-05 J
E1668A	PCB-170	35065-30-6	mg/kg	0.0112 J	0.00947 J	0.0111 J	0.017 J	0.014 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R		0.00592		
E1668A	PCB-172	52663-74-8	mg/kg	0.0028	0.00342 J	0.00315 J	0.00362 J	0.00235
E1668A	PCB-174	38411-25-5	mg/kg	R	R	0.000347	R	R
E1668A	PCB-175	40186-70-7	mg/kg	0.00113	R	0.00101	R	R

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	9.25e-05	0.00013	8.97e-05	9.17e-05	6.46e-05
E1668A	PCB-177	52663-70-4	mg/kg			0.00374 J		R
E1668A	PCB-178	52663-67-9	mg/kg		0.00922 J	0.00637 J		
E1668A	PCB-179	52663-64-6	mg/kg	3.72e-05	0.000189	0.000133	0.000104	5.49e-05
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0605 J	0.057 J	0.0501 J	0.0707 J	0.0656 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	0.000267	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	0.000246	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg			0.0204 J		
E1668A	PCB-184	74472-48-3	mg/kg	0.000159	0.000216	0.000234	0.000212	6.43e-05
E1668A	PCB-186	74472-49-4	mg/kg	7.44e-06 U	7.27e-06 U	7.47e-06 U	7.48e-06 U	7.48e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			0.0488 J		
E1668A	PCB-188	74487-85-7	mg/kg	0.000302	0.000376	0.000277	0.000297	0.000162
E1668A	PCB-189	39635-31-9	mg/kg	0.000758	0.000934	0.000804	0.00123	0.000968
E1668A	PCB-190	41411-64-7	mg/kg	0.00353 J	0.00224	0.000839	0.00339 J	0.00316 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000936	0.00105	0.000871	0.00118	0.00111
E1668A	PCB-192	74472-51-8	mg/kg	6.72e-06 J	7.32e-06 J	1.25e-05 J	6.48e-06 U	6.48e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00669 J	0.00539 J	0.0066 J	0.00893 J	0.00629 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00135	0.00123	0.00177	0.00239	0.0017
E1668A	PCB-196	42740-50-1	mg/kg	0.00645 J	0.00557 J	0.00438	0.00684 J	0.00575 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	0.000712	0.000745	0.000661	0.000546
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0132 J	0.0115 J	0.00856	1.84e-05 U	0.00776
E1668A	PCB-201	40186-71-8	mg/kg	0.00195	0.00221	0.00217	0.0019	0.00118
E1668A	PCB-202	2136-99-4	mg/kg	0.0043	0.00496 J	0.00392	0.00377	0.0017
E1668A	PCB-203	52663-76-0	mg/kg	0.00828 J	0.00575 J	0.00648 J	0.00754 J	0.00553 J
E1668A	PCB-204	74472-52-9	mg/kg	2.32e-05 J	2.65e-05	3.53e-05	3.29e-05	1.05e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	9.91e-05	7.84e-05	0.000155	0.000172	0.000116
E1668A	PCB-206	40186-72-9	mg/kg	0.0042	0.00379	0.00417	0.00455 J	0.00244
E1668A	PCB-207	52663-79-3	mg/kg	0.000559	0.000602	0.000711	0.000711	0.000376
E1668A	PCB-208	52663-77-1	mg/kg	0.0021	0.00199	0.00264	0.00234	0.000915
E1668A	PCB-209	2051-24-3	mg/kg	0.00296	0.00285	0.00295	0.00281	0.00115
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.98 J	1.13 J	1.27 J	1.32 J	0.645 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.17 J	1.37 J	1.51 J	1.59 J	0.821 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	4.13e-05	3.79e-05 J	3.79e-05	5.41e-05 J	3.38e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	4.97e-06 U	5.41e-06 J	5e-06 U	9.52e-07 U	4.88e-06 U
E1668A	PCB-2	2051-61-8	mg/kg	3.48e-06 U	3.38e-06 U	3.5e-06 U	6.67e-07 U	3.41e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	R	5.3e-06 U	5.49e-06 U	1.05e-06 U	5.37e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	3.4e-05 J	5.2e-05 J	4.63e-05	0.000234	2.96e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	3.98e-06 U	3.86e-06 U	4e-06 U	7.62e-07 U	3.9e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	3.48e-06 U	2.32e-05 J	1.75e-05	6.67e-07 U	1.23e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	3.98e-06 U	3.86e-06 U	4e-06 U	7.62e-07 U	3.9e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	6.75e-05 J	9.99e-05 J	4.31e-05 J	1.43e-06 U	4.42e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	3.68e-06 J	3.38e-06 U	3.5e-06 U	6.67e-07 U	3.41e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	6.46e-06 U	6.27e-06 U	6.49e-06 U	2.57e-05	6.34e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000244 J	0.000451 J	0.000309 J	3.24e-06 U	0.000266 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	5.1e-05	9.89e-05	7.3e-05	1.81e-06 U	5.06e-05
E1668A	PCB-14	34883-41-5	mg/kg	3.98e-06 U	3.86e-06 U	4e-06 U	7.62e-07 U	3.9e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00178 J	0.00379 J	0.00275 J	0.00126 J	0.00154 J
E1668A	PCB-16	38444-78-9	mg/kg	4.47e-06 U	3.45e-05 J	4.5e-06 U	3.09e-05	1.85e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000213 J	0.000197 J	4.5e-06 U	0.000314 J	9.78e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000546 J	0.000269 J	7.99e-06 U	0.000527 J	0.000158 J
E1668A	PCB-19	38444-73-4	mg/kg	1.12e-05	2.28e-05	4e-06 U	7.57e-05	1.13e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0478 J	0.137 J	0.0919 J	0.0401 J	0.0423 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000201 J	0.000405	0.000188	0.000199	0.000137
E1668A	PCB-22	38444-85-8	mg/kg	0.000383 J	0.000837	0.00021	0.000393 J	0.000242
E1668A	PCB-23	55720-44-0	mg/kg	3.48e-06 U	3.38e-06 U	3.5e-06 U	6.67e-07 U	3.41e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	4.97e-06 U	4.82e-06 U	5e-06 U	9.52e-07 U	4.88e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000235	0.000472	0.000177	0.000272	0.00016
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000404	0.000401	0.000278	0.000473	0.000245
E1668A	PCB-27	38444-76-7	mg/kg	0.00011	6.84e-05	5.94e-05	0.000182	5.11e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00213 J	0.00276 J	0.000837 J	0.00167 J	0.000859 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000411 J	0.00041 J	0.000219	0.000488 J	0.000231 J
E1668A	PCB-34	37680-68-5	mg/kg	4.1e-05	6.15e-05	7.22e-05	4.7e-05	3.51e-05
E1668A	PCB-35	37680-69-6	mg/kg	2.05e-05	4.39e-05	2.95e-05	8.57e-07 U	2.45e-05
E1668A	PCB-36	38444-87-0	mg/kg	8.58e-06 J	3.24e-05	1.6e-05	7.62e-07 U	1.52e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.0046 J	0.0106 J	0.00779 J	0.00376 J	0.00432 J
E1668A	PCB-38	53555-66-1	mg/kg	2.4e-05	9.53e-05	3.5e-06 U	6.67e-07 U	3.41e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	8.53e-05	0.000313	0.000196	8.63e-05	9.72e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00208	0.00164	0.00153	0.00228 J	0.00118
E1668A	PCB-41	52663-59-9	mg/kg	2.09e-05 U	2.03e-05 U	2.1e-05 U	4e-06 U	2.05e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000956	0.000804	0.000327	0.000781 J	0.000292
E1668A	PCB-43	70362-46-8	mg/kg	0.000113	9.31e-05	0.000115	0.000105	5.12e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0593 J	0.0898 J	0.109 J	0.062 J	0.0444 J
E1668A	PCB-45	70362-45-7	mg/kg	2.15e-05 J	2.25e-05 J	1.26e-05 J	2.68e-05	1.07e-05 U
E1668A	PCB-46	41464-47-5	mg/kg	2.22e-05	1.95e-05	1.26e-05	2.64e-05	1.34e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000226	2e-04	6.99e-06 U	0.000245	9.36e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0031	0.00151	1.3e-05 U	0.00199 J	0.000652
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000276	0.000113	7.26e-05	0.000218	7.07e-05
E1668A	PCB-51	68194-04-7	mg/kg	0.000132	0.000106	7.4e-05	0.00015	6.03e-05
E1668A	PCB-52	35693-99-3	mg/kg	0.00447 J	0.0013	7.49e-06 U	0.00217 J	0.000818

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.96e-06 U	6.75e-06 U	6.99e-06 U	1.33e-06 U	6.83e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	5.96e-06 U	5.79e-06 U	0.000226	1.14e-06 U	9.2e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.000827	0.00162	0.000436	0.00079 J	0.000502
E1668A	PCB-57	70424-67-8	mg/kg	4.01e-05	4.63e-05	4.05e-05	4.4e-05	3.45e-05
E1668A	PCB-58	41464-49-7	mg/kg	2.96e-05	0.000149	5.48e-05	3.71e-05	3.34e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00448	0.00703	0.00655	0.00372 J	0.00326
E1668A	PCB-60	33025-41-1	mg/kg	0.00789 J	0.0189 J	0.0126 J	0.00641 J	0.00841 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0571 J	0.12 J	0.1 J	0.0588 J	0.0479 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000911	0.00245	0.00131	0.000942 J	0.000848
E1668A	PCB-64	52663-58-8	mg/kg	0.00237	0.00189	0.000643	0.00163 J	0.000632
E1668A	PCB-66	32598-10-0	mg/kg	0.0909 J	0.175 J	0.135 J	0.0863 J	0.0699 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000214	0.000386	0.000261	0.000253	0.000201
E1668A	PCB-68	73575-52-7	mg/kg	0.000504	0.00152	0.000917	0.000584 J	0.000599
E1668A	PCB-72	41464-42-0	mg/kg	0.000255	0.000393	0.000314	0.000274	0.000241
E1668A	PCB-73	74338-23-1	mg/kg	5.27e-05	0.000114	6.75e-05	8.46e-05	5.33e-05
E1668A	PCB-77	32598-13-3	mg/kg		0.00949 J	0.0072 J		0.00416 J
E1668A	PCB-78	70362-49-1	mg/kg	7.95e-06 U	7.71e-06 U	7.99e-06 U	1.52e-06 U	7.8e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000216	0.000511	0.000412	0.000191	0.000202
E1668A	PCB-80	33284-52-5	mg/kg	1.46e-05 J	3.46e-05	2.41e-05 J	1.39e-05	1.48e-05 J
E1668A	PCB-81	70362-50-4	mg/kg	0.000194	0.000446	0.000343	0.000184	0.000199
E1668A	PCB-82	52663-62-4	mg/kg	0.000193	7.23e-06 U	7.49e-06 U	9.38e-05	0.000103
E1668A	PCB-83	60145-20-2	mg/kg	0.000136	1.4e-05 U	1.45e-05 U	2.76e-06 U	1.41e-05 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000269	0.000492	0.000209	0.000205	0.000234
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0187 J	0.0676 J	0.0264 J	0.0167 J	0.0278 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00942	0.0289 J	0.0113	0.00801 J	0.0129
E1668A	PCB-88	55215-17-3	mg/kg	1.09e-05 U	1.06e-05 U	1.1e-05 U	2.1e-06 U	1.07e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	2.22e-05 J	1.99e-05 J	6.49e-06 U	1.16e-05	1.08e-05 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00888 J	0.0132 J	0.00482	0.00661 J	0.00611
E1668A	PCB-91	68194-05-8	mg/kg	0.00108	0.0015	0.000617	0.000899 J	0.000815
E1668A	PCB-92	52663-61-3	mg/kg	0.00146	0.00149	0.000579	0.0011 J	0.00094
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00413	0.0137 J	0.00537	0.00443 J	0.00815 J
E1668A	PCB-94	73575-55-0	mg/kg	0.000124	0.000344	0.000161	0.000163	0.000206
E1668A	PCB-95	38379-99-6	mg/kg	R	0.00121	0.00105		0.00064
E1668A	PCB-96	73575-54-9	mg/kg	7.46e-06 U	7.23e-06 U	7.49e-06 U	2.63e-06 J	7.32e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000176	0.000335	0.00013	0.000198	0.000182
E1668A	PCB-99	38380-01-7	mg/kg	0.0937 J	0.296 J	0.178 J	0.0912 J	0.127 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000104	0.000113	2.75e-05	7.02e-05	4.7e-05
E1668A	PCB-104	56558-16-8	mg/kg	6.96e-06 U	7.38e-06 J	6.99e-06 U	6.95e-06	6.83e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0254 J	0.0529 J	0.0438 J	0.0234 J	0.0209 J
E1668A	PCB-106	70424-69-0	mg/kg	8.45e-06 U	8.2e-06 U	8.49e-06 U	1.62e-06 U	8.29e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00467 J	0.0332 J	0.00824 J	0.00546 J	0.0123 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000259	0.000885	0.000195	0.000236	0.000378
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00894 J	0.0198 J	0.00582	0.00665 J	0.00764 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000157	0.000586	0.000243	0.000154	0.000291
E1668A	PCB-112	74472-36-9	mg/kg	0.000101	6.75e-06 U	6.99e-06 U	1.33e-06 U	6.83e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00213	0.00419 J	0.00346 J	0.0022 J	0.00192 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.106 J	R	0.191 J	0.131 J	0.1 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000852	0.00322 J	0.00141	0.000796 J	0.00146
E1668A	PCB-121	56558-18-0	mg/kg	0.000102	0.000346	0.000146	9.82e-05	0.000188
E1668A	PCB-122	76842-07-4	mg/kg	3.57e-05	0.000241	5.99e-06 U	2.24e-05	5.85e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.0022	0.00375 J	0.00323 J	0.00191 J	0.00172 J
E1668A	PCB-126	57465-28-8	mg/kg	0.000242	0.00043 J	0.000306	0.000221	0.000174 J
E1668A	PCB-127	39635-33-1	mg/kg	0.000103	0.000265 J	0.000236	9.36e-05	0.000125 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00979 J	0.0175 J	0.0157 J	0.00885 J	0.0082 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0902 J	0.142 J	0.202 J	0.0972 J	0.0715 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00147	0.00246	0.00187	0.00161 J	0.00121
E1668A	PCB-131	61798-70-7	mg/kg	7.47e-05	0.000101	8.79e-05	6.89e-05	3.77e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.00061	0.000292	7.99e-06 U	0.000254	0.000103
E1668A	PCB-133	35694-04-3	mg/kg	0.00198	0.00437 J	0.00376 J	0.00226 J	0.00266
E1668A	PCB-134	52704-70-8	mg/kg	0.000106	9.02e-05	4.96e-05 J	8.39e-05	3.44e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00199	0.000999	0.000891	0.00127 J	0.000566
E1668A	PCB-136	38411-22-2	mg/kg	0.000138	8.66e-05	9.47e-05	8.61e-05	3.63e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00482 J	0.00803 J	0.00696 J	0.00449 J	0.00399 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00187	0.00365	0.00324	0.00181 J	0.00166
E1668A	PCB-141	52712-04-6	mg/kg	0.000653	0.000622	0.000394	0.000583 J	0.000317
E1668A	PCB-142	41411-61-4	mg/kg	8.45e-06 U	8.2e-06 U	8.49e-06 U	1.62e-06 U	8.29e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.64e-05 U	1.59e-05 U	1.65e-05 U	3.14e-06 U	1.61e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000294	7.23e-06 U	0.000246	0.000205	8.37e-05
E1668A	PCB-145	74472-40-5	mg/kg	7.95e-06 U	7.71e-06 U	7.99e-06 U	1.52e-06 U	7.8e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.0323 J	0.0318 J		0.0167 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00654 J	0.00747 J	0.00592	0.00593 J	0.00308
E1668A	PCB-148	74472-41-6	mg/kg	0.000546	0.000746	0.000869	0.000458	0.000459
E1668A	PCB-150	68194-08-1	mg/kg	1.91e-05 J	1.39e-05 J	1.06e-05 J	1.19e-05	7.32e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	6.96e-06 U	6.75e-06 U	6.99e-06 U	3.85e-06 J	6.83e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.145 J	0.205 J	0.261 J	0.164 J	0.116 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00451 J	0.00677 J	0.00737 J	0.00373 J	0.00371 J
E1668A	PCB-155	33979-03-2	mg/kg	0.00107	0.00203	0.00152	0.00142 J	0.00135
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00885 J	0.0195 J	0.0143 J	0.00935 J	0.00884 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00917 J	0.0162 J	0.0142 J	0.00882 J	0.00776 J
E1668A	PCB-159	39635-35-3	mg/kg	2.63e-05	6.23e-05	6.22e-05	2.43e-05	3.85e-05
E1668A	PCB-160	41411-62-5	mg/kg	3.13e-05 U	3.04e-05 U	3.15e-05 U	6e-06 U	3.07e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	1.78e-05 J	6.27e-06 U	6.49e-06 U	1.24e-06 U	6.34e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000451	0.00119	0.000855	1.24e-06 U	0.000619
E1668A	PCB-164	74472-45-0	mg/kg	0.000355	0.000376	0.00026	0.000381	0.000174
E1668A	PCB-165	74472-46-1	mg/kg	0.00011	R	0.000218	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.00381 J	0.00774 J	0.00601 J	0.00385 J	0.00365 J
E1668A	PCB-169	32774-16-6	mg/kg	7.99e-06 J	7.23e-06 U	7.49e-06 U	1.43e-06 U	7.32e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00996 J	0.0169 J	0.015 J	0.0102 J	0.00897 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R		0.00748 J		R
E1668A	PCB-172	52663-74-8	mg/kg	0.00249	0.00547 J	0.0046 J	0.00293 J	0.00243
E1668A	PCB-174	38411-25-5	mg/kg	R	0.000731	0.000363		0.000274
E1668A	PCB-175	40186-70-7	mg/kg	0.000901	0.00172	0.00134		0.000814

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000121	0.000117	9.55e-05	1e-04	5.13e-05
E1668A	PCB-177	52663-70-4	mg/kg	R		0.00373 J		
E1668A	PCB-178	52663-67-9	mg/kg	0.0067 J	0.0117 J	0.0105 J	0.007 J	0.00619 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000332	0.000209	0.000119	0.000189	8.54e-05
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0456 J	0.0816 J	0.0818 J	0.055 J	0.0399 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	0.000329	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	0.000345	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.0152 J	0.0363 J	0.0274 J	0.0158 J	0.017 J
E1668A	PCB-184	74472-48-3	mg/kg	0.00017	0.000342	0.000302	0.000138	0.000166
E1668A	PCB-186	74472-49-4	mg/kg	7.46e-06 U	7.23e-06 U	7.49e-06 U	1.43e-06 U	7.32e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			0.0585 J		
E1668A	PCB-188	74487-85-7	mg/kg	0.000261	0.000518	0.000459	0.00032	0.00032
E1668A	PCB-189	39635-31-9	mg/kg	0.000626	0.00148	0.00101	0.000659 J	0.000669
E1668A	PCB-190	41411-64-7	mg/kg	0.00303 J	0.00285	0.00385 J	0.00324 J	0.00207
E1668A	PCB-191	74472-50-7	mg/kg	0.000677	0.00153	0.00105	0.000747 J	0.000679
E1668A	PCB-192	74472-51-8	mg/kg	1.02e-05 J	2.11e-05 J	1.81e-05 J	8.13e-06	6.34e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00555 J	0.00962 J	0.00919 J	0.00641 J	0.00527 J
E1668A	PCB-195	52663-78-2	mg/kg	0.0014	0.00238	0.00243	0.00141 J	0.00134
E1668A	PCB-196	42740-50-1	mg/kg	0.00507 J	0.00706 J	0.00804 J	0.00528 J	0.00449 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	0.00108	0.000989	R	0.000574
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0116 J	0.0172 J	0.0194 J	0.0125 J	0.0106 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00163	0.00345	0.00293	0.0017 J	0.00198
E1668A	PCB-202	2136-99-4	mg/kg	0.00409	0.00781 J	0.0068 J	0.00462 J	0.00472 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00651 J	0.0086 J	0.0107 J	0.00608 J	0.00509 J
E1668A	PCB-204	74472-52-9	mg/kg	2.15e-05 J	4.88e-05	5.23e-05	1.58e-05	2.51e-05
E1668A	PCB-205	74472-53-0	mg/kg	9.94e-05	2e-04	0.000169	9.61e-05	0.000103
E1668A	PCB-206	40186-72-9	mg/kg	0.00418	0.0059 J	0.00645 J	0.00445 J	0.00442 J
E1668A	PCB-207	52663-79-3	mg/kg	0.00057	0.000952	0.00098	0.000609	0.000643
E1668A	PCB-208	52663-77-1	mg/kg	0.00222	0.00371	0.004	0.00242 J	0.00238
E1668A	PCB-209	2051-24-3	mg/kg	0.00254	0.00449 J	0.00449	0.00299 J	0.00308
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.862 J	1.75 J	1.57 J	0.871 J	0.803 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.01 J	1.85 J	1.84 J	1.04 J	0.945 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	2.9e-05	4.69e-05 J	3.94e-05	2.73e-05	2.21e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	4.92e-06 U	1e-06 U	9.94e-07 U	5.56e-06 J	9.94e-07 U
E1668A	PCB-2	2051-61-8	mg/kg	3.44e-06 U	1.89e-06 J	6.96e-07 U	3.39e-06 U	2.06e-06
E1668A	PCB-3	2051-62-9	mg/kg	R	1.1e-06 U	4.4e-06 J	5.33e-06 U	1.09e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	4.29e-05 J	5.73e-05 J	4.78e-05 J	4.26e-05 J	4.73e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	3.94e-06 U	8e-07 U	7.95e-07 U	3.88e-06 U	7.95e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	1.68e-05 J	3.18e-05 J	6.96e-07 U	3.39e-06 U	9.15e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	3.94e-06 U	3.22e-06	2.63e-06	3.88e-06 U	2.78e-06
E1668A	PCB-8	34883-43-7	mg/kg	3.79e-05 J	9.62e-05 J	9.35e-05	0.000102 J	0.000132
E1668A	PCB-9	34883-39-1	mg/kg	3.44e-06 U	4.05e-06	3.99e-06	3.39e-06 U	5.89e-06
E1668A	PCB-10	33146-45-1	mg/kg	6.4e-06 U	3.12e-06 J	3.12e-06 J	6.3e-06 U	1.29e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000337 J	0.000438 J	0.000425 J	0.00031 J	0.000316 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	5.67e-05	7.83e-05	8.87e-05	0.000141 J	0.000127
E1668A	PCB-14	34883-41-5	mg/kg	3.94e-06 U	8e-07 U	7.95e-07 U	3.88e-06 U	7.95e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00251 J	0.00319 J	0.00265 J	0.00359 J	0.00212 J
E1668A	PCB-16	38444-78-9	mg/kg	2.06e-05 J	9e-07 U	8.95e-07 U	4.36e-06 U	3.16e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000103 J	0.000273	0.000183 J	0.000182 J	0.000356 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000256 J	0.000362	0.000347 J	0.000351 J	0.000552 J
E1668A	PCB-19	38444-73-4	mg/kg	1.92e-05	2.84e-05	1.57e-05	1.7e-05 J	1.77e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.081 J	0.0992 J	0.0837 J	0.0976 J	0.0818 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000158	0.000411 J	0.000256	0.000313 J	0.000449
E1668A	PCB-22	38444-85-8	mg/kg	0.000238	0.000446 J	0.000573 J	0.000626 J	0.000549 J
E1668A	PCB-23	55720-44-0	mg/kg	3.44e-06 U	7e-07 U	6.96e-07 U	3.39e-06 U	6.96e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	4.92e-06 U	1e-06 U	9.94e-07 U	4.85e-06 U	9.94e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000206	0.000303 J	0.000436 J	0.000648 J	0.000671 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000316	0.000348 J	0.000524	0.000573 J	0.000948 J
E1668A	PCB-27	38444-76-7	mg/kg	5.5e-05	8.08e-05	9.66e-05	6e-05 J	0.000112
E1668A	PCB-31	16606-02-3	mg/kg	0.00132 J	0.0016 J	0.00256 J	0.00355 J	0.00213 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000227 J	0.000443 J	0.000379 J	0.000364 J	0.000737 J
E1668A	PCB-34	37680-68-5	mg/kg	3.87e-05	5.85e-05	3.97e-05	9.93e-05 J	0.000128
E1668A	PCB-35	37680-69-6	mg/kg	3.64e-05	4.5e-05	3.83e-05	5.59e-05 J	4.87e-05
E1668A	PCB-36	38444-87-0	mg/kg	1.76e-05	2.36e-05	2.31e-05	2.35e-05 J	1.89e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.00763 J	0.00821 J	0.00737 J	0.00924 J	0.00503 J
E1668A	PCB-38	53555-66-1	mg/kg	3.44e-06 U	3.06e-05	6.96e-07 U	4.7e-05 J	6.96e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	0.000149	0.000159	0.000177	0.000263 J	0.000235
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00128	0.00162 J	0.0017 J	0.00258 J	0.00355 J
E1668A	PCB-41	52663-59-9	mg/kg	2.07e-05 U	2.22e-05	7.67e-06 J	2.04e-05 U	1.16e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.00039	0.000588	0.00105 J	0.00147 J	0.00107 J
E1668A	PCB-43	70362-46-8	mg/kg	0.000128	9.03e-05	9.63e-05	0.000179 J	0.000213
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0719 J	0.065 J	0.074 J	0.0971 J	0.0838 J
E1668A	PCB-45	70362-45-7	mg/kg	1.16e-05 J	2.06e-05	1.81e-05	1.12e-05 J	1.68e-05
E1668A	PCB-46	41464-47-5	mg/kg	1.44e-05	2.17e-05	1.58e-05	1.38e-05 J	2.36e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000191	0.000264	0.000206	0.000243 J	0.000405
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000786	0.0014 J	0.00219 J	0.00241 J	0.00221 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000106	0.000139	0.000153	0.000114 J	0.000193
E1668A	PCB-51	68194-04-7	mg/kg	0.000103	0.000147	0.000121	0.000119 J	0.000163
E1668A	PCB-52	35693-99-3	mg/kg	0.00113	0.00135 J	0.00217 J	0.00177 J	0.00252 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.89e-06 U	2.35e-06 J	1.39e-06 U	6.79e-06 U	2.35e-06 J
E1668A	PCB-55	74338-24-2	mg/kg	0.000148	1.2e-06 U	0.000149	5.82e-06 U	0.000151
E1668A	PCB-56	41464-43-1	mg/kg	0.000553	0.000975 J	0.00126 J	0.00173 J	0.00179 J
E1668A	PCB-57	70424-67-8	mg/kg	3.65e-05	3.52e-05	4.68e-05	5.49e-05 J	8.2e-05
E1668A	PCB-58	41464-49-7	mg/kg	2.35e-05 J	6.49e-05	5.07e-05	8.15e-05 J	0.000124
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00568	0.00488 J	0.00534 J	0.00776 J	0.00645 J
E1668A	PCB-60	33025-41-1	mg/kg	0.0151 J	0.0122 J	0.0125 J	0.0142 J	0.0132 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0874 J	0.0968 J	0.0927 J	0.102 J	0.106 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00113	0.00102 J	0.00175 J	0.00198 J	0.00204 J
E1668A	PCB-64	52663-58-8	mg/kg	0.00101	0.00119 J	0.00209 J	0.00383 J	0.00188 J
E1668A	PCB-66	32598-10-0	mg/kg	0.126 J	0.171 J	0.148 J	0.173 J	0.178 J
E1668A	PCB-67	73575-53-8	mg/kg	0.00028	0.00024	0.00034	0.000403 J	0.00038
E1668A	PCB-68	73575-52-7	mg/kg	0.000867	0.000798 J	0.00101 J	0.0012 J	0.0012 J
E1668A	PCB-72	41464-42-0	mg/kg	0.000277	0.000223	0.00034	0.000475 J	0.000495
E1668A	PCB-73	74338-23-1	mg/kg	4.42e-05	7.1e-05	3.88e-05	7.7e-05 J	9.07e-05
E1668A	PCB-77	32598-13-3	mg/kg			0.00677 J		
E1668A	PCB-78	70362-49-1	mg/kg	7.87e-06 U	1.6e-06 U	1.59e-06 U	7.76e-06 U	1.59e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000366	0.000294	0.000304	0.000407 J	0.000387
E1668A	PCB-80	33284-52-5	mg/kg	2.67e-05	2.37e-05	2.44e-05	2.59e-05 J	2.94e-05
E1668A	PCB-81	70362-50-4	mg/kg	0.000361	0.000298	0.000292	0.000383 J	0.000284
E1668A	PCB-82	52663-62-4	mg/kg	5.04e-05	0.000119	0.000148	7.27e-06 U	6.19e-05
E1668A	PCB-83	60145-20-2	mg/kg	4.44e-05 J	6.34e-05	2.88e-06 U	0.000101 J	2.88e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000207	0.000236	0.000194	0.000225 J	0.00024
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0218 J	0.018 J	0.0215 J	0.0293 J	0.0211 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00924	0.00879 J	0.0103 J	0.0125 J	0.00948 J
E1668A	PCB-88	55215-17-3	mg/kg	1.08e-05 U	2.2e-06 U	2.19e-06 U	1.07e-05 U	2.19e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	6.4e-06 U	1.12e-05	8.74e-06	8.93e-06 J	1.29e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00407	0.00454 J	0.00765 J	0.00922 J	0.00592 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000536	0.000555	0.00091 J	0.00135 J	0.00094 J
E1668A	PCB-92	52663-61-3	mg/kg	0.000569	0.000578	0.00106 J	0.00104 J	0.000778 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00445	0.00408 J	0.00545 J	0.00557 J	0.004 J
E1668A	PCB-94	73575-55-0	mg/kg	0.00011	0.000114	0.000111	0.000193 J	0.000176
E1668A	PCB-95	38379-99-6	mg/kg	0.00137	0.00116 J	0.00133 J	R	0.00191 J
E1668A	PCB-96	73575-54-9	mg/kg	7.38e-06 U	2.69e-06 J	1.65e-06 J	7.27e-06 U	1.49e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000108	0.000107	0.000172	0.000228 J	0.000209
E1668A	PCB-99	38380-01-7	mg/kg	0.0954 J	0.0988 J	0.106 J	0.138 J	0.108 J
E1668A	PCB-103	60145-21-3	mg/kg	3.7e-05	4.25e-05	8e-05	9.43e-05 J	3.39e-05
E1668A	PCB-104	56558-16-8	mg/kg	7.12e-06 J	6.53e-06	7.29e-06	1.21e-05 J	1.39e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0444 J	0.0419 J	0.0368 J	0.05 J	0.0345 J
E1668A	PCB-106	70424-69-0	mg/kg	8.37e-06 U	1.7e-06 U	1.69e-06 U	8.24e-06 U	1.69e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.0102 J	0.00794 J	0.00829 J	0.00959 J	0.00835 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000236	0.000214	0.000323	1.41e-05 U	0.000279
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00567	0.00551 J	0.00793 J	0.0108 J	0.00645 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000205	0.000175	0.000185	0.000209 J	0.000173
E1668A	PCB-112	74472-36-9	mg/kg	5.81e-05	0.000128	1.39e-06 U	6.79e-06 U	1.39e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00358 J	0.00324 J	0.00314 J	0.00397 J	0.00289 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.225 J	0.214 J	0.175 J	0.208 J	0.164 J
E1668A	PCB-120	68194-12-7	mg/kg	0.00113	0.000942 J	0.00102 J	0.00119 J	0.000968 J
E1668A	PCB-121	56558-18-0	mg/kg	0.000111	0.000109	0.000129	0.000144 J	8.91e-05
E1668A	PCB-122	76842-07-4	mg/kg	5.91e-06 U	1.2e-06 U	5.53e-05	7.98e-05 J	1.19e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00371 J	0.00358 J	0.00279 J	0.00414 J	0.00272 J
E1668A	PCB-126	57465-28-8	mg/kg	0.000425	0.000406	0.00036	0.000494 J	0.000355
E1668A	PCB-127	39635-33-1	mg/kg	0.000209	0.000115	0.00012	0.00013 J	0.000136
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0148 J	0.0102 J	0.0129 J	0.0145 J	0.0121 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.126 J	0.1 J	0.123 J	0.128 J	0.108 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00166	0.0014 J	0.00214 J	0.0021 J	
E1668A	PCB-131	61798-70-7	mg/kg	R	5.35e-05	7.19e-05	9.75e-05 J	R
E1668A	PCB-132	38380-05-1	mg/kg	0.000137	0.000227	0.000322	0.000214 J	R
E1668A	PCB-133	35694-04-3	mg/kg	0.00392 J	0.00321 J	0.0031 J	0.00286 J	0.00331 J
E1668A	PCB-134	52704-70-8	mg/kg	4.38e-05 J	5.29e-05	9.61e-05	5.02e-05 J	R
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000831	0.000791	0.00117	0.000958 J	0.000666
E1668A	PCB-136	38411-22-2	mg/kg	9.95e-05	0.000103	8.75e-05	7.63e-05 J	5.06e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.007 J	0.0051 J	0.00625 J	0.00709 J	
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00334	0.00209 J	0.00245 J	0.00267 J	0.00234 J
E1668A	PCB-141	52712-04-6	mg/kg	0.000476	0.000474	0.000711 J	0.00062 J	0.000702 J
E1668A	PCB-142	41411-61-4	mg/kg	8.37e-06 U	1.7e-06 U	1.69e-06 U	8.24e-06 U	R
E1668A	PCB-143	68194-15-0	mg/kg	1.62e-05 U	3.3e-06 U	5.61e-06 J	1.6e-05 U	R
E1668A	PCB-144	68194-14-9	mg/kg	0.000229	0.000155	0.000192	0.000282 J	R
E1668A	PCB-145	74472-40-5	mg/kg	7.87e-06 U	1.6e-06 U	1.59e-06 U	7.76e-06 U	1.59e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0269 J		0.0241 J		
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00613 J	0.00396 J	0.00709 J	0.00761 J	0.00608 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000667	0.00055	0.000554	0.000565 J	0.000333
E1668A	PCB-150	68194-08-1	mg/kg	7.69e-06 J	1.06e-05	1.47e-05	1.84e-05 J	7.57e-06
E1668A	PCB-152	68194-09-2	mg/kg	6.89e-06 U	2.98e-06 J	3.94e-06 J	6.79e-06 U	4.38e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.193 J	0.171 J	0.191 J	0.202 J	0.165 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00614 J	0.00446 J	0.00472 J	0.0056 J	
E1668A	PCB-155	33979-03-2	mg/kg	0.00152	0.00128 J	0.00204 J	0.00195 J	0.0013 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.017 J	0.0134 J	0.0129 J	0.0156 J	0.0127 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0141 J	0.00987 J	0.0119 J	0.013 J	0.0105 J
E1668A	PCB-159	39635-35-3	mg/kg	7.73e-05	5.83e-05	6.23e-05	7.2e-05 J	5.69e-05
E1668A	PCB-160	41411-62-5	mg/kg	3.1e-05 U	6.3e-06 U	6.26e-06 U	3.06e-05 U	6.26e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	6.4e-06 U	1.95e-05	1.29e-06 U	2.44e-05 J	R
E1668A	PCB-162	39635-34-2	mg/kg	0.00087	0.000653 J	0.000767 J	0.000711 J	0.000671 J
E1668A	PCB-164	74472-45-0	mg/kg	0.000214	0.000222	0.000458	0.000444 J	0.00033
E1668A	PCB-165	74472-46-1	mg/kg	0.000182	R	0.000136	0.000126 J	R
E1668A	PCB-167	52663-72-6	mg/kg	0.00687 J	0.0059 J	0.00568 J	0.00667 J	0.00496 J
E1668A	PCB-169	32774-16-6	mg/kg	7.38e-06 U	1.72e-05	1.49e-06 U	2.43e-05 J	1.49e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0108 J	0.0111 J	0.0133 J	0.0177 J	0.0191 J
E1668A	PCB-171/173	PCB-171/173	mg/kg					
E1668A	PCB-172	52663-74-8	mg/kg	0.00409 J	0.00311 J	0.0034 J	0.00419 J	0.00437 J
E1668A	PCB-174	38411-25-5	mg/kg	R	0.000427	0.000678 J	R	R
E1668A	PCB-175	40186-70-7	mg/kg	R	0.00104 J	0.00112 J	0.00123 J	

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C006	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002
			Sample Date	08/26/15	09/01/15	08/30/15	08/30/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000113	7.94e-05	0.000108	0.000123 J	9.59e-05
E1668A	PCB-177	52663-70-4	mg/kg		0.0029 J		0.00414 J	
E1668A	PCB-178	52663-67-9	mg/kg	0.0102 J	0.00822 J	0.00748 J	0.00813 J	
E1668A	PCB-179	52663-64-6	mg/kg	0.000113	0.000138	2e-04	0.000118 J	8.16e-05
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0567 J	0.0564 J	0.0642 J	0.0762 J	0.0518 J
E1668A	PCB-181	74472-47-2	mg/kg	R	0.000231	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	0.000203	0.000239	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.0177 J	0.0217 J		
E1668A	PCB-184	74472-48-3	mg/kg	0.000293	0.000188	0.000188	0.000211 J	0.000175
E1668A	PCB-186	74472-49-4	mg/kg	7.38e-06 U	1.5e-06 U	1.49e-06 U	7.27e-06 U	R
E1668A	PCB-187	52663-68-0	mg/kg		0.0447 J	0.0492 J	0.051 J	
E1668A	PCB-188	74487-85-7	mg/kg	0.00039	0.00039	0.000396	0.000344 J	0.000329
E1668A	PCB-189	39635-31-9	mg/kg	0.00121	0.000932 J	0.000905 J	0.00118 J	0.000907 J
E1668A	PCB-190	41411-64-7	mg/kg	0.00196	0.00382 J	0.00418 J	0.00502 J	0.00534 J
E1668A	PCB-191	74472-50-7	mg/kg	0.00107	0.000847 J	0.000934 J	0.00108 J	0.000905 J
E1668A	PCB-192	74472-51-8	mg/kg	1.48e-05 J	1.2e-05	1.32e-05	2.09e-05 J	2.22e-05
E1668A	PCB-194	35694-08-7	mg/kg	0.00756 J	0.007 J	0.00828 J	0.0115 J	0.00979 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00161	0.00144 J	0.0019 J	0.00292 J	0.00229 J
E1668A	PCB-196	42740-50-1	mg/kg	0.00502 J	0.00576 J	0.00611 J	0.00855 J	0.00595 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000893	0.000654	0.000645	0.000822 J	R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0116 J	0.014 J	0.0143 J	0.0194 J	0.0164 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00267	0.00212 J	0.00206 J	0.00249 J	0.00178 J
E1668A	PCB-202	2136-99-4	mg/kg	0.00592 J	0.00593 J	0.00547 J	0.00573 J	0.00503 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00625 J	0.00731 J	0.00724 J	0.0121 J	0.00678 J
E1668A	PCB-204	74472-52-9	mg/kg	3.74e-05	2.2e-05	2.29e-05	3.44e-05 J	2.28e-05
E1668A	PCB-205	74472-53-0	mg/kg	0.000141	9.86e-05	0.000127	0.000261 J	0.000154
E1668A	PCB-206	40186-72-9	mg/kg	0.00454 J	0.00467 J	0.00526 J	0.00741 J	0.00523 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000778	0.000671	0.000803	0.000943 J	0.00077
E1668A	PCB-208	52663-77-1	mg/kg	0.00296	0.00267 J	0.00294 J	0.00326 J	0.00283 J
E1668A	PCB-209	2051-24-3	mg/kg	0.00341	0.00315 J	0.00325 J	0.00401 J	
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	1.11 J	1.15 J	1.24 J	1.39 J	1.12 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.42 J	1.44 J	1.49 J	1.68 J	1.35 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	5.18e-05	4.97e-05	4.39e-05	5.89e-05 J	4.23e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	5.25e-06 J	6.15e-06 J	4.96e-06 U	4.92e-06 U	5.44e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	3.36e-06 U	3.49e-06 U	3.47e-06 U	3.44e-06 U	6.36e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	R	5.48e-06 U	R	5.41e-06 U	4.97e-05 J
E1668A	PCB-4	13029-08-8	mg/kg	3.96e-05	6.47e-06 U	2.6e-05 J	3.26e-05	0.000211 J
E1668A	PCB-5	16605-91-7	mg/kg	3.84e-06 U	3.98e-06 U	3.96e-06 U	3.93e-06 U	7.27e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	2.72e-05	3.77e-05 J	3.47e-06 U	1.5e-05	7.5e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	3.84e-06 U	3.98e-06 U	3.96e-06 U	3.93e-06 U	7.27e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	8.7e-05 J	0.000119 J	7.18e-05 J	7.37e-06 U	0.00028 J
E1668A	PCB-9	34883-39-1	mg/kg	3.36e-06 U	3.49e-06 U	3.47e-06 U	3.44e-06 U	6.36e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	6.24e-06 U	6.47e-06 U	6.44e-06 U	6.39e-06 U	1.18e-05 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000348 J	0.000257	0.000337 J	0.000271 J	0.000833 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	0.000164	7.75e-05	0.000103	0.000104	0.000208
E1668A	PCB-14	34883-41-5	mg/kg	3.84e-06 U	3.98e-06 U	3.96e-06 U	3.93e-06 U	7.27e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00329 J	0.00221 J	0.00335 J	0.00237 J	0.00612 J
E1668A	PCB-16	38444-78-9	mg/kg	4.32e-06 U	4.48e-06 U	1.75e-05 J	2.46e-05	6.31e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	0.00014 J	0.00021	0.000108 J	0.000112	0.000248 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000229	3e-04	0.000178 J	0.000159	0.000451 J
E1668A	PCB-19	38444-73-4	mg/kg	1.21e-05	1.55e-05	1.1e-05	1.61e-05	4.36e-05 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.115 J	0.0674 J	0.107 J	0.0883 J	0.157 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000315	0.00033 J	0.000245	0.000197	0.000453 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000525	0.000391 J	0.000316	0.000431	0.000534 J
E1668A	PCB-23	55720-44-0	mg/kg	3.36e-06 U	3.49e-06 U	3.47e-06 U	3.44e-06 U	6.36e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	4.8e-06 U	4.98e-06 U	4.96e-06 U	4.92e-06 U	9.09e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000572	0.000214	0.000286	0.000311	0.000504
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000443	0.000281 J	0.000326	0.000194	0.000659
E1668A	PCB-27	38444-76-7	mg/kg	4.7e-05	7.42e-05	2.76e-05	3.65e-05	8.5e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00214 J	0.00106 J	0.00129 J	0.00122	0.00228 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000282	0.000338 J	0.000226 J	0.000222	0.000538 J
E1668A	PCB-34	37680-68-5	mg/kg	9.32e-05	6.64e-05	3.13e-05	4.93e-05	0.000119
E1668A	PCB-35	37680-69-6	mg/kg	6.01e-05	3.02e-05	4.44e-05	3.89e-05	6.29e-05
E1668A	PCB-36	38444-87-0	mg/kg	3.11e-05	1.32e-05	1.49e-05	1.86e-05	3.65e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.00849 J	0.00615 J	0.00911 J	0.00744 J	0.013 J
E1668A	PCB-38	53555-66-1	mg/kg	3.36e-06 U	3.49e-06 U	3.47e-06 U	3.44e-06 U	6.36e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	0.000323	0.000133	0.000157	0.000216	0.000394
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00201	0.00196	0.00094	0.00117	0.00224
E1668A	PCB-41	52663-59-9	mg/kg	2.02e-05 U	2.09e-05 U	2.08e-05 U	2.06e-05 U	3.82e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000797	0.000456	0.000385	0.000411	0.000678
E1668A	PCB-43	70362-46-8	mg/kg	0.000155	0.000109	4.72e-05	6.61e-05	0.000133
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0829 J	0.0788 J	0.0689 J	0.0785 J	0.119 J
E1668A	PCB-45	70362-45-7	mg/kg	1.63e-05 J	1.1e-05 U	1.09e-05 U	1.21e-05 J	2e-05 U
E1668A	PCB-46	41464-47-5	mg/kg	1.51e-05	1.25e-05	9.81e-06 J	1.13e-05	2.14e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000202	0.00018	0.000161	0.00012	0.000243
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00136	0.000849 J	0.000862	0.000684	0.00136
E1668A	PCB-50/53	PCB-50/53	mg/kg	9.54e-05	8.92e-05	6.78e-05	6.64e-05	0.00014
E1668A	PCB-51	68194-04-7	mg/kg	9.16e-05	0.000111	9.75e-05	1e-04	0.000152
E1668A	PCB-52	35693-99-3	mg/kg	0.00112 J	0.00104	0.000788	0.000605	0.00169 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.72e-06 U	6.97e-06 U	6.94e-06 U	6.88e-06 U	1.27e-05 U
E1668A	PCB-55	74338-24-2	mg/kg	5.76e-06 U	0.000113	0.000158	7.52e-05	0.000366
E1668A	PCB-56	41464-43-1	mg/kg	0.00139	0.00076	0.000693	0.000901	0.00094
E1668A	PCB-57	70424-67-8	mg/kg	5.25e-05	4.1e-05	2.64e-05	2.51e-05	5.62e-05
E1668A	PCB-58	41464-49-7	mg/kg	0.000104	8.13e-05	3.91e-05	5.39e-05	0.000144
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00701	0.00594	0.00544	0.00504	0.00943
E1668A	PCB-60	33025-41-1	mg/kg	0.015 J	0.0126 J	0.0159 J	0.0118 J	0.02 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.112 J	0.0866 J	0.101 J	0.1 J	0.148 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00239	0.00114	0.00147	0.0015	0.00285
E1668A	PCB-64	52663-58-8	mg/kg	0.00171	0.000896 J	0.00109	0.000875	0.00159
E1668A	PCB-66	32598-10-0	mg/kg	0.187 J	0.146 J	0.152 J	0.163 J	0.237 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000416	0.000227	0.000304	0.000296	0.000464
E1668A	PCB-68	73575-52-7	mg/kg	0.00137	0.000755	0.000767	0.000872	0.00171
E1668A	PCB-72	41464-42-0	mg/kg	0.000449	0.00028	0.000183	0.000227	0.000584
E1668A	PCB-73	74338-23-1	mg/kg	4.72e-05	9.41e-05	6.94e-06 U	5.52e-05	0.000108
E1668A	PCB-77	32598-13-3	mg/kg	R			0.00687 J	
E1668A	PCB-78	70362-49-1	mg/kg	7.68e-06 U	7.97e-06 U	7.93e-06 U	7.87e-06 U	1.45e-05 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000509	0.000284	0.000322	0.000389	0.000548
E1668A	PCB-80	33284-52-5	mg/kg	5.28e-06 U	2.36e-05 J	2.22e-05 J	2.43e-05 J	4.13e-05 J
E1668A	PCB-81	70362-50-4	mg/kg	0.000364	0.000257	0.000335	3e-04	0.000507
E1668A	PCB-82	52663-62-4	mg/kg	5.11e-05	4.92e-05	4.05e-05	3.78e-05	1.36e-05 U
E1668A	PCB-83	60145-20-2	mg/kg	1.39e-05 U	9.52e-05	2.32e-05 J	0.000158	2.64e-05 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000216	0.000175	0.000102	0.000148	0.000198
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0248 J	0.0218 J	0.0183 J	0.0228 J	0.0335 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0106	0.00908	0.0077	0.0108	0.0136
E1668A	PCB-88	55215-17-3	mg/kg	1.06e-05 U	1.1e-05 U	1.09e-05 U	1.08e-05 U	0.000913
E1668A	PCB-89	73575-57-2	mg/kg	6.74e-06 J	6.47e-06 U	6.44e-06 U	6.39e-06 U	1.18e-05 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00616	0.00441 J	0.00351	0.0043	0.00796
E1668A	PCB-91	68194-05-8	mg/kg	0.000832	0.000534	0.000418	0.000479	0.000972
E1668A	PCB-92	52663-61-3	mg/kg	0.000644	0.000643	0.00034	0.000307	0.000876
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00418	0.00446	0.00437	0.00625 J	0.00718
E1668A	PCB-94	73575-55-0	mg/kg	0.000144	0.000137	6.38e-05	0.000134	0.000194
E1668A	PCB-95	38379-99-6	mg/kg	0.00128	0.00103	0.00066	0.000654	0.00163
E1668A	PCB-96	73575-54-9	mg/kg	7.2e-06 U	7.47e-06 U	7.43e-06 U	7.37e-06 U	1.36e-05 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000188	0.000125	7.8e-05 J	0.000118	0.000216
E1668A	PCB-99	38380-01-7	mg/kg	0.106 J	0.107 J	0.0812 J	0.135 J	0.15 J
E1668A	PCB-103	60145-21-3	mg/kg	4.18e-05	2.93e-05	3.59e-05	2.73e-05	6.04e-05
E1668A	PCB-104	56558-16-8	mg/kg	8.54e-06 J	6.97e-06 U	6.94e-06 U	8.62e-06 J	1.6e-05 J
E1668A	PCB-105	32598-14-4	mg/kg	0.0528 J	0.0337 J	0.0382 J	0.0394 J	0.0557 J
E1668A	PCB-106	70424-69-0	mg/kg	8.17e-06 U	8.47e-06 U	8.42e-06 U	8.36e-06 U	1.55e-05 U
E1668A	PCB-107	70424-68-9	mg/kg	0.0115 J	0.00664 J	0.00728 J	0.00749 J	0.0122 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000396	0.000167	0.000169	0.000169	0.000374
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00344	0.00531 J	0.00513	0.00521	0.0081
E1668A	PCB-111	39635-32-0	mg/kg	0.000174	0.000177	0.000115	0.000161	0.000246
E1668A	PCB-112	74472-36-9	mg/kg	6.72e-06 U	6.01e-05	6.75e-05	0.000101	1.27e-05 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00407 J	0.00289	0.00308 J	0.00334 J	0.00496

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.243 J	0.155 J	0.173 J	0.204 J	0.248 J
E1668A	PCB-120	68194-12-7	mg/kg	0.00114	0.000961	0.000769	0.00109	0.00139
E1668A	PCB-121	56558-18-0	mg/kg	0.00011	0.000109	9.71e-05	0.000159	0.000164
E1668A	PCB-122	76842-07-4	mg/kg	7.73e-05	2.41e-05 J	3.97e-05	7.3e-05	1.09e-05 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00362 J	0.00269	0.00274	0.00293	0.00443
E1668A	PCB-126	57465-28-8	mg/kg	0.000441	0.000334	0.000375	0.000305	0.00057
E1668A	PCB-127	39635-33-1	mg/kg	0.000186 J	0.000123	0.000156	0.000212	0.000186
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0161 J	0.0119 J	0.0118 J	0.0138 J	0.0192 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.134 J	0.111 J	0.104 J	0.155 J	0.168 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00251	0.00149	0.00131	0.00161	0.00272
E1668A	PCB-131	61798-70-7	mg/kg	R	5.54e-05	R	5.93e-05	0.000106
E1668A	PCB-132	38380-05-1	mg/kg	0.00014	8.19e-05	0.000124	0.000114	R
E1668A	PCB-133	35694-04-3	mg/kg	0.00311 J	0.00299 J	0.00219	0.00263	0.00399
E1668A	PCB-134	52704-70-8	mg/kg	4.67e-05 J	3.76e-05 J	3.76e-05 J	3.51e-05 J	R
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000776	0.000663	0.000495	0.000627	0.00104
E1668A	PCB-136	38411-22-2	mg/kg	6.83e-05	5.9e-05	5.53e-05	7.71e-05	7.54e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00726 J	0.00552 J	0.00566 J	0.00738 J	0.00872 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00309	0.00197	0.00243	0.00283	0.0034
E1668A	PCB-141	52712-04-6	mg/kg	0.000549	0.000437	0.000404	0.000272	0.000673
E1668A	PCB-142	41411-61-4	mg/kg	8.17e-06 U	8.47e-06 U	8.42e-06 U	8.36e-06 U	1.55e-05 U
E1668A	PCB-143	68194-15-0	mg/kg	1.59e-05 U	1.64e-05 U	1.64e-05 U	1.62e-05 U	R
E1668A	PCB-144	68194-14-9	mg/kg	0.000227	0.000162	0.000134	0.000186	0.000233
E1668A	PCB-145	74472-40-5	mg/kg	7.68e-06 U	7.97e-06 U	7.93e-06 U	7.87e-06 U	1.45e-05 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0275 J		0.0198 J	0.0246 J	0.0351 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00761 J	0.00409 J	0.00452	0.00464	0.00934
E1668A	PCB-148	74472-41-6	mg/kg	0.000527	0.000477	0.000446	0.000787	0.000738
E1668A	PCB-150	68194-08-1	mg/kg	1.12e-05 J	7.47e-06 U	1e-05 J	9.82e-06 J	1.36e-05 U
E1668A	PCB-152	68194-09-2	mg/kg	6.72e-06 U	6.97e-06 U	6.94e-06 U	6.88e-06 U	1.27e-05 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.193 J	0.176 J	0.159 J	0.244 J	0.261 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00509 J	0.00388 J	0.00412 J	0.00671 J	0.00604 J
E1668A	PCB-155	33979-03-2	mg/kg	0.00166	0.00156	0.00206	0.00172	0.00314
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0172 J	0.0116 J	0.0138 J	0.0127 J	0.0193 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0142 J	0.0111 J	0.0116 J	0.0134 J	0.017 J
E1668A	PCB-159	39635-35-3	mg/kg	7.82e-05	3.58e-05	3.77e-05	4.66e-05	8.22e-05
E1668A	PCB-160	41411-62-5	mg/kg	3.03e-05 U	3.14e-05 U	3.12e-05 U	3.1e-05 U	5.73e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	6.24e-06 U	R	6.44e-06 U	6.39e-06 U	1.18e-05 U
E1668A	PCB-162	39635-34-2	mg/kg	0.00083	0.000529	0.000605	6.39e-06 U	1.18e-05 U
E1668A	PCB-164	74472-45-0	mg/kg	0.000459	0.000276	0.000226	0.000238	0.000419
E1668A	PCB-165	74472-46-1	mg/kg	0.000113	R	7.96e-05	0.000125	0.000158
E1668A	PCB-167	52663-72-6	mg/kg	0.00727 J	0.00471 J	0.00521 J	0.00543 J	0.00818 J
E1668A	PCB-169	32774-16-6	mg/kg	7.2e-06 U	1.07e-05 J	1.88e-05 J	7.37e-06 U	1.36e-05 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0135 J	0.0149 J	0.0155 J	0.0141 J	0.0227 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	R		0.00708 J	R
E1668A	PCB-172	52663-74-8	mg/kg	0.00477 J	0.00429 J	0.00356 J	0.00393 J	0.00577 J
E1668A	PCB-174	38411-25-5	mg/kg	R	R	R	0.000277	R
E1668A	PCB-175	40186-70-7	mg/kg	R	R	R	0.00107	0.00157

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-N003	NB03CRB-HEP-N004	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000131	7.75e-05	9.01e-05	7.55e-05	0.000138
E1668A	PCB-177	52663-70-4	mg/kg	R			0.00356 J	
E1668A	PCB-178	52663-67-9	mg/kg	0.00819 J		0.00553 J	0.00746 J	0.0106 J
E1668A	PCB-179	52663-64-6	mg/kg	9.43e-05	7.65e-05	0.000116	7.28e-05	0.000152
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0641 J	0.0678 J	0.0674 J	0.0695 J	0.099 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	0.000315	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	R	0.000278	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	R			0.024 J	
E1668A	PCB-184	74472-48-3	mg/kg	0.000295	0.000192	0.000217	0.000237	0.000289
E1668A	PCB-186	74472-49-4	mg/kg	7.2e-06 U	7.47e-06 U	7.43e-06 U	7.37e-06 U	1.36e-05 U
E1668A	PCB-187	52663-68-0	mg/kg	R			0.0473 J	
E1668A	PCB-188	74487-85-7	mg/kg	0.000348	0.000317	0.000303	3e-04	0.000741
E1668A	PCB-189	39635-31-9	mg/kg	0.00141	0.000868	0.00111	0.00105	0.00148
E1668A	PCB-190	41411-64-7	mg/kg	0.00225	0.00437 J	0.00334 J	0.00219	0.00675 J
E1668A	PCB-191	74472-50-7	mg/kg	0.00118	0.00093	0.00106	0.000993	0.00146
E1668A	PCB-192	74472-51-8	mg/kg	2.19e-05 J	1.92e-05 J	6.44e-06 U	6.39e-06 U	2.93e-05 J
E1668A	PCB-194	35694-08-7	mg/kg	0.0106 J	0.00908 J	0.00757 J	0.0081 J	0.015 J
E1668A	PCB-195	52663-78-2	mg/kg	0.0026	0.00204	0.00235	0.00198	0.00351
E1668A	PCB-196	42740-50-1	mg/kg	0.00479 J	0.00661 J	0.0063 J	0.00719 J	0.0106 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000822	0.000603	0.000709	0.000824	0.00104
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0114 J	0.0161 J	0.0132 J	0.0147 J	0.0245 J
E1668A	PCB-201	40186-71-8	mg/kg	0.0024	0.00192	0.00225	0.00236	0.00306
E1668A	PCB-202	2136-99-4	mg/kg	0.00516 J	0.00504 J	0.00395	0.00413	0.00823 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00695 J	0.00898 J	0.00725 J	0.00939 J	0.0135 J
E1668A	PCB-204	74472-52-9	mg/kg	4.37e-05	3.25e-05	3.31e-05	4.4e-05	4.47e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	0.000246	0.000154	0.000188	0.000157	0.000236
E1668A	PCB-206	40186-72-9	mg/kg	0.00533 J	0.00546 J	0.0051 J	0.00426	0.00767
E1668A	PCB-207	52663-79-3	mg/kg	0.000788	0.000789	0.000769	0.000775	0.00119
E1668A	PCB-208	52663-77-1	mg/kg	0.00294	0.00313	0.00254	0.00246	0.00431
E1668A	PCB-209	2051-24-3	mg/kg	0.00357	0.00336	0.00345	0.0026	0.00468
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	1.29 J	1.07 J	1.09 J	1.39 J	1.76 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.62 J	1.29 J	1.33 J	1.66 J	2.11 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	5.42e-05	4.01e-05	4.53e-05	3.94e-05	6.76e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	4.93e-06 U	4.9e-06 U	4.97e-06 U	4.99e-06 U	9.71e-07 U
E1668A	PCB-2	2051-61-8	mg/kg	3.45e-06 U	3.43e-06 U	3.48e-06 U	3.49e-06 U	2.05e-06
E1668A	PCB-3	2051-62-9	mg/kg	R	5.39e-06 U	R	R	3.81e-06 J
E1668A	PCB-4	13029-08-8	mg/kg	6.4e-06 U	3.87e-05 J	6.45e-06 U	6.49e-06 U	2.53e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	3.94e-06 U	3.92e-06 U	3.97e-06 U	3.99e-06 U	7.77e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	1.26e-05 J	1.93e-05 J	1.54e-05 J	3.49e-06 U	6.8e-07 U
E1668A	PCB-7	33284-50-3	mg/kg	6.8e-06 J	3.92e-06 U	3.97e-06 U	8.42e-06 J	1.78e-06 J
E1668A	PCB-8	34883-43-7	mg/kg	7.39e-06 U	4.75e-05 J	7.45e-06 U	7.49e-06 U	4.76e-05
E1668A	PCB-9	34883-39-1	mg/kg	3.45e-06 U	3.43e-06 U	3.48e-06 U	3.49e-06 U	6.8e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	6.4e-06 U	6.37e-06 U	6.45e-06 U	6.49e-06 U	1.26e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000165	0.000282 J	0.000239	0.000167	0.000295 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	4.02e-05	4.75e-05	4.82e-05	2.78e-05	4.31e-05
E1668A	PCB-14	34883-41-5	mg/kg	3.94e-06 U	3.92e-06 U	3.97e-06 U	3.99e-06 U	7.77e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00189 J	0.00119	0.00193 J	0.00113 J	0.00197 J
E1668A	PCB-16	38444-78-9	mg/kg	4.43e-06 U	2.82e-05 J	4.47e-06 U	4.49e-06 U	8.74e-07 U
E1668A	PCB-17	37680-66-3	mg/kg	7.89e-05	0.000156 J	0.000107	7.21e-05	6.41e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00011	0.000275 J	0.000133	9.07e-05	1.55e-06 U
E1668A	PCB-19	38444-73-4	mg/kg	9.35e-06 J	1.81e-05	1.2e-05	7.65e-06 J	7.55e-06
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.051 J	0.0378 J	0.0515 J	0.0277 J	0.0577 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000122 J	0.000147	0.000144 J	7.45e-05 J	9.99e-05
E1668A	PCB-22	38444-85-8	mg/kg	0.000141 J	0.000415	0.000193 J	0.000114 J	0.000172 J
E1668A	PCB-23	55720-44-0	mg/kg	3.45e-06 U	3.43e-06 U	3.48e-06 U	3.49e-06 U	6.8e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	4.93e-06 U	4.9e-06 U	4.97e-06 U	4.99e-06 U	9.71e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	8.84e-05	0.000261	0.000136	0.000105	0.000112
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00011 J	0.000343	0.000156 J	0.000134 J	0.000166
E1668A	PCB-27	38444-76-7	mg/kg	2.7e-05	6.83e-05	3.8e-05	3.07e-05	2.71e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.000392 J	0.00182 J	0.000673 J	0.000389 J	0.00064 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000116 J	0.000292 J	0.000253 J	0.000128 J	0.000133 J
E1668A	PCB-34	37680-68-5	mg/kg	2.86e-05	4.03e-05	4.25e-05	2.99e-05	2.35e-05
E1668A	PCB-35	37680-69-6	mg/kg	1.29e-05	3.22e-05	1.94e-05	9.59e-06 J	1.65e-05
E1668A	PCB-36	38444-87-0	mg/kg	9.17e-06 J	1.41e-05	1.62e-05	9.91e-06 J	1.47e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.00572 J	0.00451 J	0.00573 J	0.00316 J	0.00491 J
E1668A	PCB-38	53555-66-1	mg/kg	3.43e-05	3.43e-06 U	4.11e-05	1.91e-05	2.7e-05
E1668A	PCB-39	38444-88-1	mg/kg	8.87e-05	0.000106	0.000126	6.8e-05	9.98e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000709	0.0015	0.00129	0.000916	0.000637
E1668A	PCB-41	52663-59-9	mg/kg	2.07e-05 U	2.06e-05 U	2.09e-05 U	2.1e-05 U	5.13e-06 J
E1668A	PCB-42	36559-22-5	mg/kg	0.000179	0.000543	0.00026	2e-04	0.000178
E1668A	PCB-43	70362-46-8	mg/kg	5.75e-05	8.93e-05	5.15e-05	2.9e-05	3.87e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.112 J	0.042 J	0.075 J	0.0459 J	0.0524 J
E1668A	PCB-45	70362-45-7	mg/kg	1.08e-05 U	1.27e-05 J	1.09e-05 U	1.1e-05 U	7.45e-06
E1668A	PCB-46	41464-47-5	mg/kg	4.93e-06 U	1.7e-05	6.64e-06 J	5.06e-06 J	7.4e-06
E1668A	PCB-48	70362-47-9	mg/kg	6.72e-05	0.000177	0.000101	5.77e-05	6.53e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00033 J	0.00126	0.000619 J	0.000427 J	0.000434
E1668A	PCB-50/53	PCB-50/53	mg/kg	3.48e-05 J	0.000103	4.63e-05 J	3.71e-05 J	4.18e-05
E1668A	PCB-51	68194-04-7	mg/kg	3.78e-05	9.15e-05	5.11e-05	3.17e-05	3.35e-05
E1668A	PCB-52	35693-99-3	mg/kg	0.000408	0.00138	0.000591	0.00042	0.000504 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.9e-06 U	6.86e-06 U	6.95e-06 U	6.99e-06 U	1.36e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	0.000141	0.000101	0.000117	7.95e-05	0.000118
E1668A	PCB-56	41464-43-1	mg/kg	0.000217	0.000947	0.000375	0.000235	0.000307
E1668A	PCB-57	70424-67-8	mg/kg	1.5e-05 J	3.02e-05	2.27e-05 J	2.17e-05 J	2.12e-05
E1668A	PCB-58	41464-49-7	mg/kg	3.19e-05	2.39e-05 J	3.23e-05	5.92e-05	1.47e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00515	0.00324	0.00562	0.003	0.00371 J
E1668A	PCB-60	33025-41-1	mg/kg	0.00906 J	0.00846 J	0.0101 J	0.00519 J	0.00882 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0575 J	0.0569 J	0.0727 J	0.0358 J	0.0607 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000627	0.00113	0.000999	0.00052	0.000759 J
E1668A	PCB-64	52663-58-8	mg/kg	0.000314 J	0.00136	0.000628 J	0.000368 J	0.000439
E1668A	PCB-66	32598-10-0	mg/kg	0.0973 J	0.0886 J	0.108 J	0.0556 J	0.0991 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000272	0.000238	0.000194	0.000143	0.000151
E1668A	PCB-68	73575-52-7	mg/kg	0.000557	0.000639	0.00072	0.000504	0.00057
E1668A	PCB-72	41464-42-0	mg/kg	0.000128	0.000257	0.000184	0.000169	0.000187
E1668A	PCB-73	74338-23-1	mg/kg	4.45e-05	2.98e-05	8.52e-05	8.37e-05	1.8e-05
E1668A	PCB-77	32598-13-3	mg/kg					0.00483 J
E1668A	PCB-78	70362-49-1	mg/kg	7.88e-06 U	7.84e-06 U	7.94e-06 U	7.98e-06 U	1.55e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000221	0.000272	0.00026	0.000151	0.000212
E1668A	PCB-80	33284-52-5	mg/kg	1.9e-05 J	1.56e-05 J	2.24e-05 J	1.21e-05 J	2.04e-05
E1668A	PCB-81	70362-50-4	mg/kg	0.000228	0.000235	0.000286	0.000161	0.000222
E1668A	PCB-82	52663-62-4	mg/kg	4.17e-05	0.000158	5e-05	4.41e-05	2.25e-05
E1668A	PCB-83	60145-20-2	mg/kg	1.43e-05 U	9.92e-05	1.44e-05 U	1.45e-05 U	2.82e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	9.77e-05	0.000201	9.7e-05	6.68e-05	6.79e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0199 J	0.0188 J	0.0238 J	0.0127 J	0.0157 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00999	0.00889	0.0106	0.00642	0.00729 J
E1668A	PCB-88	55215-17-3	mg/kg	1.08e-05 U	1.08e-05 U	1.09e-05 U	1.1e-05 U	2.14e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	6.4e-06 U	1.1e-05 J	6.45e-06 U	6.49e-06 U	1.26e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00275 J	0.00506	0.0045 J	0.00286 J	0.00294 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000284	0.000727	0.000436	0.000328	0.00033
E1668A	PCB-92	52663-61-3	mg/kg	0.000308	0.000809	0.000503	0.000329	0.000362
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.0109 J	0.00365	0.00566	0.00403	0.00398 J
E1668A	PCB-94	73575-55-0	mg/kg	9.68e-05	0.00013	0.000142	0.000102	5.81e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.000476	0.00115	0.000732	0.000465	R
E1668A	PCB-96	73575-54-9	mg/kg	7.39e-06 U	7.35e-06 U	7.45e-06 U	7.49e-06 U	1.46e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.67e-05 J	0.000141	8.68e-05 J	6.69e-05 J	7.2e-05
E1668A	PCB-99	38380-01-7	mg/kg	0.106 J	0.085 J	0.129 J	0.0697 J	0.0812 J
E1668A	PCB-103	60145-21-3	mg/kg	1.48e-05 J	6.15e-05	2.51e-05	1.71e-05 J	1.72e-05
E1668A	PCB-104	56558-16-8	mg/kg	6.9e-06 U	6.86e-06 U	6.95e-06 U	6.99e-06 U	1.84e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.0283 J	0.0269 J	0.0321 J	0.0182 J	0.0266 J
E1668A	PCB-106	70424-69-0	mg/kg	8.37e-06 U	8.33e-06 U	8.44e-06 U	8.48e-06 U	1.65e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00521 J	0.00807 J	0.00705 J	0.00409 J	0.00596 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	8.7e-05	0.000299	0.000161	0.00011	0.000134
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00416 J	0.00728 J	0.00565 J	0.00324 J	0.00365 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000199	0.000166	0.00024	0.000149	0.000183
E1668A	PCB-112	74472-36-9	mg/kg	6.9e-06 U	0.000116	6.95e-06 U	6.99e-06 U	1.36e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00236	0.00236	0.0031 J	0.00177	0.00234 J

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.121 J	0.119 J	0.146 J	0.0905 J	0.144 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000952	0.000921	0.00125	0.000788	0.000893 J
E1668A	PCB-121	56558-18-0	mg/kg	0.000171	9.33e-05	0.000146	9.65e-05	0.000106
E1668A	PCB-122	76842-07-4	mg/kg	2.2e-05 J	5.27e-05	1.95e-05 J	1.37e-05 J	1.5e-05
E1668A	PCB-123	65510-44-3	mg/kg	0.00219	0.00222	0.00267	0.00162	0.00219 J
E1668A	PCB-126	57465-28-8	mg/kg	0.000284	0.000261 J	0.000331	0.000213	0.000297
E1668A	PCB-127	39635-33-1	mg/kg	0.000123	0.000139	0.00013	8.21e-05	0.000104
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00974 J	0.0104 J	0.0109 J	0.00812 J	0.011 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.098 J	0.0955 J	0.11 J	0.078 J	0.106 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00101	0.00166	0.00155	0.00121	0.00125 J
E1668A	PCB-131	61798-70-7	mg/kg	4.57e-05	8.34e-05	5.46e-05	4.92e-05	4.59e-05
E1668A	PCB-132	38380-05-1	mg/kg	6.66e-05	0.000319	7.75e-05	9.24e-05	8.37e-05
E1668A	PCB-133	35694-04-3	mg/kg	0.00234	0.00305 J	0.00286	0.00223	0.00334 J
E1668A	PCB-134	52704-70-8	mg/kg	2.6e-05 J	6.92e-05	3e-05 J	2.97e-05 J	2.55e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000441	0.000998	0.000613	0.000589	0.000453
E1668A	PCB-136	38411-22-2	mg/kg	4.12e-05	8.66e-05	3.92e-05	3.54e-05	3.08e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00549 J	0.00428 J	0.00602 J	0.00386 J	0.00498 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.0022	0.00218	0.00227	0.00164	0.00205 J
E1668A	PCB-141	52712-04-6	mg/kg	0.00023	0.000524	0.000361	0.000194	0.000328
E1668A	PCB-142	41411-61-4	mg/kg	8.37e-06 U	8.33e-06 U	8.44e-06 U	8.48e-06 U	1.65e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.63e-05 U	1.62e-05 U	1.64e-05 U	1.65e-05 U	3.6e-06 J
E1668A	PCB-144	68194-14-9	mg/kg	0.00013	0.000194	0.000159	0.000124	0.000104
E1668A	PCB-145	74472-40-5	mg/kg	7.88e-06 U	7.84e-06 U	7.94e-06 U	7.98e-06 U	1.55e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0205 J	0.0206 J	0.0239 J	0.0175 J	
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00265 J	0.00596 J	0.00386 J	0.0032 J	0.00345 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000657	0.000519	0.000662	0.000547	0.00054
E1668A	PCB-150	68194-08-1	mg/kg	7.39e-06 U	1.09e-05 J	7.45e-06 U	7.49e-06 U	4.87e-06
E1668A	PCB-152	68194-09-2	mg/kg	6.9e-06 U	6.86e-06 U	6.95e-06 U	6.99e-06 U	1.36e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.172 J	0.15 J	0.192 J	0.137 J	0.17 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00515 J	0.00412 J	0.00558 J	0.00433 J	0.00445 J
E1668A	PCB-155	33979-03-2	mg/kg	0.0015	0.00103	0.00151	0.000975	0.00131 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0102 J	0.0107 J	0.0122 J	0.00821 J	0.0112 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0113 J	0.00994 J	0.0118 J	0.00813 J	0.0106 J
E1668A	PCB-159	39635-35-3	mg/kg	3.5e-05	3.33e-05	3.92e-05	2.45e-05 J	3.28e-05
E1668A	PCB-160	41411-62-5	mg/kg	3.1e-05 U	3.09e-05 U	3.13e-05 U	3.14e-05 U	6.12e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	6.4e-06 U	6.37e-06 U	6.45e-06 U	6.49e-06 U	1.26e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000539	0.000712	0.000695	0.00052	0.000684 J
E1668A	PCB-164	74472-45-0	mg/kg	0.000103	0.00027	0.000254	0.000165	0.000133
E1668A	PCB-165	74472-46-1	mg/kg	R	0.000137	R	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.00452 J	0.00475 J	0.00523 J	0.0039 J	0.0047 J
E1668A	PCB-169	32774-16-6	mg/kg	1.33e-05 J	7.35e-06 U	8.13e-06 J	9.23e-06 J	1.46e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.012 J	0.00701 J	0.0107 J	0.00722 J	0.0101 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R		R	R	
E1668A	PCB-172	52663-74-8	mg/kg	0.0037 J	0.00277	0.00345 J	0.00208	0.00294 J
E1668A	PCB-174	38411-25-5	mg/kg	R	0.00048	R	R	R
E1668A	PCB-175	40186-70-7	mg/kg	0.00123	0.000995	0.00121	0.000893	0.00107 J

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002	NB03CRB-HEP-S003	NB03CRB-HEP-S004
			Sample Date	09/01/15	08/26/15	09/01/15	09/01/15	08/30/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	5.2e-05	0.000108	5.53e-05	5.11e-05	4.51e-05
E1668A	PCB-177	52663-70-4	mg/kg	R			R	
E1668A	PCB-178	52663-67-9	mg/kg		0.00681 J			0.00831 J
E1668A	PCB-179	52663-64-6	mg/kg	6.08e-05	0.000197	6.07e-05	7.47e-05	6.08e-05
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.067 J	0.0415 J	0.0594 J	0.0401 J	0.054 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	0.000194	R	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.0202 J			0.0197 J
E1668A	PCB-184	74472-48-3	mg/kg	0.000186	0.000179	0.000208	0.000153	0.000161
E1668A	PCB-186	74472-49-4	mg/kg	7.39e-06 U	7.35e-06 U	7.45e-06 U	7.49e-06 U	1.46e-06 U
E1668A	PCB-187	52663-68-0	mg/kg					0.0468 J
E1668A	PCB-188	74487-85-7	mg/kg	0.00029	0.000332	0.000357	0.000309	0.000414
E1668A	PCB-189	39635-31-9	mg/kg	0.000916	0.000829	0.000833	0.000593	0.000794 J
E1668A	PCB-190	41411-64-7	mg/kg	0.00429 J	0.00116	0.00365 J	0.00262	0.00357 J
E1668A	PCB-191	74472-50-7	mg/kg	0.00101	0.000819	0.000887	0.000616	0.000769 J
E1668A	PCB-192	74472-51-8	mg/kg	1.42e-05 J	9.18e-06 J	6.45e-06 U	7.8e-06 J	6.26e-06
E1668A	PCB-194	35694-08-7	mg/kg	0.00691 J	0.00503 J	0.00697 J	0.00467 J	0.00632 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00151	0.00103	0.00141	0.000947	0.00143 J
E1668A	PCB-196	42740-50-1	mg/kg	0.00709 J	0.003	0.00603 J	0.00389	0.00501 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	0.000671	R	R	0.000589
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0147 J	0.00727	0.014 J	0.00923 J	0.0117 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00178	0.00212	0.00198	0.00163	0.00201 J
E1668A	PCB-202	2136-99-4	mg/kg	0.00389	0.0052 J	0.00529 J	0.00452 J	0.00579 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00804 J	0.00379	0.00733 J	0.00467 J	0.00573 J
E1668A	PCB-204	74472-52-9	mg/kg	2.19e-05 J	2.28e-05 J	2.58e-05	1.54e-05 J	1.76e-05
E1668A	PCB-205	74472-53-0	mg/kg	0.000107	0.000103	0.000104	6.36e-05	8.99e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00388	0.0033	0.00467 J	0.00293	0.00485 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000621	0.000533	0.000718	0.000455	0.000753
E1668A	PCB-208	52663-77-1	mg/kg	0.00208	0.00207	0.00272	0.00176	0.00274 J
E1668A	PCB-209	2051-24-3	mg/kg	0.00239	0.00292	0.00313	0.00205	0.00319 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.985 J	0.832 J	1.04 J	0.649 J	0.938 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.15 J	0.999 J	1.24 J	0.774 J	1.14 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	3.4e-05	3.12e-05 J	3.95e-05	2.54e-05	3.6e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-1	2051-60-7	mg/kg	3.88e-06 J	1e-06 U	1.39e-05 J	4.85e-06 U	4.97e-05 J	1.93e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	1.31e-06 J	7e-07 U	3.46e-06 U	3.4e-06 U	1.19e-05 J	6.96e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	R	1.1e-06 U	5.44e-06 U	5.34e-06 U	3.25e-05 J	1.09e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.3e-06 U	2.09e-05	3.36e-05 J	2.28e-05 J	0.000117 J	1.42e-05
E1668A	PCB-5	16605-91-7	mg/kg	7.98e-07 U	8e-07 U	3.96e-06 U	3.88e-06 U	5.93e-06 U	7.95e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	1.18e-05 J	7e-07 U	1.34e-05 J	3.4e-06 U	5.19e-06 U	3.65e-06
E1668A	PCB-7	33284-50-3	mg/kg	1.12e-06 J	8e-07 U	3.96e-06 U	3.88e-06 U	5.93e-06 U	7.95e-07 U
E1668A	PCB-8	34883-43-7	mg/kg	3.95e-05 J	1.5e-06 U	4.12e-05 J	2.42e-05 J	0.000154 J	1.91e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	2.14e-06 J	7e-07 U	3.46e-06 U	3.4e-06 U	1.07e-05 J	6.96e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	2.92e-06 J	1.3e-06 U	6.43e-06 U	6.31e-06 U	9.63e-06 U	1.34e-06 J
E1668A	PCB-11	2050-67-1	mg/kg	0.000252 J	3.4e-06 U	0.000135 J	0.000133 J	0.000587 J	3.38e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	4.76e-05 J	1.9e-06 U	2.69e-05 J	2.28e-05 J	0.000113	8.55e-06
E1668A	PCB-14	34883-41-5	mg/kg	7.98e-07 U	8e-07 U	3.96e-06 U	3.88e-06 U	5.93e-06 U	7.95e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00239 J	0.00148 J	0.00132 J	0.00134	0.00342 J	0.000155
E1668A	PCB-16	38444-78-9	mg/kg	8.98e-07 U	7.69e-06	1.52e-05 J	1.14e-05 J	4.45e-05 J	8.95e-07 U
E1668A	PCB-17	37680-66-3	mg/kg	7.9e-05 J	9e-07 U	5.84e-05 J	4.24e-05 J	0.000158 J	8.95e-07 U
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000113 J	6.1e-05 J	9.73e-05 J	8.88e-05 J	0.000332 J	1.59e-06 U
E1668A	PCB-19	38444-73-4	mg/kg	7.58e-06 J	5.57e-06	1.15e-05 J	7.04e-06 J	3.76e-05 J	7.95e-07 U
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0628 J	0.0393 J	0.031 J	0.0279 J	0.0557 J	0.00358 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00013 J	5.47e-05	7.63e-05 J	6.37e-05	0.000211 J	2.09e-06 U
E1668A	PCB-22	38444-85-8	mg/kg	0.000154 J	6.58e-05	0.00011 J	8.64e-05	0.000369 J	8.95e-07 U
E1668A	PCB-23	55720-44-0	mg/kg	6.99e-07 U	7e-07 U	3.46e-06 U	3.4e-06 U	5.19e-06 U	6.96e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	9.98e-07 U	1e-06 U	4.95e-06 U	4.85e-06 U	7.41e-06 U	9.94e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00013 J	8e-07 U	6.19e-05 J	6.46e-05	0.000368	2.03e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00015 J	1.2e-06 U	0.000103 J	0.000105	0.000725	1.19e-06 U
E1668A	PCB-27	38444-76-7	mg/kg	3.19e-05 J	1.17e-05	2.18e-05 J	1.84e-05	7.03e-05	5.77e-06
E1668A	PCB-31	16606-02-3	mg/kg	0.00058 J	0.000264	0.000385 J	0.000376 J	0.00174 J	1.79e-06 U
E1668A	PCB-32	38444-77-8	mg/kg	0.000151 J	6.13e-05	9.81e-05 J	9.22e-05 J	0.000369 J	7.95e-07 U
E1668A	PCB-34	37680-68-5	mg/kg	3.73e-05 J	9.6e-06	1.47e-05 J	1.41e-05	6.04e-05	4.46e-06
E1668A	PCB-35	37680-69-6	mg/kg	2.01e-05 J	9e-07 U	1.31e-05 J	9.99e-06	3.47e-05	2.62e-06
E1668A	PCB-36	38444-87-0	mg/kg	1.5e-05 J	8e-07 U	7.82e-06 J	5.18e-06 J	2.58e-05	8.44e-07 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00671 J	0.00412 J	0.00419 J	0.00308 J	0.00725 J	0.000288
E1668A	PCB-38	53555-66-1	mg/kg	3.34e-05 J	7e-07 U	3.46e-06 U	2.36e-05	5.19e-06 U	6.96e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	0.000105 J	6.85e-05	5.68e-05 J	5.32e-05	0.000148	8.49e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.0011 J	0.000336	0.000527 J	0.000533	0.00165	0.000109
E1668A	PCB-41	52663-59-9	mg/kg	4.19e-06 U	4.2e-06 U	2.08e-05 U	2.04e-05 U	3.11e-05 U	4.17e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000298 J	8.95e-05	0.000135 J	0.000125	0.000539	1.59e-06 U
E1668A	PCB-43	70362-46-8	mg/kg	4.12e-05 J	1.4e-06 U	3.95e-05 J	3.98e-05	0.000113	6.82e-06
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0694 J	0.044 J	0.0359 J	0.0306 J	0.0596 J	0.00282 J
E1668A	PCB-45	70362-45-7	mg/kg	5.13e-06 J	3.37e-06 J	1.09e-05 U	1.07e-05 U	1.63e-05 U	2.19e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	5.1e-06 J	1e-06 U	6.58e-06 J	4.85e-06 U	1.7e-05	1.71e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	8.58e-05 J	3.91e-05	5.73e-05 J	5.51e-05	0.000189	1.39e-06 U
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000523 J	0.000173 J	0.000237 J	0.000234	0.00117	2.58e-06 U
E1668A	PCB-50/53	PCB-50/53	mg/kg	3.75e-05 J	1.83e-05	3.32e-05 J	2.86e-05 J	0.000101	6.28e-06 J
E1668A	PCB-51	68194-04-7	mg/kg	4.12e-05 J	1.56e-05	2.35e-05 J	2.39e-05 J	7.94e-05	6.38e-06
E1668A	PCB-52	35693-99-3	mg/kg	0.000505 J	0.000231	0.000331 J	0.000358	0.00146 J	1.49e-06 U

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-54	15968-05-5	mg/kg	1.4e-06 U	1.4e-06 U	6.92e-06 U	6.8e-06 U	1.04e-05 U	1.39e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	7.51e-05 J	1.2e-06 U	5.27e-05 J	7.53e-05	8.89e-06 U	1.19e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000365 J	0.000104	0.000208 J	0.000142	0.000622	3.91e-05
E1668A	PCB-57	70424-67-8	mg/kg	2.27e-05 J	9.07e-06	1.35e-05 J	1.31e-05 J	9.3e-05	1.48e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	9.29e-05 J	1.4e-06 U	8.18e-06 J	7.51e-06 J	2.78e-05 J	1.39e-06 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00469 J	0.00311 J	0.00258 J	0.00235	0.00428	0.000209
E1668A	PCB-60	33025-41-1	mg/kg	0.00963 J	0.00654 J	0.00705 J	0.00645 J	0.00955 J	0.000586
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.07 J	0.0488 J	0.0485 J	0.0386 J	0.0641 J	0.0025 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00088 J	0.000477	0.000499 J	0.00052	0.00135	4.67e-05
E1668A	PCB-64	52663-58-8	mg/kg	0.000607 J	0.000224	0.000315 J	0.000322	0.00139	1.29e-06 U
E1668A	PCB-66	32598-10-0	mg/kg	0.131 J	0.0771 J	0.0709 J	0.0629 J	0.095 J	0.00402 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000188 J	1.2e-06 U	9.05e-05 J	9.34e-05	0.000291	1.13e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.000662 J	0.000381	0.000335 J	0.000369	0.000908	2.19e-05
E1668A	PCB-72	41464-42-0	mg/kg	0.000194 J	0.000105	0.000107 J	0.00013	0.000548	1.14e-05
E1668A	PCB-73	74338-23-1	mg/kg	7.38e-05 J	1.52e-05	1.5e-05 J	1.42e-05 J	3.61e-05 J	2.56e-06 J
E1668A	PCB-77	32598-13-3	mg/kg			0.00439 J	0.00387 J		0.000233
E1668A	PCB-78	70362-49-1	mg/kg	1.6e-06 U	1.6e-06 U	7.91e-06 U	7.77e-06 U	1.19e-05 U	1.59e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.00023 J	0.000155	0.000134 J	0.000157	0.000263	1.05e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.62e-05 J	1.36e-05	1.36e-05 J	1.28e-05 J	2.46e-05 J	1.09e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	0.000289 J	0.000185	0.000226 J	0.000193	0.000302	1.01e-05
E1668A	PCB-82	52663-62-4	mg/kg	2.37e-05 J	1.5e-06 U	3.89e-05 J	7.28e-06 U	1.11e-05 U	1.49e-06 U
E1668A	PCB-83	60145-20-2	mg/kg	4.88e-05 J	2.9e-06 U	1.43e-05 U	1.41e-05 U	2.15e-05 U	2.88e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	0.00012 J	4.57e-05	6.41e-05 J	7.37e-05	0.000217	1.09e-06 U
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0214 J	0.014 J	0.0143 J	0.01 J	0.0201 J	0.000737
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00911 J	0.00596 J	0.00508 J	0.00483	0.00895	7.36e-06 U
E1668A	PCB-88	55215-17-3	mg/kg	2.2e-06 U	2.2e-06 U	1.09e-05 U	1.07e-05 U	1.63e-05 U	2.19e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	3.93e-06 J	1.83e-06 J	6.43e-06 U	6.31e-06 U	9.63e-06 U	1.29e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00446 J	0.00179 J	0.00173 J	0.00187	0.00583	4.67e-06 U
E1668A	PCB-91	68194-05-8	mg/kg	0.000482 J	0.000185	0.000194 J	0.000239	0.000875	2.19e-06 U
E1668A	PCB-92	52663-61-3	mg/kg	0.000482 J	0.000196 J	0.000206 J	0.000264	0.000868	1.29e-06 U
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00461 J	0.00246 J	0.00198 J	0.00204	0.00359	0.000146
E1668A	PCB-94	73575-55-0	mg/kg	0.000105 J	3.05e-05	4.49e-05 J	5.03e-05	9.63e-06 U	5.69e-06
E1668A	PCB-95	38379-99-6	mg/kg	0.000717 J	R	0.000393 J	0.000551	0.00166	4.38e-05
E1668A	PCB-96	73575-54-9	mg/kg	1.5e-06 U	1.5e-06 U	7.42e-06 U	7.28e-06 U	1.11e-05 U	1.49e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000103 J	3.71e-05	4.86e-05 J	4.8e-05 J	0.000155	7.65e-06 U
E1668A	PCB-99	38380-01-7	mg/kg	0.117 J	0.0814 J	0.0649 J	0.0542 J	0.0963 J	0.00291 J
E1668A	PCB-103	60145-21-3	mg/kg	2.6e-05 J	8.86e-06	9.37e-06 J	1.31e-05 J	4.41e-05	1.14e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	2.84e-06 J	1.4e-06 U	6.92e-06 U	6.8e-06 U	1.04e-05 U	1.39e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0364 J	0.0248 J	0.0237 J	0.0218 J	0.0324 J	0.00113 J
E1668A	PCB-106	70424-69-0	mg/kg	1.7e-06 U	1.7e-06 U	8.41e-06 U	8.25e-06 U	1.26e-05 U	1.69e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00687 J	0.00445 J	0.00433 J	0.00441 J	0.00795 J	0.000202
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000159 J	7.1e-05	8.33e-05 J	9.93e-05	0.000334	6.89e-06 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00535 J	0.00287 J	R	0.00239	0.00603	3.88e-06 U
E1668A	PCB-111	39635-32-0	mg/kg	0.000193 J	0.000151	0.00011 J	0.000112	0.000213	4.67e-06 J
E1668A	PCB-112	74472-36-9	mg/kg	5.36e-05 J	1.4e-06 U	6.39e-05 J	6.8e-06 U	0.000103	1.39e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00287 J	0.00206 J	0.00234 J	0.00183	0.00301	0.000106

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-118	31508-00-6	mg/kg	0.173 J	0.125 J	0.115 J	0.1 J	0.148 J	0.00463 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000991 J	0.000776 J	0.000611 J	0.00058	0.00107	2.98e-05
E1668A	PCB-121	56558-18-0	mg/kg	0.00012 J	7.43e-05	5.98e-05 J	6.26e-05	0.000109	3.28e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	1.2e-06 U	1.2e-06 U	5.93e-06 U	5.83e-06 U	8.89e-06 U	1.19e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00271 J	0.00184 J	0.00211 J	0.0019	0.00285	9.25e-05
E1668A	PCB-126	57465-28-8	mg/kg	0.000323 J	0.000247	R	0.000243	0.000398	8.73e-06
E1668A	PCB-127	39635-33-1	mg/kg	0.000133 J	8.2e-05	0.000106 J	0.000108	0.000125	4.62e-06 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0121 J	0.00851 J	0.00862 J	0.00759 J	0.013 J	0.000328
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.123 J	0.0884 J	0.0807 J	0.0673 J	0.114 J	0.00265 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00152 J	0.000718 J	0.000713 J	0.000883	0.00173	4e-05
E1668A	PCB-131	61798-70-7	mg/kg	5.99e-05 J	3.27e-05	3.06e-05 J	3.51e-05	9.27e-05	2.62e-06 J
E1668A	PCB-132	38380-05-1	mg/kg	0.000107 J	3.15e-05	4.17e-05 J	5.09e-05	R	1.59e-06 U
E1668A	PCB-133	35694-04-3	mg/kg	0.00278 J	0.00236 J	0.00187 J	0.00244	0.00367	5.78e-05
E1668A	PCB-134	52704-70-8	mg/kg	3.3e-05 J	3.3e-06 U	1.63e-05 U	1.91e-05 J	R	3.35e-06 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000659 J	0.000227	0.000287 J	0.000339	0.000927	4.57e-06 U
E1668A	PCB-136	38411-22-2	mg/kg	5.94e-05 J	1.74e-05	2.89e-05 J	3.68e-05	0.000106	3.11e-06 J
E1668A	PCB-137	35694-06-5	mg/kg	0.0055 J	0.00419 J	0.00414 J	0.00382 J	0.00565 J	0.000167
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00213 J	0.00165 J	0.0016 J	0.00155	0.00252	7.1e-05
E1668A	PCB-141	52712-04-6	mg/kg	0.000321 J	0.000152	0.000161 J	0.00024	0.000604	1.69e-06 U
E1668A	PCB-142	41411-61-4	mg/kg	1.7e-06 U	1.7e-06 U	8.41e-06 U	8.25e-06 U	1.26e-05 U	1.69e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.29e-06 U	3.3e-06 U	1.63e-05 U	1.6e-05 U	R	3.28e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000174 J	9.85e-05	7.87e-05 J	8.69e-05	0.000224	5.93e-06
E1668A	PCB-145	74472-40-5	mg/kg	1.6e-06 U	1.6e-06 U	7.91e-06 U	7.77e-06 U	1.19e-05 U	1.59e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0215 J		0.014 J	0.0142 J	0.024 J	0.000512
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00437 J	0.00203 J	0.002 J	0.00258	0.00696	3.48e-06 U
E1668A	PCB-148	74472-41-6	mg/kg	0.000641 J	0.000407	0.000362 J	0.000377	0.000555	1.77e-05
E1668A	PCB-150	68194-08-1	mg/kg	7.79e-06 J	2.19e-06 J	7.42e-06 U	7.28e-06 U	1.11e-05 U	1.49e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	2.6e-06 J	1.4e-06 U	6.92e-06 U	6.8e-06 U	1.04e-05 U	1.39e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.198 J	0.154 J	0.123 J	0.109 J	0.176 J	0.00405 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00474 J	0.0032 J	0.00303 J	0.00304 J	0.00444	0.000125
E1668A	PCB-155	33979-03-2	mg/kg	0.00135 J	0.000823 J	0.000642 J	0.000723	0.00125	4.3e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0126 J	0.00953 J	0.00965 J	0.0095 J	0.0141 J	0.000323
E1668A	PCB-158	74472-42-7	mg/kg	0.0111 J	0.00901 J	0.00884 J	0.00754 J	0.0124 J	0.000308
E1668A	PCB-159	39635-35-3	mg/kg	4.31e-05 J	2.87e-05	2.37e-05 J	3.12e-05	3.26e-05 J	1.39e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.29e-06 U	6.3e-06 U	3.12e-05 U	3.06e-05 U	4.67e-05 U	6.26e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.89e-05 J	1.3e-06 U	6.43e-06 U	6.31e-06 U	9.63e-06 U	1.29e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000544 J	0.000428	0.000445 J	0.00046	0.000707	1.64e-05
E1668A	PCB-164	74472-45-0	mg/kg	0.000236 J	9.01e-05	8.81e-05 J	0.000124	0.000322	1.49e-06 U
E1668A	PCB-165	74472-46-1	mg/kg	R	R	R	R	0.000192	3.26e-06 J
E1668A	PCB-167	52663-72-6	mg/kg	0.00548 J	0.0042 J	0.004 J	0.00396 J	0.00617 J	0.000126
E1668A	PCB-169	32774-16-6	mg/kg	1.26e-05 J	1.5e-06 U	1.44e-05 J	7.28e-06 U	1.11e-05 U	1.49e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0132 J	0.00911 J	0.00942 J	0.00793 J	0.0121 J	1.29e-06 U
E1668A	PCB-171/173	PCB-171/173	mg/kg			R	R	R	R
E1668A	PCB-172	52663-74-8	mg/kg	0.00338 J	0.00262 J	0.00233 J	0.00207	0.00348	1.29e-06 U
E1668A	PCB-174	38411-25-5	mg/kg	R	R	0.00014 J	0.000163	R	1.49e-06 U
E1668A	PCB-175	40186-70-7	mg/kg	0.00114 J		0.000737 J	0.000719	0.00121	2.01e-05

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRB122
			Sample ID	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008	NB03CRB-HEP-S009	NB03CRB-MUS122
			Sample Date	09/01/15	09/08/15	10/06/15	08/26/15	08/24/15	08/19/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-176	52663-65-7	mg/kg	8.13e-05 J	3.12e-05	3.22e-05 J	4e-05	0.000104	2.43e-06 J
E1668A	PCB-177	52663-70-4	mg/kg			0.00157 J	R	R	1.09e-06 U
E1668A	PCB-178	52663-67-9	mg/kg		0.00668 J	0.00515 J	0.00539 J	0.00894 J	0.000186
E1668A	PCB-179	52663-64-6	mg/kg	9.14e-05 J	2.61e-05	3.43e-05 J	4.6e-05	0.000128	3.09e-06 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.063 J	0.0506 J	0.0484 J	0.0385 J	0.0609 J	0.000959
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	R	R	5.22e-06
E1668A	PCB-182	60145-23-5	mg/kg	R	R	0.000176 J	R	R	5.92e-06
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.0162 J		0.0154 J		0.000324
E1668A	PCB-184	74472-48-3	mg/kg	0.000211 J	0.000124	0.000109 J	0.000136	0.000192	5.84e-06
E1668A	PCB-186	74472-49-4	mg/kg	1.5e-06 U	1.5e-06 U	7.42e-06 U	7.28e-06 U	1.11e-05 U	1.49e-06 U
E1668A	PCB-187	52663-68-0	mg/kg						0.00076 J
E1668A	PCB-188	74487-85-7	mg/kg	0.00042 J	0.000301	0.000246 J	0.000278 J	0.000486	1.02e-05
E1668A	PCB-189	39635-31-9	mg/kg	9e-04 J	0.000687 J	0.000671 J	0.000722	0.000938	1.61e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.00403 J	0.00296 J	0.00293 J	0.00231	0.00393	1.39e-06 U
E1668A	PCB-191	74472-50-7	mg/kg	0.000888 J	0.000716 J	0.000736 J	0.000605	0.000936	1.39e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.41e-05 J	1.3e-06 U	6.43e-06 U	6.31e-06 U	9.63e-06 U	1.29e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00721 J	0.00607 J	0.00596 J	0.00429	0.00839 J	1.79e-06 U
E1668A	PCB-195	52663-78-2	mg/kg	0.00177 J	0.00125 J	0.00121 J	1.07e-05 U	0.00157	3.18e-05
E1668A	PCB-196	42740-50-1	mg/kg	0.00629 J	0.0053 J	0.00475 J	9.71e-06 U	0.00624	9.55e-05
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	R	0.000458 J	0.00085	0.000756	R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.015 J	0.0115 J	0.00994 J	0.0137 J	0.0138 J	0.000253
E1668A	PCB-201	40186-71-8	mg/kg	0.00216 J	0.00163 J	0.00136 J	0.00252	0.00232	4.29e-05
E1668A	PCB-202	2136-99-4	mg/kg	0.00577 J	0.00445 J	0.00389 J	0.00414 J	0.00696 J	0.000137
E1668A	PCB-203	52663-76-0	mg/kg	0.00864 J	0.00621 J	0.00571 J	8.74e-06 U	0.00742 J	9.83e-05
E1668A	PCB-204	74472-52-9	mg/kg	3e-05 J	1.82e-05	1.6e-05 J	3.67e-05	2.59e-05 J	2.09e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000136 J	8.32e-05	7.29e-05 J	7.09e-05	0.000112	1.83e-06 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00569 J	0.00411 J	0.00387 J	0.00344 J	0.00547	6.25e-05
E1668A	PCB-207	52663-79-3	mg/kg	0.000797 J	0.000641	0.000577 J	0.000554	0.000886	1.73e-05
E1668A	PCB-208	52663-77-1	mg/kg	0.00302 J	0.00256 J	0.00221 J	0.00191	0.00325	6.71e-05
E1668A	PCB-209	2051-24-3	mg/kg	0.00343 J	0.00315 J	0.00275 J	0.00268	0.00386	1.59e-06 U
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	1.07 J	0.755 J	0.666 J	0.59 J	0.993 J	0.0303 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.31 J	0.923 J	0.828 J	0.734 J	1.2 J	0.0369 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	3.98e-05 J	2.98e-05	5.66e-06 J	2.9e-05	4.62e-05	1.1e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130	NB03CRB-MUS131
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15	08/26/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
E1668A	PCB-1	2051-60-7	mg/kg	1.14e-06 J	9.9e-07 U	9.78e-07 U	9.76e-07 U	3.21e-06 U	2e-06 U	9.53e-07 U	3.63e-06
E1668A	PCB-2	2051-61-8	mg/kg	6.69e-07 U	6.93e-07 U	6.85e-07 U	6.83e-07 U	2.24e-06 U	2.06e-06 J	8.63e-07 J	6.67e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	1.05e-06 U	1.09e-06 U	R	1.07e-06 U	3.53e-06 U	5.68e-06 J	3.43e-06 J	1.05e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.24e-06 U	1.29e-06 U	1.27e-06 U	1.27e-06 U	2.74e-05 J	1.55e-05 J	1.24e-06 U	1.24e-06 U
E1668A	PCB-5	16605-91-7	mg/kg	7.64e-07 U	7.92e-07 U	7.83e-07 U	7.8e-07 U	2.56e-06 U	1.6e-06 U	7.63e-07 U	7.62e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	2.57e-06	6.93e-07 U	6.85e-07 U	6.83e-07 U	2.24e-06 U	1.4e-06 U	6.67e-07 U	6.67e-07 U
E1668A	PCB-7	33284-50-3	mg/kg	7.64e-07 U	7.92e-07 U	1.05e-06 J	7.8e-07 U	2.36e-05	1.6e-06 U	2.18e-06	7.62e-07 U
E1668A	PCB-8	34883-43-7	mg/kg	1.43e-06 U	1.49e-06 U	2.86e-05	1.46e-06 U	4.81e-06 U	2.99e-06 U	1.43e-06 U	1.6e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	6.69e-07 U	6.93e-07 U	1.31e-06 J	6.83e-07 U	2.24e-06 U	1.4e-06 U	9.03e-07 J	6.67e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	1.24e-06 U	1.29e-06 U	1.27e-06 U	2.25e-06 J	4.17e-06 U	2.59e-06 U	1.24e-06 U	1.24e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	3.25e-06 U	3.37e-06 U	3.33e-06 U	3.32e-06 U	6.12e-05 J	3.71e-05 J	4.08e-05	3.24e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	7.32e-06	1.88e-06 U	8.33e-06	1.85e-06 U	1.29e-05 J	7.49e-06 J	8.5e-06	5.66e-06
E1668A	PCB-14	34883-41-5	mg/kg	7.64e-07 U	7.92e-07 U	7.83e-07 U	7.8e-07 U	2.56e-06 U	1.6e-06 U	7.63e-07 U	7.62e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000164	1.58e-06 U	0.000138 J	0.000122 J	2e-04 J	0.000115 J	0.000199 J	9.19e-05
E1668A	PCB-16	38444-78-9	mg/kg	4.31e-06	5e-06	8.81e-07 U	5.13e-06	2.88e-06 U	1.8e-06 U	8.58e-07 U	8.57e-07 U
E1668A	PCB-17	37680-66-3	mg/kg	1.62e-05	8.91e-07 U	8.81e-07 U	8.78e-07 U	2.88e-06 U	1.8e-06 U	1.27e-05	1.49e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	1.53e-06 U	1.81e-05 J	1.57e-06 U	2.51e-05 J	5.13e-06 U	3.19e-06 U	1.46e-05	2.1e-05 J
E1668A	PCB-19	38444-73-4	mg/kg	2.12e-06	3.24e-06	7.83e-07 U	7.8e-07 U	6.95e-06 J	1.6e-06 U	7.63e-07 U	7.62e-07 U
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00357 J	0.00108 J	0.00246 J	0.0019 J	0.00267 J	0.00175 J	0.00332 J	0.00106 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	1.79e-05	9.95e-06	2e-05	1.45e-05	2.98e-05 J	4.19e-06 U	2.01e-05 J	1.25e-05
E1668A	PCB-22	38444-85-8	mg/kg	4.29e-05	2.22e-05	5.68e-05 J	3.76e-05	7.23e-05 J	1.8e-06 U	5.19e-05 J	3.1e-05
E1668A	PCB-23	55720-44-0	mg/kg	6.69e-07 U	6.93e-07 U	6.85e-07 U	6.83e-07 U	2.24e-06 U	1.4e-06 U	6.67e-07 U	6.67e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	9.55e-07 U	9.9e-07 U	9.78e-07 U	9.76e-07 U	3.21e-06 U	2e-06 U	9.53e-07 U	9.52e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	1.88e-05	7.92e-07 U	2.12e-05	7.8e-07 U	2.56e-05	1.19e-05	1.53e-05	1.15e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	1.98e-05	1.19e-06 U	2.56e-05	1.17e-06 U	4.56e-05	2.4e-06 U	1.69e-05 J	1.21e-05
E1668A	PCB-27	38444-76-7	mg/kg	5.44e-06	4.27e-06	8.01e-06	7.8e-07 U	1.19e-05	4.86e-06	3.39e-06	4.58e-06
E1668A	PCB-31	16606-02-3	mg/kg	0.000109	5.17e-05	0.000124 J	0.000103	0.000195 J	3.59e-06 U	0.000105 J	8.11e-05 J
E1668A	PCB-32	38444-77-8	mg/kg	2.9e-05	1.66e-05	5e-05 J	3.37e-05	5.62e-05 J	1.6e-06 U	2.36e-05 J	2.12e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	3.44e-06	1.51e-06 J	2.7e-06	6.83e-07 U	3.94e-06 J	1.85e-06 J	2.39e-06	6.67e-07 U
E1668A	PCB-35	37680-69-6	mg/kg	2.22e-06	8.91e-07 U	1.78e-06 J	8.78e-07 U	3.15e-06 J	1.8e-06 U	2.44e-06	8.57e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	1.03e-06 J	7.92e-07 U	1.3e-06 J	7.8e-07 U	2.56e-06 U	1.6e-06 U	1.26e-06 J	7.62e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000318 J	9.74e-05	0.000179	0.00018	0.000269 J	0.000174	0.000327 J	0.000124
E1668A	PCB-38	53555-66-1	mg/kg	6.69e-07 U	6.93e-07 U	6.85e-07 U	6.83e-07 U	2.24e-06 U	1.4e-06 U	6.67e-07 U	6.67e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	8.17e-06	2.56e-06	4.84e-06	4.81e-06	7.76e-06	4.49e-06	4.68e-06	2.19e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	9.93e-05	5.04e-05	0.000117	9.72e-05	0.000135	6.54e-05	6.79e-05	4.91e-05
E1668A	PCB-41	52663-59-9	mg/kg	4.01e-06 U	4.16e-06 U	4.11e-06 U	4.1e-06 U	1.35e-05 U	8.38e-06 U	4e-06 U	4e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	2.7e-05	2.34e-05	4.04e-05	3.39e-05	4.61e-05	3.19e-06 U	1.87e-05	1.9e-05
E1668A	PCB-43	70362-46-8	mg/kg	6.14e-06	2.25e-06 J	5.98e-06	5.6e-06	8.79e-06 J	2.79e-06 U	4.84e-06	3.7e-06 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00289 J	0.000961 J	0.00228 J	0.00193 J	0.00233 J	0.00154 J	0.00159 J	0.000743
E1668A	PCB-45	70362-45-7	mg/kg	2.1e-06 U	2.8e-06 J	2.15e-06 U	2.15e-06 U	7.05e-06 U	4.39e-06 U	2.1e-06 U	2.1e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	1.59e-06 J	9.9e-07 U	9.78e-07 U	1.25e-06 J	3.21e-06 U	2e-06 U	9.56e-07 J	9.52e-07 U
E1668A	PCB-48	70362-47-9	mg/kg	9.72e-06	8.05e-06	1.18e-05	1.37e-06 U	1.24e-05 J	2.79e-06 U	6.42e-06	6e-06
E1668A	PCB-49/69	PCB-49/69	mg/kg	5.14e-05	4.79e-05 J	7.62e-05	7.18e-05 J	0.000108	5.19e-06 U	2.9e-05 J	3.5e-05
E1668A	PCB-50/53	PCB-50/53	mg/kg	5.86e-06 J	6.98e-06 J	8.78e-06 J	2.44e-06 U	1.2e-05 J	4.99e-06 U	3.33e-06 J	4.96e-06 J
E1668A	PCB-51	68194-04-7	mg/kg	6.3e-06	2.18e-06 U	2.15e-06 U	2.15e-06 U	7.05e-06 U	4.39e-06 U	2.43e-06 J	2.82e-06 J
E1668A	PCB-52	35693-99-3	mg/kg	6.09e-05	5.51e-05	8.23e-05 J	8.02e-05	0.000128 J	2.99e-06 U	3.13e-05	4.32e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130	NB03CRB-MUS131
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15	08/26/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
E1668A	PCB-54	15968-05-5	mg/kg	1.34e-06 U	1.39e-06 U	1.37e-06 U	1.37e-06 U	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.33e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	6.01e-06	1.19e-06 U	5.64e-06	1.17e-06 U	3.85e-06 U	3.78e-06 J	6.68e-06	1.52e-06 J
E1668A	PCB-56	41464-43-1	mg/kg	3.66e-05	2.76e-05	5.45e-05	3.62e-05	6e-05	3.54e-05	4.49e-05	2.43e-05
E1668A	PCB-57	70424-67-8	mg/kg	1.3e-06 J	1.09e-06 U	2.31e-06 J	1.07e-06 U	3.64e-06 J	2.2e-06 U	1.4e-06 J	1.05e-06 U
E1668A	PCB-58	41464-49-7	mg/kg	1.66e-06 J	1.39e-06 U	5.24e-06	1.37e-06 U	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.33e-06 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000201	6.67e-05	0.000157	0.000135	0.000158	0.000111	0.000121	5.24e-05
E1668A	PCB-60	33025-41-1	mg/kg	0.000647 J	0.000214	0.00057	0.000443	0.000545 J	0.000466 J	0.000741 J	0.000281
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00241 J	0.000782	0.00214	0.00166	0.00244 J	0.00168 J	0.00233 J	0.000773
E1668A	PCB-63	74472-34-7	mg/kg	4.82e-05	1.56e-05	4.03e-05	3.64e-05	6.82e-05	3.79e-05	3.98e-05	1.74e-05
E1668A	PCB-64	52663-58-8	mg/kg	5.44e-05	3.62e-05	7.51e-05	8.47e-05	0.00011	5.26e-05	4.18e-05 J	4.27e-05
E1668A	PCB-66	32598-10-0	mg/kg	0.00402 J	0.00118 J	0.00297 J	0.00221 J	0.00306 J	0.00227 J	0.00367 J	0.000918 J
E1668A	PCB-67	73575-53-8	mg/kg	1e-05	3.9e-06 J	8.6e-06	7.89e-06	1.14e-05 J	5.48e-06 J	6.22e-06	3.47e-06 J
E1668A	PCB-68	73575-52-7	mg/kg	3.05e-05	8.98e-06	2.54e-05	1.98e-05	3.26e-05	1.97e-05	1.66e-05	6.37e-06
E1668A	PCB-72	41464-42-0	mg/kg	1.13e-05	4.7e-06 J	1.18e-05	1.03e-05	2.05e-05	9.59e-06 J	6.62e-06	1.24e-06 U
E1668A	PCB-73	74338-23-1	mg/kg	3.53e-06 J	1.39e-06 U	6.75e-06	3.91e-06 J	5.81e-06 J	3.23e-06 J	1.76e-06 J	1.33e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000234	R	0.000161	R	R	R	R	R
E1668A	PCB-78	70362-49-1	mg/kg	1.53e-06 U	1.58e-06 U	1.57e-06 U	1.56e-06 U	5.13e-06 U	3.19e-06 U	1.53e-06 U	1.52e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	1.18e-05	4.15e-06 J	8.14e-06	6.96e-06	1.15e-05 J	7e-06 J	6.4e-06	3.15e-06 J
E1668A	PCB-80	33284-52-5	mg/kg	1.05e-06 U	1.09e-06 U	1.31e-06 J	1.07e-06 U	3.53e-06 U	2.2e-06 U	1.05e-06 U	1.05e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	1.05e-05	3.5e-06 J	9.14e-06	8.13e-06	1.24e-05 J	8.5e-06 J	1.22e-05	4.5e-06 J
E1668A	PCB-82	52663-62-4	mg/kg	3.56e-06 J	1.49e-06 U	4.48e-06 J	1.46e-06 U	4.81e-06 U	2.99e-06 U	2.45e-06 J	2.88e-06 J
E1668A	PCB-83	60145-20-2	mg/kg	3.18e-06 J	2.87e-06 U	5.99e-06 J	2.83e-06 U	9.35e-06 J	5.79e-06 U	2.76e-06 U	2.76e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	6.19e-06	1e-05	8.15e-06	9.26e-06	1.35e-05	5.95e-06	7.1e-06	5.48e-06
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000659	0.000232	0.000498	0.000501	0.000622	0.000421	0.000477 J	0.000263
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000294	0.000123	0.00023	0.000226	0.000298	1.48e-05 U	0.00017	0.000105
E1668A	PCB-88	55215-17-3	mg/kg	2.1e-06 U	2.18e-06 U	2.15e-06 U	2.15e-06 U	7.05e-06 U	4.39e-06 U	2.1e-06 U	2.1e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.24e-06 U	1.29e-06 U	1.27e-06 U	1.27e-06 U	4.17e-06 U	2.59e-06 U	1.24e-06 U	1.24e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.000138	0.000102 J	0.000156 J	0.000186 J	0.000254	9.38e-06 U	8.75e-05 J	7.05e-05
E1668A	PCB-91	68194-05-8	mg/kg	1.68e-05	1.54e-05	2.14e-05	2.89e-05	3.78e-05	1.56e-05	1.2e-05	1.21e-05
E1668A	PCB-92	52663-61-3	mg/kg	1.47e-05	1.78e-05 J	2.45e-05	3.02e-05 J	3.88e-05	2.59e-06 U	1.14e-05	1.42e-05
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000154	4.97e-05	0.000124	0.00011	0.00014	8.81e-05	7.21e-05	4.13e-05
E1668A	PCB-94	73575-55-0	mg/kg	7.99e-06	3.16e-06 J	7.23e-06	6.54e-06	1.05e-05 J	2.59e-06 U	4.24e-06 J	3.58e-06 J
E1668A	PCB-95	38379-99-6	mg/kg	3.87e-05	R	R	R	7.42e-05	2.91e-05 J	3.14e-05	2.21e-05
E1668A	PCB-96	73575-54-9	mg/kg	1.43e-06 U	1.49e-06 U	1.47e-06 U	1.46e-06 U	4.81e-06 U	2.99e-06 U	1.43e-06 U	1.43e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.35e-06 U	7.62e-06 U	7.53e-06 U	7.51e-06 U	2.47e-05 U	1.54e-05 U	7.34e-06 U	7.33e-06 U
E1668A	PCB-99	38380-01-7	mg/kg	0.00285 J	0.000972 J	0.00228 J	0.00211 J	0.00278 J	0.00198 J	0.00189 J	0.000996 J
E1668A	PCB-103	60145-21-3	mg/kg	1.11e-06 J	1.46e-06 J	1.8e-06 J	2.05e-06 J	3.53e-06 U	2.2e-06 U	1.05e-06 U	1.05e-06 U
E1668A	PCB-104	56558-16-8	mg/kg	1.34e-06 U	1.39e-06 U	1.37e-06 U	1.37e-06 U	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.33e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00111 J	0.000376	0.000821 J	0.000741 J	0.00109 J	0.000727 J	0.00117 J	0.000352
E1668A	PCB-106	70424-69-0	mg/kg	1.62e-06 U	1.68e-06 U	1.66e-06 U	1.66e-06 U	5.45e-06 U	3.39e-06 U	1.62e-06 U	1.62e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000206	6.35e-05	0.000175	0.000145	0.000267	0.000141	0.000157 J	6.7e-05
E1668A	PCB-108/124	PCB-108/124	mg/kg	6.26e-06 J	4.14e-06 J	7.57e-06 J	8.02e-06 J	1.61e-05 J	6.15e-06 J	6.41e-06 J	3.02e-06 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.000182	0.000127 J	0.000198	0.000231 J	0.000293	7.78e-06 U	0.000139 J	0.000112
E1668A	PCB-111	39635-32-0	mg/kg	5.12e-06	2.35e-06 J	4.81e-06 J	4.69e-06 J	4.49e-06 U	3.45e-06 J	2.63e-06 J	1.74e-06 J
E1668A	PCB-112	74472-36-9	mg/kg	3.29e-06 J	1.39e-06 U	1.37e-06 U	1.37e-06 U	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.33e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000106	3.25e-05	8.09e-05	7.41e-05	0.00012	7.47e-05	0.000103 J	3.32e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130	NB03CRB-MUS131
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15	08/26/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
E1668A	PCB-118	31508-00-6	mg/kg	0.00435 J	0.00139 J	0.00339 J	0.00298 J	0.00492 J	0.00287 J	0.00378 J	0.00116 J
E1668A	PCB-120	68194-12-7	mg/kg	2.89e-05	1.01e-05	2.21e-05	2.12e-05	2.94e-05	1.75e-05	1.53e-05	7.14e-06
E1668A	PCB-121	56558-18-0	mg/kg	3.37e-06 J	1.19e-06 U	2.79e-06 J	2.51e-06 J	3.9e-06 J	2.4e-06 U	1.78e-06 J	1.14e-06 U
E1668A	PCB-122	76842-07-4	mg/kg	1.15e-06 U	1.19e-06 U	1.17e-06 U	1.17e-06 U	3.85e-06 U	2.4e-06 U	1.14e-06 U	1.14e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	9.1e-05	2.78e-05	7.28e-05	6.67e-05	0.000109	5.96e-05	9.42e-05 J	2.61e-05
E1668A	PCB-126	57465-28-8	mg/kg	1.04e-05	3.83e-06 J	8.71e-06	8e-06	1.24e-05 J	8.08e-06 J	1.04e-05	3.09e-06 J
E1668A	PCB-127	39635-33-1	mg/kg	4.93e-06	1.39e-06 U	1.37e-06 U	3.41e-06 J	4.49e-06 U	2.79e-06 U	2.62e-06 J	1.33e-06 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000359	0.000102	0.000235	0.000205	0.000293	0.000171	0.000216 J	9.28e-05
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00264 J	0.000731 J	0.00186 J	0.00155 J	0.00239 J	1.26e-05 U	0.00163 J	0.000554
E1668A	PCB-130	52663-66-8	mg/kg	4.09e-05	1.66e-05	4.05e-05	3.5e-05	5.57e-05	3.43e-05	2.59e-05	1.58e-05
E1668A	PCB-131	61798-70-7	mg/kg	2.42e-06 J	1.68e-06 U	2.31e-06 J	1.66e-06 U	R	R	1.62e-06 U	1.62e-06 U
E1668A	PCB-132	38380-05-1	mg/kg	4.97e-06	1.38e-05	7.67e-06	1.1e-05	R	R	3.46e-06 J	4.76e-06 J
E1668A	PCB-133	35694-04-3	mg/kg	7.35e-05	2.33e-05	8.08e-05	5.29e-05	8.54e-05	5.27e-05	3.63e-05	1.75e-05
E1668A	PCB-134	52704-70-8	mg/kg	3.15e-06 U	3.61e-06 J	3.23e-06 U	3.22e-06 U	R	R	3.15e-06 U	3.14e-06 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	2e-05	2.82e-05	2.68e-05	3.19e-05	3.68e-05	9.18e-06 U	1.19e-05	1.54e-05
E1668A	PCB-136	38411-22-2	mg/kg	2.19e-06 J	5.22e-06	1.57e-06 U	4.22e-06 J	5.13e-06 U	3.19e-06 U	1.61e-06 J	1.73e-06 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000153	4.75e-05	0.000121	0.000105	0.000152	0.000119	0.000109 J	4.08e-05
E1668A	PCB-139/140	PCB-139/140	mg/kg	6.49e-05	2.02e-05	5.32e-05	4.17e-05	6.65e-05	4.31e-05	3.92e-05	1.95e-05
E1668A	PCB-141	52712-04-6	mg/kg	1.02e-05	1.06e-05	1.63e-05	1.79e-05	2.21e-05	3.39e-06 U	6.64e-06	R
E1668A	PCB-142	41411-61-4	mg/kg	1.62e-06 U	1.68e-06 U	1.66e-06 U	1.66e-06 U	5.45e-06 U	R	1.62e-06 U	1.62e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.15e-06 U	3.27e-06 U	3.23e-06 U	3.22e-06 U	R	R	3.15e-06 U	3.14e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	5.79e-06	3.41e-06 J	4.5e-06 J	1.46e-06 U	4.81e-06 U	R	3.41e-06 J	3.11e-06 J
E1668A	PCB-145	74472-40-5	mg/kg	1.53e-06 U	1.58e-06 U	1.57e-06 U	1.56e-06 U	5.13e-06 U	3.19e-06 U	1.53e-06 U	1.52e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000514	0.00015	0.000409	0.000318	R	R	R	0.000137
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.000131	7.84e-05 J	0.000129 J	0.000133 J	0.000202	6.99e-06 U	7.29e-05 J	4.88e-05
E1668A	PCB-148	74472-41-6	mg/kg	1.97e-05	5.48e-06	1.22e-05	1.29e-05	1.52e-05 J	9.34e-06 J	8.81e-06	6.21e-06
E1668A	PCB-150	68194-08-1	mg/kg	1.43e-06 U	1.49e-06 U	1.47e-06 U	1.46e-06 U	4.81e-06 U	2.99e-06 U	1.43e-06 U	1.43e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	1.34e-06 U	1.39e-06 U	1.37e-06 U	1.37e-06 U	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.33e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00361 J	0.00108 J	0.00278 J	0.00226 J	0.00377 J	0.00249 J	0.00232 J	0.000963 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000121	3.17e-05	7.69e-05	7.94e-05	0.000116	R	6.32e-05	3.29e-05
E1668A	PCB-155	33979-03-2	mg/kg	4.69e-05	1.37e-05	3.83e-05	3.25e-05	4.33e-05	2.96e-05	2.09e-05	9.51e-06
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00032	0.000102	0.000258	0.000229	0.000384	0.000229	0.000287 J	8.88e-05
E1668A	PCB-158	74472-42-7	mg/kg	0.000309	9.24e-05	0.000236	0.000199	0.000318	0.00021 J	0.000208 J	7.36e-05
E1668A	PCB-159	39635-35-3	mg/kg	1.34e-06 U	1.39e-06 U	1.37e-06 U	1.37e-06 U	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.33e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.02e-06 U	6.24e-06 U	6.16e-06 U	6.15e-06 U	2.02e-05 U	1.26e-05 U	6.01e-06 U	6e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.24e-06 U	1.29e-06 U	1.27e-06 U	1.27e-06 U	4.17e-06 U	R	1.24e-06 U	1.24e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	1.24e-06 U	R	1.61e-05	R	1.81e-05	1.07e-05	1.33e-05	1.24e-06 U
E1668A	PCB-164	74472-45-0	mg/kg	7.95e-06	5.35e-06	1.04e-05	1.13e-05	1.63e-05	2.99e-06 U	4.67e-06 J	2.81e-06 J
E1668A	PCB-165	74472-46-1	mg/kg	3.45e-06 J	1.29e-06 U	1.27e-06 U	1.27e-06 U	R	R	R	1.24e-06 U
E1668A	PCB-167	52663-72-6	mg/kg	0.000128	4.09e-05	0.000102	9.04e-05	0.000158	9.18e-05	0.000111 J	3.21e-05
E1668A	PCB-169	32774-16-6	mg/kg	1.43e-06 U	1.49e-06 U	1.47e-06 U	1.46e-06 U	4.81e-06 U	2.99e-06 U	1.43e-06 U	1.43e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000314	6.57e-05	0.000158	0.000128	0.000169	2.59e-06 U	0.000172 J	5.11e-05
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000132	4e-05	0.000102	7.84e-05	R	R	R	3.1e-05
E1668A	PCB-172	52663-74-8	mg/kg	7.49e-05	1.67e-05	5.15e-05	4.01e-05	4.59e-05	2.59e-06 U	2.99e-05	1.24e-05
E1668A	PCB-174	38411-25-5	mg/kg	8.77e-06	8.9e-06	R	1.31e-05	R	R	4.69e-06 J	3.07e-06 J
E1668A	PCB-175	40186-70-7	mg/kg	2.51e-05	8.09e-06	2.04e-05	1.77e-05	R	R	1.37e-05	6.23e-06

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129	NB03CRB-MUS130	NB03CRB-MUS131
			Sample Date	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15	09/01/15	08/26/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
E1668A	PCB-176	52663-65-7	mg/kg	1.85e-06 J	1.19e-06 U	1.89e-06 J	2.43e-06 J	3.85e-06 U	2.4e-06 U	1.29e-06 J	1.14e-06 U
E1668A	PCB-177	52663-70-4	mg/kg	8.48e-05	R	8.73e-05	R	R	2.2e-06 U	5e-05	2.26e-05
E1668A	PCB-178	52663-67-9	mg/kg	0.000197	6.74e-05	0.000163	0.000145	0.000209	R	9.24e-05	4.07e-05
E1668A	PCB-179	52663-64-6	mg/kg	2.05e-06 J	6.07e-06	3.25e-06 J	4.53e-06 J	4.49e-06 U	2.79e-06 U	1.33e-06 U	1.79e-06 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00126 J	3e-04	0.000888 J	0.000635	0.000867 J	5.99e-06 U	0.000744 J	0.000257
E1668A	PCB-181	74472-47-2	mg/kg	5.99e-06	R	R	R	R	R	3.77e-06 J	1.71e-06 J
E1668A	PCB-182	60145-23-5	mg/kg	7.6e-06	1.29e-06 U	3.82e-06 J	3.67e-06 J	R	R	3.62e-06 J	1.72e-06 J
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000435	0.000111	0.000334	0.000223	R	R	0.000256 J	7.22e-05
E1668A	PCB-184	74472-48-3	mg/kg	4.95e-06	1.39e-06 U	3.17e-06 J	1.37e-06 U	4.81e-06 J	2.79e-06 U	2.43e-06 J	1.33e-06 U
E1668A	PCB-186	74472-49-4	mg/kg	1.43e-06 U	1.49e-06 U	1.47e-06 U	1.46e-06 U	4.81e-06 U	R	1.43e-06 U	1.43e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000883 J	0.000256	0.000695 J	0.000531	0.00084 J	R	0.000482 J	0.000188 J
E1668A	PCB-188	74487-85-7	mg/kg	1.06e-05	5.18e-06	1.47e-06 U	1.02e-05	4.81e-06 U	7.88e-06 J	6.69e-06	2.94e-06 J
E1668A	PCB-189	39635-31-9	mg/kg	1.68e-05	1.29e-06 U	1.17e-05	1.27e-06 U	1.45e-05 J	1.07e-05	1.29e-05	3.87e-06 J
E1668A	PCB-190	41411-64-7	mg/kg	6.93e-05	2.44e-05	6.39e-05	4.96e-05	6.2e-05	2.79e-06 U	5.97e-05	1.78e-05
E1668A	PCB-191	74472-50-7	mg/kg	2e-05	5.08e-06	1.42e-05	1.06e-05	1.61e-05	1.11e-05	1.29e-05	4.4e-06 J
E1668A	PCB-192	74472-51-8	mg/kg	1.24e-06 U	1.29e-06 U	1.27e-06 U	1.27e-06 U	4.17e-06 U	2.59e-06 U	1.24e-06 U	1.24e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000109	2.53e-05	8.27e-05	5.53e-05	7.57e-05	3.59e-06 U	7.67e-05 J	2.32e-05
E1668A	PCB-195	52663-78-2	mg/kg	3.52e-05	9.36e-06	2.35e-05	1.69e-05	2.01e-05	1.66e-05	2.68e-05	6.91e-06
E1668A	PCB-196	42740-50-1	mg/kg	0.000121	3.17e-05	8.3e-05	7.3e-05	8.88e-05	7.3e-05	8.87e-05 J	2.74e-05
E1668A	PCB-197/200	PCB-197/200	mg/kg	1.59e-05	4.83e-06 J	9.76e-06 J	4.2e-06 U	1.51e-05 J	8.58e-06 U	8.82e-06 J	4.1e-06 U
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00031	7.31e-05	0.000205	0.000178	0.000217	7.39e-06 U	0.000166	5.72e-05
E1668A	PCB-201	40186-71-8	mg/kg	5.13e-05	1.65e-05	1.96e-06 U	3.13e-05	6.41e-06 U	3.45e-05	2.88e-05	1.15e-05
E1668A	PCB-202	2136-99-4	mg/kg	0.000144	5.57e-05	0.000147	0.00011	0.000228	0.000124	9.32e-05	3.34e-05
E1668A	PCB-203	52663-76-0	mg/kg	0.000126	2.81e-05	8.07e-05	6.29e-05	8.67e-05	6.13e-05	8.99e-05	2.35e-05
E1668A	PCB-204	74472-52-9	mg/kg	2.01e-06 U	2.08e-06 U	2.05e-06 U	2.05e-06 U	6.73e-06 U	4.19e-06 U	2e-06 U	2e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	2.07e-06 J	1.49e-06 U	1.47e-06 U	1.46e-06 U	4.81e-06 U	2.99e-06 U	1.43e-06 U	1.43e-06 U
E1668A	PCB-206	40186-72-9	mg/kg	7.58e-05	2.06e-05	6.14e-05	4.6e-05	5.13e-05	3.79e-05	5.63e-05	1.52e-06 U
E1668A	PCB-207	52663-79-3	mg/kg	1.75e-05	1.88e-06 U	1.27e-05	1.85e-06 U	1.34e-05 J	1.01e-05	1.06e-05	1.81e-06 U
E1668A	PCB-208	52663-77-1	mg/kg	7e-05	2.33e-05	6.11e-05	5.35e-05	7.66e-05	4.76e-05	4.43e-05	1.32e-05
E1668A	PCB-209	2051-24-3	mg/kg	7.44e-05	2.59e-05	1.57e-06 U	5.54e-05	5.13e-06 U	R	6.38e-05	1.67e-05
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0325 J	0.0103 J	0.0252 J	0.0207 J	0.0289 J	0.015 J	0.0236 J	0.00934 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0389 J	0.0123 J	0.0301 J	0.0249 J	0.0357 J	0.0191 J	0.0292 J	0.011 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.26e-06	4.51e-07 J	1.04e-06	9.33e-07	1.46e-06 J	9.48e-07 J	1.22e-06	3.68e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003	NB03CRB-MUS-C004
			Sample Date	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-1	2051-60-7	mg/kg	9.97e-07 U	1.5e-06 J	3.36e-05 J	9.99e-07 J	1.1e-06 J	1.47e-06 J	9.95e-07 U
E1668A	PCB-2	2051-61-8	mg/kg	6.98e-07 U	6.79e-07 U	5.3e-06 U	6.76e-07 U	6.85e-07 U	6.86e-07 U	6.97e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	1.1e-06 U	1.07e-06 U	R	1.06e-06 U	1.08e-06 U	1.08e-06 U	1.09e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.3e-06 U	5.7e-06	4.85e-05	4.78e-06 J	1.27e-06 U	6.04e-06	1.68e-05
E1668A	PCB-5	16605-91-7	mg/kg	7.98e-07 U	7.76e-07 U	6.06e-06 U	7.72e-07 U	7.83e-07 U	7.84e-07 U	7.96e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	1.55e-06 J	3.04e-06	2.21e-05 J	1.84e-06 J	6.85e-07 U	1.52e-06 J	6.97e-07 U
E1668A	PCB-7	33284-50-3	mg/kg	7.98e-07 U	7.76e-07 U	6.05e-05	7.72e-07 U	7.83e-07 U	7.84e-07 U	7.96e-07 U
E1668A	PCB-8	34883-43-7	mg/kg	1.5e-06 U	1.45e-06 U	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	1.49e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	6.98e-07 U	6.79e-07 U	1.15e-05 J	6.76e-07 U	6.85e-07 U	6.86e-07 U	6.97e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	1.3e-06 U	1.26e-06 U	9.85e-06 U	1.25e-06 U	1.27e-06 U	1.27e-06 U	1.29e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	3.39e-06 U	4.3e-05 J	0.000129 J	3.28e-06 U	3.33e-06 U	3.33e-06 U	3.38e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	5.62e-06	1.28e-05	2.28e-05 J	5.16e-06	2.41e-06 J	3.95e-06 J	1.89e-06 U
E1668A	PCB-14	34883-41-5	mg/kg	7.98e-07 U	7.76e-07 U	7.13e-06 J	7.72e-07 U	7.83e-07 U	7.84e-07 U	7.96e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000222	0.000307 J	0.000225 J	0.000175	7.34e-05	0.000173	0.000102 J
E1668A	PCB-16	38444-78-9	mg/kg	2.29e-06	3.42e-06	1.92e-05	8.69e-07 U	8.81e-07 U	8.81e-07 U	4.19e-06
E1668A	PCB-17	37680-66-3	mg/kg	9.54e-06	1.54e-05	2.8e-05 J	8.69e-07 U	8.81e-07 U	8.81e-07 U	8.96e-07 U
E1668A	PCB-18/30	PCB-18/30	mg/kg	1.6e-06 U	1.55e-06 U	1.21e-05 U	1.54e-06 U	1.57e-06 U	1.57e-06 U	2.56e-05 J
E1668A	PCB-19	38444-73-4	mg/kg	8.04e-07 J	7.76e-07 U	6.06e-06 U	7.72e-07 U	9.92e-07 J	7.84e-07 U	3.84e-06
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00391 J	0.00556 J	0.00258 J	0.00256 J	0.00107 J	0.0028 J	0.00178 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	1.46e-05	2.89e-05	3.75e-05 J	2.03e-06 U	6.26e-06	2.06e-06 U	1.13e-05
E1668A	PCB-22	38444-85-8	mg/kg	2.38e-05	5.93e-05	4.87e-05	8.69e-07 U	1.29e-05	8.81e-07 U	2.94e-05
E1668A	PCB-23	55720-44-0	mg/kg	6.98e-07 U	6.79e-07 U	5.3e-06 U	6.76e-07 U	6.85e-07 U	6.86e-07 U	6.97e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	9.97e-07 U	9.7e-07 U	7.58e-06 U	9.65e-07 U	9.78e-07 U	9.79e-07 U	9.95e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	1.34e-05	2.75e-05	1.75e-05	1.18e-05	5.05e-06	8.06e-06	7.96e-07 U
E1668A	PCB-26/29	PCB-26/29	mg/kg	1.26e-05	2.02e-05	2.68e-05 J	1.16e-06 U	4.93e-06	1.18e-06 U	1.19e-06 U
E1668A	PCB-27	38444-76-7	mg/kg	2.53e-06	3.84e-06	6.06e-06 U	3.74e-06	1.45e-06 J	2.27e-06	7.47e-06
E1668A	PCB-31	16606-02-3	mg/kg	6.77e-05	0.000127	0.00011 J	1.74e-06 U	3.2e-05 J	1.76e-06 U	8.74e-05
E1668A	PCB-32	38444-77-8	mg/kg	1.41e-05	2.86e-05	3.3e-05 J	7.72e-07 U	7.77e-06 J	7.84e-07 U	2.68e-05
E1668A	PCB-34	37680-68-5	mg/kg	2.49e-06	3.28e-06	5.3e-06 U	1.87e-06 J	6.85e-07 U	1.72e-06 J	2.04e-06
E1668A	PCB-35	37680-69-6	mg/kg	1.68e-06 J	4.69e-06	6.82e-06 U	1.62e-06 J	8.81e-07 U	1.3e-06 J	8.96e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	9.14e-07 J	1.62e-06 J	6.06e-06 U	8.19e-07 J	7.83e-07 U	7.84e-07 U	7.96e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000377 J	0.000531 J	0.000284	0.000235	8.25e-05	0.000256	0.000168
E1668A	PCB-38	53555-66-1	mg/kg	6.98e-07 U	6.79e-07 U	5.3e-06 U	6.76e-07 U	6.85e-07 U	6.86e-07 U	6.97e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	7.44e-06	1.1e-05	6.06e-06 U	4.04e-06	2.39e-06	5.12e-06	3.9e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	5.51e-05	8.03e-05	5.58e-05 J	6.21e-05	1.9e-05	3.85e-05	9.21e-05
E1668A	PCB-41	52663-59-9	mg/kg	4.19e-06 U	4.07e-06 U	3.18e-05 U	4.05e-06 U	4.11e-06 U	4.11e-06 U	4.18e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	1.89e-05	3.27e-05	2.24e-05 J	1.54e-06 U	7.88e-06	1.57e-06 U	3.41e-05
E1668A	PCB-43	70362-46-8	mg/kg	2.82e-06 J	3.77e-06 J	1.06e-05 U	3.16e-06 J	1.37e-06 U	3.07e-06 J	1.39e-06 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00203 J	0.00368 J	0.00238	0.0012 J	0.000699	0.00159 J	0.00191 J
E1668A	PCB-45	70362-45-7	mg/kg	2.19e-06 U	2.13e-06 U	1.67e-05 U	2.12e-06 U	2.15e-06 U	2.15e-06 U	2.19e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	9.97e-07 U	1.2e-06 J	7.58e-06 U	9.65e-07 U	9.78e-07 U	9.79e-07 U	9.95e-07 U
E1668A	PCB-48	70362-47-9	mg/kg	6.08e-06	8.88e-06	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.14e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	3.67e-05	4.92e-05	4.69e-05 J	2.51e-06 U	1.25e-05	2.55e-06 U	7.27e-05 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	3.58e-06 J	4.66e-06 J	1.89e-05 U	6.22e-06 J	2.45e-06 U	2.5e-06 J	9.07e-06 J
E1668A	PCB-51	68194-04-7	mg/kg	3.74e-06 J	5.96e-06	1.67e-05 U	3.56e-06 J	2.15e-06 U	2.43e-06 J	8.33e-06
E1668A	PCB-52	35693-99-3	mg/kg	4.22e-05	4.95e-05	6.81e-05	1.45e-06 U	1.32e-05	1.47e-06 U	8.33e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003	NB03CRB-MUS-C004
			Sample Date	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-54	15968-05-5	mg/kg	1.4e-06 U	1.36e-06 U	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.39e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	4.05e-06 J	1.16e-06 U	9.47e-06 J	1.16e-06 U	1.17e-06 U	2.11e-06 J	1.19e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	2.76e-05	7.07e-05	4.09e-05	2.91e-05	1.02e-05	1.62e-05	3.22e-05
E1668A	PCB-57	70424-67-8	mg/kg	1.1e-06 U	1.34e-06 J	8.33e-06 U	1.06e-06 U	1.08e-06 U	1.08e-06 U	1.66e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	1.44e-06 J	1.36e-06 U	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.94e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000164	0.000221	0.000158	9.27e-05	5.46e-05	0.000126	0.000133
E1668A	PCB-60	33025-41-1	mg/kg	0.000619 J	0.000865 J	0.00065	0.000412	0.000187	0.000434	0.000401
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00213	0.00348 J	0.00277 J	0.00132	0.000658	0.00151	0.00153
E1668A	PCB-63	74472-34-7	mg/kg	3.84e-05	6.02e-05	3.2e-05 J	2.16e-05	1.19e-05	2.27e-05	3.04e-05
E1668A	PCB-64	52663-58-8	mg/kg	3.52e-05	6.73e-05	4.7e-05	1.25e-06 U	1.4e-05	1.27e-06 U	6.56e-05
E1668A	PCB-66	32598-10-0	mg/kg	0.00373 J	0.006 J	0.00394 J	0.00217 J	0.000983 J	0.00256 J	0.002 J
E1668A	PCB-67	73575-53-8	mg/kg	6.76e-06	1.82e-05	1.06e-05 J	5.16e-06	2.15e-06 J	4.7e-06 J	7.64e-06
E1668A	PCB-68	73575-52-7	mg/kg	2.3e-05	3.29e-05	2.12e-05 J	1.13e-05	7.96e-06	1.57e-05	1.92e-05
E1668A	PCB-72	41464-42-0	mg/kg	7.11e-06	9.37e-06	9.85e-06 U	6.09e-06	1.27e-06 U	5.37e-06	9.59e-06
E1668A	PCB-73	74338-23-1	mg/kg	1.44e-06 J	2.13e-06 J	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.49e-06 J	1.39e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000255	0.000356	0.000237	0.00014	5.26e-05	0.000167	R
E1668A	PCB-78	70362-49-1	mg/kg	1.6e-06 U	1.55e-06 U	1.21e-05 U	1.54e-06 U	1.57e-06 U	1.57e-06 U	1.59e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	8.78e-06	1.69e-05	1.37e-05 J	5.62e-06	2.74e-06 J	5.93e-06	6.91e-06
E1668A	PCB-80	33284-52-5	mg/kg	1.1e-06 U	1.07e-06 U	8.33e-06 U	1.06e-06 U	1.08e-06 U	1.08e-06 U	1.09e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	8.69e-06	1.41e-05	1.54e-05 J	5.24e-06	2.46e-06 J	5.61e-06	7.14e-06
E1668A	PCB-82	52663-62-4	mg/kg	2.75e-06 J	4.5e-06 J	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	6.91e-06
E1668A	PCB-83	60145-20-2	mg/kg	2.89e-06 U	2.81e-06 U	2.2e-05 U	3.46e-06 J	2.84e-06 U	2.84e-06 U	2.89e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	5.25e-06	8.61e-06	8.33e-06 U	1.06e-06 U	2.78e-06	1.08e-06 U	9.11e-06
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000616	0.00102	0.00142	0.00037	0.000181	0.00045	0.000511
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000233	0.00041	0.000443	7.14e-06 U	7.65e-05	7.25e-06 U	0.000239
E1668A	PCB-88	55215-17-3	mg/kg	2.19e-06 U	2.02e-05	1.67e-05 U	2.12e-06 U	2.15e-06 U	2.15e-06 U	2.19e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.3e-06 U	1.26e-06 U	9.85e-06 U	1.25e-06 U	1.27e-06 U	1.27e-06 U	1.29e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.000121	0.000182	0.000157	4.54e-06 U	3.59e-05	4.6e-06 U	0.000188 J
E1668A	PCB-91	68194-05-8	mg/kg	1.52e-05	1.9e-05	1.72e-05 J	2.12e-06 U	4.85e-06 J	2.15e-06 U	2.8e-05
E1668A	PCB-92	52663-61-3	mg/kg	1.66e-05	1.86e-05	9.85e-06 U	1.25e-06 U	5.5e-06	1.27e-06 U	3.14e-05 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000114	0.000277	0.000168	7.19e-05	3.97e-05	9.49e-05	0.000131
E1668A	PCB-94	73575-55-0	mg/kg	3.85e-06 J	4.95e-06	9.85e-06 U	3.21e-06 J	1.89e-06 J	3.47e-06 J	5.74e-06
E1668A	PCB-95	38379-99-6	mg/kg	2.49e-05	4.18e-05	6.88e-05 J	4e-05	1.03e-05 J	2.26e-05	R
E1668A	PCB-96	73575-54-9	mg/kg	1.5e-06 U	1.45e-06 U	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	1.49e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.68e-06 U	7.47e-06 U	5.83e-05 U	7.43e-06 U	7.53e-06 U	7.54e-06 U	7.66e-06 U
E1668A	PCB-99	38380-01-7	mg/kg	0.00241 J	0.00428 J	0.0058 J	0.00152 J	0.000736 J	0.0019 J	0.00221 J
E1668A	PCB-103	60145-21-3	mg/kg	1.1e-06 U	1.3e-06 J	8.33e-06 U	1.48e-06 J	1.08e-06 U	1.08e-06 U	1.09e-06 U
E1668A	PCB-104	56558-16-8	mg/kg	1.4e-06 U	1.36e-06 U	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.39e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00104 J	0.00163 J	0.0032 J	0.000658 J	0.000275	0.000738 J	0.000726 J
E1668A	PCB-106	70424-69-0	mg/kg	1.69e-06 U	1.65e-06 U	1.29e-05 U	1.64e-06 U	1.66e-06 U	1.67e-06 U	1.69e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000171	0.000296	0.000379	1e-04	5.6e-05	0.000123	0.000154
E1668A	PCB-108/124	PCB-108/124	mg/kg	5.14e-06 J	8.13e-06 J	2.2e-05 U	5.81e-06 J	2.84e-06 U	3.06e-06 J	6.91e-06 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00017	0.000278	0.000366	3.76e-06 U	5.05e-05	3.82e-06 U	0.000218 J
E1668A	PCB-111	39635-32-0	mg/kg	4.04e-06 J	6.42e-06	1.06e-05 U	2.93e-06 J	1.49e-06 J	3.84e-06 J	1.39e-06 U
E1668A	PCB-112	74472-36-9	mg/kg	2.24e-06 J	1.36e-06 U	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.39e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	7.91e-05	0.00014	0.000281	4.81e-05	2.22e-05	5.68e-05	7.27e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003	NB03CRB-MUS-C004
			Sample Date	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-118	31508-00-6	mg/kg	0.00351 J	0.00645 J	0.0123 J	0.00206 J	0.000999 J	0.0026 J	0.003 J
E1668A	PCB-120	68194-12-7	mg/kg	2.37e-05	4.09e-05	9.85e-06 U	1.57e-05	6.84e-06	1.87e-05	2.3e-05
E1668A	PCB-121	56558-18-0	mg/kg	2.96e-06 J	5.17e-06	9.09e-06 U	1.72e-06 J	1.17e-06 U	2.37e-06 J	3.13e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	1.2e-06 U	1.16e-06 U	9.09e-06 U	1.16e-06 U	1.17e-06 U	1.18e-06 U	1.19e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	7.13e-05	0.000123	0.000221	4.35e-05	2.01e-05	5.91e-05	5.74e-05
E1668A	PCB-126	57465-28-8	mg/kg	7.48e-06	1.4e-05	2.26e-05 J	4.41e-06 J	2.22e-06 J	5.82e-06	6.97e-06
E1668A	PCB-127	39635-33-1	mg/kg	3.75e-06 J	8.2e-06	1.5e-05 J	2.18e-06 J	1.37e-06 U	2.68e-06 J	2.81e-06 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000283	0.000549	0.00107	0.000182	8.45e-05	0.000234	0.000237
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00218 J	0.00478 J	0.00657 J	6.08e-06 U	0.000662	0.00176	0.00187 J
E1668A	PCB-130	52663-66-8	mg/kg	3.62e-05	6.37e-05	4.57e-05	2.32e-05	1.12e-05	2.39e-05	3.63e-05
E1668A	PCB-131	61798-70-7	mg/kg	1.78e-06 J	2.3e-06 J	1.29e-05 U	1.77e-06 J	1.66e-06 U	1.67e-06 U	2.13e-06 J
E1668A	PCB-132	38380-05-1	mg/kg	4.6e-06 J	7.51e-06	1.44e-05 J	1.54e-06 U	1.57e-06 U	1.57e-06 U	1.2e-05
E1668A	PCB-133	35694-04-3	mg/kg	4.89e-05	0.000101	0.000168	3.4e-05	1.98e-05	4.83e-05	5.82e-05
E1668A	PCB-134	52704-70-8	mg/kg	3.29e-06 U	3.2e-06 U	2.5e-05 U	3.19e-06 U	3.23e-06 U	3.23e-06 U	3.28e-06 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	2.19e-05	2.62e-05	3.48e-05 U	4.44e-06 U	7.15e-06 J	4.51e-06 U	3.7e-05
E1668A	PCB-136	38411-22-2	mg/kg	2.01e-06 J	3.21e-06 J	1.21e-05 U	2.88e-06 J	1.57e-06 U	2.32e-06 J	4.25e-06 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000107	0.000251	0.000622	7.19e-05	3.84e-05	9.36e-05	0.000109
E1668A	PCB-139/140	PCB-139/140	mg/kg	5.03e-05	0.000103	0.000191	3.71e-05	1.79e-05	4.65e-05	4.62e-05
E1668A	PCB-141	52712-04-6	mg/kg	9.2e-06	1.59e-05	3.44e-05 J	1.64e-06 U	2.87e-06 J	1.67e-06 U	1.72e-05
E1668A	PCB-142	41411-61-4	mg/kg	1.69e-06 U	1.65e-06 U	1.29e-05 U	1.64e-06 U	1.66e-06 U	1.67e-06 U	1.69e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.29e-06 U	3.2e-06 U	2.5e-05 U	3.19e-06 U	3.23e-06 U	3.23e-06 U	3.28e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	4.41e-06 J	6.7e-06	1.14e-05 U	5.69e-06	1.59e-06 J	4.15e-06 J	6.36e-06
E1668A	PCB-145	74472-40-5	mg/kg	1.6e-06 U	1.55e-06 U	1.21e-05 U	1.54e-06 U	1.57e-06 U	1.57e-06 U	1.59e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000392	0.000805 J	0.00109	1.35e-06 U	0.000132	0.00037	R
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.000119	0.000178	0.00016 J	3.38e-06 U	3.53e-05	3.43e-06 U	0.000144 J
E1668A	PCB-148	74472-41-6	mg/kg	1.32e-05	2.37e-05	1.06e-05 U	9.62e-06	5.49e-06	1.38e-05	1.39e-05
E1668A	PCB-150	68194-08-1	mg/kg	1.5e-06 U	1.45e-06 U	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	1.49e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	1.4e-06 U	1.36e-06 U	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.39e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0029 J	0.00672 J	0.00898 J	0.00183 J	0.000933 J	0.0024 J	0.00263 J
E1668A	PCB-154	60145-22-4	mg/kg	9.74e-05	0.000185	0.000171	7.21e-05	3.4e-05	8.88e-05	9.03e-05
E1668A	PCB-155	33979-03-2	mg/kg	3.41e-05	7.48e-05	4.2e-05	1.83e-05	9.6e-06	2.31e-05	3.81e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000257	0.00051	0.00131	0.000156	7.25e-05	0.000192	0.00024
E1668A	PCB-158	74472-42-7	mg/kg	0.000215	0.000495	0.00108	0.000156	7.27e-05	0.000188	0.000224
E1668A	PCB-159	39635-35-3	mg/kg	1.4e-06 U	2.35e-06 J	1.06e-05 U	1.35e-06 U	1.37e-06 U	1.37e-06 U	1.39e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.28e-06 U	6.11e-06 U	4.77e-05 U	6.08e-06 U	6.16e-06 U	6.17e-06 U	6.27e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.3e-06 U	1.26e-06 U	9.85e-06 U	1.25e-06 U	1.27e-06 U	1.27e-06 U	1.29e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	1.3e-06 U	1.26e-06 U	3.96e-05	8.32e-06	4.69e-06 J	1.01e-05	1.29e-06 U
E1668A	PCB-164	74472-45-0	mg/kg	6.15e-06	1.45e-06 U	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	1.01e-05
E1668A	PCB-165	74472-46-1	mg/kg	2.02e-06 J	4.52e-06 J	9.85e-06 U	1.79e-06 J	1.27e-06 U	3.24e-06 J	R
E1668A	PCB-167	52663-72-6	mg/kg	1e-04	0.000207	0.000454	5.92e-05	2.78e-05	7.59e-05	9.27e-05
E1668A	PCB-169	32774-16-6	mg/kg	1.5e-06 U	1.45e-06 U	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	1.49e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000224	0.000523	0.0011	1.25e-06 U	5.65e-05	1.27e-06 U	0.000161
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000117	0.000279	0.000547	R	3.48e-05	8.79e-05	R
E1668A	PCB-172	52663-74-8	mg/kg	5.3e-05	0.000124	0.000239	1.25e-06 U	1.53e-05	1.27e-06 U	4.54e-05
E1668A	PCB-174	38411-25-5	mg/kg	8.94e-06	1.53e-05	1.14e-05 U	1.45e-06 U	2.71e-06 J	1.47e-06 U	R
E1668A	PCB-175	40186-70-7	mg/kg	1.84e-05	3.71e-05	7.36e-05	1.33e-05	7.11e-06	1.75e-05	R

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003	NB03CRB-MUS-C004
			Sample Date	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15	09/08/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-176	52663-65-7	mg/kg	1.78e-06 J	3.14e-06 J	9.09e-06 U	2.25e-06 J	1.17e-06 U	1.76e-06 J	3.03e-06 J
E1668A	PCB-177	52663-70-4	mg/kg	7.96e-05	0.000145	0.000149	1.06e-06 U	2.12e-05	1.08e-06 U	R
E1668A	PCB-178	52663-67-9	mg/kg	0.000127	0.000252	0.000545	0.00011	5.29e-05	0.000139	0.000171
E1668A	PCB-179	52663-64-6	mg/kg	2.81e-06 J	4.05e-06 J	1.06e-05 U	3.72e-06 J	1.37e-06 U	1.37e-06 U	5.92e-06
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.000973	0.00231 J	0.00446 J	2.9e-06 U	0.000253	2.94e-06 U	0.000786
E1668A	PCB-181	74472-47-2	mg/kg	5.47e-06	1.24e-05	R	2.75e-06 J	1.41e-06 J	4.02e-06 J	R
E1668A	PCB-182	60145-23-5	mg/kg	4.57e-06 J	1.18e-05	9.85e-06 U	3.24e-06 J	1.54e-06 J	4.61e-06 J	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000353	0.00083	0.00137	2.7e-06 U	8.88e-05	2.74e-06 U	0.000292
E1668A	PCB-184	74472-48-3	mg/kg	4.07e-06 J	7.45e-06	1.06e-05 U	2.5e-06 J	1.55e-06 J	4.06e-06 J	3.86e-06 J
E1668A	PCB-186	74472-49-4	mg/kg	1.5e-06 U	1.45e-06 U	1.14e-05 U	1.45e-06 U	1.47e-06 U	1.47e-06 U	1.49e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000745 J	0.00158 J	0.00223 J	1.64e-06 U	0.000241 J		
E1668A	PCB-188	74487-85-7	mg/kg	6.72e-06	1.36e-05	1.14e-05 U	5.01e-06	2.68e-06 J	6.62e-06	1e-05
E1668A	PCB-189	39635-31-9	mg/kg	1.36e-05	3.18e-05	4.58e-05 J	7.95e-06	3.91e-06 J	9.93e-06	1.08e-05
E1668A	PCB-190	41411-64-7	mg/kg	5.89e-05	0.000124	0.000355	1.35e-06 U	1.67e-05	1.37e-06 U	6.31e-05
E1668A	PCB-191	74472-50-7	mg/kg	1.38e-05	3.34e-05	9.1e-05	8.68e-06	4.22e-06 J	9.87e-06	1.29e-06 U
E1668A	PCB-192	74472-51-8	mg/kg	1.3e-06 U	1.26e-06 U	9.85e-06 U	1.25e-06 U	1.27e-06 U	1.27e-06 U	1.29e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	9.72e-05	0.000264	0.00018	1.74e-06 U	2.86e-05	1.76e-06 U	6.88e-05
E1668A	PCB-195	52663-78-2	mg/kg	3.4e-05	7.16e-05	0.000106	1.95e-05	8.8e-06	2e-05	2.48e-05
E1668A	PCB-196	42740-50-1	mg/kg	9.99e-05	0.000234	0.000311	5.14e-05	2.92e-05	6.88e-05	8.45e-05
E1668A	PCB-197/200	PCB-197/200	mg/kg	1.28e-05	2.49e-05	3.26e-05 U	R	4.21e-06 J	1.13e-05	R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000239	0.000513	0.000554	3.57e-06 U	7.33e-05	3.62e-06 U	0.000207
E1668A	PCB-201	40186-71-8	mg/kg	4.38e-05	8.37e-05	8.53e-05	2.73e-05	1.52e-05	4e-05	4.01e-05
E1668A	PCB-202	2136-99-4	mg/kg	9.85e-05	0.000176	0.000262	7.53e-05	3.86e-05	9.51e-05	0.000137
E1668A	PCB-203	52663-76-0	mg/kg	0.000118	0.000259	0.000222	6.79e-05	2.78e-05	7.41e-05	7.71e-05
E1668A	PCB-204	74472-52-9	mg/kg	2.09e-06 U	2.04e-06 U	1.59e-05 U	2.03e-06 U	2.05e-06 U	2.06e-06 U	2.09e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	2.58e-06 J	4.48e-06 J	1.14e-05 U	1.49e-06 J	1.47e-06 U	1.47e-06 U	1.49e-06 U
E1668A	PCB-206	40186-72-9	mg/kg	7.25e-05	0.000149	0.000119	4.46e-05	1.99e-05	5.16e-05	5.55e-05
E1668A	PCB-207	52663-79-3	mg/kg	1.42e-05	2.68e-05	2.62e-05 J	1e-05	4.24e-06 J	1.21e-05	1.36e-05
E1668A	PCB-208	52663-77-1	mg/kg	5.17e-05	9.37e-05	9.52e-05	3.61e-05	1.51e-05	4.48e-05	5.69e-05
E1668A	PCB-209	2051-24-3	mg/kg	5.95e-05	0.000108	9.76e-05 J	1.54e-06 U	1.97e-05	1.57e-06 U	6.97e-05
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.028 J	0.0513 J	0.0573 J	0.0136 J	0.00847 J	0.0184 J	0.0206 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0333 J	0.0608 J	0.0754 J	0.0168 J	0.00995 J	0.0223 J	0.0248 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	9.38e-07	1.72e-06	2.85e-06 J	5.53e-07 J	2.76e-07 J	7.19e-07	8.31e-07

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003
			Sample Date	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15	08/25/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-1	2051-60-7	mg/kg	9.92e-07 U	1.28e-06 J	9.63e-07 U	9.97e-07 U	9.83e-07 U	9.74e-07 U	1.43e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	6.94e-07 U	6.72e-07 U	8.74e-07 J	8.33e-07 J	6.88e-07 U	1.23e-06 J	6.69e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	1.09e-06 U	1.06e-06 U	4.6e-06 J	2.82e-06 J	1.08e-06 U	3.18e-06 J	1.05e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.29e-06 U	1.25e-06 U	1.25e-06 U	1.3e-06 U	6.62e-06	1.27e-06 U	6.2e-06
E1668A	PCB-5	16605-91-7	mg/kg	7.94e-07 U	7.68e-07 U	7.71e-07 U	7.98e-07 U	7.87e-07 U	7.79e-07 U	7.64e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	6.94e-07 U	6.72e-07 U	6.74e-07 U	6.98e-07 U	2.99e-06	6.82e-07 U	3.41e-06
E1668A	PCB-7	33284-50-3	mg/kg	7.94e-07 U	7.68e-07 U	1.89e-06 J	7.98e-07 U	7.87e-07 U	1.41e-05	7.64e-07 U
E1668A	PCB-8	34883-43-7	mg/kg	1.49e-06 U	1.44e-06 U	1.45e-06 U	2.16e-05	1.47e-06 U	2.32e-05	1.43e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	6.94e-07 U	6.72e-07 U	1.04e-06 J	1.48e-06 J	6.88e-07 U	1.75e-06 J	6.69e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	1.29e-06 U	1.25e-06 U	1.25e-06 U	1.3e-06 U	1.28e-06 U	1.27e-06 U	1.24e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	3.37e-06 U	3.26e-06 U	3.4e-05	3.39e-06 U	3.34e-06 U	3.31e-06 U	3.25e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.74e-06 J	1.93e-06 J	6.26e-06	4.95e-06 J	9.33e-06	8.4e-06	8.58e-06
E1668A	PCB-14	34883-41-5	mg/kg	7.94e-07 U	7.68e-07 U	7.71e-07 U	7.98e-07 U	7.87e-07 U	7.79e-07 U	7.64e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	9.29e-05	6.33e-05	0.000143 J	0.00014 J	0.000227	0.000182 J	0.000174
E1668A	PCB-16	38444-78-9	mg/kg	8.93e-07 U	8.64e-07 U	8.67e-07 U	8.97e-07 U	8.85e-07 U	8.76e-07 U	8.6e-07 U
E1668A	PCB-17	37680-66-3	mg/kg	6.82e-06 J	8.64e-07 U	1.93e-05	8.97e-07 U	1.32e-05 J	8.76e-07 U	1.52e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	1.59e-06 U	1.54e-06 U	2.27e-05	1.6e-06 U	2.2e-05	1.56e-06 U	2.05e-05
E1668A	PCB-19	38444-73-4	mg/kg	1.22e-06 J	7.68e-07 U	2.54e-06	1.94e-06 J	2.32e-06	7.79e-07 U	2.05e-06
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0015 J	0.000776 J	0.00188 J	0.00221 J	0.00491 J	0.00449 J	0.00367 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	7.65e-06	4.04e-06 J	1.65e-05 J	1.1e-05	1.71e-05	1.94e-05	1.43e-05
E1668A	PCB-22	38444-85-8	mg/kg	1.49e-05	7.23e-06	2.16e-05 J	2.65e-05 J	4.22e-05	3.88e-05 J	3.4e-05
E1668A	PCB-23	55720-44-0	mg/kg	6.94e-07 U	6.72e-07 U	6.74e-07 U	6.98e-07 U	6.88e-07 U	6.82e-07 U	6.69e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	9.92e-07 U	9.6e-07 U	9.63e-07 U	9.97e-07 U	9.83e-07 U	9.74e-07 U	9.55e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	6.3e-06	2.75e-06	9.05e-06	1.26e-05	2.95e-05	2.1e-05	1.96e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	7.69e-06	3.37e-06 J	1.01e-05 J	1.52e-05	2.74e-05	1.95e-05	1.92e-05
E1668A	PCB-27	38444-76-7	mg/kg	2.74e-06	7.68e-07 U	4.18e-06	4.28e-06	3.95e-06	4.68e-06	4.36e-06
E1668A	PCB-31	16606-02-3	mg/kg	3.42e-05 J	1.93e-05 J	5.24e-05 J	1.79e-06 U	0.000145 J	9.42e-05 J	8.8e-05 J
E1668A	PCB-32	38444-77-8	mg/kg	9.8e-06 J	5.02e-06 J	2.13e-05 J	1.75e-05 J	2.47e-05	3.28e-05 J	2.48e-05
E1668A	PCB-34	37680-68-5	mg/kg	8.6e-07 J	6.72e-07 U	2.16e-06	6.98e-07 U	4.13e-06	4.49e-06	5.95e-06
E1668A	PCB-35	37680-69-6	mg/kg	8.93e-07 U	8.64e-07 U	1.46e-06 J	1.08e-06 J	2.48e-06	8.76e-07 U	2.17e-06
E1668A	PCB-36	38444-87-0	mg/kg	7.94e-07 U	7.68e-07 U	9.86e-07 J	9.55e-07 J	1.08e-06 J	7.79e-07 U	1.17e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.000112	5.85e-05	0.000167 J	0.000172	0.000408 J	0.000269	0.000298 J
E1668A	PCB-38	53555-66-1	mg/kg	6.94e-07 U	6.72e-07 U	6.74e-07 U	7.93e-07 J	6.88e-07 U	6.82e-07 U	6.69e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	2.48e-06	1.39e-06 J	3.51e-06	4.29e-06	9.14e-06	1.29e-05	1.07e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	2.76e-05	1.1e-05	5.76e-05	4.56e-05	0.000114	0.000107	0.00012
E1668A	PCB-41	52663-59-9	mg/kg	4.17e-06 U	4.03e-06 U	4.05e-06 U	4.19e-06 U	4.13e-06 U	4.09e-06 U	4.01e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	8.72e-06	4e-06 J	2e-05	2.26e-05	5.38e-05	3e-05	2.89e-05
E1668A	PCB-43	70362-46-8	mg/kg	1.49e-06 J	1.34e-06 U	1.35e-06 U	2.56e-06 J	7.65e-06	6.21e-06	6.87e-06
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00105	0.000446	0.00134 J	0.00144 J	0.00335 J	0.00408 J	0.00301 J
E1668A	PCB-45	70362-45-7	mg/kg	2.18e-06 U	2.11e-06 U	2.12e-06 U	2.19e-06 U	2.16e-06 U	2.14e-06 U	2.1e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	9.92e-07 U	9.6e-07 U	9.63e-07 U	1.07e-06 J	1.67e-06 J	1.24e-06 J	1.4e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	1.39e-06 U	1.56e-06 J	9.98e-06	6.62e-06	1.28e-05	9.42e-06	1.03e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	1.48e-05	6.22e-06 J	4.09e-05 J	4.17e-05	8.21e-05	4.65e-05	4.88e-05
E1668A	PCB-50/53	PCB-50/53	mg/kg	2.48e-06 U	2.4e-06 U	5.79e-06 J	5.37e-06 J	7.58e-06 J	6.47e-06 J	6.1e-06 J
E1668A	PCB-51	68194-04-7	mg/kg	2.18e-06 U	2.11e-06 U	2.12e-06 U	3.58e-06 J	2.16e-06 U	7.48e-06	6.07e-06
E1668A	PCB-52	35693-99-3	mg/kg	1.94e-05	8.56e-06	4.29e-05	5.08e-05 J	7.93e-05 J	5.89e-05 J	5.57e-05 J

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003
			Sample Date	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15	08/25/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-54	15968-05-5	mg/kg	1.39e-06 U	1.34e-06 U	1.35e-06 U	1.4e-06 U	1.38e-06 U	1.36e-06 U	1.34e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	1.77e-06 J	1.27e-06 J	3.39e-06 J	4.01e-06 J	9.72e-06	1.61e-05	5.13e-06
E1668A	PCB-56	41464-43-1	mg/kg	1.02e-05	4.26e-06 J	2.55e-05	2.55e-05	6.21e-05	4.18e-05	4.24e-05
E1668A	PCB-57	70424-67-8	mg/kg	1.09e-06 U	1.06e-06 U	1.06e-06 U	1.24e-06 J	2.1e-06 J	1.07e-06 U	1.94e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	1.39e-06 U	1.34e-06 U	1.77e-06 J	1.4e-06 U	2.56e-06 J	2.51e-06 J	3.85e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	7.37e-05	3.39e-05	0.000102	0.000104	0.000289	0.000329	0.000251
E1668A	PCB-60	33025-41-1	mg/kg	0.000242	0.000132	0.000342 J	0.000434	0.000959 J	0.00105 J	0.000689 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.000836	0.000402	0.00116 J	0.00144	0.00332 J	0.00436 J	0.00294 J
E1668A	PCB-63	74472-34-7	mg/kg	1.08e-05	5.44e-06	1.7e-05	2.74e-05	5.78e-05	7.64e-05	5.79e-05
E1668A	PCB-64	52663-58-8	mg/kg	1.54e-05	7.88e-06	3.41e-05 J	4.14e-05	0.000126	5.87e-05	6.2e-05
E1668A	PCB-66	32598-10-0	mg/kg	0.00116 J	0.000588 J	0.00182 J	0.00204 J	0.00539 J	0.00655 J	0.00482 J
E1668A	PCB-67	73575-53-8	mg/kg	2.54e-06 J	1.23e-06 J	4.45e-06 J	6.06e-06	1.37e-05	1.11e-05	9.65e-06
E1668A	PCB-68	73575-52-7	mg/kg	8.9e-06	3.68e-06 J	1.22e-05	1.66e-05	3.11e-05	4.68e-05	3.42e-05
E1668A	PCB-72	41464-42-0	mg/kg	1.29e-06 U	1.25e-06 U	4.1e-06 J	6.63e-06	1.44e-05	1.52e-05	1.43e-05
E1668A	PCB-73	74338-23-1	mg/kg	1.72e-06 J	1.34e-06 U	1.35e-06 U	1.4e-06 U	3.11e-06 J	3.42e-06 J	3.34e-06 J
E1668A	PCB-77	32598-13-3	mg/kg	6.45e-05	3.18e-05	0.00012	0.000108	0.000332	R	0.000273
E1668A	PCB-78	70362-49-1	mg/kg	1.59e-06 U	1.54e-06 U	1.54e-06 U	1.6e-06 U	1.57e-06 U	1.56e-06 U	1.53e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	1.09e-06 U	1.55e-06 J	5.46e-06	5.43e-06	1.34e-05	1.63e-05	1.26e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.09e-06 U	1.06e-06 U	1.06e-06 U	1.1e-06 U	1.08e-06 U	1.51e-06 J	1.05e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	3.18e-06 J	1.73e-06 U	5.12e-06	5.33e-06	1.28e-05	1.45e-05	1.05e-05
E1668A	PCB-82	52663-62-4	mg/kg	1.49e-06 U	1.44e-06 U	4.06e-06 J	1.82e-06 J	3.7e-06 J	2.36e-06 J	3.42e-06 J
E1668A	PCB-83	60145-20-2	mg/kg	2.88e-06 U	2.78e-06 U	2.79e-06 U	2.89e-06 U	2.85e-06 U	2.82e-06 U	4.86e-06 J
E1668A	PCB-84	52663-60-2	mg/kg	3.64e-06	2.03e-06	8.1e-06	4.82e-06	1.23e-05	8.43e-06	1.06e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000266	0.000109	0.000362	0.000318	0.000956	0.00104	0.000902
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000122	4.49e-05	0.000163	0.000151	0.000415	0.000397	0.000349
E1668A	PCB-88	55215-17-3	mg/kg	2.18e-06 U	2.11e-06 U	2.12e-06 U	2.19e-06 U	2.16e-06 U	2.14e-06 U	2.1e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.29e-06 U	1.25e-06 U	1.25e-06 U	1.3e-06 U	1.28e-06 U	1.27e-06 U	1.24e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	4.7e-05	2.06e-05	9.34e-05 J	9.56e-05 J	0.000249	0.00016 J	0.000185
E1668A	PCB-91	68194-05-8	mg/kg	7.39e-06	3e-06 J	2.12e-06 U	1.45e-05	4.41e-05	2.27e-05	3.11e-05
E1668A	PCB-92	52663-61-3	mg/kg	7.44e-06	3.39e-06 J	1.32e-05	1.51e-05	3.3e-05	1.67e-05	2.34e-05
E1668A	PCB-93/100	PCB-93/100	mg/kg	7.1e-05	2.44e-05	7.56e-05	9.04e-05	0.000203	0.000195	0.000142
E1668A	PCB-94	73575-55-0	mg/kg	2.78e-06 J	1.25e-06 U	3.69e-06 J	1.3e-06 U	7.53e-06	7.6e-06	9.55e-06
E1668A	PCB-95	38379-99-6	mg/kg	1.34e-05 J	7.39e-06 U	2.91e-05	R	5.98e-05	4.83e-05	4.84e-05
E1668A	PCB-96	73575-54-9	mg/kg	1.49e-06 U	1.44e-06 U	1.45e-06 U	1.5e-06 U	1.47e-06 U	1.46e-06 U	1.43e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.64e-06 U	7.39e-06 U	7.42e-06 U	7.68e-06 U	1.05e-05 J	7.5e-06 U	7.75e-06 J
E1668A	PCB-99	38380-01-7	mg/kg	0.00117 J	0.000457	0.00152 J	0.00142 J	0.00395 J	0.00428 J	0.00346 J
E1668A	PCB-103	60145-21-3	mg/kg	1.09e-06 U	1.06e-06 U	1.06e-06 U	1.1e-06 U	2.75e-06 J	1.1e-06 J	1.37e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	1.39e-06 U	1.34e-06 U	1.35e-06 U	1.4e-06 U	1.38e-06 U	1.36e-06 U	1.34e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00037	0.000163	0.000571 J	0.000553 J	0.00161 J	0.00126 J	0.0014 J
E1668A	PCB-106	70424-69-0	mg/kg	1.69e-06 U	1.63e-06 U	1.64e-06 U	1.69e-06 U	1.67e-06 U	1.66e-06 U	1.62e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	7.04e-05	2.77e-05	9.03e-05	0.000112	0.00023	0.000281	0.000271
E1668A	PCB-108/124	PCB-108/124	mg/kg	2.88e-06 U	2.78e-06 U	2.79e-06 U	3.84e-06 J	9.67e-06 J	6.44e-06 J	8.9e-06 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	6.98e-05	2.93e-05	7.29e-05 J	0.000115	0.000338	0.000228	0.000231
E1668A	PCB-111	39635-32-0	mg/kg	3.08e-06 J	1.34e-06 U	2.95e-06 J	3.15e-06 J	5.86e-06	6.21e-06	5.99e-06
E1668A	PCB-112	74472-36-9	mg/kg	1.39e-06 U	1.34e-06 U	1.35e-06 U	1.4e-06 U	1.38e-06 U	1.36e-06 U	1.34e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	3.45e-05	1.29e-05	4.24e-05	4.68e-05	0.000124	0.000113	0.000115

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003
			Sample Date	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15	08/25/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-118	31508-00-6	mg/kg	0.00147 J	0.000569 J	0.00189 J	0.00213 J	0.00533 J	0.00484 J	0.00527 J
E1668A	PCB-120	68194-12-7	mg/kg	1.3e-05	4.4e-06 J	1.25e-06 U	1.44e-05	3.26e-05	3.29e-05	3.37e-05
E1668A	PCB-121	56558-18-0	mg/kg	1.52e-06 J	1.15e-06 U	2.04e-06 J	1.2e-06 U	4.34e-06 J	4.42e-06 J	3.53e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	1.19e-06 U	1.15e-06 U	1.16e-06 U	1.2e-06 U	2.34e-06 J	1.17e-06 U	2.46e-06 J
E1668A	PCB-123	65510-44-3	mg/kg	2.96e-05	1.1e-05	3.75e-05	4.23e-05	0.000107	0.000108	0.000107
E1668A	PCB-126	57465-28-8	mg/kg	1.59e-06 U	1.54e-06 U	1.54e-06 U	4.76e-06 J	1.08e-05	1.06e-05	1.11e-05
E1668A	PCB-127	39635-33-1	mg/kg	1.48e-06 J	1.34e-06 U	1.35e-06 U	2.12e-06 J	4.41e-06 J	4.63e-06 J	4.24e-06 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000128	5.1e-05	0.000147	0.000164	0.000495	0.000456	0.000463
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.000999	0.000376	0.00108 J	0.00129 J	0.00375 J	0.00351 J	0.00332 J
E1668A	PCB-130	52663-66-8	mg/kg	1.28e-05	5.19e-06	1.94e-05	2.24e-05	5.56e-05	R	6.36e-05
E1668A	PCB-131	61798-70-7	mg/kg	1.69e-06 U	1.63e-06 U	1.64e-06 U	1.69e-06 U	3.7e-06 J	R	3.08e-06 J
E1668A	PCB-132	38380-05-1	mg/kg	2.62e-06 J	1.54e-06 U	5.51e-06	5.58e-06	1.57e-06 U	R	6.3e-06
E1668A	PCB-133	35694-04-3	mg/kg	3.39e-05	1.08e-05	3.59e-05	4.6e-05	7.87e-05	0.000104	8.55e-05
E1668A	PCB-134	52704-70-8	mg/kg	3.27e-06 U	3.17e-06 U	3.18e-06 U	3.29e-06 U	3.24e-06 U	R	3.15e-06 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	1.04e-05	4.41e-06 U	1.26e-05	1.59e-05	3.22e-05	1.52e-05	2.7e-05
E1668A	PCB-136	38411-22-2	mg/kg	1.59e-06 U	1.54e-06 U	2.48e-06 J	1.91e-06 J	3.77e-06 J	1.56e-06 U	2.57e-06 J
E1668A	PCB-137	35694-06-5	mg/kg	6.2e-05	2.06e-05	5.86e-05	7.86e-05	0.000208	R	0.000183
E1668A	PCB-139/140	PCB-139/140	mg/kg	2.98e-05	9.68e-06	2.52e-05	3.42e-05	8.99e-05	7.62e-05	8.02e-05
E1668A	PCB-141	52712-04-6	mg/kg	3.58e-06 J	1.89e-06 J	9.06e-06	8.67e-06	1.56e-05	1.54e-05	9.98e-06
E1668A	PCB-142	41411-61-4	mg/kg	1.69e-06 U	1.63e-06 U	1.64e-06 U	1.69e-06 U	1.67e-06 U	R	1.62e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.27e-06 U	3.17e-06 U	3.18e-06 U	3.29e-06 U	3.24e-06 U	R	3.15e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	2.07e-06 J	1.44e-06 U	2.87e-06 J	2.25e-06 J	8.1e-06	R	1.43e-06 U
E1668A	PCB-145	74472-40-5	mg/kg	1.59e-06 U	1.54e-06 U	1.54e-06 U	1.6e-06 U	1.57e-06 U	1.56e-06 U	1.53e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000214	6.9e-05	0.000217	R	0.000629 J		0.000648 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	4.42e-05	1.82e-05	6.16e-05 J	7.96e-05 J	0.000238	0.000119 J	0.000191
E1668A	PCB-148	74472-41-6	mg/kg	1.09e-05	1.34e-06 U	8.12e-06	9.97e-06	1.92e-05	1.46e-05	1.57e-05
E1668A	PCB-150	68194-08-1	mg/kg	1.49e-06 U	1.44e-06 U	1.45e-06 U	1.5e-06 U	1.47e-06 U	1.46e-06 U	1.43e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	1.39e-06 U	1.34e-06 U	1.35e-06 U	1.4e-06 U	1.38e-06 U	1.36e-06 U	1.34e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00141 J	0.000522 J	0.0015 J	0.00204 J	0.00495 J	0.005 J	0.00439 J
E1668A	PCB-154	60145-22-4	mg/kg	6.16e-05	1.91e-05	5.18e-05	6.18e-05	0.000155	R	0.000118
E1668A	PCB-155	33979-03-2	mg/kg	1.86e-05	5.97e-06	1.75e-05 J	2.78e-05	5.64e-05	5.68e-05	4.82e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000119	4.18e-05	0.000137	0.000162	0.000402	0.000389	0.000392
E1668A	PCB-158	74472-42-7	mg/kg	0.000123	4.1e-05	0.000121	0.000151	0.00041	0.000379	0.000365
E1668A	PCB-159	39635-35-3	mg/kg	1.39e-06 U	1.34e-06 U	1.35e-06 U	1.4e-06 U	1.38e-06 U	1.36e-06 U	1.85e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.25e-06 U	6.05e-06 U	6.07e-06 U	6.28e-06 U	6.19e-06 U	6.13e-06 U	6.02e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.29e-06 U	1.25e-06 U	1.25e-06 U	1.3e-06 U	1.28e-06 U	R	1.24e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	1.29e-06 U	1.25e-06 U	1.25e-06 U	8.74e-06	1.64e-05	2.28e-05	1.73e-05
E1668A	PCB-164	74472-45-0	mg/kg	2.04e-06 J	1.44e-06 U	3.16e-06 J	5.53e-06	1.29e-05	1.46e-06 U	1.12e-05
E1668A	PCB-165	74472-46-1	mg/kg	1.29e-06 U	1.25e-06 U	1.82e-06 J	R	3.99e-06 J	R	3.58e-06 J
E1668A	PCB-167	52663-72-6	mg/kg	4.71e-05	1.58e-05	5.59e-05	6.52e-05	0.000143	0.00014	0.000149
E1668A	PCB-169	32774-16-6	mg/kg	1.49e-06 U	1.44e-06 U	1.45e-06 U	1.5e-06 U	1.47e-06 U	1.46e-06 U	1.43e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	8.18e-05	3.36e-05	0.000122	0.000138	0.000336	0.000411	0.000366
E1668A	PCB-171/173	PCB-171/173	mg/kg	5.76e-05	1.96e-05	R	R	0.000189	R	0.000164
E1668A	PCB-172	52663-74-8	mg/kg	2.38e-05	8.38e-06	3.7e-05	3.71e-05	9.01e-05	9.64e-05	9.46e-05
E1668A	PCB-174	38411-25-5	mg/kg	3.07e-06 J	1.73e-06 J	R	R	1.72e-05	R	9.21e-06
E1668A	PCB-175	40186-70-7	mg/kg	1.14e-05	3.7e-06 J	1.32e-05	1.46e-05	3.1e-05	R	3.02e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002	NB03CRB-MUS-N003
			Sample Date	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15	08/25/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-176	52663-65-7	mg/kg	1.19e-06 U	1.15e-06 U	1.6e-06 J	1.2e-06 U	3.2e-06 J	1.17e-06 U	1.15e-06 U
E1668A	PCB-177	52663-70-4	mg/kg	3.13e-05	1.05e-05	R	R	0.000107	R	0.000124
E1668A	PCB-178	52663-67-9	mg/kg	0.000108	2.86e-05	0.000105	0.000109	0.000222	R	0.000222
E1668A	PCB-179	52663-64-6	mg/kg	1.39e-06 U	1.34e-06 U	1.35e-06 U	2.64e-06 J	4.07e-06 J	1.36e-06 U	2.79e-06 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.000393	0.00014	0.000545 J	0.000648 J	0.00143 J	0.00157 J	0.00141 J
E1668A	PCB-181	74472-47-2	mg/kg	2.51e-06 J	1.25e-06 U	R	R	8.63e-06	R	8.04e-06
E1668A	PCB-182	60145-23-5	mg/kg	2.79e-06 J	1.25e-06 U	R	R	8.01e-06	R	7.27e-06
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000158	5.6e-05	R	0.000228	0.000573	R	0.000493
E1668A	PCB-184	74472-48-3	mg/kg	2.62e-06 J	1.34e-06 U	2.02e-06 J	1.4e-06 U	6.63e-06	5.79e-06	6.29e-06
E1668A	PCB-186	74472-49-4	mg/kg	1.49e-06 U	1.44e-06 U	1.45e-06 U	1.5e-06 U	1.47e-06 U	R	1.43e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000377 J	0.000131 J	0.000508 J	0.000535	0.00113 J		0.00111 J
E1668A	PCB-188	74487-85-7	mg/kg	5.1e-06	1.44e-06 U	4.66e-06 J	1.5e-06 U	1.06e-05	1.46e-06 U	1.01e-05
E1668A	PCB-189	39635-31-9	mg/kg	5.46e-06	2.04e-06 J	1.25e-06 U	9.41e-06	2.05e-05	1.97e-05	2.14e-05
E1668A	PCB-190	41411-64-7	mg/kg	2.94e-05	1.07e-05	4.09e-05	4.72e-05	4.86e-05	0.00012	8.34e-05
E1668A	PCB-191	74472-50-7	mg/kg	6.59e-06	2.2e-06 J	9.02e-06	1.05e-05	2.42e-05	2.41e-05	2.09e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.29e-06 U	1.25e-06 U	1.25e-06 U	1.3e-06 U	1.28e-06 U	1.27e-06 U	1.24e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	3.57e-05	1.34e-05	5.46e-05	3.97e-05	0.000145	0.000154	0.000128
E1668A	PCB-195	52663-78-2	mg/kg	1.26e-05	4.07e-06 J	1.56e-05	1.59e-05	5.56e-05	5.45e-05	5.73e-05
E1668A	PCB-196	42740-50-1	mg/kg	5.03e-05	1.32e-05	5.28e-05	5.52e-05	0.000107	0.000136	0.000126
E1668A	PCB-197/200	PCB-197/200	mg/kg	7.67e-06 J	4.13e-06 U	6.64e-06 J	6.77e-06 J	1.77e-05	R	1.74e-05
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000129	3.23e-05	0.000144	0.000143	0.000251	0.000395	0.000329
E1668A	PCB-201	40186-71-8	mg/kg	2.68e-05	6.01e-06	2.39e-05	1.99e-06 U	5.66e-05	1.95e-06 U	5.6e-05
E1668A	PCB-202	2136-99-4	mg/kg	6.8e-05	1.69e-05	7.27e-05	8.47e-05	0.000155	0.000182	0.000157
E1668A	PCB-203	52663-76-0	mg/kg	4.19e-05	1.33e-05	5.71e-05	5.64e-05	0.000127	0.000157	0.000125
E1668A	PCB-204	74472-52-9	mg/kg	2.08e-06 U	2.02e-06 U	2.02e-06 U	2.09e-06 U	2.06e-06 U	2.04e-06 U	2.01e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	1.49e-06 U	1.44e-06 U	1.45e-06 U	1.5e-06 U	4.22e-06 J	1.46e-06 U	1.43e-06 U
E1668A	PCB-206	40186-72-9	mg/kg	3e-05	9.37e-06	4.07e-05	3.82e-05	9.87e-05	8.78e-05	9.12e-05
E1668A	PCB-207	52663-79-3	mg/kg	6.95e-06	2.3e-06 J	8.01e-06	7.55e-06	2.04e-05	2.11e-05	2.05e-05
E1668A	PCB-208	52663-77-1	mg/kg	2.62e-05	7.25e-06	3.35e-05	3.29e-05	7.66e-05	7.69e-05	7.2e-05
E1668A	PCB-209	2051-24-3	mg/kg	3.4e-05	8.73e-06	3.66e-05	1.6e-06 U	8.99e-05	R	1.53e-06 U
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0122 J	0.00519 J	0.0153 J	0.0172 J	0.0432 J	0.0422 J	0.0379 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0143 J	0.00604 J	0.0182 J	0.0203 J	0.0513 J	0.0491 J	0.0456 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	2.36e-07 J	1.85e-07 J	2.33e-07 J	5.84e-07 J	1.36e-06	1.28e-06	1.38e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-1	2051-60-7	mg/kg	9.68e-07 U	7.23e-05 J	1.19e-06 J	9.88e-07 U	9.56e-07 U	1.29e-06 J	9.67e-07 U
E1668A	PCB-2	2051-61-8	mg/kg	6.78e-07 U	6.08e-06 J	6.97e-07 U	6.92e-07 U	6.69e-07 U	6.81e-07 U	6.77e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	2.15e-06 J	2.82e-05 J	1.1e-06 U	1.09e-06 U	1.05e-06 U	R	1.06e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.26e-06 U	7.97e-05 J	1.29e-06 U	1.28e-06 U	6.55e-06	1.26e-06 U	1.26e-06 U
E1668A	PCB-5	16605-91-7	mg/kg	7.74e-07 U	2.41e-06 U	7.97e-07 U	7.91e-07 U	7.65e-07 U	7.78e-07 U	7.74e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	6.78e-07 U	1.33e-05	1.59e-06 J	2.05e-06	6.69e-07 U	6.81e-07 U	6.77e-07 U
E1668A	PCB-7	33284-50-3	mg/kg	2.83e-06	2.41e-06 U	7.97e-07 U	7.91e-07 U	7.65e-07 U	7.78e-07 U	3.58e-06
E1668A	PCB-8	34883-43-7	mg/kg	1.45e-06 U	0.000104 J	1.49e-06 U	1.48e-06 U	1.43e-06 U	1.46e-06 U	1.45e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	1.1e-06 J	4.24e-06 J	6.97e-07 U	6.92e-07 U	6.69e-07 U	6.81e-07 U	6.77e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	1.26e-06 U	3.92e-06 U	1.29e-06 U	1.28e-06 U	1.24e-06 U	1.26e-06 U	1.26e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	2.7e-05	8.33e-05 J	3.39e-06 U	3.06e-05 J	3.25e-06 U	3.31e-06 U	2e-05
E1668A	PCB-12/13	PCB-12/13	mg/kg	7.67e-06	5.72e-06 U	5.66e-06	7.94e-06	1.82e-06 U	4.54e-06 J	4.42e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.74e-07 U	2.41e-06 U	7.97e-07 U	7.91e-07 U	7.65e-07 U	7.78e-07 U	7.74e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000162 J	0.000327 J	0.000144	0.000251	0.000149 J	0.00013	9.02e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	8.71e-07 U	1.36e-05	2.69e-06	2.75e-06	2.83e-06	8.75e-07 U	8.7e-07 U
E1668A	PCB-17	37680-66-3	mg/kg	1.86e-05	2.34e-05 J	9.09e-06	1e-05	8.6e-07 U	8.49e-06 J	7.36e-06
E1668A	PCB-18/30	PCB-18/30	mg/kg	2.4e-05	3.5e-05 J	1.59e-06 U	1.58e-06 U	1.01e-05 J	1.23e-05 J	8.89e-06
E1668A	PCB-19	38444-73-4	mg/kg	1.88e-06 J	8.81e-06	1.46e-06 J	1.6e-06 J	1.43e-06 J	7.78e-07 U	1.18e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00323 J	0.00605 J	0.00314 J	0.00513 J	0.00244 J	0.00164 J	0.00125 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	2.32e-05 J	3.75e-05 J	1.17e-05	2.12e-05	9.43e-06	1.08e-05	2.03e-06 U
E1668A	PCB-22	38444-85-8	mg/kg	3.24e-05 J	4.98e-05 J	2.83e-05	3.8e-05	1.74e-05	2.08e-05	1.59e-05 J
E1668A	PCB-23	55720-44-0	mg/kg	6.78e-07 U	2.11e-06 U	6.97e-07 U	6.92e-07 U	6.69e-07 U	6.81e-07 U	6.77e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	9.68e-07 U	3.01e-06 U	9.96e-07 U	9.88e-07 U	9.56e-07 U	9.73e-07 U	9.67e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	1.44e-05	2.81e-05	1.25e-05	2.01e-05	7.65e-07 U	8.34e-06	4.94e-06
E1668A	PCB-26/29	PCB-26/29	mg/kg	1.8e-05 J	3.65e-05	1.04e-05	2.04e-05	1.15e-06 U	1.18e-05	1.16e-06 U
E1668A	PCB-27	38444-76-7	mg/kg	5.46e-06	2.41e-06 U	2.49e-06	3.14e-06	2.37e-06	2.92e-06	1.49e-06 J
E1668A	PCB-31	16606-02-3	mg/kg	7.45e-05 J	0.000125 J	6.29e-05	0.000102	3.36e-05	4.72e-05 J	3.14e-05 J
E1668A	PCB-32	38444-77-8	mg/kg	2.8e-05 J	3.36e-05 J	1.68e-05	2.34e-05	1.06e-05	1.6e-05 J	1.05e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	3.45e-06	3.16e-06 J	2.69e-06	4.33e-06	1.54e-06 J	1.27e-06 J	1e-06 J
E1668A	PCB-35	37680-69-6	mg/kg	1.99e-06	4.13e-06 J	1.86e-06 J	2.68e-06	8.6e-07 U	1.58e-06 J	8.7e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.74e-07 U	2.41e-06 U	7.97e-07 U	1.32e-06 J	7.65e-07 U	7.92e-07 J	7.74e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000314 J	0.00047 J	0.00027	0.000493 J	0.000245	0.000204	0.000101 J
E1668A	PCB-38	53555-66-1	mg/kg	6.78e-07 U	2.85e-06 J	6.97e-07 U	4.15e-06	6.69e-07 U	6.81e-07 U	6.77e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	6.01e-06	9.94e-06	7.43e-06	1.42e-05	3.95e-06	2.63e-06	7.74e-07 U
E1668A	PCB-40/71	PCB-40/71	mg/kg	9.74e-05	7.33e-05	5.82e-05	8.48e-05	3.64e-05	5.95e-05	2.34e-05
E1668A	PCB-41	52663-59-9	mg/kg	4.07e-06 U	1.27e-05 U	4.18e-06 U	4.15e-06 U	4.02e-06 U	4.09e-06 U	4.06e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	2.64e-05	4.82e-06 U	1.6e-05	2.36e-05	1.27e-05	1.65e-05	5.75e-06
E1668A	PCB-43	70362-46-8	mg/kg	6.79e-06	6.11e-06 J	3.44e-06 J	5.18e-06	1.99e-06 J	3.9e-06 J	1.35e-06 U
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00293 J	0.00339 J	0.00251 J	0.00308 J	0.00271 J	0.00114	0.000942 J
E1668A	PCB-45	70362-45-7	mg/kg	2.13e-06 U	6.63e-06 U	2.19e-06 U	2.17e-06 U	2.1e-06 U	2.14e-06 U	2.13e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	1.15e-06 J	3.01e-06 U	9.96e-07 U	1.04e-06 J	9.81e-07 J	9.83e-07 J	9.67e-07 U
E1668A	PCB-48	70362-47-9	mg/kg	1.13e-05	1.08e-05 J	5.6e-06	7.88e-06	4.68e-06 J	1.36e-06 U	2.52e-06 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	4.61e-05 J	6.48e-05	2.38e-05	3.77e-05	2.52e-05 J	2.73e-05	2.51e-06 U
E1668A	PCB-50/53	PCB-50/53	mg/kg	6.2e-06 J	7.53e-06 U	3.05e-06 J	4.47e-06 J	3.46e-06 J	4.21e-06 J	2.42e-06 U
E1668A	PCB-51	68194-04-7	mg/kg	6.46e-06	7.06e-06 J	3.76e-06 J	5.2e-06	2.81e-06 J	3.18e-06 J	2.13e-06 U
E1668A	PCB-52	35693-99-3	mg/kg	5.54e-05	6.31e-05 J	2.53e-05	4.62e-05	3.21e-05	3.75e-05	1.41e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-54	15968-05-5	mg/kg	1.36e-06 U	4.22e-06 U	1.39e-06 U	1.38e-06 U	1.34e-06 U	1.36e-06 U	1.35e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	6.37e-06	3.61e-06 U	1.2e-06 U	1.19e-06 U	1.15e-06 U	3.22e-06 J	2.37e-06 J
E1668A	PCB-56	41464-43-1	mg/kg	3.71e-05	5.24e-05	2.38e-05	3.54e-05	1.33e-05	2.61e-05	7.51e-06
E1668A	PCB-57	70424-67-8	mg/kg	1.53e-06 J	3.31e-06 U	1.1e-06 U	1.63e-06 J	1.05e-06 U	1.21e-06 J	1.06e-06 U
E1668A	PCB-58	41464-49-7	mg/kg	3.23e-06 J	4.22e-06 U	1.54e-06 J	3.3e-06 J	2.18e-06 J	1.36e-06 U	1.35e-06 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000217	0.000258	0.000184	0.000234	0.000154	8.61e-05	6.63e-05
E1668A	PCB-60	33025-41-1	mg/kg	0.00069 J	0.00108 J	0.000601 J	0.00095 J	0.000458	0.000366	0.000242 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00252 J	0.00391 J	0.00242 J	0.00372 J	0.00159	0.00128	0.000749 J
E1668A	PCB-63	74472-34-7	mg/kg	4.23e-05	6.12e-05	3.41e-05	6.97e-05	1.79e-05	1.89e-05	1.1e-05
E1668A	PCB-64	52663-58-8	mg/kg	4.82e-05 J	6.65e-05	2.87e-05	4.83e-05	2.01e-05	2.96e-05	1.28e-05 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00394 J	0.00595 J	0.00386 J	0.00588 J	0.00259 J	0.00194 J	0.00105 J
E1668A	PCB-67	73575-53-8	mg/kg	8.35e-06	1.38e-05 J	8e-06	1.27e-05	6.17e-06	5.18e-06	2.24e-06 J
E1668A	PCB-68	73575-52-7	mg/kg	2.41e-05	3.86e-05	2.16e-05	4.05e-05	1.62e-05	1.1e-05	6.6e-06
E1668A	PCB-72	41464-42-0	mg/kg	9.12e-06	1.12e-05 J	7.15e-06	1.49e-05	4.95e-06	5.61e-06	2.44e-06 J
E1668A	PCB-73	74338-23-1	mg/kg	4.55e-06 J	4.22e-06 U	2.23e-06 J	3.23e-06 J	2.73e-06 J	1.85e-06 J	1.35e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000224	R	0.000194	0.00036	R	R	6.1e-05
E1668A	PCB-78	70362-49-1	mg/kg	1.55e-06 U	4.82e-06 U	1.59e-06 U	1.58e-06 U	1.53e-06 U	1.56e-06 U	1.55e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	9.13e-06	1.46e-05 J	9.61e-06	1.63e-05	7.16e-06	5.15e-06	3.08e-06 J
E1668A	PCB-80	33284-52-5	mg/kg	1.07e-06 J	3.31e-06 U	1.1e-06 U	1.09e-06 U	1.05e-06 U	1.07e-06 U	1.06e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	9.79e-06	1.53e-05	9.16e-06	1.4e-05	6.8e-06	6.24e-06	3.27e-06 J
E1668A	PCB-82	52663-62-4	mg/kg	2.18e-06 J	4.52e-06 U	2.3e-06 J	2.6e-06 J	1.43e-06 U	2.46e-06 J	2.06e-06 J
E1668A	PCB-83	60145-20-2	mg/kg	2.81e-06 U	8.73e-06 U	2.89e-06 U	2.87e-06 J	2.77e-06 U	2.82e-06 U	2.8e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	1.02e-05	8.65e-06	6.62e-06	8.12e-06	1.05e-06 U	6.78e-06	2.58e-06
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00081	0.000906 J	0.000702	0.000962	0.000458	0.00032	0.000253
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000323	0.000385	0.000279	0.000363	0.000219	0.000141	0.000101
E1668A	PCB-88	55215-17-3	mg/kg	2.13e-06 U	6.63e-06 U	2.19e-06 U	2.17e-06 U	2.1e-06 U	1.12e-05	2.13e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.26e-06 U	3.92e-06 U	1.29e-06 U	1.28e-06 U	1.24e-06 U	1.26e-06 U	1.26e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.000173 J	0.000204	9.81e-05	0.000197	8.04e-05 J	7.3e-05	4.14e-05 J
E1668A	PCB-91	68194-05-8	mg/kg	2.45e-05	2.39e-05	1.31e-05	2.61e-05	9.83e-06	1.19e-05	5.54e-06
E1668A	PCB-92	52663-61-3	mg/kg	2.65e-05	2.07e-05	1.01e-05	2.01e-05	1.23e-05 J	1.27e-05	6.2e-06
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000187	0.000209 J	0.000172	0.000183	0.000182	6.68e-05	5.18e-05
E1668A	PCB-94	73575-55-0	mg/kg	7.19e-06	3.92e-06 U	5.55e-06	6.98e-06	3.49e-06 J	3.34e-06 J	2.31e-06 J
E1668A	PCB-95	38379-99-6	mg/kg	4.6e-05	2.32e-05 U	2.81e-05	4.73e-05	R	3.01e-05	1.39e-05 J
E1668A	PCB-96	73575-54-9	mg/kg	1.45e-06 U	4.52e-06 U	1.49e-06 U	1.48e-06 U	1.43e-06 U	1.46e-06 U	1.45e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.45e-06 U	2.32e-05 U	7.67e-06 U	7.61e-06 U	7.36e-06 U	7.49e-06 U	7.45e-06 U
E1668A	PCB-99	38380-01-7	mg/kg	0.00349 J	0.00399 J	0.00287 J	0.00394 J	0.0021 J	0.00133 J	0.00108 J
E1668A	PCB-103	60145-21-3	mg/kg	1.52e-06 J	3.31e-06 U	1.1e-06 U	1.31e-06 J	1.05e-06 U	1.07e-06 U	1.06e-06 U
E1668A	PCB-104	56558-16-8	mg/kg	1.36e-06 U	4.22e-06 U	1.39e-06 U	1.38e-06 U	1.34e-06 U	1.36e-06 U	1.35e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00121 J	0.00185 J	0.00104 J	0.00167 J	0.000793 J	0.000605 J	0.000337 J
E1668A	PCB-106	70424-69-0	mg/kg	1.65e-06 U	5.12e-06 U	1.69e-06 U	1.68e-06 U	1.63e-06 U	1.65e-06 U	1.64e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000205	0.000343 J	0.000178	0.000315	0.000128	9.67e-05	5.75e-05
E1668A	PCB-108/124	PCB-108/124	mg/kg	6.28e-06 J	9.52e-06 J	4.32e-06 J	8.78e-06 J	3.32e-06 J	4.15e-06 J	2.8e-06 U
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.000228 J	0.000277 J	0.000162	0.000243	0.000124 J	0.000104	6.85e-05 J
E1668A	PCB-111	39635-32-0	mg/kg	7.03e-06	6.45e-06 J	5.04e-06	6.43e-06	4.79e-06	3.2e-06 J	1.35e-06 U
E1668A	PCB-112	74472-36-9	mg/kg	1.36e-06 U	4.22e-06 U	1.39e-06 U	1.38e-06 U	1.34e-06 U	1.36e-06 U	1.35e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	9.75e-05	0.00015	9.76e-05	0.000136	6.52e-05	4.79e-05	3.2e-05

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-118	31508-00-6	mg/kg	0.0043 J	0.00672 J	0.00419 J	0.00604 J	0.00286 J	0.00205 J	0.00127 J
E1668A	PCB-120	68194-12-7	mg/kg	3.48e-05	3.97e-05	2.99e-05	3.81e-05	2.07e-05	1.46e-05	1.05e-05
E1668A	PCB-121	56558-18-0	mg/kg	4.24e-06 J	3.61e-06 U	3.56e-06 J	4.21e-06 J	1.15e-06 U	1.74e-06 J	1.42e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	1.16e-06 U	3.61e-06 U	1.2e-06 U	1.19e-06 U	1.15e-06 U	1.17e-06 U	1.16e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	7.84e-05	0.000134	8.84e-05	0.000126	5.33e-05	4.73e-05	2.63e-05
E1668A	PCB-126	57465-28-8	mg/kg	1.55e-06 U	1.5e-05 J	8.71e-06	1.35e-05	6.59e-06	5.3e-06	1.55e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	4.3e-06 J	4.35e-06 J	4.43e-06 J	7.01e-06	2.56e-06 J	1.36e-06 U	1.35e-06 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00038	0.000435 J	0.000368	0.000499	0.000197	0.000185	0.000107
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00294 J	0.00325 J	0.00267 J	0.00409 J	0.00158 J	0.00149	0.000869 J
E1668A	PCB-130	52663-66-8	mg/kg	4.32e-05	4.65e-05	3.18e-05	6.35e-05	2.07e-05	2.27e-05	1.2e-05
E1668A	PCB-131	61798-70-7	mg/kg	2.42e-06 J	R	1.83e-06 J	2.96e-06 J	1.63e-06 U	1.65e-06 U	1.64e-06 U
E1668A	PCB-132	38380-05-1	mg/kg	6.79e-06	4.82e-06 U	3.89e-06 J	6.02e-06	7.02e-06	4.43e-06 J	2.25e-06 J
E1668A	PCB-133	35694-04-3	mg/kg	7.85e-05	9.76e-05	7.07e-05	9.44e-05	4.97e-05	6.25e-05	2.45e-05
E1668A	PCB-134	52704-70-8	mg/kg	3.19e-06 U	9.94e-06 U	3.29e-06 U	3.26e-06 U	3.15e-06 U	3.21e-06 U	3.19e-06 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	2.98e-05	2.33e-05 J	1.6e-05	2.92e-05	1.72e-05	1.58e-05	8.41e-06 J
E1668A	PCB-136	38411-22-2	mg/kg	1.55e-06 U	4.82e-06 U	2.26e-06 J	3.28e-06 J	2.33e-06 J	2.32e-06 J	1.55e-06 U
E1668A	PCB-137	35694-06-5	mg/kg	0.000176	0.000183 J	0.000164	0.000207	9.82e-05	7.3e-05	5.44e-05
E1668A	PCB-139/140	PCB-139/140	mg/kg	7.14e-05	7.93e-05	6.74e-05	9.15e-05	4.11e-05	3.85e-05	2.28e-05
E1668A	PCB-141	52712-04-6	mg/kg	1.47e-05	1.92e-05	8.05e-06	1.47e-05	9.53e-06	8.68e-06	4.06e-06 J
E1668A	PCB-142	41411-61-4	mg/kg	1.65e-06 U	5.12e-06 U	1.69e-06 U	1.68e-06 U	1.63e-06 U	1.65e-06 U	1.64e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.19e-06 U	9.94e-06 U	3.29e-06 U	3.26e-06 U	3.15e-06 U	3.21e-06 U	3.19e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	1.45e-06 U	5.27e-06 J	4.64e-06 J	7.92e-06	1.43e-06 U	2.66e-06 J	2.62e-06 J
E1668A	PCB-145	74472-40-5	mg/kg	1.55e-06 U	4.82e-06 U	1.59e-06 U	1.58e-06 U	1.53e-06 U	1.56e-06 U	1.55e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000601 J	R	0.000522	0.000772 J	R	R	0.000175
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00015 J	0.00016 J	9.23e-05	0.00023	6.49e-05 J	7.93e-05	3.65e-05 J
E1668A	PCB-148	74472-41-6	mg/kg	1.95e-05	1.7e-05	1.99e-05	2.28e-05	1.32e-05	9.91e-06	6.61e-06
E1668A	PCB-150	68194-08-1	mg/kg	1.45e-06 U	4.52e-06 U	1.49e-06 U	1.48e-06 U	1.43e-06 U	1.46e-06 U	1.45e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	1.36e-06 U	4.22e-06 U	1.39e-06 U	1.38e-06 U	1.34e-06 U	1.36e-06 U	1.35e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00433 J	0.00491 J	0.00383 J	0.00536 J	0.00242 J	0.0022 J	0.00126 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000133	0.000132 J	0.000137	0.00017	8.82e-05	7.02e-05	4.15e-05
E1668A	PCB-155	33979-03-2	mg/kg	5.5e-05	0.000111 J	4.97e-05	5.8e-05	3.08e-05	1.88e-05	1.43e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000348	0.000533 J	0.000322	0.000436	0.000221	0.000182	9.99e-05
E1668A	PCB-158	74472-42-7	mg/kg	0.000344	0.000377 J	0.000318	0.000398	0.000203	0.00017	0.00011
E1668A	PCB-159	39635-35-3	mg/kg	1.36e-06 U	4.22e-06 U	1.39e-06 U	2.09e-06 J	1.34e-06 U	1.36e-06 U	1.35e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.1e-06 U	1.9e-05 U	6.27e-06 U	6.23e-06 U	6.02e-06 U	6.13e-06 U	6.09e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.26e-06 U	3.92e-06 U	1.29e-06 U	1.28e-06 U	1.24e-06 U	R	1.26e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	1.65e-05	3.92e-06 U	1.29e-06 U	1.28e-06 U	1.08e-05	1.16e-05	5.04e-06
E1668A	PCB-164	74472-45-0	mg/kg	8.4e-06	4.52e-06 U	5.47e-06	9.78e-06	1.43e-06 U	5.21e-06	2.92e-06 J
E1668A	PCB-165	74472-46-1	mg/kg	4.47e-06 J	R	3.41e-06 J	4.39e-06 J	R	R	1.63e-06 J
E1668A	PCB-167	52663-72-6	mg/kg	0.000131	0.000204 J	0.000123	0.000177	8.82e-05	7.4e-05	3.85e-05
E1668A	PCB-169	32774-16-6	mg/kg	1.45e-06 U	4.52e-06 U	1.49e-06 U	1.48e-06 U	1.43e-06 U	1.46e-06 U	1.45e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000321	0.000461 J	0.000251	0.00043	0.000148	0.000121	7.11e-05
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	R	0.000145	0.000222	R	R	R
E1668A	PCB-172	52663-74-8	mg/kg	9.71e-05	0.000104	7.15e-05	0.000113	5.02e-05	3.64e-05	2.18e-05
E1668A	PCB-174	38411-25-5	mg/kg	R	R	6.66e-06	1.3e-05	R	R	R
E1668A	PCB-175	40186-70-7	mg/kg	3.44e-05	3.52e-05 J	2.4e-05	3.57e-05	R	R	9.21e-06

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001	NB03CRB-MUS-S002
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-176	52663-65-7	mg/kg	3.44e-06 J	3.61e-06 U	1.46e-06 J	3.33e-06 J	1.51e-06 J	1.69e-06 J	1.16e-06 U
E1668A	PCB-177	52663-70-4	mg/kg	R	R	6.6e-05	0.000145	R	R	R
E1668A	PCB-178	52663-67-9	mg/kg	0.000253	0.000242 J	0.000199	0.00026	0.000149	R	7.56e-05
E1668A	PCB-179	52663-64-6	mg/kg	3.48e-06 J	5.48e-06 J	1.72e-06 J	3.85e-06 J	1.34e-06 U	2.08e-06 J	1.35e-06 U
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00141 J	0.00188 J	0.00122 J	0.0019 J	0.000777	0.000621	0.000359 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	6.27e-06	1.02e-05	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	7.09e-06	1.01e-05	R	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	R	R	0.000446	0.000704	0.000279	R	R
E1668A	PCB-184	74472-48-3	mg/kg	5.78e-06	4.22e-06 U	5.35e-06	8.09e-06	3.13e-06 J	2.97e-06 J	1.47e-06 J
E1668A	PCB-186	74472-49-4	mg/kg	1.45e-06 U	4.52e-06 U	1.49e-06 U	1.48e-06 U	1.43e-06 U	1.46e-06 U	1.45e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00117 J	R	0.00081 J	0.00157 J		R	0.000342 J
E1668A	PCB-188	74487-85-7	mg/kg	1.17e-05	4.52e-06 U	9.05e-06	1.36e-05	7.97e-06	6.22e-06	3.46e-06 J
E1668A	PCB-189	39635-31-9	mg/kg	2.07e-05	2.94e-05	1.64e-05	2.62e-05	1.11e-05	1.01e-05	4.88e-06
E1668A	PCB-190	41411-64-7	mg/kg	0.000103	0.000149	5.29e-05	0.000129	5.74e-05	4.3e-05	2.63e-05
E1668A	PCB-191	74472-50-7	mg/kg	2.05e-05	2.8e-05	1.83e-05	2.77e-05	1.25e-05	1.06e-05	6.05e-06
E1668A	PCB-192	74472-51-8	mg/kg	1.26e-06 U	3.92e-06 U	1.29e-06 U	1.28e-06 U	1.24e-06 U	1.26e-06 U	1.26e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000139	0.000162	0.000111	0.000181	7.69e-05	6.24e-05	3.04e-05
E1668A	PCB-195	52663-78-2	mg/kg	4.45e-05	7.22e-05	3.7e-05	5.84e-05	2.03e-05	1.68e-05	9.75e-06
E1668A	PCB-196	42740-50-1	mg/kg	0.000149	0.000183	0.000116	0.000201	8.57e-05	5.51e-05	3.76e-05
E1668A	PCB-197/200	PCB-197/200	mg/kg	1.64e-05	1.97e-05 J	1.54e-05	2.69e-05	R	9.55e-06 J	4.37e-06 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000384	0.000409	0.000271	0.000496	0.000194	0.000137	9.19e-05
E1668A	PCB-201	40186-71-8	mg/kg	5.8e-05	7.06e-05	5.07e-05	9.87e-05	3.04e-05	3.31e-05	1.45e-05
E1668A	PCB-202	2136-99-4	mg/kg	0.000152	0.000221	0.00012	0.000176	9.73e-05	0.000101	4.63e-05
E1668A	PCB-203	52663-76-0	mg/kg	0.000161	0.000194	0.00011	0.000248	7.92e-05	6.65e-05	3.29e-05
E1668A	PCB-204	74472-52-9	mg/kg	2.03e-06 U	6.33e-06 U	2.09e-06 U	2.08e-06 U	2.01e-06 U	2.04e-06 U	2.03e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	1.45e-06 U	5.09e-06 J	1.98e-06 J	4.14e-06 J	1.43e-06 U	1.46e-06 U	1.45e-06 U
E1668A	PCB-206	40186-72-9	mg/kg	1e-04	0.000137	5.81e-05	0.000121	4.05e-05	5.17e-05	2.22e-05
E1668A	PCB-207	52663-79-3	mg/kg	2.06e-05	2.54e-05	1.43e-05	2.53e-05	1.08e-05	9.45e-06	4.69e-06 J
E1668A	PCB-208	52663-77-1	mg/kg	8.77e-05	0.000114	5.38e-05	8.75e-05	4.19e-05	3.52e-05	1.98e-05
E1668A	PCB-209	2051-24-3	mg/kg	9.93e-05	0.000144 J	5.37e-05	9.33e-05	4.57e-05	5.25e-05	2.41e-05
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0347 J	0.044 J	0.031 J	0.0465 J	0.0211 J	0.0155 J	0.0105 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0411 J	0.0536 J	0.0371 J	0.0555 J	0.0253 J	0.0185 J	0.0124 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	3.76e-07 J	1.81e-06 J	1.08e-06	1.66e-06	7.89e-07	6.27e-07	2.23e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-1	2051-60-7	mg/kg	9.8e-07 U	9.96e-07 U	1e-06 U	9.52e-07 U	9.87e-07 U	9.66e-07 U	9.99e-07 U
E1668A	PCB-2	2051-61-8	mg/kg	7.64e-07 J	6.97e-07 U	7e-07 U	6.67e-07 U	6.91e-07 U	6.76e-07 U	6.99e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	2.61e-06 J	2.35e-06 J	2.33e-06 J	1.05e-06 U	1.09e-06 U	1.06e-06 U	1.1e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.27e-06 U	1.29e-06 U	1.3e-06 U	1.24e-06 U	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-5	16605-91-7	mg/kg	7.84e-07 U	7.97e-07 U	8e-07 U	7.62e-07 U	7.9e-07 U	7.73e-07 U	7.99e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	6.86e-07 U	6.97e-07 U	7e-07 U	6.67e-07 U	6.91e-07 U	6.76e-07 U	6.99e-07 U
E1668A	PCB-7	33284-50-3	mg/kg	2.17e-06	8.59e-07 J	2.52e-06	7.62e-07 U	7.9e-07 U	7.73e-07 U	9.26e-07 J
E1668A	PCB-8	34883-43-7	mg/kg	1.47e-06 U	1.59e-05	1.5e-06 U	1.43e-06 U	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	6.86e-07 U	6.97e-07 U	7.91e-07 J	6.67e-07 U	6.91e-07 U	6.76e-07 U	6.99e-07 U
E1668A	PCB-10	33146-45-1	mg/kg	1.27e-06 U	1.29e-06 U	1.3e-06 U	1.24e-06 U	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	2.23e-05	3.39e-06 U	2.05e-05	3.24e-06 U	3.36e-06 U	3.29e-06 U	3.4e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.36e-06 J	3.64e-06 J	3.44e-06 J	1.81e-06 U	2.52e-06 J	1.94e-06 J	2.72e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.84e-07 U	7.97e-07 U	8e-07 U	7.62e-07 U	7.9e-07 U	7.73e-07 U	7.99e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000114 J	0.000123 J	0.000155 J	0.000111 J	7.08e-05 J	6.26e-05 J	7.72e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	8.82e-07 U	8.96e-07 U	9e-07 U	2.25e-06	2.13e-06 J	2.04e-06 J	2.23e-06 J
E1668A	PCB-17	37680-66-3	mg/kg	7.12e-06	8.96e-07 U	6.45e-06	8.57e-07 U	8.88e-07 U	8.7e-07 U	8.99e-07 U
E1668A	PCB-18/30	PCB-18/30	mg/kg	7.92e-06	1.59e-06 U	8.14e-06	1.52e-06 U	1.58e-06 U	1.55e-06 U	1.6e-06 U
E1668A	PCB-19	38444-73-4	mg/kg	1.15e-06 J	1.64e-06 J	1.42e-06 J	9.54e-07 J	1.02e-06 J	1.21e-06 J	7.99e-07 U
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00173 J	0.00195 J	0.00184 J	0.00158 J	0.001 J	0.000777 J	0.000909 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	2.06e-06 U	9.15e-06	2.1e-06 U	6.11e-06	5e-06 J	4.24e-06 J	4.85e-06 J
E1668A	PCB-22	38444-85-8	mg/kg	1.41e-05 J	1.41e-05 J	1.09e-05 J	9.56e-06	1.04e-05 J	6.64e-06 J	9.64e-06 J
E1668A	PCB-23	55720-44-0	mg/kg	6.86e-07 U	6.97e-07 U	7e-07 U	6.67e-07 U	6.91e-07 U	6.76e-07 U	6.99e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	9.8e-07 U	9.96e-07 U	1e-06 U	9.52e-07 U	9.87e-07 U	9.66e-07 U	9.99e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	6.96e-06	6.01e-06	4.66e-06	7.62e-07 U	3.68e-06 J	2.85e-06 J	4.58e-06 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	1.18e-06 U	9.16e-06	1.2e-06 U	1.14e-06 U	4.67e-06 J	3.08e-06 J	6.49e-06 J
E1668A	PCB-27	38444-76-7	mg/kg	1.86e-06 J	1.95e-06 J	1.62e-06 J	1.44e-06 J	1.97e-06 U	1.93e-06 U	2e-06 U
E1668A	PCB-31	16606-02-3	mg/kg	3.16e-05 J	1.79e-06 U	2.59e-05 J	2.5e-05	2.24e-05 J	1.65e-05 J	2.93e-05 J
E1668A	PCB-32	38444-77-8	mg/kg	9.93e-06 J	9.6e-06 J	8.93e-06 J	6.43e-06	6.68e-06 J	4.8e-06 J	7.63e-06 J
E1668A	PCB-34	37680-68-5	mg/kg	1.39e-06 J	9.48e-07 J	1.29e-06 J	6.67e-07 U	6.91e-07 U	6.76e-07 U	6.99e-07 U
E1668A	PCB-35	37680-69-6	mg/kg	8.82e-07 U	9.24e-07 J	9.67e-07 J	8.57e-07 U	8.88e-07 U	8.7e-07 U	8.99e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.84e-07 U	7.97e-07 U	8e-07 U	7.62e-07 U	7.9e-07 U	7.73e-07 U	7.99e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000166 J	0.000165	0.00021 J	0.000154	0.000103 J	7.56e-05 J	8.98e-05 J
E1668A	PCB-38	53555-66-1	mg/kg	8.26e-07 J	6.97e-07 U	7.6e-07 J	6.67e-07 U	6.91e-07 U	6.76e-07 U	6.99e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	3.25e-06	3.15e-06	2.41e-06	2.61e-06	1.68e-06 J	1.32e-06 J	1.85e-06 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	3.54e-05	2.54e-05	2.96e-05	1.91e-05	1.71e-05 J	1.13e-05 J	1.95e-05 J
E1668A	PCB-41	52663-59-9	mg/kg	4.12e-06 U	4.18e-06 U	4.2e-06 U	4e-06 U	4.15e-06 U	4.06e-06 U	4.2e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	8.61e-06	7.89e-06	7.98e-06	7.83e-06	5.8e-06 J	3.77e-06 J	7.09e-06 J
E1668A	PCB-43	70362-46-8	mg/kg	1.64e-06 J	1.39e-06 U	1.4e-06 U	1.7e-06 J	1.44e-06 J	1.35e-06 U	1.56e-06 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00143 J	0.00124 J	0.0011 J	0.00126 J	0.000799 J	0.000581 J	0.000655 J
E1668A	PCB-45	70362-45-7	mg/kg	2.16e-06 U	2.19e-06 U	2.2e-06 U	2.1e-06 U	2.17e-06 U	2.13e-06 U	2.2e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	9.8e-07 U	9.96e-07 U	1e-06 U	9.52e-07 U	9.87e-07 U	9.66e-07 U	9.99e-07 U
E1668A	PCB-48	70362-47-9	mg/kg	2.81e-06 J	3.14e-06 J	2.89e-06 J	1.33e-06 U	2.86e-06 J	1.92e-06 J	3.37e-06 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	1.57e-05 J	1.8e-05	2.6e-06 U	2.48e-06 U	2.57e-06 U	2.51e-06 U	2.6e-06 U
E1668A	PCB-50/53	PCB-50/53	mg/kg	2.45e-06 U	2.95e-06 J	2.5e-06 U	2.38e-06 U	2.47e-06 U	2.42e-06 U	2.5e-06 U
E1668A	PCB-51	68194-04-7	mg/kg	2.16e-06 U	2.19e-06 U	2.2e-06 U	2.1e-06 U	2.17e-06 U	2.13e-06 U	2.2e-06 U
E1668A	PCB-52	35693-99-3	mg/kg	1.56e-05	2.37e-05 J	1.58e-05	1.98e-05	1.48e-06 U	1.45e-06 U	1.5e-06 U

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-54	15968-05-5	mg/kg	1.37e-06 U	1.39e-06 U	1.4e-06 U	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	4.14e-06 J	1.2e-06 U	2.25e-06 J	1.14e-06 U	1.18e-06 U	1.16e-06 U	1.2e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	9.73e-06	1.12e-05	1.04e-05	6.57e-06	7.15e-06 J	3.63e-06 J	7.66e-06 J
E1668A	PCB-57	70424-67-8	mg/kg	1.08e-06 U	1.1e-06 U	1.1e-06 U	1.05e-06 U	1.09e-06 U	1.06e-06 U	1.1e-06 U
E1668A	PCB-58	41464-49-7	mg/kg	2.34e-06 J	1.39e-06 U	2.33e-06 J	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	9.76e-05	9.32e-05	8.28e-05	9.41e-05	5.61e-05 J	4.14e-05 J	4.88e-05 J
E1668A	PCB-60	33025-41-1	mg/kg	0.000323 J	0.000363	0.000337 J	0.000305	0.00024 J	0.000146 J	0.000154 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00105 J	0.00114	0.000961 J	0.00108	0.000838 J	0.000547 J	0.000608 J
E1668A	PCB-63	74472-34-7	mg/kg	1.5e-05	1.96e-05	1.41e-05	1.32e-05	9.78e-06 J	7.83e-06 J	9.53e-06 J
E1668A	PCB-64	52663-58-8	mg/kg	1.46e-05 J	1.92e-05	1.49e-05 J	1.47e-05	1.09e-05 J	1.26e-06 U	1.66e-05 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00161 J	0.00177 J	0.00166 J	0.00161 J	0.00115 J	0.000779 J	0.000862 J
E1668A	PCB-67	73575-53-8	mg/kg	1.4e-06 J	3.58e-06 J	3.04e-06 J	1.14e-06 U	2.08e-06 J	1.58e-06 J	2.26e-06 J
E1668A	PCB-68	73575-52-7	mg/kg	1.33e-05	1.47e-05	9.89e-06	9.87e-06	6.08e-06 J	6.14e-06 J	6.26e-06 J
E1668A	PCB-72	41464-42-0	mg/kg	4.65e-06 J	1.29e-06 U	4.03e-06 J	3.29e-06 J	2.41e-06 J	1.9e-06 J	2.76e-06 J
E1668A	PCB-73	74338-23-1	mg/kg	2.98e-06 J	1.39e-06 U	2.58e-06 J	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000108	0.000111	0.000122	R	7.72e-05 J	5.15e-05 J	5.34e-05 J
E1668A	PCB-78	70362-49-1	mg/kg	1.57e-06 U	1.59e-06 U	1.6e-06 U	1.52e-06 U	1.58e-06 U	1.55e-06 U	1.6e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	4.67e-06 J	4.17e-06 J	3.93e-06 J	4.15e-06 J	2.36e-06 J	1.94e-06 J	2.4e-06 J
E1668A	PCB-80	33284-52-5	mg/kg	1.08e-06 U	1.1e-06 U	1.1e-06 U	1.05e-06 U	1.09e-06 U	1.06e-06 U	1.1e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	4.97e-06	4.76e-06 J	4.42e-06 J	5.4e-06	4.44e-06 J	2.91e-06 J	2.81e-06 J
E1668A	PCB-82	52663-62-4	mg/kg	1.47e-06 U	1.74e-06 J	1.5e-06 U	3.17e-06 J	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-83	60145-20-2	mg/kg	2.84e-06 U	2.89e-06 U	2.9e-06 U	2.76e-06 U	2.86e-06 U	2.8e-06 U	2.9e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	3.01e-06	2.45e-06	1.1e-06 U	3.21e-06	1.09e-06 U	1.06e-06 U	1.1e-06 U
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000364	0.00027	0.000288	0.000328	0.000248 J	0.000166 J	0.000164 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000173	0.000125	0.000122	0.000141	8.88e-05 J	7.02e-05 J	7.07e-05 J
E1668A	PCB-88	55215-17-3	mg/kg	2.16e-06 U	2.19e-06 U	2.2e-06 U	2.1e-06 U	2.17e-06 U	2.13e-06 U	2.2e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.27e-06 U	1.29e-06 U	1.3e-06 U	1.24e-06 U	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	7.08e-05 J	6.74e-05 J	6.56e-05 J	6.11e-05 J	4.64e-06 U	4.54e-06 U	4.7e-06 U
E1668A	PCB-91	68194-05-8	mg/kg	9.28e-06	9.36e-06	8.71e-06	2.1e-06 U	5.04e-06 J	3.68e-06 J	7.46e-06 J
E1668A	PCB-92	52663-61-3	mg/kg	8.55e-06	9.85e-06	8.53e-06	8.87e-06 J	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000108	6.76e-05	6.37e-05	6.24e-05	3.55e-05 J	3.24e-05 J	3.1e-05 J
E1668A	PCB-94	73575-55-0	mg/kg	1.27e-06 U	2.14e-06 J	2.28e-06 J	1.52e-06 J	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-95	38379-99-6	mg/kg	1.51e-05 J	R	1.6e-05 J	R	7.6e-06 U	7.44e-06 U	7.69e-06 U
E1668A	PCB-96	73575-54-9	mg/kg	1.47e-06 U	1.49e-06 U	1.5e-06 U	1.43e-06 U	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.55e-06 U	7.67e-06 U	7.7e-06 U	7.33e-06 U	7.6e-06 U	7.44e-06 U	7.69e-06 U
E1668A	PCB-99	38380-01-7	mg/kg	0.00174 J	0.00123 J	0.00122 J	0.00145 J	0.000981 J	0.000763 J	0.000711 J
E1668A	PCB-103	60145-21-3	mg/kg	1.08e-06 U	1.1e-06 U	1.1e-06 U	1.05e-06 U	1.09e-06 U	1.06e-06 U	1.1e-06 U
E1668A	PCB-104	56558-16-8	mg/kg	1.37e-06 U	1.39e-06 U	1.4e-06 U	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.000555 J	0.00055 J	0.00052 J	0.000561	0.000416 J	0.000274 J	0.000254 J
E1668A	PCB-106	70424-69-0	mg/kg	1.67e-06 U	1.69e-06 U	1.7e-06 U	1.62e-06 U	1.68e-06 U	1.64e-06 U	1.7e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000102	0.000111	8.03e-05	7.93e-05	6.3e-05 J	4.32e-05 J	4.3e-05 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	2.84e-06 U	3.44e-06 J	2.9e-06 U	2.76e-06 U	2.86e-06 U	2.8e-06 U	2.9e-06 U
E1668A	PCB-110/115	PCB-110/115	mg/kg	9.38e-05 J	7.54e-05	8.4e-05 J	9.19e-05 J	6.18e-05 J	3.77e-06 U	5.6e-05 J
E1668A	PCB-111	39635-32-0	mg/kg	4.42e-06 J	3.51e-06 J	1.4e-06 U	3.24e-06 J	2.01e-06 J	1.63e-06 J	1.75e-06 J
E1668A	PCB-112	74472-36-9	mg/kg	1.37e-06 U	1.39e-06 U	1.4e-06 U	1.33e-06 U	1.84e-06 J	1.35e-06 U	1.4e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	4.58e-05	4.47e-05	3.61e-05	1.43e-06 U	4.39e-05 J	2.57e-05 J	2.32e-05 J

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-118	31508-00-6	mg/kg	0.00214 J	0.00205 J	0.00164 J	0.00215 J	0.00156 J	0.00107 J	0.000969 J
E1668A	PCB-120	68194-12-7	mg/kg	1.98e-05	1.47e-05	1.26e-05	1.54e-05	9.5e-06 J	8.38e-06 J	7.48e-06 J
E1668A	PCB-121	56558-18-0	mg/kg	2.59e-06 J	1.79e-06 J	1.2e-06 U	1.14e-06 U	1.18e-06 U	1.16e-06 U	1.2e-06 U
E1668A	PCB-122	76842-07-4	mg/kg	1.18e-06 U	1.2e-06 U	1.2e-06 U	1.14e-06 U	1.18e-06 U	1.16e-06 U	1.2e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	3.91e-05	3.7e-05	3.25e-05	4.05e-05	3.69e-05 J	2.35e-05 J	2.06e-05 J
E1668A	PCB-126	57465-28-8	mg/kg	5.88e-06	5.23e-06	4.6e-06 J	5.42e-06	R	2.83e-06 J	2.28e-06 J
E1668A	PCB-127	39635-33-1	mg/kg	1.8e-06 J	1.39e-06 U	1.43e-06 J	1.85e-06 J	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00019	0.00016	0.000152	0.000161	0.000109 J	7.53e-05 J	7.4e-05 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00154 J	0.00121 J	0.00112 J	0.00115 J	0.000805 J	0.000601 J	0.000555 J
E1668A	PCB-130	52663-66-8	mg/kg	2.4e-05	1.83e-05	1.92e-05	1.49e-05	8.48e-06 J	7.72e-06 J	7.54e-06 J
E1668A	PCB-131	61798-70-7	mg/kg	1.67e-06 U	1.69e-06 U	1.7e-06 U	1.62e-06 U	1.68e-06 U	1.64e-06 U	1.7e-06 U
E1668A	PCB-132	38380-05-1	mg/kg	2.93e-06 J	1.59e-06 U	2.88e-06 J	6.49e-06	1.58e-06 U	1.55e-06 U	1.6e-06 U
E1668A	PCB-133	35694-04-3	mg/kg	5.05e-05	5.19e-05	3.1e-05	3.81e-05	2.63e-05 J	1.87e-05 J	1.75e-05 J
E1668A	PCB-134	52704-70-8	mg/kg	3.24e-06 U	3.29e-06 U	3.3e-06 U	3.14e-06 U	3.26e-06 U	3.19e-06 U	3.3e-06 U
E1668A	PCB-135/151	PCB-135/151	mg/kg	1.27e-05	1.08e-05	1.06e-05	1.33e-05	4.54e-06 U	4.44e-06 U	4.6e-06 U
E1668A	PCB-136	38411-22-2	mg/kg	1.57e-06 U	1.67e-06 J	1.6e-06 U	1.52e-06 U	1.58e-06 U	1.55e-06 U	1.83e-06 J
E1668A	PCB-137	35694-06-5	mg/kg	8.62e-05	6.22e-05	6.27e-05	7.21e-05	5.54e-05 J	3.57e-05 J	2.97e-05 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	3.83e-05	3.09e-05	2.67e-05	3.06e-05	2.16e-05 J	1.65e-05 J	1.41e-05 J
E1668A	PCB-141	52712-04-6	mg/kg	1.67e-06 U	7.03e-06	5.56e-06	8e-06	1.68e-06 U	1.64e-06 U	1.7e-06 U
E1668A	PCB-142	41411-61-4	mg/kg	1.67e-06 U	1.69e-06 U	1.7e-06 U	1.62e-06 U	1.68e-06 U	1.64e-06 U	1.7e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.24e-06 U	3.29e-06 U	3.3e-06 U	3.14e-06 U	3.26e-06 U	3.19e-06 U	3.3e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	2.96e-06 J	2.45e-06 J	3.12e-06 J	3.22e-06 J	1.48e-06 U	1.45e-06 U	1.99e-06 J
E1668A	PCB-145	74472-40-5	mg/kg	1.57e-06 U	1.59e-06 U	1.6e-06 U	1.52e-06 U	1.58e-06 U	1.55e-06 U	1.6e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000338	R	0.00021	R	0.00016 J	0.000117 J	0.000105 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	6.76e-05 J	6.67e-05 J	6.44e-05 J	5.31e-05 J	3.46e-06 U	3.38e-06 U	3.5e-06 U
E1668A	PCB-148	74472-41-6	mg/kg	1.36e-05	9.14e-06	6.21e-06	8.43e-06	5.78e-06 J	4.64e-06 J	1.4e-06 U
E1668A	PCB-150	68194-08-1	mg/kg	1.47e-06 U	1.49e-06 U	1.5e-06 U	1.43e-06 U	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	1.37e-06 U	1.39e-06 U	1.4e-06 U	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00235 J	0.00176 J	0.0014 J	0.00175 J	0.00118 J	0.000897 J	0.000766 J
E1668A	PCB-154	60145-22-4	mg/kg	8.31e-05	5.37e-05	4.41e-05	5.54e-05	3.38e-05 J	3.01e-05 J	2.59e-05 J
E1668A	PCB-155	33979-03-2	mg/kg	2.42e-05	1.91e-05	1.73e-05	1.71e-05	9.82e-06 J	7.53e-06 J	7.14e-06 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000173	0.000156	0.000125	0.000164	0.000136 J	8.75e-05 J	7.4e-05 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00018	0.000134	0.000125	0.000152	0.000111 J	7.43e-05 J	6.23e-05 J
E1668A	PCB-159	39635-35-3	mg/kg	1.37e-06 U	1.39e-06 U	1.4e-06 U	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.18e-06 U	6.27e-06 U	6.3e-06 U	6e-06 U	6.22e-06 U	6.09e-06 U	6.29e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.27e-06 U	1.29e-06 U	1.3e-06 U	1.24e-06 U	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	9.81e-06	9.05e-06	6.94e-06	1.24e-06 U	5.81e-06 J	3.95e-06 J	3.62e-06 J
E1668A	PCB-164	74472-45-0	mg/kg	1.47e-06 U	1.49e-06 U	3.84e-06 J	3.03e-06 J	1.48e-06 U	1.45e-06 U	2.14e-06 J
E1668A	PCB-165	74472-46-1	mg/kg	3.06e-06 J	R	1.59e-06 J	R	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-167	52663-72-6	mg/kg	7.37e-05	6.39e-05	4.96e-05	6.64e-05	5.16e-05 J	3.43e-05 J	2.87e-05 J
E1668A	PCB-169	32774-16-6	mg/kg	1.47e-06 U	1.49e-06 U	1.5e-06 U	1.43e-06 U	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000125	0.000101	0.000108	0.000108	8.33e-05 J	4.61e-05 J	4.72e-05 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	7.9e-05	R	5.74e-05	R	4.93e-05 J	2.91e-05 J	2.78e-05 J
E1668A	PCB-172	52663-74-8	mg/kg	3.89e-05	2.87e-05	2.73e-05	2.86e-05	2.17e-05 J	1.31e-05 J	1.29e-05 J
E1668A	PCB-174	38411-25-5	mg/kg	3.39e-06 J	R	4.63e-06 J	R	3.34e-06 J	1.78e-06 J	3.22e-06 J
E1668A	PCB-175	40186-70-7	mg/kg	1.94e-05	1.19e-05	1.1e-05	R	9.48e-06 J	5.64e-06 J	5.02e-06 J

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008	NB03CRB-MUS-S009
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1668A	PCB-176	52663-65-7	mg/kg	1.18e-06 U	1.2e-06 U	1.2e-06 J	1.3e-06 J	1.18e-06 U	1.16e-06 U	1.2e-06 U
E1668A	PCB-177	52663-70-4	mg/kg	R	R	R	R	1.95e-05 J	1.21e-05 J	1.36e-05 J
E1668A	PCB-178	52663-67-9	mg/kg	0.000151	0.00011	9.28e-05	0.000101	6.93e-05 J	4.35e-05 J	4.2e-05 J
E1668A	PCB-179	52663-64-6	mg/kg	1.54e-06 J	1.62e-06 J	1.83e-06 J	1.33e-06 U	1.38e-06 U	1.35e-06 U	1.4e-06 U
E1668A	PCB-180/193	PCB-180/193	mg/kg	6e-04 J	0.000463 J	0.000428 J	0.000485	0.000406 J	0.000248 J	0.000213 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	R	2.06e-06 J	1.26e-06 J	1.3e-06 U
E1668A	PCB-182	60145-23-5	mg/kg	3.47e-06 J	R	2.74e-06 J	R	2.12e-06 J	1.48e-06 J	1.3e-06 U
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000248	0.000192	0.000152	0.000189	0.000146 J	9.83e-05 J	8.62e-05 J
E1668A	PCB-184	74472-48-3	mg/kg	2.93e-06 J	1.39e-06 U	1.41e-06 J	2.02e-06 J	1.58e-06 J	1.35e-06 U	1.4e-06 U
E1668A	PCB-186	74472-49-4	mg/kg	1.47e-06 U	1.49e-06 U	1.5e-06 U	1.43e-06 U	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.000635 J	0.00047	0.000416 J	R	3e-04 J	0.000202 J	0.000191 J
E1668A	PCB-188	74487-85-7	mg/kg	7.06e-06	1.49e-06 U	5.59e-06	5.77e-06	4.03e-06 J	3.03e-06 J	2.6e-06 J
E1668A	PCB-189	39635-31-9	mg/kg	9.18e-06	7.49e-06	5.89e-06	7.54e-06	6.55e-06 J	4.14e-06 J	3.42e-06 J
E1668A	PCB-190	41411-64-7	mg/kg	4.81e-05	3.76e-05	3.58e-05	3.74e-05	3.13e-05 J	1.8e-05 J	1.57e-05 J
E1668A	PCB-191	74472-50-7	mg/kg	8.93e-06	7.55e-06	7.32e-06	8.25e-06	6.86e-06 J	3.9e-06 J	3.36e-06 J
E1668A	PCB-192	74472-51-8	mg/kg	1.27e-06 U	1.29e-06 U	1.3e-06 U	1.24e-06 U	1.28e-06 U	1.26e-06 U	1.3e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	5.41e-05	4.96e-05	4.84e-05	4.83e-05	4.41e-05 J	2.64e-05 J	2.51e-05 J
E1668A	PCB-195	52663-78-2	mg/kg	1.79e-05	1.53e-05	1.6e-05	1.45e-05	1.21e-05 J	6.84e-06 J	6.68e-06 J
E1668A	PCB-196	42740-50-1	mg/kg	6.34e-05	4.57e-05	4.85e-05	5.49e-05	4.49e-05 J	2.58e-05 J	2.2e-05 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	9.05e-06 J	7.14e-06 J	5.12e-06 J	R	4.99e-06 J	4.15e-06 U	4.3e-06 U
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000156	0.000116	0.000123	0.000122	9.86e-05 J	5.64e-05 J	5.7e-05 J
E1668A	PCB-201	40186-71-8	mg/kg	3.04e-05	1.99e-06 U	1.79e-05	2.35e-05	1.57e-05 J	1.02e-05 J	1.05e-05 J
E1668A	PCB-202	2136-99-4	mg/kg	1e-04	0.000107	6.56e-05	8.56e-05	5.77e-05 J	3.87e-05 J	4.13e-05 J
E1668A	PCB-203	52663-76-0	mg/kg	6.09e-05	4.9e-05	4.93e-05	5.12e-05	4.04e-05 J	2.7e-05 J	2.5e-05 J
E1668A	PCB-204	74472-52-9	mg/kg	2.06e-06 U	2.09e-06 U	2.1e-06 U	2e-06 U	2.07e-06 U	2.03e-06 U	2.1e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	1.47e-06 U	1.49e-06 U	1.5e-06 U	1.43e-06 U	1.48e-06 U	1.45e-06 U	1.5e-06 U
E1668A	PCB-206	40186-72-9	mg/kg	4.07e-05	3.69e-05	3.53e-05	3.69e-05	2.89e-05 J	1.87e-05 J	1.74e-05 J
E1668A	PCB-207	52663-79-3	mg/kg	8.09e-06	8.42e-06	6.24e-06	8.6e-06	6.37e-06 J	3.9e-06 J	3.68e-06 J
E1668A	PCB-208	52663-77-1	mg/kg	3.73e-05	3.38e-05	2.86e-05	3.67e-05	2.66e-05 J	1.73e-05 J	1.69e-05 J
E1668A	PCB-209	2051-24-3	mg/kg	4.19e-05	1.59e-06 U	3.19e-05	4.44e-05	3.53e-05 J	2.19e-05 J	1.99e-05 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0172 J	0.0147 J	0.0138 J	0.0137 J	0.0101 J	0.0072 J	0.00738 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0204 J	0.0177 J	0.0163 J	0.0167 J	0.0125 J	0.00878 J	0.00881 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	6.96e-07	6.28e-07	5.5e-07 J	6.37e-07	8.03e-08 J	3.4e-07 J	2.81e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124
			Sample ID	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123	NB03-CRB-COMBHEPMUS-124
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	4.1322e-06 J	2.622e-06 J	1.9702e-06 U
E1668A	PCB-2	2051-61-8	mg/kg	1.41724e-06 U	1.40246e-06 U	1.37862e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	2.2236e-06 U	2.2018e-06 U	2.169e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	4.7948e-05	2.04956e-05 J	5.99746e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	1.6179e-06 U	1.60276e-06 U	1.57668e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	1.2477e-05	1.00658e-05	1.37862e-06 U
E1668A	PCB-7	33284-50-3	mg/kg	1.6179e-06 U	1.60276e-06 U	1.57668e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	4.5334e-05 J	3.003e-06 U	2.959e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	1.86704e-06 J	1.40246e-06 U	1.37862e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	5.7496e-06 J	3.3434e-06 J	1.21866e-05 J
E1668A	PCB-11	2050-67-1	mg/kg	9.42812e-05 J	8.1705e-05 J	0.0001265138 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.5967e-05	2.66068e-05	3.7442e-06 U
E1668A	PCB-14	34883-41-5	mg/kg	1.6179e-06 U	1.60276e-06 U	1.57668e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.0006997 J	0.00058936 J	0.0003989692 J
E1668A	PCB-16	38444-78-9	mg/kg	1.8219e-06 U	1.20034e-05	2.3668e-05
E1668A	PCB-17	37680-66-3	mg/kg	6.80023e-05 J	6.1908e-05	9.399934e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0001267566 J	7.91322e-05 J	0.000149374 J
E1668A	PCB-19	38444-73-4	mg/kg	1.6179e-06 U	8.9268e-06	1.95836e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0225392 J	0.0189698 J	0.0108092 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	8.73466e-05 J	8.6826e-05	8.0423e-05
E1668A	PCB-22	38444-85-8	mg/kg	0.0001233823 J	0.000166946	0.000155268
E1668A	PCB-23	55720-44-0	mg/kg	1.41724e-06 U	1.40246e-06 U	1.37862e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	2.02516e-06 U	2.0041e-06 U	1.9702e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000120582	0.000104912	7.884608e-05 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.0001545406 J	0.000111372	0.0001165806 J
E1668A	PCB-27	38444-76-7	mg/kg	2.79558e-05	2.29796e-05	4.34598e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0005291246 J	0.00053046 J	0.000490658 J
E1668A	PCB-32	38444-77-8	mg/kg	0.0001129083 J	0.0001278	0.000150344
E1668A	PCB-34	37680-68-5	mg/kg	3.06004e-05	2.06416e-05	1.68214e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	1.49908e-05	1.22248e-05	1.77474e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	5.98056e-06 J	5.6762e-06 J	1.57668e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.00211112 J	0.00174072 J	0.001184876 J
E1668A	PCB-38	53555-66-1	mg/kg	2.516304e-05 J	2.191906e-05 J	1.37862e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	6.34826e-05	5.28458e-05	2.89344e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00079046	0.000653282	0.000702896
E1668A	PCB-41	52663-59-9	mg/kg	8.4938e-06 U	8.4014e-06 U	9.5524e-06 J
E1668A	PCB-42	36559-22-5	mg/kg	0.0001823966 J	0.00021706	0.000258596
E1668A	PCB-43	70362-46-8	mg/kg	5.80868e-05	3.60036e-05	3.4165e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0306868 J	0.0255646 J	0.01826114 J
E1668A	PCB-45	70362-45-7	mg/kg	1.00966e-05 J	7.768e-06 J	1.4188e-05 J
E1668A	PCB-46	41464-47-5	mg/kg	9.1954e-06 J	7.2086e-06 J	1.01706e-05 J
E1668A	PCB-48	70362-47-9	mg/kg	7.74686e-05 J	6.20528e-05	7.9797e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0003529092 J	0.000352636	0.000532046 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	4.80672e-05 J	3.89164e-05 J	5.76852e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	4.55412e-05	4.1582e-05	4.55532e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.0004769026 J	0.000422066	0.000581574

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124
			Sample ID	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123	NB03-CRB-COMBHEPMUS-124
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	2.833e-06 U	2.8064e-06 U	2.7628e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	1.76766e-05 J	4.11074e-05	2.57886e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	0.000299334	0.000287084	0.000345424
E1668A	PCB-57	70424-67-8	mg/kg	1.60712e-05 J	1.0686e-05 J	1.57826e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	1.83966e-05 J	1.53464e-05 J	2.14126e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00193306	0.00182834	0.001240158
E1668A	PCB-60	33025-41-1	mg/kg	0.00378764 J	0.00359878 J	0.00239176 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.02811 J	0.0267954 J	0.01633468 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000460958	0.000462068	0.000310544
E1668A	PCB-64	52663-58-8	mg/kg	0.0004637546 J	0.000401656	0.000484388
E1668A	PCB-66	32598-10-0	mg/kg	0.0328748 J	0.0437948 J	0.0267952 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000126922	0.00010906	7.0486e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000267106	0.00029037	0.0001837052
E1668A	PCB-72	41464-42-0	mg/kg	0.000123616	9.1822e-05	9.7078e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	2.13684e-05 J	2.60902e-05 J	2.78086e-05 J
E1668A	PCB-77	32598-13-3	mg/kg	0.00217182 J	0.00180596 J	
E1668A	PCB-78	70362-49-1	mg/kg	3.2384e-06 U	3.207e-06 U	3.1504e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.00012503	0.000109612	6.0271e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	7.8786e-06 J	8.447e-06 J	5.3046e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	0.000103414	8.941e-05	6.109e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	3.0344e-06 U	2.49684e-05 J	2.959e-06 U
E1668A	PCB-83	60145-20-2	mg/kg	3.93112e-05 J	2.43232e-05 J	4.21638e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	9.05066e-05 J	5.26806e-05	7.76e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00813738 J	0.00667566 J	0.00648968 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0032554464 J	0.00281236	0.00274302
E1668A	PCB-88	55215-17-3	mg/kg	4.4546e-06 U	4.414e-06 U	4.3432e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	4.6986e-06 J	3.2264e-06 J	5.4786e-06 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0019014558 J	0.00136832	0.00206448 J
E1668A	PCB-91	68194-05-8	mg/kg	0.0003006206 J	0.000173372	0.000252676
E1668A	PCB-92	52663-61-3	mg/kg	0.0002661546 J	0.000136718	0.000286172 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00176424 J	0.00178316 J	0.001235378
E1668A	PCB-94	73575-55-0	mg/kg	6.58306e-05	5.53126e-05	5.09584e-05 J
E1668A	PCB-95	38379-99-6	mg/kg	0.000503012	0.000317238	
E1668A	PCB-96	73575-54-9	mg/kg	3.0344e-06 U	3.003e-06 U	2.959e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.3001e-05 J	4.3659e-05 J	6.43988e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0505134 J	0.033829 J	0.03191928 J
E1668A	PCB-103	60145-21-3	mg/kg	1.64956e-05 J	1.05714e-05 J	2.06584e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	2.833e-06 U	3.4408e-06 J	3.3426e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.0135242 J	0.0114034 J	0.00893624 J
E1668A	PCB-106	70424-69-0	mg/kg	3.4398e-06 U	3.401e-06 U	3.3492e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00242968 J	0.00252104 J	0.00172919 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	8.23186e-05 J	6.52124e-05 J	8.00236e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0021062712 J	0.00167648	0.00220258 J
E1668A	PCB-111	39635-32-0	mg/kg	5.59758e-05 J	4.72088e-05	5.4259e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	2.833e-06 U	3.15546e-05 J	3.01486e-05 J
E1668A	PCB-114	74472-37-0	mg/kg	0.00107164 J	0.00108724 J	0.00077545 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124
			Sample ID	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123	NB03-CRB-COMBHEPMUS-124
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0484062 J	0.056779 J	0.0405486 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000383452	0.000354186	0.000277874
E1668A	PCB-121	56558-18-0	mg/kg	4.29872e-05 J	4.01938e-05 J	3.26006e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	2.4276e-06 U	2.4058e-06 U	1.63766e-05 J
E1668A	PCB-123	65510-44-3	mg/kg	0.00101485 J	0.00101114 J	0.000753772
E1668A	PCB-126	57465-28-8	mg/kg	8.60202e-05	9.9736e-05	8.31742e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	7.12788e-05 J	7.38482e-05	3.61286e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00450672 J	0.00463366 J	0.00324748 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.054481 J	0.0466736 J	0.03278094 J
E1668A	PCB-130	52663-66-8	mg/kg	0.0005782	0.000643866	0.000555684
E1668A	PCB-131	61798-70-7	mg/kg	2.94988e-05 J	2.55548e-05 J	1.81952e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	3.2384e-06 U	4.89178e-05	9.1852e-05
E1668A	PCB-133	35694-04-3	mg/kg	0.000861772 J	0.00106059 J	0.000721842
E1668A	PCB-134	52704-70-8	mg/kg	2.1199e-05 J	1.6319e-05 J	2.69554e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.0003283818 J	0.00023918	0.000397868
E1668A	PCB-136	38411-22-2	mg/kg	4.13014e-05 J	2.21346e-05 J	3.32428e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00205278 J	0.00241942 J	0.00154055 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00093914	0.000971026	0.000594748
E1668A	PCB-141	52712-04-6	mg/kg	0.0001406106 J	0.000141968	0.000142004
E1668A	PCB-142	41411-61-4	mg/kg	3.4398e-06 U	3.401e-06 U	
E1668A	PCB-143	68194-15-0	mg/kg	7.0032e-06 J	6.621e-06 U	6.5018e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	8.55082e-05	7.42246e-05	5.97234e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	3.2384e-06 U	3.207e-06 U	3.1504e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00833488 J	0.00893436 J	
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0022099752 J	0.00187014 J	0.001677816 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000223958	0.000215818	0.0001582352
E1668A	PCB-150	68194-08-1	mg/kg	5.7826e-06 J	3.5256e-06 J	5.8866e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	3.2932e-06 J	2.8064e-06 U	2.7628e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.065917 J	0.0765114 J	0.0530592 J
E1668A	PCB-154	60145-22-4	mg/kg	0.0020529 J	0.00211234 J	0.001359858 J
E1668A	PCB-155	33979-03-2	mg/kg	0.00052842	0.000552106	0.000402738
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00416502 J	0.0042668 J	0.00337748 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00430992 J	0.00459666 J	0.003136376 J
E1668A	PCB-159	39635-35-3	mg/kg	2.13086e-05 J	1.46676e-05 J	1.52506e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	1.27444e-05 U	1.26188e-05 U	1.73056e-05 J
E1668A	PCB-161	74472-43-8	mg/kg	2.629e-06 U	2.6024e-06 U	
E1668A	PCB-162	39635-34-2	mg/kg	1.38104e-05 J	0.0002544176 J	
E1668A	PCB-164	74472-45-0	mg/kg	0.0001103026 J	0.000118203	0.000127459
E1668A	PCB-165	74472-46-1	mg/kg	4.27124e-05 J	5.2473e-05 J	
E1668A	PCB-167	52663-72-6	mg/kg	0.00171044 J	0.00184192 J	0.001455066 J
E1668A	PCB-169	32774-16-6	mg/kg	6.1206e-06 J	3.003e-06 U	2.959e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0038489546 J	0.00465236 J	0.003350618 J
E1668A	PCB-171/173	PCB-171/173	mg/kg		0.00277568 J	
E1668A	PCB-172	52663-74-8	mg/kg	0.0012541546 J	0.001381426 J	0.000966558 J
E1668A	PCB-174	38411-25-5	mg/kg	0.0001477426 J	0.0001346698	
E1668A	PCB-175	40186-70-7	mg/kg	0.000371074	0.000447574	

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124
			Sample ID	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123	NB03-CRB-COMBHEPMUS-124
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	4.02782e-05 J	3.0749e-05 J	2.87006e-05 J
E1668A	PCB-177	52663-70-4	mg/kg	0.0012488066 J	0.001591552 J	
E1668A	PCB-178	52663-67-9	mg/kg	0.00284164 J	0.00323978 J	0.002202676 J
E1668A	PCB-179	52663-64-6	mg/kg	4.59666e-05 J	3.2977e-05 J	5.64918e-05
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.02397966 J	0.0246704 J	0.01798 J
E1668A	PCB-181	74472-47-2	mg/kg	0.0001031828	0.0001307926	
E1668A	PCB-182	60145-23-5	mg/kg	0.0001042208	0.000124964	
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00762376 J	0.0097339 J	
E1668A	PCB-184	74472-48-3	mg/kg	8.31016e-05	9.7523e-05	4.86086e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	3.0344e-06 U	3.003e-06 U	2.959e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0175924 J	0.01893142 J	
E1668A	PCB-188	74487-85-7	mg/kg	0.000117268	0.000120684	9.37932e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000292714	0.000347832	0.0002378146 J
E1668A	PCB-190	41411-64-7	mg/kg	0.0006120286 J	0.001190082 J	0.001081456 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000306686	0.0003528	0.0002546592
E1668A	PCB-192	74472-51-8	mg/kg	6.8566e-06 J	7.0276e-06 J	5.3746e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.0024089246 J	0.00278466 J	0.002155922 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000598132	0.000585048	0.0004229264
E1668A	PCB-196	42740-50-1	mg/kg	0.00192447 J	0.00297554 J	0.001703058 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.000315966	0.0001577542 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00413922 J	0.0067814 J	0.003850094 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000803946	0.001020762	0.00049841
E1668A	PCB-202	2136-99-4	mg/kg	0.00159378 J	0.00173676 J	0.001258018 J
E1668A	PCB-203	52663-76-0	mg/kg	0.002550542 J	0.00347324 J	0.002139794 J
E1668A	PCB-204	74472-52-9	mg/kg	1.66786e-05 J	1.65674e-05 J	7.1552e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	4.58142e-05 J	4.46918e-05 J	2.81426e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00136445 J	0.001592692 J	0.001499844 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000241862	0.00028855	0.0001893712 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000879054	0.000928	0.000693242
E1668A	PCB-209	2051-24-3	mg/kg	0.0008877766 J	0.001019656	0.000869366
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.426 J	0.426 J	0.275 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.499 J	0.504 J	0.331 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.11e-05	1.25e-05	1e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126	NB03-CRB-COMBHEPMUS-127
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	9.8086e-07 U	9.7574e-07 U	5.6774e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	9.333e-07 J	6.8274e-07 U	1.83388e-06 U
E1668A	PCB-3	2051-62-9	mg/kg		1.07e-06 U	3.9122e-06 J
E1668A	PCB-4	13029-08-8	mg/kg	2.48078e-05 J	3.60398e-05 J	6.1356e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	7.8508e-07 U	7.8e-07 U	2.09564e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	6.8682e-07 U	6.8274e-07 U	1.83388e-06 U
E1668A	PCB-7	33284-50-3	mg/kg	9.8266e-07 J	7.8e-07 U	1.81452e-05
E1668A	PCB-8	34883-43-7	mg/kg	4.5942e-05	1.46e-06 U	3.37194e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	1.14932e-06 J	6.8274e-07 U	2.7132e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	3.4904e-06 J	6.917e-06 J	7.7138e-06 J
E1668A	PCB-11	2050-67-1	mg/kg	8.43642e-05 J	3.3174e-06 U	0.000166708 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.04382e-05	1.85e-06 U	2.7486e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	7.8508e-07 U	7.8e-07 U	2.09564e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00034652 J	0.00039708 J	0.0004522 J
E1668A	PCB-16	38444-78-9	mg/kg	8.8334e-07 U	1.46382e-05	2.35766e-06 U
E1668A	PCB-17	37680-66-3	mg/kg	5.915194e-05 J	5.654972e-05 J	8.32512e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	8.02018e-05 J	0.000110614 J	0.0001114362 J
E1668A	PCB-19	38444-73-4	mg/kg	9.62742e-06 J	1.12112e-05 J	1.6947e-05 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0080344 J	0.010194 J	0.0112578 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	6.108e-05	5.623e-05	9.0432e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000140052 J	0.000119344 J	0.000197542 J
E1668A	PCB-23	55720-44-0	mg/kg	6.8682e-07 U	6.8274e-07 U	1.83388e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.8086e-07 U	9.7574e-07 U	2.62708e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	7.1588e-05	5.46572e-05 J	9.9804e-05 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	9.3304e-05	8.43258e-05 J	0.000177524
E1668A	PCB-27	38444-76-7	mg/kg	2.83134e-05	2.57712e-05 J	4.7026e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.00042456 J	0.00043242 J	0.0005967 J
E1668A	PCB-32	38444-77-8	mg/kg	0.0001592 J	0.000132838 J	0.000177048 J
E1668A	PCB-34	37680-68-5	mg/kg	1.1462e-05	9.70942e-06 J	1.60196e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	7.3752e-06 J	8.7774e-07 U	1.1067e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	6.5e-06 J	7.8e-07 U	1.16704e-05 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00067846 J	0.000986 J	0.00088806 J
E1668A	PCB-38	53555-66-1	mg/kg	6.8682e-07 U	5.44542e-06 J	1.83388e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	2.09496e-05	2.32674e-05	3.40824e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00052338 J	0.000563328 J	0.0012699 J
E1668A	PCB-41	52663-59-9	mg/kg	9.0734e-06 J	4.0974e-06 U	1.6438e-05 J
E1668A	PCB-42	36559-22-5	mg/kg	0.000174196	0.000178226 J	0.000408514 J
E1668A	PCB-43	70362-46-8	mg/kg	2.72532e-05	3.0664e-05	6.70846e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0101892 J	0.0150782 J	0.0273862 J
E1668A	PCB-45	70362-45-7	mg/kg	8.403e-06 J	2.1474e-06 U	1.3745e-05 J
E1668A	PCB-46	41464-47-5	mg/kg	7.17172e-06 J	6.385e-06 J	1.35814e-05 J
E1668A	PCB-48	70362-47-9	mg/kg	5.5792e-05	4.93738e-05 J	0.000108236 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000357988	0.000404132 J	0.00094572 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	4.23772e-05 J	4.00256e-05 J	9.26e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	3.1231e-05 J	3.6951e-05 J	6.5277e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.000391102 J	0.000438948 J	0.00079672 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126	NB03-CRB-COMBHEPMUS-127
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	1.3726e-06 U	1.3674e-06 U	3.6762e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	2.06836e-05	1.17e-06 U	7.0709e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	0.00025483 J	0.000198388 J	0.000541 J
E1668A	PCB-57	70424-67-8	mg/kg	1.04714e-05 J	9.8398e-06 J	2.83816e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	2.38976e-05	1.05818e-05 J	4.67426e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00068558 J	0.0009449 J	0.00179652 J
E1668A	PCB-60	33025-41-1	mg/kg	0.0017166 J	0.00179162 J	0.0021609 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0108396 J	0.0142024 J	0.0319656 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000229502 J	0.000245076 J	0.000627668 J
E1668A	PCB-64	52663-58-8	mg/kg	0.000338974 J	0.000468278 J	0.0008042 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0153538 J	0.0209794 J	0.0433444 J
E1668A	PCB-67	73575-53-8	mg/kg	4.6404e-05	5.52386e-05	0.000122056 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000126436	0.000130872	0.000349124 J
E1668A	PCB-72	41464-42-0	mg/kg	5.6832e-05	6.7162e-05	0.00019197 J
E1668A	PCB-73	74338-23-1	mg/kg	2.9461e-05	3.247e-06 J	4.653e-06 J
E1668A	PCB-77	32598-13-3	mg/kg	0.00074574 J		
E1668A	PCB-78	70362-49-1	mg/kg	1.5726e-06 U	1.56e-06 U	4.1992e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	4.34636e-05	5.01304e-05	0.00012655 J
E1668A	PCB-80	33284-52-5	mg/kg	5.3894e-06 J	4.1978e-06 J	1.32202e-05 J
E1668A	PCB-81	70362-50-4	mg/kg	4.16036e-05	5.20362e-05	6.4296e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	2.57272e-05 J	1.46e-06 U	2.71154e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	2.57526e-05 J	2.83e-06 U	7.6496e-06 J
E1668A	PCB-84	52663-60-2	mg/kg	4.4771e-05	5.72924e-05	6.225e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00290612 J	0.00442674 J	0.00420428 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0013766 J	0.00201324 J	0.00205092 J
E1668A	PCB-88	55215-17-3	mg/kg	2.1578e-06 U	2.1474e-06 U	5.7708e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	3.3136e-06 J	3.4774e-06 J	5.5064e-06 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00098904 J	0.00150264 J	0.00148796 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000128416	0.000213006 J	0.000210752 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00014137	0.000217868 J	0.000257772 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00069756 J	0.0010252 J	0.0009798 J
E1668A	PCB-94	73575-55-0	mg/kg	3.57702e-05	4.17596e-05	5.067e-05 J
E1668A	PCB-95	38379-99-6	mg/kg			0.000434508 J
E1668A	PCB-96	73575-54-9	mg/kg	1.6026e-06 J	1.694e-06 J	3.9832e-06 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	3.23522e-05 J	4.14374e-05 J	5.6238e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0140372 J	0.0239734 J	0.0216612 J
E1668A	PCB-103	60145-21-3	mg/kg	8.092e-06 J	1.4543e-05 J	1.00222e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	2.644e-06 J	2.5374e-06 J	4.6824e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.00411754 J	0.00611234 J	0.0055906 J
E1668A	PCB-106	70424-69-0	mg/kg	1.6652e-06 U	1.66e-06 U	4.462e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.0010811 J	0.0012981 J	0.00174198 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	4.69418e-05 J	5.94948e-05 J	8.9134e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00111632 J	0.00173354 J	0.00171962 J
E1668A	PCB-111	39635-32-0	mg/kg	2.71154e-05 J	3.77906e-05 J	3.79026e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	1.45078e-05 J	1.3674e-06 U	3.6762e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000421266 J	0.000582634 J	0.000614 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126	NB03-CRB-COMBHEPMUS-127
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0211766 J	0.0339252 J	0.0387408 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000134134	0.000199768 J	0.000201416 J
E1668A	PCB-121	56558-18-0	mg/kg	1.80546e-05 J	2.47634e-05 J	2.6234e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	8.7178e-06 J	9.1858e-06 J	1.1975e-05 J
E1668A	PCB-123	65510-44-3	mg/kg	0.000417872 J	0.000538158 J	0.00061886 J
E1668A	PCB-126	57465-28-8	mg/kg	4.28454e-05	6.3256e-06 J	6.7676e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	1.87978e-05 J	2.72494e-05 J	2.64886e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0018483 J	0.0022655 J	0.00289482 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0172884 J	0.023533 J	0.0321886 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00037577 J	0.0004081 J	
E1668A	PCB-131	61798-70-7	mg/kg	1.40594e-05 J	1.58144e-05 J	
E1668A	PCB-132	38380-05-1	mg/kg	4.36358e-05	5.104e-05	
E1668A	PCB-133	35694-04-3	mg/kg	0.000540792 J	0.000605946 J	0.000902996 J
E1668A	PCB-134	52704-70-8	mg/kg	1.63002e-05 J	1.50708e-05 J	
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000174792	0.000257606	0.000280212
E1668A	PCB-136	38411-22-2	mg/kg	1.43698e-05 J	1.94508e-05 J	2.01502e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00091894 J	0.0012165 J	
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000364368 J	0.000470258 J	0.00060041 J
E1668A	PCB-141	52712-04-6	mg/kg	0.000103062	0.000130766	0.000149734
E1668A	PCB-142	41411-61-4	mg/kg	1.6652e-06 U	1.66e-06 U	
E1668A	PCB-143	68194-15-0	mg/kg	3.5472e-06 J	3.22e-06 U	
E1668A	PCB-144	68194-14-9	mg/kg	2.8212e-05 J	4.68404e-05 J	
E1668A	PCB-145	74472-40-5	mg/kg	1.5726e-06 U	1.56e-06 U	4.1992e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00352666 J	0.00439532 J	
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00099506 J	0.00130222 J	0.00169388 J
E1668A	PCB-148	74472-41-6	mg/kg	8.6248e-05	0.000122126	0.000117328 J
E1668A	PCB-150	68194-08-1	mg/kg	2.4606e-06 J	3.1344e-06 J	5.6004e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	1.8068e-06 J	2.085e-06 J	3.9778e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0263412 J	0.0401524 J	0.0560898 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000665306 J	0.001046756 J	
E1668A	PCB-155	33979-03-2	mg/kg	0.000253242 J	0.00033865 J	0.000357042 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00175092 J	0.00252506 J	0.00296216 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00184644 J	0.00238846 J	0.000235723 J
E1668A	PCB-159	39635-35-3	mg/kg	1.3726e-06 U	1.3674e-06 U	8.0806e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.1782e-06 U	6.1474e-06 U	1.6534e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	2.5388e-06 J	1.27e-06 U	
E1668A	PCB-162	39635-34-2	mg/kg	0.000127094		0.000173294 J
E1668A	PCB-164	74472-45-0	mg/kg	8.7516e-05	9.5202e-05	0.000118922
E1668A	PCB-165	74472-46-1	mg/kg	2.56658e-05 J	2.92798e-05 J	
E1668A	PCB-167	52663-72-6	mg/kg	0.00075928 J	0.001018496 J	0.00146372 J
E1668A	PCB-169	32774-16-6	mg/kg	3.3732e-06 J	1.46e-06 U	3.9364e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00161452 J	0.00226572 J	0.00233766 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00086328 J	0.001147416 J	
E1668A	PCB-172	52663-74-8	mg/kg	0.00044891 J	0.000697874 J	0.000382366 J
E1668A	PCB-174	38411-25-5	mg/kg		0.000120454	
E1668A	PCB-175	40186-70-7	mg/kg	0.000167716	0.000232018 J	

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126	NB03-CRB-COMBHEPMUS-127
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	1.45026e-05 J	2.14282e-05 J	2.4741e-05 J
E1668A	PCB-177	52663-70-4	mg/kg	0.000764002 J		
E1668A	PCB-178	52663-67-9	mg/kg	0.00123862 J	0.0017921 J	
E1668A	PCB-179	52663-64-6	mg/kg	2.3699e-05 J	3.11722e-05 J	3.21826e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00858712 J	0.0129759 J	0.01483758 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg	3.74068e-05 J	5.60158e-05 J	
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00326316 J	0.00403902 J	
E1668A	PCB-184	74472-48-3	mg/kg	2.80338e-05 J	3.74138e-05 J	4.95794e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	1.4726e-06 U	1.46e-06 U	
E1668A	PCB-187	52663-68-0	mg/kg	0.0068063 J	0.00938894 J	
E1668A	PCB-188	74487-85-7	mg/kg	6.40078e-05 J	8.8148e-05	0.0001132794 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000116298	0.0001592798 J	0.00014983 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000549086 J	0.000751704 J	0.00083368 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000135048	0.000184384 J	0.000224594 J
E1668A	PCB-192	74472-51-8	mg/kg	1.2752e-06 U	2.5232e-06 J	4.4872e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.001168798 J	0.001509922 J	0.001358618 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00024567	0.000303706 J	0.000250694 J
E1668A	PCB-196	42740-50-1	mg/kg	0.00087262 J	0.00132282 J	0.001030312 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	9.66624e-05 J	0.000138308 J	
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0020211 J	0.00306972 J	0.00273458 J
E1668A	PCB-201	40186-71-8	mg/kg	0.0002848504 J	0.000444362 J	0.0004467434 J
E1668A	PCB-202	2136-99-4	mg/kg	0.00094078 J	0.0011422 J	0.00164032 J
E1668A	PCB-203	52663-76-0	mg/kg	0.001068518 J	0.001523346 J	0.000547758 J
E1668A	PCB-204	74472-52-9	mg/kg	4.767e-06 J	6.093e-06 J	9.4522e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	1.69218e-05 J	1.91244e-05 J	1.90814e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.000833236 J	0.00109224 J	0.001059762 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000118078	0.000156849 J	0.000183856 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000435214 J	0.00055439 J	0.000594884 J
E1668A	PCB-209	2051-24-3	mg/kg	0.0005133618 J	0.000677996 J	
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.164 J	0.23 J	0.288 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.193 J	0.275 J	0.338 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	5.34e-06	2.01e-06 J	8.32e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130	NB03-CRB-COMBHEPMUS-131
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	2.0044e-05 J	1.99482e-06 U	9.2382e-06
E1668A	PCB-2	2051-61-8	mg/kg	3.2404e-06 J	1.54082e-06 J	1.37498e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	1.72292e-05 J		
E1668A	PCB-4	13029-08-8	mg/kg	7.881e-05 J	2.5946e-06 U	3.05576e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	3.147e-06 U	1.59682e-06 U	1.57268e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	3.5876e-05 J	9.02158e-06 J	1.786158e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	3.147e-06 U	2.7416e-06 J	1.57268e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	0.0001316926 J	3.40782e-05 J	6.332e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	2.752e-06 U	1.57042e-06 J	1.37498e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	5.2966e-06 J	2.5946e-06 U	2.5556e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000357654 J	0.000140432	0.0001768576 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	7.28826e-05 J	3.385e-05	3.66884e-05
E1668A	PCB-14	34883-41-5	mg/kg	3.147e-06 U	1.59682e-06 U	1.57268e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.0009795 J	0.00069326 J	0.000595806 J
E1668A	PCB-16	38444-78-9	mg/kg	3.5394e-06 U	1.79452e-06 U	1.917218e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000112352 J	7.2578e-05	0.000106706 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0001542006 J	9.0364e-05	0.00016296 J
E1668A	PCB-19	38444-73-4	mg/kg	3.147e-06 U	7.03862e-06 J	1.278388e-05 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.019677 J	0.0153268 J	0.0145644 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.0001552006 J	0.000104054 J	0.00016187
E1668A	PCB-22	38444-85-8	mg/kg	0.000295132 J	0.000178546 J	0.00028554
E1668A	PCB-23	55720-44-0	mg/kg	2.752e-06 U	1.39578e-06 U	1.37498e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	3.9318e-06 U	1.99482e-06 U	1.96548e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000143226	8.4642e-05	0.00013591
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000182476 J	0.000100906 J	0.000213834
E1668A	PCB-27	38444-76-7	mg/kg	4.36364e-05	2.23466e-05	4.03092e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0007800566 J	0.0005899 J	0.000959614 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000252344 J	0.000161504 J	0.000206528 J
E1668A	PCB-34	37680-68-5	mg/kg	3.1269e-05 J	1.58086e-05	2.100758e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	1.6126e-05 J	1.54556e-05	1.852218e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	1.6654e-05 J	7.1724e-06 J	9.74188e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00202676 J	0.00203338 J	0.00165696 J
E1668A	PCB-38	53555-66-1	mg/kg	2.752e-06 U	8.21558e-06 J	1.37498e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	5.01226e-05	3.18032e-05	3.59406e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000929796	0.000770446	0.000839734
E1668A	PCB-41	52663-59-9	mg/kg	1.64972e-05 U	8.368e-06 U	1.141e-05 J
E1668A	PCB-42	36559-22-5	mg/kg	0.0002270006 J	0.000204158	0.00028446
E1668A	PCB-43	70362-46-8	mg/kg	3.84646e-05 J	5.42816e-05	6.6178e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0200676 J	0.0157886 J	0.01484982 J
E1668A	PCB-45	70362-45-7	mg/kg	8.6566e-06 U	6.026e-06 J	1.2084e-05 J
E1668A	PCB-46	41464-47-5	mg/kg	3.9318e-06 U	4.55544e-06 J	1.191048e-05 J
E1668A	PCB-48	70362-47-9	mg/kg	5.82246e-05 J	7.13108e-05	0.0001048
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0004380406 J	0.00033346 J	0.0005875
E1668A	PCB-50/53	PCB-50/53	mg/kg	3.80126e-05 J	2.21722e-05 J	6.37304e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	3.02886e-05 J	2.25982e-05 J	4.73268e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.0004624126 J	0.000316962	0.000822368 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130	NB03-CRB-COMBHEPMUS-131
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	5.4966e-06 U	2.7886e-06 U	2.7496e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	4.30972e-05 J	2.94352e-05	2.638e-06 J
E1668A	PCB-56	41464-43-1	mg/kg	0.000421396	0.000360826	0.000530182
E1668A	PCB-57	70424-67-8	mg/kg	1.9802e-05 J	1.2788e-05 J	2.1343e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	4.15846e-05 J	1.21642e-05 J	2.7496e-06 U
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00145234	0.00119454	0.001026776
E1668A	PCB-60	33025-41-1	mg/kg	0.00398484 J	0.00346034 J	0.00340594 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0241232 J	0.0194562 J	0.02002002 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000522046	0.000422052	0.000449676
E1668A	PCB-64	52663-58-8	mg/kg	0.000566724	0.000498932 J	0.000652998
E1668A	PCB-66	32598-10-0	mg/kg	0.0346998 J	0.0278578 J	0.02522332 J
E1668A	PCB-67	73575-53-8	mg/kg	7.99752e-05 J	7.14228e-05	9.46078e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000274578	0.000171404	0.0001911338
E1668A	PCB-72	41464-42-0	mg/kg	0.0001311166 J	7.11988e-05	0.0001038776 J
E1668A	PCB-73	74338-23-1	mg/kg	5.8222e-06 J	1.94244e-05 J	2.82842e-05 J
E1668A	PCB-77	32598-13-3	mg/kg			
E1668A	PCB-78	70362-49-1	mg/kg	6.2866e-06 U	3.1966e-06 U	3.1424e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	9.462e-05 J	6.2976e-05	7.9031e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	1.0806e-05 J	5.405e-06 J	6.081e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	0.00011341 J	9.2228e-05	9.797e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	5.9046e-06 U	2.3081e-05 J	7.77912e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	4.06846e-05 J	5.7864e-06 U	5.7084e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	5.5623e-05	9.5734e-05	0.0002305152
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00735754 J	0.00594298 J	0.01163462 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.002844952 J	0.002523	0.0049657 J
E1668A	PCB-88	55215-17-3	mg/kg	8.6566e-06 U	4.388e-06 U	4.336e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	5.1146e-06 U	2.8728e-06 J	1.25396e-05 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0017281412 J	0.00179635 J	0.00301617 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000207584	0.00020076	0.000482154
E1668A	PCB-92	52663-61-3	mg/kg	0.0001974366 J	0.000203696	0.000642308
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.001326194	0.001210354	0.002282162 J
E1668A	PCB-94	73575-55-0	mg/kg	6.53566e-05 J	5.04576e-05 J	0.0001188692 J
E1668A	PCB-95	38379-99-6	mg/kg	0.000349134 J	0.000444436	0.000520754
E1668A	PCB-96	73575-54-9	mg/kg	5.9046e-06 U	2.9926e-06 U	2.9614e-06 J
E1668A	PCB-98/102	PCB-98/102	mg/kg	5.7416e-05 J	6.31516e-05 J	0.0001208642 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0334452 J	0.0297386 J	0.04935704 J
E1668A	PCB-103	60145-21-3	mg/kg	1.078e-05 J	8.291e-06 J	2.9377e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	5.4966e-06 U	2.7886e-06 U	2.9368e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.01153598 J	0.0095758 J	0.00993248 J
E1668A	PCB-106	70424-69-0	mg/kg	6.6686e-06 U	3.3906e-06 U	3.3412e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00265754 J	0.00182178 J	0.00574358 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	9.8411e-05 J	8.97634e-05 J	0.0002830348 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0022521572 J	0.00200866 J	0.00507488 J
E1668A	PCB-111	39635-32-0	mg/kg	5.7933e-05 J	4.51062e-05 J	9.04676e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	5.4966e-06 U	2.7886e-06 U	2.7496e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.001134278	0.00085622 J	0.000934568 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130	NB03-CRB-COMBHEPMUS-131
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0510038 J	0.0373772 J	0.0460984 J
E1668A	PCB-120	68194-12-7	mg/kg	0.00030415	0.000253902	0.0005148836
E1668A	PCB-121	56558-18-0	mg/kg	4.714e-06 U	3.25172e-05 J	5.49236e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	2.1822e-05 J	1.64696e-05 J	5.85636e-05 J
E1668A	PCB-123	65510-44-3	mg/kg	0.001045104	0.000706708 J	0.000786314 J
E1668A	PCB-126	57465-28-8	mg/kg	0.0001385792 J	9.9736e-05	8.15866e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	4.21046e-05 J	3.10588e-05 J	5.50642e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00363654 J	0.00281184 J	0.003240672 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.033289324 J	0.0290262 J	0.02874996 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000755982	0.000531366	0.000583692
E1668A	PCB-131	61798-70-7	mg/kg		2.20248e-05 J	
E1668A	PCB-132	38380-05-1	mg/kg		2.02664e-05 J	7.24224e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.001117998	0.000604062	0.00087875 J
E1668A	PCB-134	52704-70-8	mg/kg		1.1327e-05 J	3.24836e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.0002745932 J	0.000226166	1.7194e-05 J
E1668A	PCB-136	38411-22-2	mg/kg	1.36186e-05 J	1.72334e-05 J	3.04002e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00198866 J	0.00158606 J	0.001746192 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000752094	0.000580208	0.00075803
E1668A	PCB-141	52712-04-6	mg/kg	0.0001491486 J	0.0001271136	
E1668A	PCB-142	41411-61-4	mg/kg		3.3906e-06 U	3.3412e-06 U
E1668A	PCB-143	68194-15-0	mg/kg		7.479e-06 J	6.4836e-06 U
E1668A	PCB-144	68194-14-9	mg/kg		8.07834e-05 J	6.78214e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	6.2866e-06 U	3.1966e-06 U	3.1424e-06 U
E1668A	PCB-146	51908-16-8	mg/kg			0.00605538 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0016769726 J	0.001530746 J	0.001871712 J
E1668A	PCB-148	74472-41-6	mg/kg	0.0001376916 J	0.0001632994	0.0001574754
E1668A	PCB-150	68194-08-1	mg/kg	5.9046e-06 U	2.9926e-06 U	2.9978e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	5.4966e-06 U	2.7886e-06 U	2.7496e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0509826 J	0.0498168 J	0.04023262 J
E1668A	PCB-154	60145-22-4	mg/kg		0.001336368 J	0.001438746 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000513304 J	0.000309266	0.0003346374
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00479746 J	0.00333238 J	0.003861712 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0042374 J	0.00322192 J	0.003746464 J
E1668A	PCB-159	39635-35-3	mg/kg	1.60266e-05 J	9.7982e-06 J	1.08642e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	2.4768e-05 U	1.25854e-05 U	1.2396e-05 U
E1668A	PCB-161	74472-43-8	mg/kg		2.5946e-06 U	2.5556e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000249458	0.000176762	0.0002294576 J
E1668A	PCB-164	74472-45-0	mg/kg	0.0001485926 J	0.0001157758 J	0.0001354594 J
E1668A	PCB-165	74472-46-1	mg/kg			3.91376e-05 J
E1668A	PCB-167	52663-72-6	mg/kg	0.001976332 J	0.00133534 J	0.001466754 J
E1668A	PCB-169	32774-16-6	mg/kg	5.9046e-06 U	2.9926e-06 U	2.9484e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0035119166 J	0.00303928 J	0.002500014 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.0012057166 J	0.000750126	0.000898376 J
E1668A	PCB-174	38411-25-5	mg/kg			
E1668A	PCB-175	40186-70-7	mg/kg		0.000303938	

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131
			Sample ID	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130	NB03-CRB-COMBHEPMUS-131
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	2.333e-05 J	2.50046e-05 J	3.46436e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			
E1668A	PCB-178	52663-67-9	mg/kg			0.002427318 J
E1668A	PCB-179	52663-64-6	mg/kg		1.06562e-05 J	5.04646e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0213504326 J	0.01628056 J	0.01501018 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg			
E1668A	PCB-183/185	PCB-183/185	mg/kg			
E1668A	PCB-184	74472-48-3	mg/kg	4.62646e-05 J	4.31382e-05 J	5.71442e-05 J
E1668A	PCB-186	74472-49-4	mg/kg		2.9926e-06 U	2.9484e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			
E1668A	PCB-188	74487-85-7	mg/kg	0.0001449312 J	8.34706e-05	9.99356e-05 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000299118	0.000206626	0.0002457038 J
E1668A	PCB-190	41411-64-7	mg/kg	0.0013306646 J	0.000961978 J	0.000595572
E1668A	PCB-191	74472-50-7	mg/kg	0.000348814	0.000252906	0.000276256 J
E1668A	PCB-192	74472-51-8	mg/kg	5.1146e-06 U	2.6648e-06 J	2.8208e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.0024830566 J	0.001796158 J	0.001418568 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000462084	0.000370832	0.0003249134
E1668A	PCB-196	42740-50-1	mg/kg	0.00228482 J	0.001742638 J	0.001468476 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.0001966692 J		0.000188154 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0049454686 J	0.00355484 J	0.003032328 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00067293	0.000528312	0.00058311
E1668A	PCB-202	2136-99-4	mg/kg	0.00201576	0.001186968	0.001314316 J
E1668A	PCB-203	52663-76-0	mg/kg	0.002463362 J	0.002219326 J	0.00151239 J
E1668A	PCB-204	74472-52-9	mg/kg	8.2486e-06 U	7.512e-06 J	8.37e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	2.38446e-05 J	2.68242e-05 J	2.14422e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.001697246	0.001133662	0.0009865248 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000225874	0.000153184	0.0001578594 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000953024	0.000578782	0.000527168
E1668A	PCB-209	2051-24-3	mg/kg		0.000816812	0.000753358
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.314 J	0.266 J	0.299 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.386 J	0.32 J	0.363 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.61e-05 J	1.16e-05	1.01e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133	NB03-CRB-COMBHEPMUS-134
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	2.03258e-06 U	2.9248e-06 J	2.67204e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	1.42392e-06 U	1.40986e-06 U	4.8294e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	2.2388e-06 U		
E1668A	PCB-4	13029-08-8	mg/kg	7.722e-06 J	5.9028e-06 J	4.59e-05
E1668A	PCB-5	16605-91-7	mg/kg	1.62532e-06 U	1.61164e-06 U	5.5218e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	5.307e-06 J	9.8936e-06	1.72614e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	1.62532e-06 U	1.61164e-06 U	4.58074e-05 J
E1668A	PCB-8	34883-43-7	mg/kg	3.0522e-06 U	3.8513e-05 J	1.03808e-05 U
E1668A	PCB-9	34883-39-1	mg/kg	1.42392e-06 U	1.40986e-06 U	9.4174e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	2.6442e-06 U	2.6172e-06 U	8.9738e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	8.36286e-05 J	0.00015272 J	0.00017112 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.58948e-05	4.7952e-05	3.5644e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	1.62532e-06 U	1.61164e-06 U	6.3136e-06 J
E1668A	PCB-15	2050-68-2	mg/kg	0.00095468 J	0.00098118 J	0.0005565 J
E1668A	PCB-16	38444-78-9	mg/kg	6.8426e-06	1.00188e-05	2.0266e-05
E1668A	PCB-17	37680-66-3	mg/kg	4.00796e-05	5.0396e-05	3.8764e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	5.0584e-05 J	5.2887e-05 J	3.446e-05 J
E1668A	PCB-19	38444-73-4	mg/kg	3.35096e-06 J	5.43624e-06 J	7.2404e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0288674 J	0.0244204 J	0.0083572 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	7.2944e-05	0.000118366	6.571e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000104712	0.000187662	0.000112478
E1668A	PCB-23	55720-44-0	mg/kg	1.42392e-06 U	1.40986e-06 U	4.8294e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	2.03258e-06 U	2.0152e-06 U	6.9066e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	7.6996e-05	0.00012227	4.857e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	7.3284e-05	8.0988e-05	4.9732e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	1.32602e-05	1.30856e-05	9.3464e-06 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000393298	0.00049178 J	0.00031826 J
E1668A	PCB-32	38444-77-8	mg/kg	7.0754e-05	0.000101504	6.134e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	1.46086e-05	1.34772e-05	5.846e-06 J
E1668A	PCB-35	37680-69-6	mg/kg	1.05252e-05 J	1.92786e-05	1.23008e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	5.43436e-06 J	7.6988e-06 J	7.4744e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00264498 J	0.00244694 J	0.00114616 J
E1668A	PCB-38	53555-66-1	mg/kg	2.212252e-05 J	1.40986e-06 U	4.8294e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	5.88056e-05	6.066e-05	1.49624e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000318974	0.000397422	0.000145292 J
E1668A	PCB-41	52663-59-9	mg/kg	8.5346e-06 U	8.4458e-06 U	2.8966e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000117466	0.000193978	7.7156e-05 J
E1668A	PCB-43	70362-46-8	mg/kg	1.95848e-05 J	2.21078e-05 J	1.515e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0209502 J	0.0287232 J	0.0071432 J
E1668A	PCB-45	70362-45-7	mg/kg	4.4806e-06 U	5.3462e-06 J	1.5218e-05 U
E1668A	PCB-46	41464-47-5	mg/kg	2.67478e-06 J	4.606e-06 J	6.9118e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	3.28392e-05	5.36312e-05	2.2586e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000244778	0.000327608	0.000151706 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	1.71052e-05 J	2.39624e-05 J	2.1344e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	1.82636e-05 J	3.00984e-05	1.891e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.000251968	0.00027115	0.000128134

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133	NB03-CRB-COMBHEPMUS-134
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	2.8482e-06 U	2.8212e-06 U	9.6588e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	5.6037e-05 J	2.4132e-06 U	8.5626e-06 J
E1668A	PCB-56	41464-43-1	mg/kg	0.000182144	0.000408518	0.000166246
E1668A	PCB-57	70424-67-8	mg/kg	6.742e-06 J	8.9476e-06 J	8.4678e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	1.03476e-05 J	1.44744e-05 J	1.02438e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00136156	0.00176514	0.00049912
E1668A	PCB-60	33025-41-1	mg/kg	0.00399406 J	0.0045661 J	0.0021632 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0267182 J	0.0290952 J	0.0097458 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000348216	0.000577548	0.00014302 J
E1668A	PCB-64	52663-58-8	mg/kg	0.000243148	0.000408602	0.00018948
E1668A	PCB-66	32598-10-0	mg/kg	0.0350002 J	0.04578 J	0.0142256 J
E1668A	PCB-67	73575-53-8	mg/kg	6.29824e-05	0.000138788	3.8524e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.00019772	0.000302546	7.2368e-05 J
E1668A	PCB-72	41464-42-0	mg/kg	5.64814e-05	6.93338e-05	1.9769e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	8.9956e-06 J	1.11442e-05 J	9.6588e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.0022167 J		
E1668A	PCB-78	70362-49-1	mg/kg	3.2562e-06 U	3.2218e-06 U	1.10288e-05 U
E1668A	PCB-79	41464-48-6	mg/kg	9.20372e-05	9.4406e-05	4.8878e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	5.858e-06 J	6.2518e-06 J	8.8422e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	8.52106e-05	9.4674e-05	5.6896e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	2.0781e-05 J	3.583e-05 J	1.03808e-05 U
E1668A	PCB-83	60145-20-2	mg/kg	5.8826e-06 U	5.8494e-06 U	2.4288e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	3.8725e-05	8.74914e-05	2.82382e-05 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00620184 J	0.0119088 J	0.0054188 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00236682	0.0051654 J	0.00184882
E1668A	PCB-88	55215-17-3	mg/kg	4.4806e-06 U	1.7808e-05 J	1.5218e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	2.6442e-06 U	4.6504e-06 J	8.9738e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00118414	0.00231608	0.00075578
E1668A	PCB-91	68194-05-8	mg/kg	0.000126428	0.00027666	8.2408e-05 J
E1668A	PCB-92	52663-61-3	mg/kg	0.000138124	0.000211884	6.2669e-05 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00115036	0.00496298 J	0.00072492
E1668A	PCB-94	73575-55-0	mg/kg	2.6509e-05 J	5.8523e-05	1.5635e-05 J
E1668A	PCB-95	38379-99-6	mg/kg	0.000203026	0.000205652	0.000141392 J
E1668A	PCB-96	73575-54-9	mg/kg	3.0522e-06 U	3.0178e-06 U	1.03808e-05 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	2.87192e-05 J	6.74078e-05 J	5.6064e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0332434 J	0.0520472 J	0.022648 J
E1668A	PCB-103	60145-21-3	mg/kg	7.938e-06 J	2.3868e-06 J	1.16502e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	2.8482e-06 U	2.8212e-06 U	9.6588e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0114816 J	0.0121002 J	0.01022 J
E1668A	PCB-106	70424-69-0	mg/kg	3.4528e-06 U	3.4232e-06 U	1.17482e-05 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00191794 J	0.00565304 J	0.00169486 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	5.06036e-05 J	0.0001505762 J	5.346e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0016884 J	0.00316972 J	0.00159164
E1668A	PCB-111	39635-32-0	mg/kg	4.35496e-05 J	8.19708e-05	2.5394e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	1.86616e-05 J	2.8212e-06 U	3.0334e-05 J
E1668A	PCB-114	74472-37-0	mg/kg	0.000820334	0.001024 J	0.00081634 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133	NB03-CRB-COMBHEPMUS-134
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0454974 J	0.053913 J	0.040302 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000290538	0.000498266	0.000142749 J
E1668A	PCB-121	56558-18-0	mg/kg	3.02704e-05 J	8.13058e-05	2.04286e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	1.2276e-05 J	2.4132e-06 U	8.2814e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000778162	0.00091522 J	0.00073034
E1668A	PCB-126	57465-28-8	mg/kg	8.37952e-05	0.00011436 J	8.9524e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	5.2175e-05 J	5.6508e-05 J	5.946e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00387542 J	0.00441026 J	0.0039378 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0387932 J	0.0368172 J	0.0304718 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000458388	0.000593138	0.000261838
E1668A	PCB-131	61798-70-7	mg/kg	1.79052e-05 J	1.9876e-05 J	1.7476e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	5.0724e-05 J	4.63774e-05	3.9516e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000576986	0.00076634	0.00048832
E1668A	PCB-134	52704-70-8	mg/kg	1.44466e-05 J	1.5238e-05 J	2.4428e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000256446	0.000178508	0.000100892 J
E1668A	PCB-136	38411-22-2	mg/kg	1.94534e-05 J	1.61294e-05 J	1.6416e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00154038 J	0.00209414 J	0.00208528 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000695022	0.00091862	0.00066654
E1668A	PCB-141	52712-04-6	mg/kg	8.7668e-05	0.000107966	0.000103716 J
E1668A	PCB-142	41411-61-4	mg/kg	3.4528e-06 U	3.4232e-06 U	1.17482e-05 U
E1668A	PCB-143	68194-15-0	mg/kg	6.6986e-06 U	6.658e-06 U	2.279e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	5.63034e-05 J	4.3958e-05	3.1446e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	3.2562e-06 U	3.2218e-06 U	1.10288e-05 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00642608 J		
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00140626	0.00166052	0.00081 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000183448	0.000151958	7.3624e-05 J
E1668A	PCB-150	68194-08-1	mg/kg	4.074e-06 J	3.335e-06 J	1.03808e-05 U
E1668A	PCB-152	68194-09-2	mg/kg	2.8482e-06 U	2.8212e-06 U	9.6588e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.063506 J	0.0548928 J	0.0412252 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001559276 J	0.0013667 J	0.00094034 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000397034	0.000557152	0.0001252
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00310218 J	0.0044334 J	0.0045314 J
E1668A	PCB-158	74472-42-7	mg/kg	0.0030191 J	0.0043183 J	0.0040492 J
E1668A	PCB-159	39635-35-3	mg/kg	1.0448e-05 J	2.1213e-05 J	1.5176e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	1.28112e-05 U	1.26854e-05 U	4.3462e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	6.838e-06 J		
E1668A	PCB-162	39635-34-2	mg/kg	0.000162162 J	0.0002003524 J	0.000166844
E1668A	PCB-164	74472-45-0	mg/kg	7.6051e-05	8.4013e-05 J	4.8216e-05 J
E1668A	PCB-165	74472-46-1	mg/kg	2.74948e-05 J		
E1668A	PCB-167	52663-72-6	mg/kg	0.0012882 J	0.00182238 J	0.00173216 J
E1668A	PCB-169	32774-16-6	mg/kg	3.0522e-06 U	5.4893e-05 J	1.2856e-05 J
E1668A	PCB-170	35065-30-6	mg/kg	0.00305176 J	0.00480702 J	0.004454 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00162578		
E1668A	PCB-172	52663-74-8	mg/kg	0.00085822 J	0.00103296 J	0.00078786
E1668A	PCB-174	38411-25-5	mg/kg	9.68356e-05		
E1668A	PCB-175	40186-70-7	mg/kg	0.000276216		

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133	NB03-CRB-COMBHEPMUS-134
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	2.46392e-05 J	2.61656e-05 J	2.35226e-05 J
E1668A	PCB-177	52663-70-4	mg/kg	0.001031304 J		
E1668A	PCB-178	52663-67-9	mg/kg	0.00175018 J		
E1668A	PCB-179	52663-64-6	mg/kg	3.66594e-05 J	3.0037e-05 J	2.2118e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.01374602 J	0.0200914 J	0.0203564 J
E1668A	PCB-181	74472-47-2	mg/kg	7.34678e-05		
E1668A	PCB-182	60145-23-5	mg/kg	6.73418e-05 J		
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00556522 J		
E1668A	PCB-184	74472-48-3	mg/kg	6.38518e-05 J	6.0633e-05	2.4562e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	3.0522e-06 U	3.0178e-06 U	1.03808e-05 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0132393 J		
E1668A	PCB-188	74487-85-7	mg/kg	7.69928e-05	8.7284e-05	5.0556e-05 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000219104	0.000343332	0.000285572 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000261726	0.00097316 J	0.0010843 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000236672	0.000331516	0.00035594
E1668A	PCB-192	74472-51-8	mg/kg	4.212e-06 J	2.6172e-06 U	8.9738e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.001787928 J	0.00251716 J	0.0017686 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00048536	0.000674384	0.00052044
E1668A	PCB-196	42740-50-1	mg/kg	0.001212726	0.00195156 J	0.00172514 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000203172	0.000190286	0.000166084 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00240246	0.000384404 J	0.00242756
E1668A	PCB-201	40186-71-8	mg/kg	0.000596612	0.000555938	0.000369922
E1668A	PCB-202	2136-99-4	mg/kg	0.00109209	0.00111044	0.00063588
E1668A	PCB-203	52663-76-0	mg/kg	0.00177212 J	0.00215206 J	0.00160208 J
E1668A	PCB-204	74472-52-9	mg/kg	1.07246e-05 J	1.00636e-05 J	1.4496e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	4.22092e-05 J	4.80352e-05 J	3.8596e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00113785	0.00129326 J	0.00072246
E1668A	PCB-207	52663-79-3	mg/kg	0.000195368	0.000204692	0.000117148 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000724658	0.000677738	0.000308348
E1668A	PCB-209	2051-24-3	mg/kg	0.00081103	0.00081052	0.000371224 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.351 J	0.379 J	0.206 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.416 J	0.454 J	0.264 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.05e-05	1.53e-05 J	1.11e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002	NB03-CRB-COMBHEPMUS-C003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	2.03146e-06 J	2.2206e-06 J	2.3878e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	1.40504e-06 U	1.3857e-06 U	1.41764e-06 U
E1668A	PCB-3	2051-62-9	mg/kg		2.1772e-06 U	2.2266e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.23772e-05 J	1.44598e-05 J	1.65076e-05
E1668A	PCB-5	16605-91-7	mg/kg	1.60608e-06 U	1.58302e-06 U	1.62016e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	2.2664e-06 J	6.5389e-06 J	5.6748e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	1.60608e-06 U	1.58302e-06 U	1.62016e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	1.8623e-05 J	2.70618e-05 J	1.22938e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	1.45704e-06 J	1.3857e-06 U	1.41764e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	2.6046e-06 U	2.57e-06 U	2.6272e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	6.58672e-05 J	0.0001197242 J	8.28042e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.70784e-05	2.74974e-05 J	2.1903e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	1.60608e-06 U	1.58302e-06 U	1.62016e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.0005923 J	0.001039716 J	0.00084302 J
E1668A	PCB-16	38444-78-9	mg/kg	1.80526e-06 U	9.62194e-06 J	1.82194e-06 U
E1668A	PCB-17	37680-66-3	mg/kg	5.602306e-05 J	5.187194e-05 J	1.82194e-06 U
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0001430996 J	7.11018e-05 J	3.2392e-06 U
E1668A	PCB-19	38444-73-4	mg/kg	3.48328e-06 J	6.66208e-06 J	1.62016e-06 U
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0143224 J	0.0364118 J	0.025966 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	5.37622e-05 J	0.0001099324	5.04044e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	0.00010022306 J	0.000227166	5.525194e-05 J
E1668A	PCB-23	55720-44-0	mg/kg	1.40504e-06 U	1.3857e-06 U	1.41764e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	2.0063e-06 U	1.97692e-06 U	2.02446e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	6.9832e-05	0.000126457	5.19844e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.0001058984 J	0.0001079082	7.31532e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	3.13676e-05	1.8857e-05 J	1.71238e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0005550876 J	0.00074128 J	0.0002189224 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00010743128 J	0.0001123498 J	5.752016e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	1.20438e-05 J	1.64969e-05 J	2.00448e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	6.5288e-06 J	1.206594e-05 J	8.632e-06 J
E1668A	PCB-36	38444-87-0	mg/kg	2.83686e-06 J	9.00342e-06 J	4.74016e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.0013699 J	0.00281705 J	0.00221484 J
E1668A	PCB-38	53555-66-1	mg/kg	6.74024e-06 J	2.52849e-05 J	1.41764e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	2.51676e-05	8.31486e-05	5.47488e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000586754	0.00044046	0.00042629
E1668A	PCB-41	52663-59-9	mg/kg	8.431e-06 U	8.3194e-06 U	8.5014e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	0.0002496996 J	0.0002148712	8.61818e-05 J
E1668A	PCB-43	70362-46-8	mg/kg	3.17184e-05 J	2.52198e-05 J	3.21718e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.016306 J	0.02386526 J	0.0295166 J
E1668A	PCB-45	70362-45-7	mg/kg	7.1588e-06 J	7.441e-06 J	4.867e-06 J
E1668A	PCB-46	41464-47-5	mg/kg	6.4861e-06 J	5.79372e-06 J	4.00046e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	5.9759e-05 J	5.30138e-05 J	2.8312e-06 U
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0008078574 J	0.00040185	5.267e-06 U
E1668A	PCB-50/53	PCB-50/53	mg/kg	7.63628e-05 J	3.1193e-05 J	2.0726e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	3.69544e-05 J	2.9151e-05 J	2.10382e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.001163273 J	0.000347768	3.0352e-06 U

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002	NB03-CRB-COMBHEPMUS-C003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	2.8086e-06 U	2.7688e-06 U	2.8312e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	2.408e-06 U	2.3712e-06 U	6.03214e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	0.000236554	0.000428748	0.000125348
E1668A	PCB-57	70424-67-8	mg/kg	1.12104e-05 J	1.28372e-05 J	1.13292e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	8.695e-06 J	3.97538e-05 J	1.52618e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.001233398	0.001868204	0.00179624
E1668A	PCB-60	33025-41-1	mg/kg	0.00235628 J	0.00505238 J	0.00359716 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0158228 J	0.03168692 J	0.0271174 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000252844	0.000645806	0.000357398
E1668A	PCB-64	52663-58-8	mg/kg	0.000617125 J	0.00050176	0.0001681198 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0252398 J	0.04622742 J	0.0369944 J
E1668A	PCB-67	73575-53-8	mg/kg	5.94584e-05	0.000101951 J	7.1338e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000139402	0.0004010904	0.000250038
E1668A	PCB-72	41464-42-0	mg/kg	7.08066e-05	0.0001031198 J	8.56138e-05
E1668A	PCB-73	74338-23-1	mg/kg	1.4701e-05 J	3.06538e-05 J	1.86526e-05 J
E1668A	PCB-77	32598-13-3	mg/kg		0.002506324 J	0.00199558 J
E1668A	PCB-78	70362-49-1	mg/kg	3.2066e-06 U	3.1664e-06 U	3.2392e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	6.03188e-05	0.0001348876 J	0.0001115082
E1668A	PCB-80	33284-52-5	mg/kg	4.5804e-06 J	9.7952e-06 J	7.0652e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	5.43176e-05	0.0001177804 J	9.33314e-05
E1668A	PCB-82	52663-62-4	mg/kg	5.1253e-05 J	2.9676e-06 U	3.0352e-06 U
E1668A	PCB-83	60145-20-2	mg/kg	3.79204e-05 J	5.7416e-06 U	5.8716e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	7.07244e-05 J	0.0001299772	5.51392e-05 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0051358 J	0.01770994 J	0.007197 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0024544836 J	0.00757061 J	0.002943365 J
E1668A	PCB-88	55215-17-3	mg/kg	4.4028e-06 U	4.347e-06 U	4.451e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	6.697e-06 J	6.1138e-06 J	2.6272e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0023121596 J	0.003458566 J	0.001256604 J
E1668A	PCB-91	68194-05-8	mg/kg	0.0002823688 J	0.000393589 J	0.000162011 J
E1668A	PCB-92	52663-61-3	mg/kg	0.000380525 J	0.00039147	0.0001514798 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.001127006	0.003591378 J	0.001466426
E1668A	PCB-94	73575-55-0	mg/kg	3.46154e-05 J	9.08386e-05 J	4.44278e-05 J
E1668A	PCB-95	38379-99-6	mg/kg		0.000322222 J	0.000289724
E1668A	PCB-96	73575-54-9	mg/kg	3.0126e-06 U	2.9676e-06 U	3.0352e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	5.12582e-05 J	9.26722e-05 J	3.93796e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0254868 J	0.07750464 J	0.047686 J
E1668A	PCB-103	60145-21-3	mg/kg	2.81352e-05 J	3.01792e-05 J	7.9492e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	2.8086e-06 U	2.9326e-06 J	2.8312e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00709092 J	0.0139575 J	0.01193412 J
E1668A	PCB-106	70424-69-0	mg/kg	3.4106e-06 U	3.3604e-06 U	3.4432e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.0012882 J	0.00867344 J	0.00223342 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	7.16394e-05 J	0.0002322016 J	5.29644e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0023271824 J	0.00518537 J	0.0015160268 J
E1668A	PCB-111	39635-32-0	mg/kg	4.29882e-05 J	0.0001534626 J	6.60216e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	2.7259e-05 J	2.7688e-06 U	2.8312e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000589394	0.001105828 J	0.000941632 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002	NB03-CRB-COMBHEPMUS-C003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0290844 J		0.051584 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000233138	0.0008422616 J	0.000380438
E1668A	PCB-121	56558-18-0	mg/kg	2.77928e-05 J	9.08258e-05 J	3.97138e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	1.01404e-05 J	6.35258e-05 J	2.4306e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00060419	0.000989874 J	0.000883534 J
E1668A	PCB-126	57465-28-8	mg/kg	6.61834e-05 J	0.0001134428 J	8.38668e-05
E1668A	PCB-127	39635-33-1	mg/kg	2.83932e-05 J	6.99138e-05 J	6.33432e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00268008 J	0.00461253 J	0.00425516 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0234564992 J	0.03740988 J	0.0538224 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000399368	0.000647888	0.000503886
E1668A	PCB-131	61798-70-7	mg/kg	2.07318e-05 J	2.74884e-05 J	2.40898e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	0.0001597396 J	7.70818e-05 J	3.2392e-06 U
E1668A	PCB-133	35694-04-3	mg/kg	0.00053996	0.001150852 J	0.001013342 J
E1668A	PCB-134	52704-70-8	mg/kg	2.99206e-05 J	2.58422e-05 J	1.52862e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.0005206856 J	0.000265031 J	0.0002349974 J
E1668A	PCB-136	38411-22-2	mg/kg	3.80112e-05 J	2.36778e-05 J	2.63388e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.001306406 J	0.002116216 J	0.001878864 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000513654	0.000962246	0.00087681
E1668A	PCB-141	52712-04-6	mg/kg	0.0001709936 J	0.0001638438 J	0.0001036758 J
E1668A	PCB-142	41411-61-4	mg/kg	3.4106e-06 U	3.3604e-06 U	3.4432e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	6.6246e-06 U	6.5242e-06 U	6.6802e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	8.06506e-05	3.0564e-06 J	6.7031e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	3.2066e-06 U	3.1664e-06 U	3.2392e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.00849568 J	0.0085418 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0017029012 J	0.001968322 J	0.0015417382 J
E1668A	PCB-148	74472-41-6	mg/kg	0.0001490788	0.0001980226	0.000236152
E1668A	PCB-150	68194-08-1	mg/kg	6.039e-06 J	4.7018e-06 J	3.8438e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	2.8086e-06 U	2.7688e-06 U	2.8312e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0390542 J	0.05399042 J	0.069636 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001225954 J	0.00178536 J	0.001981912 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000291742	0.000534904	0.000412294
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00241644 J	0.00512365 J	0.00386008 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00249964 J	0.004265798 J	0.00383112 J
E1668A	PCB-159	39635-35-3	mg/kg	7.837e-06 J	1.72118e-05 J	1.71858e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	1.26372e-05 U	1.24624e-05 U	1.27558e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	5.553e-06 J	2.57e-06 U	2.6272e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.0001234168	0.0003128706 J	0.000229774
E1668A	PCB-164	74472-45-0	mg/kg	9.3373e-05 J	9.88478e-05 J	6.86878e-05 J
E1668A	PCB-165	74472-46-1	mg/kg	2.99246e-05 J		5.90776e-05 J
E1668A	PCB-167	52663-72-6	mg/kg	0.001034408 J	0.002032972 J	0.001618766 J
E1668A	PCB-169	32774-16-6	mg/kg	3.1504e-06 J	2.9676e-06 U	3.0352e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.002590525 J	0.00443581 J	0.0039009398 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			0.002009846 J
E1668A	PCB-172	52663-74-8	mg/kg	0.000648325 J	0.001433522 J	0.0011969398 J
E1668A	PCB-174	38411-25-5	mg/kg		0.0001920654 J	9.54678e-05 J
E1668A	PCB-175	40186-70-7	mg/kg	0.000244102	0.0004524614	0.00036135

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002	NB03-CRB-COMBHEPMUS-C003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	3.3125e-05 J	3.12858e-05 J	2.61324e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			0.0009705992 J
E1668A	PCB-178	52663-67-9	mg/kg	0.0018234 J	0.003081146 J	0.00283286 J
E1668A	PCB-179	52663-64-6	mg/kg	8.90728e-05 J	5.53538e-05 J	3.19538e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.011858146 J	0.02140322 J	0.0212701756 J
E1668A	PCB-181	74472-47-2	mg/kg			8.85148e-05 J
E1668A	PCB-182	60145-23-5	mg/kg			9.31114e-05 J
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.003953998 J	0.009503712 J	0.0071260276 J
E1668A	PCB-184	74472-48-3	mg/kg	4.605e-05 J	9.0067e-05 J	8.15244e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	3.0126e-06 U	2.9676e-06 U	3.0352e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			
E1668A	PCB-188	74487-85-7	mg/kg	7.15674e-05	0.0001366632 J	0.0001242388
E1668A	PCB-189	39635-31-9	mg/kg	0.000168643	0.0003876934 J	0.0002699482
E1668A	PCB-190	41411-64-7	mg/kg	0.000788799 J	0.000753358	0.0010020138 J
E1668A	PCB-191	74472-50-7	mg/kg	0.0001824432	0.0004009228 J	0.0002803038
E1668A	PCB-192	74472-51-8	mg/kg	3.577e-06 J	6.4258e-06 J	5.6458e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.0014442876 J	0.002522364 J	0.0023907024 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00037843	0.000625312	0.0006466
E1668A	PCB-196	42740-50-1	mg/kg	0.001356236 J	0.001857208 J	0.002141312 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.0002839154 J	0.000265502
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0030186418 J	0.004526242 J	0.0050466788 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000444002	0.000908248	0.0007914
E1668A	PCB-202	2136-99-4	mg/kg	0.001119122	0.002059164 J	0.001838374 J
E1668A	PCB-203	52663-76-0	mg/kg	0.001742846 J	0.002256572 J	0.002836834 J
E1668A	PCB-204	74472-52-9	mg/kg	7.0922e-06 J	1.4205e-05 J	1.51224e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	2.69466e-05 J	5.30878e-05 J	4.50278e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.001119804	0.001548726 J	0.001715184 J
E1668A	PCB-207	52663-79-3	mg/kg	0.0001556	0.0002506576 J	0.000263754
E1668A	PCB-208	52663-77-1	mg/kg	0.000603914	0.000975774	0.001073152
E1668A	PCB-209	2051-24-3	mg/kg	0.0006615396 J	0.001181978 J	0.0011685618 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.234 J	0.462 J	0.408 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.275 J	0.488 J	0.481 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	7.96e-06 J	1.24e-05 J	1.08e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005	NB03-CRB-COMBHEPMUS-C006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	9.8382e-07 U	2.00288e-06 U	2.2264e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	6.892e-07 U	1.40016e-06 U	1.39168e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	1.0796e-06 U	2.2028e-06 U	
E1668A	PCB-4	13029-08-8	mg/kg	7.3272e-05	8.6506e-06 J	1.2079e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	7.8716e-07 U	1.60156e-06 U	1.59272e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	6.892e-07 U	3.71156e-06 J	4.86528e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	7.8716e-07 U	1.60156e-06 U	1.59272e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	1.4744e-06 U	1.25946e-05 J	1.09196e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	6.892e-07 U	1.40016e-06 U	1.39168e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	7.6366e-06 J	2.603e-06 U	2.589e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	3.3436e-06 U	7.16538e-05 J	9.00324e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.8692e-06 U	1.51836e-05 J	1.61702e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	7.8716e-07 U	1.60156e-06 U	1.59272e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00040308 J	0.000469146 J	0.000699442 J
E1668A	PCB-16	38444-78-9	mg/kg	1.11346e-05	5.47082e-06 J	5.99536e-06 J
E1668A	PCB-17	37680-66-3	mg/kg	8.230304e-05 J	3.04748e-05 J	2.741936e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000155964 J	4.22566e-05 J	6.76996e-05 J
E1668A	PCB-19	38444-73-4	mg/kg	2.25236e-05	3.8408e-06 J	5.56032e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0117432 J	0.012108 J	0.02163424 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	6.0102e-05	4.1281e-05	4.40696e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000123936 J	7.3946e-05	6.72302e-05
E1668A	PCB-23	55720-44-0	mg/kg	6.892e-07 U	1.40016e-06 U	1.39168e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.8382e-07 U	2.00288e-06 U	1.9896e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	7.130904e-05 J	4.6262e-05	5.5595e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.0001238606 J	6.93906e-05	8.46538e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	5.28478e-05	1.53136e-05	1.486832e-05 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000498876 J	0.000248648 J	0.000357482 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000146712 J	6.7312e-05 J	6.27348e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	1.37296e-05	9.7624e-06 J	1.055928e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	8.8586e-07 U	7.03082e-06 J	1.010336e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	7.8716e-07 U	4.53956e-06 J	5.14432e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00110192 J	0.00120608 J	0.00202709 J
E1668A	PCB-38	53555-66-1	mg/kg	6.892e-07 U	1.40016e-06 U	1.39168e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	2.5324e-05	2.71072e-05	3.97686e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000660954 J	0.000327224	0.00034094
E1668A	PCB-41	52663-59-9	mg/kg	4.1332e-06 U	8.4158e-06 U	8.3642e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	0.000228294 J	8.23728e-05	0.00010436 J
E1668A	PCB-43	70362-46-8	mg/kg	2.83286e-05 J	1.44146e-05 J	3.42716e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0175334 J	0.012321 J	0.01902404 J
E1668A	PCB-45	70362-45-7	mg/kg	8.5886e-06 J	4.3952e-06 U	4.5774e-06 J
E1668A	PCB-46	41464-47-5	mg/kg	7.6003e-06 J	4.21808e-06 J	4.4544e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	7.2136e-05	2.53646e-05 J	5.08144e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000571198 J	0.000180472	0.0002089628 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	6.33918e-05 J	2.02172e-05 J	2.9336e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	4.51642e-05	1.72912e-05 J	2.83414e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.000625842 J	0.000227036	0.0003001344

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005	NB03-CRB-COMBHEPMUS-C006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	1.3744e-06 U	2.8044e-06 U	2.783e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	1.177e-06 U	2.52298e-05 J	3.94198e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	0.000229228 J	0.000138068	0.0001469324 J
E1668A	PCB-57	70424-67-8	mg/kg	1.26684e-05 J	9.7766e-06 J	1.02744e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	1.10816e-05 J	9.7126e-06 J	7.1016e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00106562 J	0.000902138	0.001501886
E1668A	PCB-60	33025-41-1	mg/kg	0.00196334 J	0.00236568 J	0.00402368 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0164202 J	0.01307264 J	0.02302148 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000267416 J	0.000228472	0.0002978256
E1668A	PCB-64	52663-58-8	mg/kg	0.000472344 J	0.000175716	0.0002684312
E1668A	PCB-66	32598-10-0	mg/kg	0.023918 J	0.0190324 J	0.03319512 J
E1668A	PCB-67	73575-53-8	mg/kg	7.14336e-05	5.41396e-05 J	7.37102e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000166048 J	0.000162326	0.0002281432 J
E1668A	PCB-72	41464-42-0	mg/kg	7.83366e-05	6.36146e-05 J	7.2945e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	2.30246e-05 J	1.51308e-05 J	1.24836e-05 J
E1668A	PCB-77	32598-13-3	mg/kg		0.00112933 J	
E1668A	PCB-78	70362-49-1	mg/kg	1.5718e-06 U	3.2046e-06 U	3.1858e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	5.47734e-05	5.33266e-05 J	9.6307e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	4.4206e-06 J	4.6546e-06 J	7.7264e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	5.31236e-05	5.40932e-05 J	9.51402e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	2.95014e-05	2.78826e-05 J	1.41696e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	2.8562e-06 U	5.7972e-06 U	1.36012e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	6.00414e-05	6.35336e-05	5.53222e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00472014 J	0.00742484 J	0.00574866 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00225946 J	0.00344428	0.002435626
E1668A	PCB-88	55215-17-3	mg/kg	2.1666e-06 U	4.3952e-06 U	4.3694e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	3.9706e-06 J	3.7626e-06 J	2.589e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00185772 J	0.00162338	0.001073444
E1668A	PCB-91	68194-05-8	mg/kg	0.00025446 J	0.0002173686	0.00014158 J
E1668A	PCB-92	52663-61-3	mg/kg	0.000309236 J	0.0002499056	0.0001504486 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00124874 J	0.00217154 J	0.001175056
E1668A	PCB-94	73575-55-0	mg/kg	4.66276e-05	5.56172e-05 J	2.9525e-05 J
E1668A	PCB-95	38379-99-6	mg/kg		0.000176316 J	0.0003616686 J
E1668A	PCB-96	73575-54-9	mg/kg	1.7864e-06 J	3.0058e-06 U	2.9844e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	5.71484e-05 J	5.29736e-05 J	3.35486e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0253474 J	0.0338858 J	0.02514218 J
E1668A	PCB-103	60145-21-3	mg/kg	1.90586e-05 J	1.30266e-05 J	1.04044e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	2.8356e-06 J	2.8044e-06 U	2.8428e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.00662124 J	0.0057078 J	0.01166462 J
E1668A	PCB-106	70424-69-0	mg/kg	1.6718e-06 U	3.406e-06 U	3.3824e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00153356 J	0.003250096 J	0.002672498 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	6.64734e-05 J	0.0001004112 J	6.34172e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00189032 J	0.002038052 J	0.001495882
E1668A	PCB-111	39635-32-0	mg/kg	4.10686e-05 J	7.79392e-05 J	5.42916e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	1.3744e-06 U	2.8044e-06 U	1.60976e-05 J
E1668A	PCB-114	74472-37-0	mg/kg	0.000625798 J	0.00052473 J	0.000940346 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005	NB03-CRB-COMBHEPMUS-C006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.03628 J	0.0270878 J	0.05892106 J
E1668A	PCB-120	68194-12-7	mg/kg	0.00022398 J	0.00038922	0.000297056 J
E1668A	PCB-121	56558-18-0	mg/kg	2.78482e-05 J	5.00048e-05 J	2.9711e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	6.7046e-06 J	2.4016e-06 U	2.3876e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000539076 J	0.000469104 J	0.00097274 J
E1668A	PCB-126	57465-28-8	mg/kg	6.26178e-05	4.64166e-05 J	0.0001116396 J
E1668A	PCB-127	39635-33-1	mg/kg	2.64154e-05 J	3.35952e-05 J	5.53316e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00247638 J	0.00222672 J	0.00388574 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0266558 J	0.01932926 J	0.03303824 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000445462 J	0.000324072	0.0004354406
E1668A	PCB-131	61798-70-7	mg/kg	1.94902e-05 J	1.10526e-05 J	
E1668A	PCB-132	38380-05-1	mg/kg	7.492e-05	2.87188e-05 J	3.67596e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000630668 J	0.000716686	0.001027192 J
E1668A	PCB-134	52704-70-8	mg/kg	2.42412e-05 J	1.13638e-05 J	1.37338e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00035758 J	0.000154856	0.0002193234 J
E1668A	PCB-136	38411-22-2	mg/kg	2.5531e-05 J	1.06146e-05 J	2.70096e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00124806 J	0.00108328 J	0.001835244 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000504788 J	0.000453652	0.0008755632
E1668A	PCB-141	52712-04-6	mg/kg	0.000164308 J	8.50692e-05 J	0.0001251586 J
E1668A	PCB-142	41411-61-4	mg/kg	1.6718e-06 U	3.406e-06 U	3.3824e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.2436e-06 U	6.6058e-06 U	6.5578e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	5.80064e-05	2.32938e-05 J	6.06056e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	1.5718e-06 U	3.2046e-06 U	3.1858e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.00450036 J	0.00704506 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00164836 J	0.000833508	0.001607268 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000129366	0.000127406	0.0001744116 J
E1668A	PCB-150	68194-08-1	mg/kg	4.1966e-06 J	3.0058e-06 U	3.065e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	2.0296e-06 J	2.8044e-06 U	2.783e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0445862 J	0.0312034 J	0.05056628 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001036622 J	0.001010184 J	0.001610534 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000397394 J	0.000364764	0.0003996178
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0026086 J	0.00238646 J	0.004450932 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00245896 J	0.00210862 J	0.00369634 J
E1668A	PCB-159	39635-35-3	mg/kg	7.3466e-06 J	1.10386e-05 J	2.10896e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	6.1998e-06 U	1.2607e-05 U	1.2537e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	1.277e-06 U	2.603e-06 U	2.589e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	1.277e-06 U	0.0001618946 J	0.000227125 J
E1668A	PCB-164	74472-45-0	mg/kg	0.000106534	4.67496e-05 J	5.67056e-05 J
E1668A	PCB-165	74472-46-1	mg/kg			4.8245e-05 J
E1668A	PCB-167	52663-72-6	mg/kg	0.001069598 J	0.000983854 J	0.001797892 J
E1668A	PCB-169	32774-16-6	mg/kg	1.4744e-06 U	3.0058e-06 U	2.9844e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00277114 J	0.002392732 J	0.002832864 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.000795396 J	0.000649412	0.0010696012 J
E1668A	PCB-174	38411-25-5	mg/kg		7.35118e-05 J	
E1668A	PCB-175	40186-70-7	mg/kg		0.000220076	

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005	NB03-CRB-COMBHEPMUS-C006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	2.82422e-05 J	1.42186e-05 J	3.0231e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			
E1668A	PCB-178	52663-67-9	mg/kg	0.00194654 J	0.00168932 J	0.002673164 J
E1668A	PCB-179	52663-64-6	mg/kg	5.35208e-05	2.32326e-05 J	3.03716e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.01488164 J	0.01066482 J	0.0148456 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg			
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00432408 J	0.00453692 J	
E1668A	PCB-184	74472-48-3	mg/kg	3.87364e-05 J	4.50988e-05 J	7.71716e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	1.4744e-06 U	3.0058e-06 U	2.9844e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			
E1668A	PCB-188	74487-85-7	mg/kg	9.06e-05	8.6974e-05	0.0001024656 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000179332 J	0.0001779804	0.0003161096 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000889094 J	0.000559956	0.000517518
E1668A	PCB-191	74472-50-7	mg/kg	0.0001951746 J	0.0001814166	0.000279828 J
E1668A	PCB-192	74472-51-8	mg/kg	3.0684e-06 J	2.603e-06 U	4.773e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.001717512 J	0.001396618 J	0.001975516 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000384952 J	0.000357724	0.0004216118 J
E1668A	PCB-196	42740-50-1	mg/kg	0.00143533 J	0.001204622 J	0.001314968 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.0001549158 J	0.0002352362 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00340318 J	0.00285146 J	0.003039902 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000471674 J	0.000534632	0.0006986474
E1668A	PCB-202	2136-99-4	mg/kg	0.00130258 J	0.00127752 J	0.001551706 J
E1668A	PCB-203	52663-76-0	mg/kg	0.001637854 J	0.001354406 J	0.001634842 J
E1668A	PCB-204	74472-52-9	mg/kg	5.6546e-06 J	8.0652e-06 J	1.12188e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	2.60886e-05 J	2.78826e-05 J	3.77256e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00119807 J	0.0011714 J	0.0011873338 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000168404	0.000172323	0.000203982 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000671306 J	0.000638188	0.000774965
E1668A	PCB-209	2051-24-3	mg/kg	0.000828978 J	0.00082596	0.0008930602
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.242 J	0.218 J	0.293 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.29 J	0.256 J	0.372 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	7.73e-06	5.92e-06 J	1.36e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008	NB03-CRB-COMBHEPMUS-N001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	9.7262e-07 U	9.9622e-07 U	2.17302e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	1.13816e-06 J	7.9738e-07 J	1.39052e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	3.69e-06 J	3.2308e-06 J	2.185e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	1.5823e-05 J	1.339e-05 J	1.59748e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	7.7854e-07 U	7.9722e-07 U	1.59118e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	8.76676e-06 J	6.9748e-07 U	3.094e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	2.2358e-06 J	1.27432e-06 J	1.59118e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	2.6085e-05 J	4.0294e-05	2.76078e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	1.8226e-06 J	2.1326e-06 J	1.39052e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	1.7362e-06 J	1.7732e-06 J	2.5852e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.00013904 J	0.0001130086 J	8.30716e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.49904e-05	2.6725e-05 J	4.35642e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	7.7854e-07 U	7.9722e-07 U	1.59118e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00093522 J	0.0007926 J	0.00110138 J
E1668A	PCB-16	38444-78-9	mg/kg	8.7558e-07 U	8.9648e-07 U	1.7885e-06 U
E1668A	PCB-17	37680-66-3	mg/kg	8.5262e-05	4.824378e-05 J	5.7088e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000110918	9.1404e-05 J	0.00010754 J
E1668A	PCB-19	38444-73-4	mg/kg	9.2636e-06	5.5176e-06 J	6.1368e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0271832 J	0.0233974 J	0.0290094 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00011907 J	7.47e-05	9.4034e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000131944 J	0.00016859 J	0.000193988 J
E1668A	PCB-23	55720-44-0	mg/kg	6.8076e-07 U	6.9748e-07 U	1.39052e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.7262e-07 U	9.9622e-07 U	1.98842e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	8.5477e-05 J	0.000122684 J	0.00019031 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	9.7954e-05 J	0.000147488	0.000169256 J
E1668A	PCB-27	38444-76-7	mg/kg	2.41012e-05	2.82832e-05	1.8523e-05 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000454776 J	0.0006669246 J	0.0010303 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000130942 J	0.00011149 J	0.000112918 J
E1668A	PCB-34	37680-68-5	mg/kg	1.68084e-05	1.083852e-05 J	2.88742e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	1.27804e-05 J	1.07572e-05 J	1.63692e-05 J
E1668A	PCB-36	38444-87-0	mg/kg	6.86564e-06 J	6.7127e-06 J	6.9092e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00225818 J	0.00204348 J	0.00270432 J
E1668A	PCB-38	53555-66-1	mg/kg	8.45476e-06 J	7.6778e-07 J	1.272912e-05 J
E1668A	PCB-39	38444-88-1	mg/kg	4.39374e-05	4.91946e-05	7.51436e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000463824 J	0.000475744 J	0.00075516 J
E1668A	PCB-41	52663-59-9	mg/kg	8.769e-06 J	5.0948e-06 J	8.3602e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	0.00016768	0.000289724 J	0.000422012 J
E1668A	PCB-43	70362-46-8	mg/kg	2.4477e-05 J	2.69324e-05 J	5.2201e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0178916 J	0.0203056 J	0.027725 J
E1668A	PCB-45	70362-45-7	mg/kg	6.9248e-06 J	6.3266e-06 J	4.5104e-06 J
E1668A	PCB-46	41464-47-5	mg/kg	6.35462e-06 J	4.8998e-06 J	4.8238e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	7.60252e-05	5.84588e-05	7.2652e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000394266 J	0.000600258 J	0.000687354 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	4.04246e-05 J	4.37538e-05 J	3.52492e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	3.97888e-05 J	3.41092e-05 J	3.25384e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.000382746 J	0.000601792 J	0.000518882 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008	NB03-CRB-COMBHEPMUS-N001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	1.61e-06 J	1.3974e-06 U	2.7866e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	2.8206e-06 J	4.17074e-05 J	8.706e-06 J
E1668A	PCB-56	41464-43-1	mg/kg	0.00027237 J	0.00034647 J	0.000495754 J
E1668A	PCB-57	70424-67-8	mg/kg	9.9364e-06 J	1.30856e-05 J	1.5828e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	1.81838e-05 J	1.4218e-05 J	2.30844e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00134428 J	0.00146536 J	0.00223146 J
E1668A	PCB-60	33025-41-1	mg/kg	0.00342508 J	0.00357116 J	0.00440166 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0260264 J	0.0251676 J	0.0289768 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00027778 J	0.000475276 J	0.000557572 J
E1668A	PCB-64	52663-58-8	mg/kg	0.000334634 J	0.000574036 J	0.00108904 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0458068 J	0.0399896 J	0.0489686 J
E1668A	PCB-67	73575-53-8	mg/kg	6.5693e-05 J	9.28844e-05	0.000114918 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000216508 J	0.000274884 J	0.000335014 J
E1668A	PCB-72	41464-42-0	mg/kg	6.1014e-05 J	9.33062e-05	0.000134156 J
E1668A	PCB-73	74338-23-1	mg/kg	1.9459e-05 J	1.1124e-05 J	2.23214e-05 J
E1668A	PCB-77	32598-13-3	mg/kg		0.00184012 J	
E1668A	PCB-78	70362-49-1	mg/kg	1.5556e-06 U	1.5974e-06 U	3.1794e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	8.04804e-05	8.30582e-05	0.000115736 J
E1668A	PCB-80	33284-52-5	mg/kg	6.9464e-06 J	7.158e-06 J	7.5332e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	8.12688e-05	7.98642e-05	0.000109052 J
E1668A	PCB-82	52663-62-4	mg/kg	3.39444e-05 J	3.98268e-05 J	4.6282e-06 J
E1668A	PCB-83	60145-20-2	mg/kg	1.85486e-05 J	2.8874e-06 U	2.8369e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	6.7354e-05	5.40068e-05	6.7602e-05 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00494788 J	0.00582532 J	0.00832544 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00240602 J	0.00278974 J	0.0035571 J
E1668A	PCB-88	55215-17-3	mg/kg	2.1408e-06 U	2.19e-06 U	4.3804e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	3.837e-06 J	3.2344e-06 J	3.269e-06 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.001249516 J	0.002059744 J	0.00258146 J
E1668A	PCB-91	68194-05-8	mg/kg	0.0001458688 J	0.00024733 J	0.000383634 J
E1668A	PCB-92	52663-61-3	mg/kg	0.000160048	0.000286774 J	0.00029482 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.001116744 J	0.001483896 J	0.00159842 J
E1668A	PCB-94	73575-55-0	mg/kg	3.23706e-05 J	2.9822e-05 J	5.57522e-05 J
E1668A	PCB-95	38379-99-6	mg/kg	0.000323134 J		
E1668A	PCB-96	73575-54-9	mg/kg	1.7724e-06 J	1.539e-06 J	2.978e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	3.33108e-05 J	5.04032e-05 J	6.705e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0268128 J	0.0286108 J	0.038803 J
E1668A	PCB-103	60145-21-3	mg/kg	1.18344e-05 J	2.1614e-05 J	2.6553e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	2.6968e-06 J	2.9314e-06 J	4.1672e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.01131654 J	0.00997722 J	0.0141914 J
E1668A	PCB-106	70424-69-0	mg/kg	1.6556e-06 U	1.69e-06 U	3.3782e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.002131222 J	0.00223828 J	0.0026636 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	5.77046e-05 J	8.68216e-05 J	1.08218e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.001486546 J	0.0021469 J	0.00305812 J
E1668A	PCB-111	39635-32-0	mg/kg	4.7683e-05 J	5.0431e-05 J	5.86764e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	3.4279e-05 J	1.3974e-06 U	2.7866e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000873776 J	0.000851032 J	0.00112396 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008	NB03-CRB-COMBHEPMUS-N001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0570386 J	0.0470762 J	0.0580242 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000245845 J	0.000275856 J	0.000333524 J
E1668A	PCB-121	56558-18-0	mg/kg	2.98496e-05 J	3.4428e-05 J	4.06516e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	1.1704e-06 U	1.5266e-05 J	2.24796e-05 J
E1668A	PCB-123	65510-44-3	mg/kg	0.00095855 J	0.000756702 J	0.00115558 J
E1668A	PCB-126	57465-28-8	mg/kg	0.0001066996 J	9.71224e-05 J	0.000136432 J
E1668A	PCB-127	39635-33-1	mg/kg	3.0899e-05 J	3.27688e-05 J	3.70634e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00276078 J	0.00347536 J	0.0041363 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0267992 J	0.0329346 J	0.036055 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000378356 J	0.000572976 J	0.000587144 J
E1668A	PCB-131	61798-70-7	mg/kg	1.51236e-05 J	1.99446e-05 J	2.8088e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	6.30974e-05	8.78492e-05	5.68018e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000861166 J	0.00084004 J	0.000801838 J
E1668A	PCB-134	52704-70-8	mg/kg	1.61072e-05 J	2.74206e-05 J	1.54496e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000214984	0.000315966	0.000272908 J
E1668A	PCB-136	38411-22-2	mg/kg	2.86152e-05 J	2.41634e-05 J	2.26278e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.001369364 J	0.001683164 J	0.00199732 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000562048 J	0.000662308 J	0.000760726 J
E1668A	PCB-141	52712-04-6	mg/kg	0.0001299444	0.0001912758 J	0.000172744 J
E1668A	PCB-142	41411-61-4	mg/kg	1.6556e-06 U	1.69e-06 U	3.3782e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.2112e-06 U	3.8932e-06 J	6.5576e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	4.24238e-05 J	5.1585e-05 J	7.9314e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	1.5556e-06 U	1.5974e-06 U	3.1794e-06 U
E1668A	PCB-146	51908-16-8	mg/kg			
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.001075184 J	0.001902304 J	0.00215472 J
E1668A	PCB-148	74472-41-6	mg/kg	0.0001490088	0.0001514178	0.000161108 J
E1668A	PCB-150	68194-08-1	mg/kg	3.829e-06 J	4.932e-06 J	5.8718e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	1.7738e-06 J	2.0604e-06 J	2.7866e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.04557 J	0.0511696 J	0.056183 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001197932 J	0.001272932 J	0.0015707 J
E1668A	PCB-155	33979-03-2	mg/kg	0.00034575 J	0.000550972 J	0.000548736 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00358538 J	0.00347388 J	0.00435348 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00265574 J	0.00320574 J	0.0036834 J
E1668A	PCB-159	39635-35-3	mg/kg	1.6157e-05 J	1.7234e-05 J	1.97412e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	6.1298e-06 U	6.2748e-06 U	1.25366e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	5.995e-06 J	1.2974e-06 U	7.2912e-06 J
E1668A	PCB-162	39635-34-2	mg/kg	0.000170705 J	0.0002058876 J	0.000196996 J
E1668A	PCB-164	74472-45-0	mg/kg	6.00584e-05 J	0.0001231722	0.000124986 J
E1668A	PCB-165	74472-46-1	mg/kg			3.57126e-05 J
E1668A	PCB-167	52663-72-6	mg/kg	0.001575366 J	0.001525048 J	0.00184002 J
E1668A	PCB-169	32774-16-6	mg/kg	5.545e-06 J	1.4974e-06 U	7.4058e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.00297628 J	0.00356012 J	0.00485064 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.00083598 J	0.000911454 J	0.001156074 J
E1668A	PCB-174	38411-25-5	mg/kg			
E1668A	PCB-175	40186-70-7	mg/kg	0.000280168 J	0.000302004 J	0.00034274 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008	NB03-CRB-COMBHEPMUS-N001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	2.1828e-05 J	2.8968e-05 J	3.4348e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			0.00115558 J
E1668A	PCB-178	52663-67-9	mg/kg	0.0022149 J	0.00202546 J	0.00227808 J
E1668A	PCB-179	52663-64-6	mg/kg	3.6879e-05 J	5.39536e-05 J	3.36918e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0150673 J	0.01717152 J	0.0208702 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg			
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.00581072 J	
E1668A	PCB-184	74472-48-3	mg/kg	5.03748e-05 J	4.9916e-05 J	5.97662e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	1.463e-06 U	1.4974e-06 U	2.978e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.01199792 J	0.0131879 J	0.0140962 J
E1668A	PCB-188	74487-85-7	mg/kg	0.0001048484 J	0.00010407 J	9.7284e-05 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000243245 J	0.0002422634 J	0.00032197 J
E1668A	PCB-190	41411-64-7	mg/kg	0.001023466 J	0.001121728 J	0.001341164 J
E1668A	PCB-191	74472-50-7	mg/kg	0.0002268948 J	0.00025061 J	0.000298708 J
E1668A	PCB-192	74472-51-8	mg/kg	4.045e-06 J	4.394e-06 J	6.3812e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.001860404 J	0.002182178 J	0.0030973 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000385944 J	0.000505766 J	0.000800344 J
E1668A	PCB-196	42740-50-1	mg/kg	0.001536672 J	0.001629448 J	0.00230218 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.0001749536 J	0.0001727098 J	0.000226818 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00374656 J	0.00382382 J	0.00522974 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000568886 J	0.0005370726 J	0.000689284 J
E1668A	PCB-202	2136-99-4	mg/kg	0.001595598 J	0.001484878 J	0.0016045 J
E1668A	PCB-203	52663-76-0	mg/kg	0.001942854 J	0.001924136 J	0.00323998 J
E1668A	PCB-204	74472-52-9	mg/kg	7.2148e-06 J	7.5006e-06 J	1.04684e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	2.6709e-05 J	3.413e-05 J	7.09828e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.001244318 J	0.001395868 J	0.001999638 J
E1668A	PCB-207	52663-79-3	mg/kg	0.0001803874	0.000214367	0.000260276 J
E1668A	PCB-208	52663-77-1	mg/kg	0.00071899 J	0.000788746 J	0.000904284 J
E1668A	PCB-209	2051-24-3	mg/kg	0.000846084 J	0.000846184 J	0.001109126 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.305 J	0.329 J	0.393 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.381 J	0.395 J	0.474 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.31e-05 J	1.19e-05 J	1.63e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003	NB03-CRB-COMBHEPMUS-N004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	9.792e-07 U	2.4232e-06 J	2.31532e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	1.4458e-06 J	1.36866e-06 U	1.40912e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	2.6366e-06 J		3.0158e-06 J
E1668A	PCB-4	13029-08-8	mg/kg	1.32378e-05 J	1.4884e-05	2.6146e-06 U
E1668A	PCB-5	16605-91-7	mg/kg	7.8316e-07 U	1.56376e-06 U	1.60756e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	2.429468e-05 J	9.5954e-06	1.030372e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	1.11568e-05	1.56376e-06 U	3.129e-06 J
E1668A	PCB-8	34883-43-7	mg/kg	5.1488e-05	2.36782e-05 J	3.2013e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	2.8264e-06 J	1.36866e-06 U	1.7214e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	1.2752e-06 U	2.54e-06 U	2.6146e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	8.46094e-05 J	9.2885e-05 J	8.68e-05
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.9236e-05	4.89892e-05	2.58258e-05
E1668A	PCB-14	34883-41-5	mg/kg	7.8316e-07 U	1.56376e-06 U	1.60756e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00068588 J	0.00098416 J	0.00069448 J
E1668A	PCB-16	38444-78-9	mg/kg	8.86424e-06 J	1.7596e-06 U	1.80934e-06 U
E1668A	PCB-17	37680-66-3	mg/kg	9.320824e-05 J	4.7648e-05 J	6.8364e-05
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0001446744 J	7.471e-05	9.576e-05
E1668A	PCB-19	38444-73-4	mg/kg	5.17846e-06 J	4.663e-06	5.4212e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0245906 J	0.0326158 J	0.0199142 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000131096	9.2482e-05	0.000102968 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000171452 J	0.00016166	0.000125636 J
E1668A	PCB-23	55720-44-0	mg/kg	6.8564e-07 U	1.36866e-06 U	1.40912e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.792e-07 U	1.9547e-06 U	2.01112e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00019 J	0.000163224	6.6296e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00026091 J	0.000129388	8.638e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	3.25832e-05	1.54464e-05	2.33324e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.000623508 J	0.00062152 J	0.00033073 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000215892 J	9.1672e-05	0.0001086 J
E1668A	PCB-34	37680-68-5	mg/kg	3.66026e-05	2.8635e-05	1.9817e-05
E1668A	PCB-35	37680-69-6	mg/kg	1.331024e-05 J	1.72318e-05	9.3246e-06
E1668A	PCB-36	38444-87-0	mg/kg	5.49046e-06 J	8.9518e-06 J	4.00476e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00150686 J	0.00242792 J	0.00183136 J
E1668A	PCB-38	53555-66-1	mg/kg	6.8564e-07 U	1.36866e-06 U	1.40912e-06 U
E1668A	PCB-39	38444-88-1	mg/kg	7.0646e-05	9.1898e-05	3.90274e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00100218 J	0.0006114	0.000581676
E1668A	PCB-41	52663-59-9	mg/kg	6.0426e-06 J	8.2194e-06 U	8.4458e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	0.0003004 J	0.000228606	0.000138096
E1668A	PCB-43	70362-46-8	mg/kg	5.99754e-05	4.53838e-05	3.33646e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0248072 J	0.0237814 J	0.0226562 J
E1668A	PCB-45	70362-45-7	mg/kg	5.9516e-06 J	5.792e-06 J	4.4362e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	7.0536e-06 J	4.962e-06 J	4.101e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	0.0001122708	6.0142e-05	5.5162e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00060901 J	0.000389712	0.000254854 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	5.49678e-05 J	2.9318e-05 J	2.778e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	4.79152e-05	2.83078e-05	3.36404e-05
E1668A	PCB-52	35693-99-3	mg/kg	0.000698786 J	0.000332418 J	0.000311396

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003	NB03-CRB-COMBHEPMUS-N004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	1.6174e-06 J	2.7388e-06 U	2.8186e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	5.1174e-05	5.2938e-06 J	3.40938e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.000496332 J	0.000392776	0.000225054
E1668A	PCB-57	70424-67-8	mg/kg	2.21118e-05 J	1.50856e-05 J	1.17922e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	3.40974e-05 J	2.9889e-05 J	2.35282e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00192046 J	0.00200834	0.00170498
E1668A	PCB-60	33025-41-1	mg/kg	0.004209 J	0.00440986 J	0.0037866 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0307864 J	0.0312956 J	0.0243808 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000586936 J	0.000664246	0.000327702
E1668A	PCB-64	52663-58-8	mg/kg	0.000532238 J	0.00049048	0.000268628 J
E1668A	PCB-66	32598-10-0	mg/kg	0.051127 J	0.0521868 J	0.0408756 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000107014	0.000115301	6.5199e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.000346632 J	0.000381508	0.000214134
E1668A	PCB-72	41464-42-0	mg/kg	0.000139948	0.000127322	7.95488e-05
E1668A	PCB-73	74338-23-1	mg/kg	2.61128e-05 J	1.47436e-05 J	2.7833e-05 J
E1668A	PCB-77	32598-13-3	mg/kg			
E1668A	PCB-78	70362-49-1	mg/kg	1.5678e-06 U	3.129e-06 U	3.2192e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000112682	0.000141664	8.05962e-05
E1668A	PCB-80	33284-52-5	mg/kg	8.7614e-06 J	2.1498e-06 U	6.9278e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	8.457e-05	0.00010241	7.40646e-05
E1668A	PCB-82	52663-62-4	mg/kg	1.78404e-05 J	1.58168e-05 J	1.44052e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	2.8356e-06 U	7.2104e-06 J	2.68314e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	6.86382e-05	6.4004e-05	5.3048e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0062556 J	0.00711548 J	0.0062674 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00275858 J	0.00301426	0.00259982
E1668A	PCB-88	55215-17-3	mg/kg	2.153e-06 U	4.31e-06 U	4.4362e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.2752e-06 U	2.67e-06 J	2.6146e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0016576 J	0.0017385	0.00127462 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000261198 J	0.000239334	0.00015697
E1668A	PCB-92	52663-61-3	mg/kg	0.000214638 J	0.000184756	0.00018679
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.0011843 J	0.00119188	0.00129798
E1668A	PCB-94	73575-55-0	mg/kg	5.1384e-05	4.4507e-05	4.09406e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.000532342 J	0.000368616	0.00030184
E1668A	PCB-96	73575-54-9	mg/kg	1.4678e-06 U	2.9302e-06 U	3.0152e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	5.989e-05 J	5.4615e-05 J	3.8013e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0312472 J	0.0301204 J	0.0304026 J
E1668A	PCB-103	60145-21-3	mg/kg	9.628e-06 J	1.18818e-05 J	8.7428e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	1.3678e-06 U	3.212e-06 J	2.8186e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.0099024 J	0.014764 J	0.0096574 J
E1668A	PCB-106	70424-69-0	mg/kg	1.6678e-06 U	3.323e-06 U	3.4232e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00237894 J	0.00319054 J	0.0018781 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	7.73056e-05 J	0.000109546 J	4.80672e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00184572 J	0.00106534	0.00154932 J
E1668A	PCB-111	39635-32-0	mg/kg	4.95754e-05	4.96726e-05	5.12222e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.3678e-06 U	2.7388e-06 U	1.66324e-05 J
E1668A	PCB-114	74472-37-0	mg/kg	0.00083502 J	0.0011433 J	0.00082355

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003	NB03-CRB-COMBHEPMUS-N004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0462216 J	0.0670798 J	0.043482 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000276026 J	0.000321338	0.000275612
E1668A	PCB-121	56558-18-0	mg/kg	2.64368e-05 J	3.12122e-05 J	3.14776e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	1.1752e-06 U	2.19184e-05 J	7.1244e-06 J
E1668A	PCB-123	65510-44-3	mg/kg	0.00078712 J	0.00102038 J	0.000757416
E1668A	PCB-126	57465-28-8	mg/kg	0.000100144	0.000122874	8.7987e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	3.87862e-05 J	5.14976e-05 J	3.5162e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00348344 J	0.00452862 J	0.0033752 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0306774 J	0.0372968 J	0.0310356 J
E1668A	PCB-130	52663-66-8	mg/kg		0.000699664	0.000419368
E1668A	PCB-131	61798-70-7	mg/kg			1.61948e-05 J
E1668A	PCB-132	38380-05-1	mg/kg		4.1062e-05	2.63186e-05
E1668A	PCB-133	35694-04-3	mg/kg	0.00093756 J	0.00087187 J	0.00083549 J
E1668A	PCB-134	52704-70-8	mg/kg		1.4473e-05 J	1.21366e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000184408	0.00022174	0.000194432
E1668A	PCB-136	38411-22-2	mg/kg	1.43104e-05 J	1.96598e-05 J	1.6487e-05 J
E1668A	PCB-137	35694-06-5	mg/kg		0.00202302 J	0.00156544 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000664788 J	0.000862748	0.000565036
E1668A	PCB-141	52712-04-6	mg/kg	0.000193916 J	0.0001501252	0.000124498
E1668A	PCB-142	41411-61-4	mg/kg		3.323e-06 U	3.4232e-06 U
E1668A	PCB-143	68194-15-0	mg/kg		6.465e-06 U	6.6246e-06 U
E1668A	PCB-144	68194-14-9	mg/kg		6.00782e-05 J	4.3193e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	1.5678e-06 U	3.129e-06 U	3.2192e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.00762952 J	
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00166886 J	0.00211994 J	0.0011744 J
E1668A	PCB-148	74472-41-6	mg/kg	9.7384e-05	0.000148638	0.00013845
E1668A	PCB-150	68194-08-1	mg/kg	3.0486e-06 J	3.9702e-06 J	3.0152e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	2.1452e-06 J	2.7388e-06 U	2.8186e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0466 J	0.0534286 J	0.0489642 J
E1668A	PCB-154	60145-22-4	mg/kg		0.00141072 J	0.00110722 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000380032 J	0.000467268	0.0004463
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00358986 J	0.00476208 J	0.00327352 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00301046 J	0.0039621 J	0.00314056 J
E1668A	PCB-159	39635-35-3	mg/kg	1.58004e-05 J	2.1701e-05 J	1.03144e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	6.1638e-06 U	1.23328e-05 U	1.2678e-05 U
E1668A	PCB-161	74472-43-8	mg/kg		2.54e-06 U	
E1668A	PCB-162	39635-34-2	mg/kg	0.000191332 J	0.000228602	0.00014975
E1668A	PCB-164	74472-45-0	mg/kg	8.68804e-05 J	0.000127628	7.7976e-05
E1668A	PCB-165	74472-46-1	mg/kg		3.20292e-05 J	
E1668A	PCB-167	52663-72-6	mg/kg	0.0013932 J	0.00200046 J	0.00132154 J
E1668A	PCB-169	32774-16-6	mg/kg	1.4678e-06 U	2.9302e-06 U	3.855e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.00527014 J	0.00378084 J	0.00411154 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.001207536 J	0.001310204 J	0.001187254 J
E1668A	PCB-174	38411-25-5	mg/kg			
E1668A	PCB-175	40186-70-7	mg/kg			

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003	NB03-CRB-COMBHEPMUS-N004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	2.57998e-05 J	3.4911e-05 J	2.26956e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			
E1668A	PCB-178	52663-67-9	mg/kg		0.00229368 J	
E1668A	PCB-179	52663-64-6	mg/kg	2.22224e-05 J	2.65826e-05 J	2.24652e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0146298 J	0.0177094 J	0.0186714 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg			
E1668A	PCB-183/185	PCB-183/185	mg/kg			
E1668A	PCB-184	74472-48-3	mg/kg	4.97846e-05	8.13546e-05	5.41972e-05
E1668A	PCB-186	74472-49-4	mg/kg		2.9302e-06 U	3.0152e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			
E1668A	PCB-188	74487-85-7	mg/kg	8.66204e-05 J	9.7954e-05	9.1078e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000250398 J	0.000382436	0.000240998
E1668A	PCB-190	41411-64-7	mg/kg	0.0014772 J	0.000646716	0.00121242 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000253134 J	0.000322266	0.00025697
E1668A	PCB-192	74472-51-8	mg/kg	6.7118e-06 J	6.6116e-06 J	5.9244e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.00265936 J	0.00285072 J	0.00246366 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00063573 J	0.000718402	0.00056333
E1668A	PCB-196	42740-50-1	mg/kg	0.00164764 J	0.00133864 J	0.00182886 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.000226596	0.000168916
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0045563 J	0.00320746 J	0.00447016 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000464243 J	0.00066544	0.00054212
E1668A	PCB-202	2136-99-4	mg/kg	0.00144248 J	0.00145778 J	0.00142288 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00187898 J	0.0018995 J	0.00245394 J
E1668A	PCB-204	74472-52-9	mg/kg	7.4376e-06 J	1.28494e-05 J	9.9522e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	4.11204e-05 J	6.50182e-05 J	4.1113e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.001424772 J	0.001453288 J	0.0014936 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000215814	0.00022005	0.000220384
E1668A	PCB-208	52663-77-1	mg/kg	0.000792706 J	0.00081768	0.000878698
E1668A	PCB-209	2051-24-3	mg/kg		0.0009293322 J	0.000947082
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.323 J	0.363 J	0.303 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.386 J	0.455 J	0.363 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.2e-05	1.51e-05	1.07e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006	NB03-CRB-COMBHEPMUS-N007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	5.47916e-05 J	2.1598e-06 J	1.487512e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	5.4014e-06 J	1.41018e-06 U	2.16568e-06 U
E1668A	PCB-3	2051-62-9	mg/kg		2.2206e-06 U	1.37286e-05 J
E1668A	PCB-4	13029-08-8	mg/kg	6.5738e-05 J	9.4306e-06 J	5.58072e-05 J
E1668A	PCB-5	16605-91-7	mg/kg	2.813e-06 U	1.61158e-06 U	2.47554e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	1.07442e-05 J	5.0766e-06 J	2.1017e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	2.813e-06 U	1.61158e-06 U	2.47554e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	9.5628e-05 J	3.0188e-06 U	7.38952e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	4.0398e-06 J	1.41018e-06 U	2.16568e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	4.5752e-06 U	2.616e-06 U	4.0152e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	0.000149262 J	7.29686e-05 J	0.000239224 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.10128e-05 J	3.12284e-05	5.99556e-05
E1668A	PCB-14	34883-41-5	mg/kg	2.813e-06 U	1.61158e-06 U	2.47554e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00111298 J	0.00072276 J	0.00177694 J
E1668A	PCB-16	38444-78-9	mg/kg	1.4614e-05 J	8.3866e-06	1.8441e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	4.5396e-05 J	3.58466e-05	7.188e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	7.218e-05 J	4.25166e-05 J	0.0001184292 J
E1668A	PCB-19	38444-73-4	mg/kg	9.3794e-06	5.2664e-06 J	1.252e-05 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.032297 J	0.0252816 J	0.0446162 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	9.145e-05 J	5.9878e-05	0.000133468 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000119012 J	0.000133002	0.00016696 J
E1668A	PCB-23	55720-44-0	mg/kg	2.4636e-06 U	1.41018e-06 U	2.16568e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	3.517e-06 U	2.01624e-06 U	3.09452e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	9.5154e-05	9.011e-05	0.000145914
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00011177	5.8136e-05	0.000186436
E1668A	PCB-27	38444-76-7	mg/kg	8.9594e-06 J	1.13326e-05	2.44236e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0004279 J	0.000363746	0.00066828 J
E1668A	PCB-32	38444-77-8	mg/kg	8.3624e-05 J	7.0152e-05	0.000157196 J
E1668A	PCB-34	37680-68-5	mg/kg	1.04764e-05 J	1.48086e-05	3.41442e-05
E1668A	PCB-35	37680-69-6	mg/kg	1.46002e-05 J	1.14904e-05 J	1.83372e-05
E1668A	PCB-36	38444-87-0	mg/kg	5.6574e-06 J	5.42578e-06 J	1.04668e-05 J
E1668A	PCB-37	38444-90-5	mg/kg	0.0027164 J	0.0021342 J	0.00374482 J
E1668A	PCB-38	53555-66-1	mg/kg	3.0112e-06 J	1.41018e-06 U	4.7246e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	4.81756e-05	6.16582e-05	0.000112948
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000298642	0.000347268	0.000645152
E1668A	PCB-41	52663-59-9	mg/kg	1.4806e-05 U	8.4492e-06 U	1.3003e-05 U
E1668A	PCB-42	36559-22-5	mg/kg	0.0001036668 J	0.0001187	0.000193744
E1668A	PCB-43	70362-46-8	mg/kg	1.67934e-05 J	1.97316e-05 J	3.84132e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0204226 J	0.0222674 J	0.0332192 J
E1668A	PCB-45	70362-45-7	mg/kg	7.7402e-06 U	4.7666e-06 J	6.8058e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	4.778e-06 J	3.67504e-06 J	6.3336e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	4.9852e-05 J	3.5344e-05	6.90112e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000272072	0.000195452	0.000381498
E1668A	PCB-50/53	PCB-50/53	mg/kg	2.32002e-05 J	1.9521e-05 J	3.97078e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	3.05744e-05 J	2.87824e-05 J	4.3368e-05
E1668A	PCB-52	35693-99-3	mg/kg	0.000251574 J	0.000176022	0.000473588 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006	NB03-CRB-COMBHEPMUS-N007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	4.9272e-06 U	2.8174e-06 U	4.3232e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	4.37514e-05 J	2.044e-05 J	9.60406e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	0.000218956	0.000251872	0.000270596
E1668A	PCB-57	70424-67-8	mg/kg	9.3134e-06 J	7.34e-06 J	1.58182e-05 J
E1668A	PCB-58	41464-49-7	mg/kg	1.32888e-05 J	1.51536e-05 J	3.9882e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00160532	0.00144656	0.00262496
E1668A	PCB-60	33025-41-1	mg/kg	0.0049332 J	0.00351274 J	0.005903 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0291534 J	0.0277908 J	0.0412328 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000427488	0.000415234	0.000792578
E1668A	PCB-64	52663-58-8	mg/kg	0.00033261	0.000248738	0.000449142
E1668A	PCB-66	32598-10-0	mg/kg	0.043923 J	0.0452364 J	0.0659712 J
E1668A	PCB-67	73575-53-8	mg/kg	8.9252e-05 J	8.288e-05	0.000130038
E1668A	PCB-68	73575-52-7	mg/kg	0.000227984	0.000242704	0.00047457
E1668A	PCB-72	41464-42-0	mg/kg	5.5868e-05 J	6.4311e-05	0.000162866
E1668A	PCB-73	74338-23-1	mg/kg	4.9272e-06 U	1.60022e-05 J	3.04702e-05 J
E1668A	PCB-77	32598-13-3	mg/kg		0.00192976 J	
E1668A	PCB-78	70362-49-1	mg/kg	5.6286e-06 U	3.2228e-06 U	4.9392e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	9.4524e-05 J	0.0001082514	0.000154542
E1668A	PCB-80	33284-52-5	mg/kg	8.2214e-06 J	7.132e-06 J	1.15446e-05 J
E1668A	PCB-81	70362-50-4	mg/kg	9.8422e-05	8.47784e-05	0.00014218
E1668A	PCB-82	52663-62-4	mg/kg	1.38748e-05 J	1.153e-05 J	5.46e-06 J
E1668A	PCB-83	60145-20-2	mg/kg	1.24922e-05 J	4.32186e-05 J	8.9878e-06 J
E1668A	PCB-84	52663-60-2	mg/kg	3.2921e-05	4.33788e-05	5.74888e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00542844 J	0.00644748 J	0.00942188 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0022869	0.00301446	0.00380462
E1668A	PCB-88	55215-17-3	mg/kg	7.7402e-06 U	4.4286e-06 U	0.0002389858 J
E1668A	PCB-89	73575-57-2	mg/kg	4.5752e-06 U	2.616e-06 U	4.0152e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00106356	0.001190594	0.00221538
E1668A	PCB-91	68194-05-8	mg/kg	0.000126366	0.000134234	0.000272034
E1668A	PCB-92	52663-61-3	mg/kg	0.000103718	8.7294e-05	0.000242634
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00129086 J	0.00175228 J	0.00200222
E1668A	PCB-94	73575-55-0	mg/kg	1.94888e-05 J	3.8947e-05	5.56052e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.000188768 J	0.000190834	0.000458802
E1668A	PCB-96	73575-54-9	mg/kg	5.2766e-06 U	3.0188e-06 U	4.6312e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	3.7448e-05 J	3.63558e-05 J	6.17914e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0240646 J	0.0372238 J	0.0419156 J
E1668A	PCB-103	60145-21-3	mg/kg	1.17834e-05 J	7.912e-06 J	1.66734e-05 J
E1668A	PCB-104	56558-16-8	mg/kg	4.9272e-06 U	3.2698e-06 J	5.1812e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.011301 J	0.0110136 J	0.0157178 J
E1668A	PCB-106	70424-69-0	mg/kg	5.978e-06 U	3.4242e-06 U	5.2732e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00214662 J	0.00207912 J	0.0034051 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	5.09848e-05 J	4.71368e-05 J	0.0001037372 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00153878 J	0.00147448	0.00228582
E1668A	PCB-111	39635-32-0	mg/kg	3.4673e-05 J	4.55896e-05	6.87182e-05
E1668A	PCB-112	74472-36-9	mg/kg	2.06728e-05 J	2.72886e-05 J	4.3232e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.0009118 J	0.000940624 J	0.00139024

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006	NB03-CRB-COMBHEPMUS-N007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0499528 J	0.0561406 J	0.0689496 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000229318	0.000305526	0.000389594
E1668A	PCB-121	56558-18-0	mg/kg	2.79174e-05 J	4.39744e-05 J	4.57554e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	1.29934e-05 J	1.9868e-05 J	3.7146e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00081156	0.000827216	0.00124504
E1668A	PCB-126	57465-28-8	mg/kg	0.0001086 J	8.57454e-05	0.00015819
E1668A	PCB-127	39635-33-1	mg/kg	4.3779e-05 J	5.83982e-05 J	5.35474e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0033899 J	0.00386032 J	0.00536126 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.029445 J	0.0422758 J	0.0467066 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00037501	0.000442132	0.00075419
E1668A	PCB-131	61798-70-7	mg/kg		1.67722e-05 J	2.97504e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	3.58068e-05 J	3.25186e-05 J	
E1668A	PCB-133	35694-04-3	mg/kg	0.000641624	0.000736118	0.001107256
E1668A	PCB-134	52704-70-8	mg/kg	1.71316e-05 J	1.15606e-05 J	
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000145942 J	0.00017486	0.000292008
E1668A	PCB-136	38411-22-2	mg/kg	1.79448e-05 J	2.17184e-05 J	2.20312e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.00160702 J	0.00204016 J	0.00242038 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000690482	0.000785676	0.00095171
E1668A	PCB-141	52712-04-6	mg/kg	0.000119248	7.6677e-05	0.000185858
E1668A	PCB-142	41411-61-4	mg/kg	5.978e-06 U	3.4242e-06 U	5.2732e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	1.16196e-05 U	6.6466e-06 U	
E1668A	PCB-144	68194-14-9	mg/kg	3.87398e-05 J	5.17936e-05 J	6.64408e-05
E1668A	PCB-145	74472-40-5	mg/kg	5.6286e-06 U	3.2228e-06 U	4.9392e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.00678228 J	0.00969728 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0012936 J	0.001274702	0.0025986
E1668A	PCB-148	74472-41-6	mg/kg	0.00012854	0.000219346	0.000208752
E1668A	PCB-150	68194-08-1	mg/kg	5.9448e-06 J	3.6558e-06 J	4.6312e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	4.9272e-06 U	2.8174e-06 U	4.3232e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0449734 J	0.0662742 J	0.0718264 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00116888 J	0.00184598 J	0.0016962 J
E1668A	PCB-155	33979-03-2	mg/kg	0.00061774 J	0.000483978	0.00085932
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00398242 J	0.00354028 J	0.00534064 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00329498 J	0.00371932 J	0.00471452 J
E1668A	PCB-159	39635-35-3	mg/kg	1.29248e-05 J	1.31446e-05 J	2.29186e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	2.2172e-05 U	1.26998e-05 U	1.95082e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	4.5752e-06 U	2.616e-06 U	4.0152e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.0001602008 J	2.616e-06 U	4.0152e-06 U
E1668A	PCB-164	74472-45-0	mg/kg	6.21048e-05 J	6.59278e-05	0.0001161772
E1668A	PCB-165	74472-46-1	mg/kg		3.50234e-05 J	4.43286e-05 J
E1668A	PCB-167	52663-72-6	mg/kg	0.00150556 J	0.00150282 J	0.00225778 J
E1668A	PCB-169	32774-16-6	mg/kg	8.2328e-06 J	3.0188e-06 U	4.6312e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00437114 J	0.00385174 J	0.0062202 J
E1668A	PCB-171/173	PCB-171/173	mg/kg		0.0019481 J	
E1668A	PCB-172	52663-74-8	mg/kg	0.00100256 J	0.00107471 J	0.00158382 J
E1668A	PCB-174	38411-25-5	mg/kg		7.69484e-05	
E1668A	PCB-175	40186-70-7	mg/kg		0.00029596	0.000434618

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006	NB03-CRB-COMBHEPMUS-N007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	2.60974e-05 J	2.07104e-05 J	3.83442e-05 J
E1668A	PCB-177	52663-70-4	mg/kg		0.00097444 J	
E1668A	PCB-178	52663-67-9	mg/kg	0.00161688 J	0.00208686 J	0.0029484 J
E1668A	PCB-179	52663-64-6	mg/kg	3.42152e-05 J	2.02008e-05 J	4.2369e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0189152 J	0.0189728 J	0.027146 J
E1668A	PCB-181	74472-47-2	mg/kg		8.65398e-05	
E1668A	PCB-182	60145-23-5	mg/kg		7.75266e-05	
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.00657004 J	
E1668A	PCB-184	74472-48-3	mg/kg	5.95428e-05 J	6.5579e-05	8.11266e-05
E1668A	PCB-186	74472-49-4	mg/kg	5.2766e-06 U	3.0188e-06 U	4.6312e-06 U
E1668A	PCB-187	52663-68-0	mg/kg		0.0128974 J	
E1668A	PCB-188	74487-85-7	mg/kg	8.21248e-05 J	8.4697e-05	0.000202724
E1668A	PCB-189	39635-31-9	mg/kg	0.000310356	0.000285136	0.000404188
E1668A	PCB-190	41411-64-7	mg/kg	0.00097866 J	0.000608546	0.00185046 J
E1668A	PCB-191	74472-50-7	mg/kg	0.00029632	0.000271722	0.000400098
E1668A	PCB-192	74472-51-8	mg/kg	4.5752e-06 U	2.616e-06 U	8.5652e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.00208808 J	0.00218814 J	0.00403394 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000664428	0.00054218	0.000955816
E1668A	PCB-196	42740-50-1	mg/kg	0.00177342 J	0.00195524 J	0.00290474 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000198918 J	0.000225636	0.000290306
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00373466 J	0.00402254 J	0.00673704 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000637244	0.000651118	0.000868638
E1668A	PCB-202	2136-99-4	mg/kg	0.00119054	0.0011626	0.00227004 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00202856 J	0.0025228 J	0.00369352 J
E1668A	PCB-204	74472-52-9	mg/kg	1.32902e-05 J	1.29866e-05 J	1.31612e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	5.26466e-05 J	4.22852e-05 J	6.44236e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00142738 J	0.001150594	0.00208374
E1668A	PCB-207	52663-79-3	mg/kg	0.000218736	0.000212082	0.000328122
E1668A	PCB-208	52663-77-1	mg/kg	0.00074476	0.000679412	0.00118535
E1668A	PCB-209	2051-24-3	mg/kg	0.00100356 J	0.000715738	0.001285842
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.311 J	0.384 J	0.491 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.38 J	0.46 J	0.586 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.32e-05 J	1.1e-05	1.88e-05

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001	NB03-CRB-COMBHEPMUS-S002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	1.98924e-06 U	2.2286e-06 J	2.00778e-06 U
E1668A	PCB-2	2051-61-8	mg/kg	1.39206e-06 U	1.39574e-06 U	1.40578e-06 U
E1668A	PCB-3	2051-62-9	mg/kg			
E1668A	PCB-4	13029-08-8	mg/kg	6.511e-06 J	1.09944e-05 J	2.6094e-06 U
E1668A	PCB-5	16605-91-7	mg/kg	1.5905e-06 U	1.59492e-06 U	1.60496e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	3.77106e-06 J	5.52194e-06 J	4.50498e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	2.3341e-06 J	1.59492e-06 U	3.6814e-06 J
E1668A	PCB-8	34883-43-7	mg/kg	2.9796e-06 U	1.34304e-05 J	3.01e-06 U
E1668A	PCB-9	34883-39-1	mg/kg	1.39206e-06 U	1.39574e-06 U	1.40578e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	2.5816e-06 U	2.5886e-06 U	2.6094e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	4.5305e-05 J	7.57694e-05 J	7.694e-05
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.17988e-05 J	1.57096e-05 J	1.58028e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	1.5905e-06 U	1.59492e-06 U	1.60496e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00060166 J	0.0004056	0.000568548 J
E1668A	PCB-16	38444-78-9	mg/kg	3.246e-06 J	7.9795e-06 J	1.806e-06 U
E1668A	PCB-17	37680-66-3	mg/kg	2.11504e-05 J	4.68426e-05 J	3.32664e-05
E1668A	PCB-18/30	PCB-18/30	mg/kg	3.6074e-05 J	8.0602e-05 J	4.11586e-05
E1668A	PCB-19	38444-73-4	mg/kg	3.4892e-06 J	5.28172e-06 J	3.9932e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0150656 J	0.0110416 J	0.014315 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	3.86982e-05 J	4.6212e-05	3.89422e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	4.9536e-05 J	0.000123292	6.1946e-05 J
E1668A	PCB-23	55720-44-0	mg/kg	1.39206e-06 U	1.39574e-06 U	1.40578e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	1.98924e-06 U	1.99402e-06 U	2.00778e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	2.35501e-05 J	7.40316e-05	3.90156e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	2.9451e-05 J	9.7912e-05	4.14184e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	8.7738e-06	1.99188e-05	1.09826e-05 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000126784 J	0.000508128 J	0.000198216 J
E1668A	PCB-32	38444-77-8	mg/kg	3.8004e-05 J	8.776e-05 J	7.355e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	8.5756e-06 J	1.14178e-05 J	1.179e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	3.9904e-06 J	9.5412e-06 J	5.6878e-06 J
E1668A	PCB-36	38444-87-0	mg/kg	2.9503e-06 J	4.25208e-06 J	4.78476e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.0016685 J	0.00132356 J	0.00156454 J
E1668A	PCB-38	53555-66-1	mg/kg	9.41306e-06 J	1.39574e-06 U	1.118698e-05 J
E1668A	PCB-39	38444-88-1	mg/kg	2.5985e-05	2.95062e-05	3.333276e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000211276	0.00043403	0.000352716
E1668A	PCB-41	52663-59-9	mg/kg	8.3568e-06 U	8.3826e-06 U	8.4384e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	5.5938e-05	0.00015339	7.1855e-05
E1668A	PCB-43	70362-46-8	mg/kg	1.64226e-05 J	2.6104e-05 J	1.4389e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0311254 J	0.0117636 J	0.02019708 J
E1668A	PCB-45	70362-45-7	mg/kg	4.362e-06 U	4.8856e-06 J	4.4102e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	2.00774e-06 J	5.14742e-06 J	2.44198e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	2.09352e-05 J	4.70264e-05 J	2.81248e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000104448 J	0.000347802	0.0001627974 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	1.16084e-05 J	2.98954e-05 J	1.38288e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	1.19074e-05 J	2.61432e-05 J	1.48622e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.000129834	0.00038655	0.000164094

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001	NB03-CRB-COMBHEPMUS-S002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	2.7856e-06 U	2.79e-06 U	2.806e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	3.7511e-05 J	2.86428e-05 J	3.21738e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	6.6262e-05	0.000265534	0.0001030574
E1668A	PCB-57	70424-67-8	mg/kg	4.677e-06 J	8.7474e-06 J	6.6864e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	9.9072e-06 J	7.2204e-06 J	9.397e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00145296	0.000906114	0.001510262
E1668A	PCB-60	33025-41-1	mg/kg	0.00269452 J	0.00247044 J	0.00280508 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0161266 J	0.0157412 J	0.01945626 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000176266	0.000307786	0.00026788
E1668A	PCB-64	52663-58-8	mg/kg	9.6514e-05 J	0.000375504	0.000172752 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0272146 J	0.0244716 J	0.028857 J
E1668A	PCB-67	73575-53-8	mg/kg	7.52858e-05	6.57132e-05	5.20976e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000156808	0.00017428	0.000192084
E1668A	PCB-72	41464-42-0	mg/kg	3.6943e-05	7.09714e-05	4.96456e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	1.35902e-05 J	9.117e-06 J	2.3151e-05 J
E1668A	PCB-77	32598-13-3	mg/kg			
E1668A	PCB-78	70362-49-1	mg/kg	3.181e-06 U	3.1928e-06 U	3.2114e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	6.27584e-05	7.4531e-05	6.98792e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	5.717e-06 J	4.8478e-06 J	6.6084e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	6.4312e-05	6.57176e-05	7.67798e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	1.19002e-05 J	4.29004e-05 J	1.45244e-05 J
E1668A	PCB-83	60145-20-2	mg/kg	5.7678e-06 U	2.78788e-05 J	5.816e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	2.6179e-05 J	5.72772e-05	2.71292e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00551292 J	0.0051248 J	0.00637522 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00275946	0.00241574	0.00283074
E1668A	PCB-88	55215-17-3	mg/kg	4.362e-06 U	1.1096e-05 J	4.4102e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	2.5816e-06 U	3.7924e-06 J	2.6094e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.000774496 J	0.00136962	0.001200636 J
E1668A	PCB-91	68194-05-8	mg/kg	8.11142e-05	0.000197826	0.0001174596
E1668A	PCB-92	52663-61-3	mg/kg	8.9182e-05 J	0.000219738	0.000135368
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00296868 J	0.000998432	0.001509932
E1668A	PCB-94	73575-55-0	mg/kg	2.77506e-05 J	3.62716e-05 J	3.86294e-05 J
E1668A	PCB-95	38379-99-6	mg/kg		0.000321274	0.000200606 J
E1668A	PCB-96	73575-54-9	mg/kg	2.9796e-06 U	2.9914e-06 U	3.01e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	2.53884e-05 J	4.22026e-05 J	2.8081e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.029114 J	0.0230842 J	0.0343392 J
E1668A	PCB-103	60145-21-3	mg/kg	4.625e-06 J	1.67818e-05 J	7.3104e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	2.7856e-06 U	2.79e-06 U	2.806e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00794482 J	0.0074417 J	0.00859538 J
E1668A	PCB-106	70424-69-0	mg/kg	3.3824e-06 U	3.3868e-06 U	3.408e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00144932 J	0.002169758 J	0.00187555 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	2.50768e-05 J	8.0811e-05 J	4.3932e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00117336 J	0.00196976 J	0.00151969 J
E1668A	PCB-111	39635-32-0	mg/kg	5.52846e-05	4.5528e-05 J	6.3399e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	2.7856e-06 U	3.11664e-05 J	2.806e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000661848	0.000649046	0.00082968 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001	NB03-CRB-COMBHEPMUS-S002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0335764 J	0.032457 J	0.0388998 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000262838	0.000250264	0.00033277
E1668A	PCB-121	56558-18-0	mg/kg	4.5311e-05 J	2.55456e-05 J	3.90108e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	6.571e-06 J	1.45678e-05 J	5.9284e-06 J
E1668A	PCB-123	65510-44-3	mg/kg	0.000608842	0.000612202	0.000713662
E1668A	PCB-126	57465-28-8	mg/kg	7.87166e-05	7.1782e-05 J	8.7207e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	3.38744e-05 J	3.71464e-05 J	3.4799e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00267818 J	0.0028409 J	0.00291318 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0266492 J	0.0259326 J	0.02924306 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000277918	0.000448398	0.00041188
E1668A	PCB-131	61798-70-7	mg/kg	1.30882e-05 J	2.2905e-05 J	1.54096e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	2.25108e-05	8.62182e-05 J	2.1815e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000645178	0.00083925 J	0.00076173
E1668A	PCB-134	52704-70-8	mg/kg	9.091e-06 J	2.03674e-05 J	1.01606e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000127388	0.000271172	0.0001656034 J
E1668A	PCB-136	38411-22-2	mg/kg	1.24362e-05 J	2.42328e-05 J	1.1339e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.001500068 J	0.00116682 J	0.001605456 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000602414	0.00059529	0.000607072
E1668A	PCB-141	52712-04-6	mg/kg	6.68522e-05	0.0001426632	9.68644e-05 J
E1668A	PCB-142	41411-61-4	mg/kg	3.3824e-06 U	3.3868e-06 U	3.408e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	6.569e-06 U	6.5874e-06 U	6.6246e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	3.48582e-05 J	5.24084e-05 J	4.32788e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	3.181e-06 U	3.1928e-06 U	3.2114e-06 U
E1668A	PCB-146	51908-16-8	mg/kg			0.0063435 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.000737026 J	0.001608282 J	0.00103061 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000180588	0.0001422734	0.0001770114
E1668A	PCB-150	68194-08-1	mg/kg	2.9796e-06 U	3.9144e-06 J	3.01e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	2.7856e-06 U	2.79e-06 U	2.806e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0465108 J	0.040628 J	0.0508524 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001404268 J	0.001123148 J	0.00148151 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000412792	0.000281712	0.000403182
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00281554 J	0.00291668 J	0.003245926 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00308822 J	0.0027102 J	0.0031494 J
E1668A	PCB-159	39635-35-3	mg/kg	1.00916e-05 J	9.6644e-06 J	1.1191e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	1.25148e-05 U	1.25702e-05 U	1.26446e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	2.5816e-06 U		2.6094e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000148132	0.000193704	0.0001844296
E1668A	PCB-164	74472-45-0	mg/kg	2.78382e-05 J	7.40554e-05	6.82008e-05 J
E1668A	PCB-165	74472-46-1	mg/kg			
E1668A	PCB-167	52663-72-6	mg/kg	0.001240468 J	0.00128976 J	0.00138829 J
E1668A	PCB-169	32774-16-6	mg/kg	4.5162e-06 J	2.9914e-06 U	3.1868e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.00322952 J	0.00191214 J	0.002834614 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.000999148 J	0.000747136	0.000913132 J
E1668A	PCB-174	38411-25-5	mg/kg			
E1668A	PCB-175	40186-70-7	mg/kg			0.0003214154

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001	NB03-CRB-COMBHEPMUS-S002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	1.46374e-05 J	2.93306e-05 J	1.52364e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			
E1668A	PCB-178	52663-67-9	mg/kg			
E1668A	PCB-179	52663-64-6	mg/kg	1.67996e-05 J	5.27592e-05 J	1.6781e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.01799498 J	0.01124954 J	0.01570966 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg			
E1668A	PCB-183/185	PCB-183/185	mg/kg			
E1668A	PCB-184	74472-48-3	mg/kg	5.06762e-05 J	4.87378e-05 J	5.51678e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	2.9796e-06 U	2.9914e-06 U	3.01e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			
E1668A	PCB-188	74487-85-7	mg/kg	8.12978e-05	9.09228e-05	9.53804e-05 J
E1668A	PCB-189	39635-31-9	mg/kg	0.000246374	0.000223014	0.0002201912
E1668A	PCB-190	41411-64-7	mg/kg	0.001157876 J	0.00033342	0.000968462 J
E1668A	PCB-191	74472-50-7	mg/kg	0.00027185	0.000220784	0.000235097
E1668A	PCB-192	74472-51-8	mg/kg	4.6096e-06 J	3.3192e-06 J	2.6094e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.001853506 J	0.001353976 J	0.001834696 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000407622	0.000280232	0.000373815
E1668A	PCB-196	42740-50-1	mg/kg	0.001906818 J	0.000820774	0.001595624 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.000181527 J	
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00396556 J	0.00199158	0.003708006 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000485296	0.000575694	0.00052553
E1668A	PCB-202	2136-99-4	mg/kg	0.001083402	0.00142674 J	0.001409662 J
E1668A	PCB-203	52663-76-0	mg/kg	0.002149008 J	0.00103461	0.001930146 J
E1668A	PCB-204	74472-52-9	mg/kg	7.1814e-06 J	7.4376e-06 J	8.2102e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	2.88782e-05 J	2.78604e-05 J	2.8113e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.00103877	0.000896258	0.001230628 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000169452	0.000145573	0.0001901506 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000571806	0.000564248	0.000721852
E1668A	PCB-209	2051-24-3	mg/kg	0.000655218	0.00079805	0.000831634
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.266 J	0.215 J	0.278 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.313 J	0.261 J	0.332 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	9.44e-06	8.6e-06 J	1.05e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004	NB03-CRB-COMBHEPMUS-S005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	2.0226e-06 U	9.895e-07 U	1.7488e-06 J
E1668A	PCB-2	2051-61-8	mg/kg	1.47276e-06 J	1.04878e-06 J	8.586e-07 J
E1668A	PCB-3	2051-62-9	mg/kg		2.7296e-06 J	
E1668A	PCB-4	13029-08-8	mg/kg	2.6272e-06 U	7.5326e-06 J	1.3e-06 U
E1668A	PCB-5	16605-91-7	mg/kg	1.61756e-06 U	7.918e-07 U	7.9948e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	1.41504e-06 U	6.9258e-07 U	3.586e-06 J
E1668A	PCB-7	33284-50-3	mg/kg	3.795e-06 J	1.09846e-06 J	2.156e-06 J
E1668A	PCB-8	34883-43-7	mg/kg	3.0352e-06 U	2.4142e-05	1.138e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	1.41504e-06 U	6.9258e-07 U	1.14174e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	2.6272e-06 U	1.2822e-06 U	1.7212e-06 J
E1668A	PCB-11	2050-67-1	mg/kg	5.9922e-05	7.92086e-05 J	8.069e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.7144e-06 J	1.38996e-05 J	1.49216e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	1.61756e-06 U	7.918e-07 U	7.9948e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00037816 J	0.00060322 J	0.0007361 J
E1668A	PCB-16	38444-78-9	mg/kg	1.82008e-06 U	8.9028e-07 U	8.9948e-07 U
E1668A	PCB-17	37680-66-3	mg/kg	2.40148e-05	1.732904e-05 J	2.5313e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	2.94428e-05	1.5796e-06 U	3.54036e-05 J
E1668A	PCB-19	38444-73-4	mg/kg	2.84e-06 J	3.1766e-06 J	3.0216e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0084822 J	0.016445 J	0.0176896 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	2.08944e-05 J	3.2745e-05	3.5354e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	4.0074e-05 J	5.5154e-05 J	4.8106e-05 J
E1668A	PCB-23	55720-44-0	mg/kg	1.41504e-06 U	6.9258e-07 U	6.9974e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	2.0226e-06 U	9.895e-07 U	9.9948e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	3.24504e-05	3.35674e-05	3.72484e-05 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	3.57132e-05 J	4.99384e-05	3.9888e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	9.3584e-06 J	8.489e-06 J	9.4928e-06 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000124524 J	0.0001677246 J	0.000169966 J
E1668A	PCB-32	38444-77-8	mg/kg	4.06282e-05 J	4.1684e-05 J	4.58682e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	8.8026e-06 J	6.81152e-06 J	1.06526e-05 J
E1668A	PCB-35	37680-69-6	mg/kg	3.14608e-06 J	4.97376e-06 J	5.94158e-06 J
E1668A	PCB-36	38444-87-0	mg/kg	3.15676e-06 J	4.41178e-06 J	4.492e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00094444 J	0.0013987 J	0.0019 J
E1668A	PCB-38	53555-66-1	mg/kg	5.57724e-06 J	7.53578e-06 J	9.2464e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	2.0085e-05	2.8279e-05	2.90834e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000264356	0.000184416	0.000307904 J
E1668A	PCB-41	52663-59-9	mg/kg	8.5088e-06 U	4.427e-06 J	4.1974e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	5.83714e-05	5.21186e-05	8.33852e-05 J
E1668A	PCB-43	70362-46-8	mg/kg	8.7536e-06 J	1.10906e-05 J	1.1748e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0129922 J	0.0145416 J	0.018858 J
E1668A	PCB-45	70362-45-7	mg/kg	4.4584e-06 U	3.5576e-06 J	2.9618e-06 J
E1668A	PCB-46	41464-47-5	mg/kg	2.0408e-06 J	2.66104e-06 J	2.066e-06 J
E1668A	PCB-48	70362-47-9	mg/kg	1.70814e-05 J	1.93016e-05 J	2.44466e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000122638 J	0.00012616	0.000137904 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	1.1459e-05 J	1.3051e-05 J	1.16e-05 J
E1668A	PCB-51	68194-04-7	mg/kg	9.8404e-06 J	1.03306e-05 J	1.234e-05 J
E1668A	PCB-52	35693-99-3	mg/kg	0.000120744	0.000148578 J	0.000142992 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004	NB03-CRB-COMBHEPMUS-S005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	2.8312e-06 U	1.3822e-06 U	1.4e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	2.37336e-05 J	3.1568e-05 J	2.1191e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	6.83002e-05	8.8108e-05	0.000102596 J
E1668A	PCB-57	70424-67-8	mg/kg	6.4412e-06 J	6.326e-06 J	6.716e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	1.71236e-05 J	4.8506e-06 J	2.58782e-05 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000852224	0.001033568 J	0.001280672 J
E1668A	PCB-60	33025-41-1	mg/kg	0.00158842 J	0.00256182 J	0.00275318 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.010085 J	0.0166256 J	0.01891114 J
E1668A	PCB-63	74472-34-7	mg/kg	0.0001463	0.000211844 J	0.000239234 J
E1668A	PCB-64	52663-58-8	mg/kg	0.000106484 J	0.000128348	0.000168846 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0156474 J	0.0270758 J	0.0352884 J
E1668A	PCB-67	73575-53-8	mg/kg	3.8216e-05 J	4.19092e-05 J	5.11296e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000140882	0.000159078	0.0001794386 J
E1668A	PCB-72	41464-42-0	mg/kg	4.7381e-05 J	4.95746e-05 J	5.34222e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	2.39672e-05 J	5.7086e-06 J	2.10972e-05 J
E1668A	PCB-77	32598-13-3	mg/kg		0.00133794 J	
E1668A	PCB-78	70362-49-1	mg/kg	3.2366e-06 U	1.5796e-06 U	1.6e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	4.27158e-05 J	5.82058e-05 J	6.27082e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	3.9452e-06 J	6.118e-06 J	5.026e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	4.55378e-05	6.12424e-05 J	7.84108e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	1.25538e-05 J	7.1376e-06 J	7.272e-06 J
E1668A	PCB-83	60145-20-2	mg/kg	5.8716e-06 U	2.8718e-06 U	1.4834e-05 J
E1668A	PCB-84	52663-60-2	mg/kg	1.95954e-05	1.9467e-05	3.2014e-05 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00357136 J	0.0042818 J	0.00577712 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00179722	0.0019879 J	0.00245888 J
E1668A	PCB-88	55215-17-3	mg/kg	4.4584e-06 U	2.177e-06 U	2.2e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	2.6272e-06 U	1.2822e-06 U	1.9838e-06 J
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.000795992 J	0.000814276 J	0.001208144 J
E1668A	PCB-91	68194-05-8	mg/kg	9.21472e-05	9.27264e-05	0.0001317654 J
E1668A	PCB-92	52663-61-3	mg/kg	9.1867e-05	0.000101409	0.0001316322 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00112772	0.001084824 J	0.001245738 J
E1668A	PCB-94	73575-55-0	mg/kg	2.74598e-05 J	1.66896e-05 J	2.89872e-05 J
E1668A	PCB-95	38379-99-6	mg/kg	0.000132074 J		0.00019826 J
E1668A	PCB-96	73575-54-9	mg/kg	3.0352e-06 U	1.4822e-06 U	1.5e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	2.2981e-05 J	2.43958e-05 J	3.2478e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.0194096 J	0.0220222 J	0.0313228 J
E1668A	PCB-103	60145-21-3	mg/kg	5.2452e-06 J	5.286e-06 J	7.574e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	2.8312e-06 U	1.507e-06 J	1.7744e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.0051427 J	0.007323 J	0.0098488 J
E1668A	PCB-106	70424-69-0	mg/kg	3.4406e-06 U	1.6796e-06 U	1.7e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00113888 J	0.00163174 J	0.001845622 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	3.07016e-05 J	3.73856e-05 J	4.3486e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.000911812 J	0.001004796 J	0.00145316 J
E1668A	PCB-111	39635-32-0	mg/kg	4.20108e-05 J	5.01774e-05 J	5.1216e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	2.8312e-06 U	1.3822e-06 U	1.4972e-05 J
E1668A	PCB-114	74472-37-0	mg/kg	0.000494092	0.000641478 J	0.000772914 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004	NB03-CRB-COMBHEPMUS-S005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.0251136 J	0.038957 J	0.0461936 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000219532	0.000243058 J	0.000266984 J
E1668A	PCB-121	56558-18-0	mg/kg	2.70066e-05 J	2.88846e-05 J	3.2088e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	4.4352e-06 J	4.788e-06 J	1.2e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000450134	0.00059678 J	0.00072865 J
E1668A	PCB-126	57465-28-8	mg/kg	5.97312e-05	8.10902e-05	8.7384e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	2.2678e-05 J	2.80686e-05 J	3.56382e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.0022518 J	0.0029784 J	0.00325848 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0214196 J	0.0284554 J	0.0328088 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00033236	0.000338542 J	0.000409408 J
E1668A	PCB-131	61798-70-7	mg/kg	1.40278e-05 J	1.31846e-05 J	1.6832e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	2.61922e-05 J	2.29386e-05 J	2.99512e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.00061717	0.000906806 J	0.00074574 J
E1668A	PCB-134	52704-70-8	mg/kg	1.01196e-05 J	9.0646e-06 J	1.1022e-05 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000162538	0.000125772	0.000179184 J
E1668A	PCB-136	38411-22-2	mg/kg	1.03658e-05 J	9.2438e-06 J	1.6628e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.001067388 J	0.001340828 J	0.001476398 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000454742	0.000555866 J	0.000573558 J
E1668A	PCB-141	52712-04-6	mg/kg	5.16758e-05 J	9.04822e-05	8.75744e-05 J
E1668A	PCB-142	41411-61-4	mg/kg	3.4406e-06 U	1.6796e-06 U	1.7e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	6.6876e-06 U	3.3706e-06 J	3.2974e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	3.44304e-05 J	2.8853e-05 J	4.75488e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	3.2366e-06 U	1.5796e-06 U	1.6e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00480012 J		0.0057454 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.000882024 J	0.000946358 J	0.001183856 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000152284	0.0001471636	0.0001712554 J
E1668A	PCB-150	68194-08-1	mg/kg	3.0352e-06 U	2.3688e-06 J	3.1354e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	2.8312e-06 U	1.3822e-06 U	1.712e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.037359 J	0.0455024 J	0.052516 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001187294 J	0.001196738 J	0.001265034 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000271408	0.000354734 J	0.000363802 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00226262 J	0.00302744 J	0.0033685 J
E1668A	PCB-158	74472-42-7	mg/kg	0.002247 J	0.00285516 J	0.0029785 J
E1668A	PCB-159	39635-35-3	mg/kg	7.3838e-06 J	9.5566e-06 J	1.2242e-05 J
E1668A	PCB-160	41411-62-5	mg/kg	1.27372e-05 U	6.231e-06 U	6.2974e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	2.6272e-06 U	1.2822e-06 U	5.876e-06 J
E1668A	PCB-162	39635-34-2	mg/kg	0.0001424594	0.000184537 J	0.0001465756 J
E1668A	PCB-164	74472-45-0	mg/kg	4.39878e-05 J	3.56826e-05 J	6.42016e-05 J
E1668A	PCB-165	74472-46-1	mg/kg			
E1668A	PCB-167	52663-72-6	mg/kg	0.001068538 J	0.001269286 J	0.001461504 J
E1668A	PCB-169	32774-16-6	mg/kg	3.4876e-06 J	1.4822e-06 U	4.386e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.0019697 J	0.00270074 J	0.00351192 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.000569586	0.000785638 J	0.000899002 J
E1668A	PCB-174	38411-25-5	mg/kg			
E1668A	PCB-175	40186-70-7	mg/kg	0.000246536	0.000287006 J	0.00030454 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004	NB03-CRB-COMBHEPMUS-S005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	1.41592e-05 J	1.2614e-05 J	2.2026e-05 J
E1668A	PCB-177	52663-70-4	mg/kg			
E1668A	PCB-178	52663-67-9	mg/kg		0.002242 J	
E1668A	PCB-179	52663-64-6	mg/kg	2.05616e-05 J	1.70068e-05 J	2.51182e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.01087 J	0.01438262 J	0.01669672 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg			
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.00526408 J	
E1668A	PCB-184	74472-48-3	mg/kg	4.19482e-05 J	4.28886e-05 J	5.59034e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	3.0352e-06 U	1.4822e-06 U	1.5e-06 U
E1668A	PCB-187	52663-68-0	mg/kg		0.0125158 J	
E1668A	PCB-188	74487-85-7	mg/kg	8.55644e-05	0.0001087426 J	0.0001133366 J
E1668A	PCB-189	39635-31-9	mg/kg	0.0001609732	0.0002119826 J	0.0002383586 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000716794	0.000956024 J	0.001074292 J
E1668A	PCB-191	74472-50-7	mg/kg	0.0001667682	0.000205527 J	0.0002362968 J
E1668A	PCB-192	74472-51-8	mg/kg	2.9678e-06 J	2.5822e-06 J	4.628e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.001254234 J	0.001679904 J	0.001910416 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000259466	0.000383122 J	0.00047204 J
E1668A	PCB-196	42740-50-1	mg/kg	0.001058316	0.001336418 J	0.00167129 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.0001584236 J	
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00251524 J	0.00312784 J	0.00399102 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000446296	0.0005240726 J	0.000574846 J
E1668A	PCB-202	2136-99-4	mg/kg	0.0012492 J	0.00158458 J	0.001548744 J
E1668A	PCB-203	52663-76-0	mg/kg	0.001259266 J	0.00152606 J	0.002282882 J
E1668A	PCB-204	74472-52-9	mg/kg	5.5284e-06 J	6.1226e-06 J	9.354e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	1.76238e-05 J	2.44766e-05 J	3.647e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.000791918	0.001288306 J	0.001505522 J
E1668A	PCB-207	52663-79-3	mg/kg	0.0001242866	0.0002020108	0.0002118376 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000485202	0.000737412 J	0.000806364 J
E1668A	PCB-209	2051-24-3	mg/kg	0.000564006	0.0008305766 J	0.000915406 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.181 J	0.255 J	0.289 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.215 J	0.308 J	0.352 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	7.13e-06	9.84e-06	1.08e-05 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007	NB03-CRB-COMBHEPMUS-S008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-1	2051-60-7	mg/kg	9.6448e-07 U	4.34438e-06 J	1.97584e-06 U
E1668A	PCB-2	2051-61-8	mg/kg	6.7558e-07 U	1.41094e-06 U	1.38424e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	1.063e-06 U	2.221e-06 U	2.1728e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	6.3516e-06 J	9.6832e-06 J	6.8604e-06 J
E1668A	PCB-5	16605-91-7	mg/kg	7.7188e-07 U	1.6142e-06 U	1.58082e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	6.7558e-07 U	3.99534e-06 J	1.38424e-06 U
E1668A	PCB-7	33284-50-3	mg/kg	7.7188e-07 U	1.6142e-06 U	1.58082e-06 U
E1668A	PCB-8	34883-43-7	mg/kg	1.4482e-06 U	1.18072e-05 J	7.365e-06 J
E1668A	PCB-9	34883-39-1	mg/kg	6.7558e-07 U	1.41094e-06 U	1.38424e-06 U
E1668A	PCB-10	33146-45-1	mg/kg	1.2556e-06 U	2.619e-06 U	2.573e-06 U
E1668A	PCB-11	2050-67-1	mg/kg	3.2816e-06 U	3.75864e-05 J	3.70146e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.8334e-06 U	8.8588e-06 J	7.3636e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.7188e-07 U	1.6142e-06 U	1.58082e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	0.00046694 J	0.000395592 J	0.000394724 J
E1668A	PCB-16	38444-78-9	mg/kg	3.6644e-06	5.5282e-06 J	4.4736e-06 J
E1668A	PCB-17	37680-66-3	mg/kg	8.6818e-07 U	1.584112e-05 J	1.16678e-05 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	1.69848e-05 J	2.64672e-05 J	2.4235e-05 J
E1668A	PCB-19	38444-73-4	mg/kg	2.15416e-06 J	3.7448e-06 J	2.7258e-06 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0113872 J	0.0088 J	0.00782898 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	1.87434e-05	2.3538e-05 J	1.96996e-05 J
E1668A	PCB-22	38444-85-8	mg/kg	2.41824e-05	3.6296e-05 J	2.73776e-05 J
E1668A	PCB-23	55720-44-0	mg/kg	6.7558e-07 U	1.41094e-06 U	1.38424e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.6448e-07 U	2.01738e-06 U	1.97584e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	7.7188e-07 U	1.88172e-05 J	1.8905e-05 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	1.1556e-06 U	3.02358e-05 J	2.95792e-05 J
E1668A	PCB-27	38444-76-7	mg/kg	4.1076e-06 J	7.1258e-06 J	6.2122e-06 J
E1668A	PCB-31	16606-02-3	mg/kg	8.714e-05	0.000116676 J	0.00010997 J
E1668A	PCB-32	38444-77-8	mg/kg	2.06962e-05	3.04492e-05 J	2.7524e-05 J
E1668A	PCB-34	37680-68-5	mg/kg	2.98958e-06 J	4.33334e-06 J	4.16624e-06 J
E1668A	PCB-35	37680-69-6	mg/kg	8.6818e-07 U	4.06312e-06 J	3.2412e-06 J
E1668A	PCB-36	38444-87-0	mg/kg	7.7188e-07 U	2.6178e-06 J	1.91882e-06 J
E1668A	PCB-37	38444-90-5	mg/kg	0.00118516 J	0.00116562 J	0.000856744 J
E1668A	PCB-38	53555-66-1	mg/kg	6.7558e-07 U	1.41094e-06 U	6.63624e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	1.97414e-05	1.60112e-05 J	1.48088e-05 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000101494	0.000149674 J	0.000146942 J
E1668A	PCB-41	52663-59-9	mg/kg	4.052e-06 U	8.479e-06 U	8.3084e-06 U
E1668A	PCB-42	36559-22-5	mg/kg	2.90642e-05	3.9392e-05 J	3.52898e-05 J
E1668A	PCB-43	70362-46-8	mg/kg	1.622e-06 J	1.13356e-05 J	1.1347e-05 J
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0123724 J	0.00992526 J	0.00838594 J
E1668A	PCB-45	70362-45-7	mg/kg	2.4302e-06 J	4.4398e-06 U	4.3582e-06 U
E1668A	PCB-46	41464-47-5	mg/kg	9.6448e-07 U	2.44118e-06 J	1.97584e-06 U
E1668A	PCB-48	70362-47-9	mg/kg	1.11502e-05 J	1.70144e-05 J	1.57468e-05 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	4.68152e-05 J	6.35218e-05 J	6.26974e-05 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	6.5192e-06 J	1.04598e-05 J	9.2268e-06 J
E1668A	PCB-51	68194-04-7	mg/kg	5.61e-06 J	7.7158e-06 J	7.7902e-06 J
E1668A	PCB-52	35693-99-3	mg/kg	7.4712e-05	8.71552e-05 J	9.4153e-05 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007	NB03-CRB-COMBHEPMUS-S008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-54	15968-05-5	mg/kg	1.3482e-06 U	2.8204e-06 U	2.767e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	1.1556e-06 U	1.45752e-05 J	2.04364e-05 J
E1668A	PCB-56	41464-43-1	mg/kg	3.19018e-05	5.9371e-05 J	3.96062e-05 J
E1668A	PCB-57	70424-67-8	mg/kg	3.1352e-06 J	4.3166e-06 J	4.1904e-06 J
E1668A	PCB-58	41464-49-7	mg/kg	1.3482e-06 U	3.148e-06 J	2.9516e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000878234 J	0.000712314 J	0.000641636 J
E1668A	PCB-60	33025-41-1	mg/kg	0.0019261 J	0.0020106 J	0.00178504 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0134872 J	0.01323012 J	0.01044078 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000133788	0.0001369772 J	0.0001409942 J
E1668A	PCB-64	52663-58-8	mg/kg	6.9118e-05	8.9966e-05 J	8.46524e-05 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0212374 J	0.019285 J	0.01693046 J
E1668A	PCB-67	73575-53-8	mg/kg	1.1556e-06 U	2.50692e-05 J	2.54532e-05 J
E1668A	PCB-68	73575-52-7	mg/kg	0.0001063638	9.15992e-05 J	0.0001004836 J
E1668A	PCB-72	41464-42-0	mg/kg	2.97346e-05 J	2.96034e-05 J	3.5206e-05 J
E1668A	PCB-73	74338-23-1	mg/kg	4.9362e-06 J	4.9212e-06 J	4.691e-06 J
E1668A	PCB-77	32598-13-3	mg/kg		0.001198528 J	0.00104431 J
E1668A	PCB-78	70362-49-1	mg/kg	1.5408e-06 U	3.2258e-06 U	3.1672e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	4.3371e-05 J	3.65864e-05 J	4.22556e-05 J
E1668A	PCB-80	33284-52-5	mg/kg	4.313e-06 J	4.3426e-06 J	4.1124e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	5.2096e-05	6.20456e-05 J	5.23334e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	2.7358e-06 J	1.12092e-05 J	2.9658e-06 U
E1668A	PCB-83	60145-20-2	mg/kg	2.7964e-06 U	5.8344e-06 U	5.738e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	1.42574e-05	1.74726e-05 J	1.99464e-05 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00388272 J	0.00390152 J	0.00272284 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00165394 J	0.001386512 J	0.001307748 J
E1668A	PCB-88	55215-17-3	mg/kg	2.126e-06 U	4.4398e-06 U	4.3582e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.3934e-06 J	2.619e-06 U	2.573e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.000510614 J	0.0004532336 J	0.0004895596 J
E1668A	PCB-91	68194-05-8	mg/kg	4.9654e-05 J	5.41696e-05 J	6.48632e-05 J
E1668A	PCB-92	52663-61-3	mg/kg	5.75238e-05 J	5.45072e-05 J	6.95724e-05 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000685776 J	0.00054107 J	0.000554376 J
E1668A	PCB-94	73575-55-0	mg/kg	9.0548e-06 J	1.26212e-05 J	1.40104e-05 J
E1668A	PCB-95	38379-99-6	mg/kg		0.000107804 J	0.0001487656 J
E1668A	PCB-96	73575-54-9	mg/kg	1.4482e-06 U	3.0244e-06 U	2.9658e-06 U
E1668A	PCB-98/102	PCB-98/102	mg/kg	1.50702e-05 J	1.826e-05 J	1.79856e-05 J
E1668A	PCB-99	38380-01-7	mg/kg	0.022237 J	0.01759994 J	0.01465662 J
E1668A	PCB-103	60145-21-3	mg/kg	3.0806e-06 J	3.2428e-06 J	4.1904e-06 J
E1668A	PCB-104	56558-16-8	mg/kg	1.3482e-06 U	2.8204e-06 U	2.767e-06 U
E1668A	PCB-105	32598-14-4	mg/kg	0.00686314 J	0.00646984 J	0.00587076 J
E1668A	PCB-106	70424-69-0	mg/kg	1.6408e-06 U	3.4298e-06 U	3.3586e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.001215682 J	0.00117242 J	0.001178568 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	2.05024e-05 J	2.37744e-05 J	2.789e-05 J
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.000814206 J		0.0006241898 J
E1668A	PCB-111	39635-32-0	mg/kg	4.16576e-05 J	3.00874e-05 J	3.03262e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	1.3482e-06 U	1.79756e-05 J	2.767e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.0005366582 J	0.000640886 J	0.000494818 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007	NB03-CRB-COMBHEPMUS-S008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-118	31508-00-6	mg/kg	0.034091 J	0.0310544 J	0.0267918 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000213156 J	0.00016589 J	0.0001570012 J
E1668A	PCB-121	56558-18-0	mg/kg	2.01616e-05 J	1.64212e-05 J	1.71344e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	1.1556e-06 U	2.415e-06 U	2.3742e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.00050837 J	0.000575906 J	0.00051139 J
E1668A	PCB-126	57465-28-8	mg/kg	6.82308e-05		6.52742e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	2.2689e-05 J	2.85812e-05 J	2.9079e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00233174 J	0.00232186 J	0.002029122 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.023835 J	0.0215777 J	0.01794274 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000197706 J	0.0001916552 J	0.0002352928 J
E1668A	PCB-131	61798-70-7	mg/kg	9.7008e-06 J	9.1992e-06 J	1.03396e-05 J
E1668A	PCB-132	38380-05-1	mg/kg	1.29926e-05	1.20112e-05 J	1.4381e-05 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000641794 J	0.000505662 J	0.000648238 J
E1668A	PCB-134	52704-70-8	mg/kg	3.1816e-06 U	6.6504e-06 U	7.3266e-06 J
E1668A	PCB-135/151	PCB-135/151	mg/kg	6.8862e-05	7.79796e-05 J	9.14256e-05 J
E1668A	PCB-136	38411-22-2	mg/kg	5.6488e-06 J	8.6832e-06 J	1.0715e-05 J
E1668A	PCB-137	35694-06-5	mg/kg	0.001142754 J	0.001117396 J	0.001019618 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000451644 J	0.000431984 J	0.00041521 J
E1668A	PCB-141	52712-04-6	mg/kg	4.544e-05	4.31032e-05 J	6.36136e-05 J
E1668A	PCB-142	41411-61-4	mg/kg	1.6408e-06 U	3.4298e-06 U	3.3586e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.1816e-06 U	6.6504e-06 U	6.5206e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	2.79928e-05 J	2.15572e-05 J	2.3667e-05 J
E1668A	PCB-145	74472-40-5	mg/kg	1.5408e-06 U	3.2258e-06 U	3.1672e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		0.0037584 J	0.00377858 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.000567094 J	0.0005225604 J	0.0006733012 J
E1668A	PCB-148	74472-41-6	mg/kg	0.0001120582	9.83972e-05 J	0.0001014536 J
E1668A	PCB-150	68194-08-1	mg/kg	1.6276e-06 J	3.0244e-06 U	2.9658e-06 U
E1668A	PCB-152	68194-09-2	mg/kg	1.3482e-06 U	2.8204e-06 U	2.767e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.041335 J	0.0328532 J	0.02900378 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000872996 J	0.000812812 J	0.000812674 J
E1668A	PCB-155	33979-03-2	mg/kg	0.000226634 J	0.0001741868 J	0.0001935522 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00259916 J	0.00260964 J	0.00253475 J
E1668A	PCB-158	74472-42-7	mg/kg	0.00245508 J	0.00238054 J	0.002015382 J
E1668A	PCB-159	39635-35-3	mg/kg	8.4462e-06 J	7.1832e-06 J	9.111e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.078e-06 U	1.27148e-05 U	1.24626e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	1.2556e-06 U	2.619e-06 U	2.573e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.0001121976 J	0.0001199994 J	0.000122523 J
E1668A	PCB-164	74472-45-0	mg/kg	2.56682e-05 J	2.40012e-05 J	3.3313e-05 J
E1668A	PCB-165	74472-46-1	mg/kg			
E1668A	PCB-167	52663-72-6	mg/kg	0.001141136 J	0.001078184 J	0.001054982 J
E1668A	PCB-169	32774-16-6	mg/kg	1.4482e-06 U	4.8392e-06 J	2.9658e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00244852 J	0.002510842 J	0.002095914 J
E1668A	PCB-171/173	PCB-171/173	mg/kg			
E1668A	PCB-172	52663-74-8	mg/kg	0.000702364 J	0.000621858 J	0.000547894 J
E1668A	PCB-174	38411-25-5	mg/kg		3.88716e-05 J	4.36972e-05 J
E1668A	PCB-175	40186-70-7	mg/kg		0.0001986352 J	0.0001911136 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007	NB03-CRB-COMBHEPMUS-S008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1668A	PCB-176	52663-65-7	mg/kg	9.074e-06 J	9.2452e-06 J	1.12584e-05 J
E1668A	PCB-177	52663-70-4	mg/kg		0.00042263 J	
E1668A	PCB-178	52663-67-9	mg/kg	0.00181154 J	0.001390282 J	0.00143359 J
E1668A	PCB-179	52663-64-6	mg/kg	7.7702e-06 J	9.9392e-06 J	1.2959e-05 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0135149 J	0.01288444 J	0.01019352 J
E1668A	PCB-181	74472-47-2	mg/kg			
E1668A	PCB-182	60145-23-5	mg/kg		4.73288e-05 J	
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00435186 J		0.004076742 J
E1668A	PCB-184	74472-48-3	mg/kg	3.37348e-05 J	2.95092e-05 J	3.6359e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	1.4482e-06 U	3.0244e-06 U	2.9658e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			
E1668A	PCB-188	74487-85-7	mg/kg	8.25298e-05	6.69422e-05 J	7.45222e-05 J
E1668A	PCB-189	39635-31-9	mg/kg	0.0001841996 J	0.000179307 J	0.0001907836 J
E1668A	PCB-190	41411-64-7	mg/kg	0.000797276 J	0.000784962 J	0.00061392 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000192265 J	0.0001964364 J	0.000160186 J
E1668A	PCB-192	74472-51-8	mg/kg	1.2556e-06 U	2.619e-06 U	2.573e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.001613942 J	0.001582234 J	0.001134936 J
E1668A	PCB-195	52663-78-2	mg/kg	0.00033573 J	0.000323554 J	7.8436e-06 J
E1668A	PCB-196	42740-50-1	mg/kg	0.001418626 J	0.001268226 J	2.16166e-05 J
E1668A	PCB-197/200	PCB-197/200	mg/kg		0.0001227726 J	0.000224071 J
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00308028 J	0.002657364 J	0.003603736 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00044119 J	0.000365218 J	0.000662748 J
E1668A	PCB-202	2136-99-4	mg/kg	0.001220344 J	0.001054098 J	0.001105038 J
E1668A	PCB-203	52663-76-0	mg/kg	0.001652488 J	0.001514496 J	2.22524e-05 J
E1668A	PCB-204	74472-52-9	mg/kg	6.212e-06 J	5.6918e-06 J	1.10442e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	2.26902e-05 J	2.00492e-05 J	1.9507e-05 J
E1668A	PCB-206	40186-72-9	mg/kg	0.001095906 J	0.001027586 J	0.000908238 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000173024	0.0001547338 J	0.000146926 J
E1668A	PCB-208	52663-77-1	mg/kg	0.000692758 J	0.000594284 J	0.000509402 J
E1668A	PCB-209	2051-24-3	mg/kg	0.000851856 J	0.000741122 J	0.000713006 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.206 J	0.18 J	0.159 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.252 J	0.224 J	0.197 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	8.23e-06	1.56e-06 J	7.8e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02	NB03FBL-COMP03	NB03FBL-COMP04
			Sample Date		12/10/15	12/10/15	12/10/15	12/01/15
			Sample Type	Calc	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	1.366126e-05 J	2.61e-05 J	2.14e-05 J	2.17e-05 J	1.29e-05
E1668A	PCB-2	2051-61-8	mg/kg	3.61126e-06 J	6.94e-07 U	6.8e-07 U	8.94e-07 J	7.17e-07 J
E1668A	PCB-3	2051-62-9	mg/kg	9.264e-06 J	1.09e-06 U	1.07e-06 U	1.08e-06 U	1.06e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	3.1382e-05 J	0.000463 J	0.000306 J	0.00031 J	0.000162
E1668A	PCB-5	16605-91-7	mg/kg	2.13306e-06 U	3.04e-06 J	7.77e-07 U	1.87e-06 J	7.73e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	1.86666e-06 U	0.000118	2.87e-05	3.17e-05	1.84e-05
E1668A	PCB-7	33284-50-3	mg/kg	2.22704e-06 J	8.86e-06	4.67e-06	4.11e-06	2.38e-06
E1668A	PCB-8	34883-43-7	mg/kg	4.115e-05 J	0.000169 J	8.92e-05 J	9.69e-05 J	5.54e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	3.29926e-06 J	2e-05	8.6e-06	8.73e-06	4.89e-06
E1668A	PCB-10	33146-45-1	mg/kg	3.4658e-06 U	5.51e-05	3.64e-05	3.88e-05	1.77e-05
E1668A	PCB-11	2050-67-1	mg/kg	0.000155136 J	1.61e-05	1.73e-05	2.11e-05	3.29e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.13928e-05 J	4.28e-06 J	3.02e-06 J	3.58e-06 J	1.84e-06 U
E1668A	PCB-14	34883-41-5	mg/kg	2.13306e-06 U	7.93e-07 U	7.77e-07 U	7.82e-07 U	7.73e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	0.000946328 J	1.59e-06 U	1.55e-06 U	1.56e-06 U	1.55e-06 U
E1668A	PCB-16	38444-78-9	mg/kg	1.32202e-05 J	0.000503 J	0.000187	0.000203	0.000104
E1668A	PCB-17	37680-66-3	mg/kg	4.174526e-05 J	0.000607 J	0.000286	0.000308 J	0.000165
E1668A	PCB-18/30	PCB-18/30	mg/kg	8.7504e-05 J	0.00193 J	0.000531	0.000565	0.000288 J
E1668A	PCB-19	38444-73-4	mg/kg	1.036726e-05 J	0.000356 J	0.000183	0.000192	0.000102
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.01515466 J	0.0031 J	0.000956 J	0.000987 J	0.000455
E1668A	PCB-21/33	PCB-21/33	mg/kg	5.8449e-05 J	0.000404	0.000128	0.000129	7e-05
E1668A	PCB-22	38444-85-8	mg/kg	0.0001030736 J	0.000599 J	0.000161 J	0.000172 J	8.46e-05
E1668A	PCB-23	55720-44-0	mg/kg	1.86666e-06 U	1.82e-06 J	6.8e-07 U	6.84e-07 U	6.76e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	2.66586e-06 U	9.91e-07 U	9.71e-07 U	9.78e-07 U	9.66e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	9.90692e-05 J	0.000509 J	8.11e-05	7.68e-05	3.82e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.0001933026 J	0.000866 J	2e-04	0.000202	0.000101
E1668A	PCB-27	38444-76-7	mg/kg	1.9758e-05 J	0.000281	9.9e-05	0.000109	5.59e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.000474082 J	0.0019 J	0.000455 J	0.000493 J	0.000231
E1668A	PCB-32	38444-77-8	mg/kg	0.0001015862 J	0.000757 J	0.000262 J	0.000283 J	0.00016
E1668A	PCB-34	37680-68-5	mg/kg	1.622126e-05 J	2.87e-05	7.76e-06	7.56e-06	4.23e-06
E1668A	PCB-35	37680-69-6	mg/kg	9.68726e-06 J	8.92e-07 U	8.74e-07 U	8.8e-07 U	8.7e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.29926e-06 J	7.93e-07 U	7.77e-07 U	7.82e-07 U	7.73e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.001951452 J	4.19e-05	1.75e-05	2.25e-05	9.69e-06
E1668A	PCB-38	53555-66-1	mg/kg	1.86666e-06 U	6.94e-07 U	6.8e-07 U	8.92e-07 J	6.76e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	3.9849e-05 J	1.08e-05	3.48e-06	3.17e-06	1.54e-06 J
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00044343 J	0.00218 J	0.000571	0.000537	0.000286
E1668A	PCB-41	52663-59-9	mg/kg	1.1194e-05 U	8.37e-05	2.62e-05	2.82e-05	1.93e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.0001453866 J	0.00165 J	0.000454	0.000399	0.000211
E1668A	PCB-43	70362-46-8	mg/kg	3.05344e-05 J	0.000182	5.43e-05	5.32e-05	3.12e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0159807 J	0.00591 J	0.00184 J	0.00166	0.000872
E1668A	PCB-45	70362-45-7	mg/kg	5.866e-06 U	0.000488	0.000154	0.000143	7.56e-05
E1668A	PCB-46	41464-47-5	mg/kg	5.15926e-06 J	0.000183	5.89e-05	6.19e-05	3.16e-05
E1668A	PCB-48	70362-47-9	mg/kg	5.16338e-05 J	0.000657 J	0.000148	0.000132	8.27e-05
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.000306124 J	0.00476 J	0.00143 J	0.00124 J	0.000677
E1668A	PCB-50/53	PCB-50/53	mg/kg	2.811e-05 J	0.000944	0.000249	0.000248	0.000124
E1668A	PCB-51	68194-04-7	mg/kg	2.2272e-05 J	0.000413	0.000127	0.000139	7.08e-05
E1668A	PCB-52	35693-99-3	mg/kg	0.00038071 J	0.00667 J	0.00215 J	0.00202 J	0.000998 J

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02	NB03FBL-COMP03	NB03FBL-COMP04
			Sample Date		12/10/15	12/10/15	12/10/15	12/01/15
			Sample Type	Calc	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	3.74e-06 U	4.69e-05	1.81e-05	2.03e-05	9.7e-06
E1668A	PCB-55	74338-24-2	mg/kg	3.1994e-06 U	1.19e-06 U	1.17e-06 U	1.17e-06 U	1.16e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.0001673884 J	0.00118 J	0.000274	0.00025	0.000136
E1668A	PCB-57	70424-67-8	mg/kg	2.4994e-05 J	2.33e-05	9.44e-06	7.61e-06	5.36e-06
E1668A	PCB-58	41464-49-7	mg/kg	8.264e-06 J	2.82e-05	1.04e-05	9.68e-06	5.45e-06
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.001148912 J	0.000501	0.000154	0.000145	7.97e-05
E1668A	PCB-60	33025-41-1	mg/kg	0.00259696 J	0.000434	0.000183	0.000159	8.56e-05
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.01711592 J	0.00571 J	0.00185	0.00163	0.000877
E1668A	PCB-63	74472-34-7	mg/kg	0.0003580522 J	0.000194	8.88e-05	7.79e-05	4.33e-05
E1668A	PCB-64	52663-58-8	mg/kg	0.000373684 J	0.0022 J	0.000598 J	0.000515 J	0.000269
E1668A	PCB-66	32598-10-0	mg/kg	0.02533788 J	0.00351 J	0.00139 J	0.00117 J	0.000691 J
E1668A	PCB-67	73575-53-8	mg/kg	7.73324e-05 J	0.000118	3.16e-05	2.97e-05	1.61e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.0002407124 J	6.6e-05	4.31e-05	3.52e-05	1.99e-05
E1668A	PCB-72	41464-42-0	mg/kg	0.0001445224 J	9.66e-05	5.45e-05	4.97e-05	2.79e-05
E1668A	PCB-73	74338-23-1	mg/kg	1.0422e-05 J	1.39e-06 U	1.36e-06 U	1.37e-06 U	4.83e-06 J
E1668A	PCB-77	32598-13-3	mg/kg		0.000166	5.35e-05	6.28e-05	2.02e-05
E1668A	PCB-78	70362-49-1	mg/kg	4.278e-06 U	1.59e-06 U	1.55e-06 U	1.56e-06 U	1.55e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	7.0156e-05 J	3.49e-05	2.19e-05	1.67e-05	1.07e-05
E1668A	PCB-80	33284-52-5	mg/kg	7.21e-06 J	1.09e-06 U	1.07e-06 U	1.08e-06 U	1.06e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	8.05994e-05 J	7.3e-06	2.19e-06 J	1.76e-06 U	1.74e-06 U
E1668A	PCB-82	52663-62-4	mg/kg	3.996e-06 U	0.000455	0.000182	0.000141	8.1e-05
E1668A	PCB-83	60145-20-2	mg/kg	7.736e-06 U	0.00024	0.000128	9.13e-05	6.67e-05
E1668A	PCB-84	52663-60-2	mg/kg	5.7234e-05 J	0.00109 J	0.00036	0.000298	0.000153
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00534736 J	0.00107	0.000677	0.000482	0.000302
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.002379318 J	0.00333	0.0017	0.00126	0.00079
E1668A	PCB-88	55215-17-3	mg/kg	5.866e-06 U	2.18e-06 U	2.14e-06 U	2.15e-06 U	2.13e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	3.4658e-06 U	4.33e-05	1.15e-05	9.92e-06	5.74e-06
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.001519278 J	0.00629 J	0.00397 J	0.00282 J	0.00185 J
E1668A	PCB-91	68194-05-8	mg/kg	0.0002330204 J	0.00114 J	0.00047	0.000364	0.000216
E1668A	PCB-92	52663-61-3	mg/kg	0.000226642 J	1.29e-06 U	0.000799 J	0.000649 J	0.000403
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00095634 J	0.000267	0.000122	0.000105	7.3e-05
E1668A	PCB-94	73575-55-0	mg/kg	3.4658e-06 U	5.63e-05	1.77e-05	1.69e-05	8.8e-06
E1668A	PCB-95	38379-99-6	mg/kg	0.0004372906 J	0.00369 J	0.00149 J	0.0012 J	0.000761 J
E1668A	PCB-96	73575-54-9	mg/kg	3.996e-06 U	4.75e-05	1.42e-05	1.47e-06 U	6.07e-06
E1668A	PCB-98/102	PCB-98/102	mg/kg	4.59906e-05 J	0.000267	8.52e-05	7.41e-05	4.29e-05
E1668A	PCB-99	38380-01-7	mg/kg	0.02556414 J	0.00462 J	0.00362 J	0.00274 J	0.00177 J
E1668A	PCB-103	60145-21-3	mg/kg	1.228e-05 J	0.00015	8.22e-05	6.6e-05	4.46e-05
E1668A	PCB-104	56558-16-8	mg/kg	3.74e-06 U	1.46e-05	4.81e-06 J	4.97e-06	2.57e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.00861196 J	0.00129 J	0.00104 J	0.000774 J	0.000435
E1668A	PCB-106	70424-69-0	mg/kg	4.534e-06 U	1.68e-06 U	1.65e-06 U	1.66e-06 U	1.64e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00209882 J	0.00045	0.00053	0.000408	0.000249
E1668A	PCB-108/124	PCB-108/124	mg/kg	8.8986e-05 J	0.000142	8.63e-05	6.78e-05	3.87e-05
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00160924 J		0.0028 J	0.00208 J	3.77e-06 U
E1668A	PCB-111	39635-32-0	mg/kg	5.6675e-05 J	1.7e-05	2.31e-05	1.97e-05	1.34e-05
E1668A	PCB-112	74472-36-9	mg/kg	2.7816e-05 J	1.39e-06 U	1.36e-06 U	1.37e-06 U	1.35e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000799768 J	8.03e-05	5.97e-05	4.41e-05	2.44e-05

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02	NB03FBL-COMP03	NB03FBL-COMP04
			Sample Date		12/10/15	12/10/15	12/10/15	12/01/15
			Sample Type	Calc	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.03919706 J	0.00491 J	0.00465 J	0.00332 J	0.00189 J
E1668A	PCB-120	68194-12-7	mg/kg	0.0002837352 J	7.16e-05	9.9e-05	7.19e-05	5.34e-05
E1668A	PCB-121	56558-18-0	mg/kg	2.9228e-05 J	7.32e-06	5.98e-06	3.14e-06 J	3.66e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	3.1994e-06 U	3.52e-05	1.24e-05	9.56e-06	1.16e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000756244 J	8.73e-05	6.81e-05	5.02e-05	2.78e-05
E1668A	PCB-126	57465-28-8	mg/kg	0.0001051672 J	9.41e-06	1.42e-05	8.59e-06	4.53e-06 J
E1668A	PCB-127	39635-33-1	mg/kg	3.3536e-05 J	4.94e-06 J	1.36e-06 U	1.37e-06 U	2.33e-06 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00343476 J	0.00072	0.000803	0.000595	0.000374
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0300507 J	0.00693 J	0.00786 J	0.00615 J	0.00391 J
E1668A	PCB-130	52663-66-8	mg/kg	0.0004553796 J	0.000376	0.000396	0.000339	0.000209
E1668A	PCB-131	61798-70-7	mg/kg	2.536e-05 J	4.25e-05	2.99e-05	2.23e-05	1.44e-05
E1668A	PCB-132	38380-05-1	mg/kg		0.0012 J	0.000752 J	0.000594 J	0.000358
E1668A	PCB-133	35694-04-3	mg/kg	0.00096715 J	0.000229	0.00026	0.000259	0.000153
E1668A	PCB-134	52704-70-8	mg/kg		0.000256	0.000192	0.000163	9.72e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000244424 J	0.0023 J	0.00189 J	0.00158 J	0.000814
E1668A	PCB-136	38411-22-2	mg/kg	2.89142e-05 J	0.000544	0.000329	0.000264	0.000132
E1668A	PCB-137	35694-06-5	mg/kg	0.001490978 J	0.000221	0.00019	0.000138	9.94e-05
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000665634 J	0.000116	0.000108	8.63e-05	5.85e-05
E1668A	PCB-141	52712-04-6	mg/kg	0.000158298 J	0.000659 J	0.000433 J	0.000376 J	0.000253
E1668A	PCB-142	41411-61-4	mg/kg	4.534e-06 U	R	1.65e-06 U	1.66e-06 U	1.64e-06 U
E1668A	PCB-143	68194-15-0	mg/kg		3.27e-06 U	3.2e-06 U	3.23e-06 U	3.19e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	5.97126e-05 J	0.000231	0.000172	0.000125	7.06e-05
E1668A	PCB-145	74472-40-5	mg/kg	4.278e-06 U	2.32e-06 J	1.55e-06 U	1.56e-06 U	1.55e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0063177 J		0.00204 J	0.00156 J	0.00109 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00181219 J	0.00443 J	0.00337 J	0.0028 J	0.00177 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000145336 J	8e-05	8.74e-05	6.94e-05	4.86e-05
E1668A	PCB-150	68194-08-1	mg/kg	3.996e-06 U	5.41e-05	4.05e-05	4.73e-05	2.35e-05
E1668A	PCB-152	68194-09-2	mg/kg	3.74e-06 U	6.9e-06	2.97e-06 J	3.45e-06 J	1.54e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.04632684 J	0.00806 J	0.00942 J	0.00682 J	0.0048 J
E1668A	PCB-154	60145-22-4	mg/kg	0.001173566 J	0.000467	0.000469	0.000366	0.000242
E1668A	PCB-155	33979-03-2	mg/kg	0.0003302836 J	8.07e-05	6.33e-05	5.99e-05	3.81e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00372076 J	0.000455	0.000501	0.000388	0.000219
E1668A	PCB-158	74472-42-7	mg/kg	0.003270102 J	0.000431	0.000373	0.000277	0.000184
E1668A	PCB-159	39635-35-3	mg/kg	9.512e-06 J	1.39e-06 U	1.36e-06 U	1.37e-06 U	1.35e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	1.67966e-05 U	6.24e-06 U	6.12e-06 U	6.16e-06 U	6.09e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	3.4658e-06 U	R	1.26e-06 U	1.27e-06 U	1.26e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.0001864988 J	6.01e-05	6.68e-05	6.32e-05	4.41e-05
E1668A	PCB-164	74472-45-0	mg/kg	8.53036e-05 J	0.000283	0.000182	0.000155	9.84e-05
E1668A	PCB-165	74472-46-1	mg/kg	5.0882e-05 J	R	3.01e-05	2.57e-05	1.79e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.001625438 J	0.000217	0.00025	0.000195	R
E1668A	PCB-169	32774-16-6	mg/kg	3.996e-06 U	1.49e-06 U	1.46e-06 U	1.47e-06 U	1.45e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.003180928 J	0.000966 J	0.00099 J	0.000938 J	0.000568
E1668A	PCB-171/173	PCB-171/173	mg/kg		R	0.000369	0.000335	0.000218
E1668A	PCB-172	52663-74-8	mg/kg	0.000914346 J	0.000257	0.000243	0.000277	0.000154
E1668A	PCB-174	38411-25-5	mg/kg			0.000478	0.000506	0.000285
E1668A	PCB-175	40186-70-7	mg/kg	0.0003183148 J	R	1e-04	0.000102	5.88e-05

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02	NB03FBL-COMP03	NB03FBL-COMP04
			Sample Date		12/10/15	12/10/15	12/10/15	12/01/15
			Sample Type	Calc	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	2.7928e-05 J	0.000132	0.000117	0.00011	5.92e-05
E1668A	PCB-177	52663-70-4	mg/kg			0.000894 J	0.000976 J	0.000513
E1668A	PCB-178	52663-67-9	mg/kg	0.00235548 J		0.00082 J	0.000966 J	0.000477
E1668A	PCB-179	52663-64-6	mg/kg	3.4316e-05 J	0.000542	0.000493	0.000485	0.000254
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.01599162 J	0.00301 J	0.00292 J	0.00286 J	0.00174 J
E1668A	PCB-181	74472-47-2	mg/kg		R	1e-05	9.59e-06	6.76e-06
E1668A	PCB-182	60145-23-5	mg/kg		R	3.11e-05	3.68e-05	2.4e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg			0.00124 J	0.00118 J	0.000745
E1668A	PCB-184	74472-48-3	mg/kg	5.0956e-05 J	2.19e-05	2.01e-05	1.64e-05	1.46e-05
E1668A	PCB-186	74472-49-4	mg/kg	3.996e-06 U	1.49e-06 U	1.46e-06 U	1.47e-06 U	1.45e-06 U
E1668A	PCB-187	52663-68-0	mg/kg			0.00479 J	0.00526 J	0.00253 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000128284 J	0.000117	0.000122	0.000186	8.39e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.0002464108 J	4.27e-05	4.49e-05	4.56e-05	2.4e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.001033418 J	0.000209	0.000201	0.000191	0.000117
E1668A	PCB-191	74472-50-7	mg/kg	0.0002458464 J	4.47e-05	4.24e-05	4.15e-05	2.64e-05
E1668A	PCB-192	74472-51-8	mg/kg	3.4658e-06 U	1.29e-06 U	1.26e-06 U	1.27e-06 U	1.26e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.002199974 J	0.000616	0.000614	0.000972 J	0.00034
E1668A	PCB-195	52663-78-2	mg/kg	0.0004131432 J	0.00015	0.000158	0.000184	9.63e-05
E1668A	PCB-196	42740-50-1	mg/kg	0.00163868 J	0.000502	0.000493	0.000797	0.000296 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000199742 J	0.00014	0.000129	0.000169	9.26e-05
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00363018 J	0.00178	0.00155	0.0032 J	0.000963
E1668A	PCB-201	40186-71-8	mg/kg	0.00061097 J	0.000329	0.000329	0.000452	0.000242
E1668A	PCB-202	2136-99-4	mg/kg	0.001840162 J	0.0011 J	0.00108 J	0.00194 J	0.000632
E1668A	PCB-203	52663-76-0	mg/kg	0.0019477 J	0.000908 J	0.000764	0.0014 J	0.000435
E1668A	PCB-204	74472-52-9	mg/kg	8.288e-06 J	4.42e-06 J	3.67e-06 J	4e-06 J	4.3e-06 J
E1668A	PCB-205	74472-53-0	mg/kg	3.023e-05 J	2.62e-05	2.68e-05	2.79e-05	1.75e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.001435076 J	0.00168 J	0.00134 J	0.00313 J	0.000991 J
E1668A	PCB-207	52663-79-3	mg/kg	0.0002330832 J	0.000199	0.000166	0.000281	0.000141
E1668A	PCB-208	52663-77-1	mg/kg	0.000857506 J	0.000836	0.000714	0.00152 J	0.000569
E1668A	PCB-209	2051-24-3	mg/kg	0.001018326 J	0.000842	0.000723	0.00113 J	0.000669
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.263 J	0.117 J	0.0849 J	0.0807 J	0.0432 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.319 J	0.124 J	0.0916 J	0.0856 J	0.0458 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.22e-05 J	1.18e-06	1.63e-06	1.02e-06	5.38e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471	NB03FBLC475	NB03FBLC476
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-1	2051-60-7	mg/kg	1.64e-05	2.39e-05	4.39e-05	2.33e-05	7.2e-06	2.1e-05
E1668A	PCB-2	2051-61-8	mg/kg	9.6e-07 J	7.19e-07 J	1.08e-06 J	8.08e-07 J	6.99e-07 U	6.85e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	1.09e-06 U	1.94e-06 J	2.51e-06 J	2.05e-06 J	1.1e-06 U	1.44e-06 J
E1668A	PCB-4	13029-08-8	mg/kg	0.000246	0.000249 J	0.000433 J	0.000231 J	9.6e-05 J	4e-04 J
E1668A	PCB-5	16605-91-7	mg/kg	1.5e-06 J	2.08e-06 J	2.93e-06 J	1.62e-06 J	7.99e-07 U	1.98e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	2.96e-05	3.94e-05 J	5.6e-05 J	2.79e-05 J	8.73e-06 J	3.93e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	7.94e-07 U	4.9e-06	1.28e-05	5.18e-06	1.94e-06 J	6.73e-06
E1668A	PCB-8	34883-43-7	mg/kg	8.77e-05 J	9.87e-05 J	0.000148 J	8.01e-05 J	3.6e-05 J	0.000114 J
E1668A	PCB-9	34883-39-1	mg/kg	8.29e-06	9.64e-06	1.36e-05	7.48e-06	3.06e-06	1.14e-05
E1668A	PCB-10	33146-45-1	mg/kg	2.48e-05	2.87e-05	4.8e-05	2.52e-05	1.11e-05	4.37e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.37e-06 U	3.36e-06 U	3.25e-06 U	3.39e-06 U	3.4e-06 U	3.33e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.28e-06 J	4.64e-06 J	6.81e-06	3.54e-06 J	1.9e-06 U	2.86e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.94e-07 U	1.98e-06 U	1.91e-06 U	1.99e-06 U	7.99e-07 U	7.83e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	1.59e-06 U	6.75e-06	1.22e-05	5.86e-06	4.18e-06 J	8.18e-06
E1668A	PCB-16	38444-78-9	mg/kg	0.000184	0.00016 J	0.000209 J	9.33e-05 J	4.52e-05 J	0.000263 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000302 J	0.000212 J	0.00035 J	0.000166 J	9.94e-05 J	0.000448 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000608 J	0.000528 J	0.000628 J	3e-04 J	0.000157 J	0.000753 J
E1668A	PCB-19	38444-73-4	mg/kg	0.00019	0.00016	0.000248	0.000136	7.88e-05	0.000283
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00135 J	0.00107 J	0.00115 J	0.000519 J	0.000369 J	0.00128 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000152	0.000145	0.000183	8.59e-05	4.2e-05	0.00018
E1668A	PCB-22	38444-85-8	mg/kg	0.000211	0.000201 J	0.000209 J	0.000102 J	6.32e-05 J	0.000229 J
E1668A	PCB-23	55720-44-0	mg/kg	9.71e-07 J	7.05e-07 J	9.58e-07 J	6.97e-07 U	6.99e-07 U	9.51e-07 J
E1668A	PCB-24	55702-45-9	mg/kg	9.92e-07 U	9.88e-07 U	6.8e-06	3.39e-06	9.99e-07 U	9.78e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000105	0.000157	0.000125	5.12e-05	2.68e-05	0.000108
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000289	0.000287	0.000274	0.000125	8.47e-05	0.000273
E1668A	PCB-27	38444-76-7	mg/kg	0.000114	8.56e-05	0.000131	5.75e-05	3.12e-05	0.00015
E1668A	PCB-31	16606-02-3	mg/kg	0.000627 J	0.000623 J	0.000653 J	0.000285 J	0.000166 J	6e-04 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000357 J	0.000251 J	0.000342 J	0.000174 J	0.000145 J	0.000418 J
E1668A	PCB-34	37680-68-5	mg/kg	1.19e-05	9.86e-06	1.09e-05	4.68e-06	3.21e-06	1.1e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.93e-07 U	8.89e-07 U	8.61e-07 U	8.96e-07 U	8.99e-07 U	8.81e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.94e-07 U	7.91e-07 U	7.66e-07 U	7.97e-07 U	1.4e-05	7.83e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	1.76e-05	4.31e-05	4.67e-05	1.94e-05	7.46e-06	2.37e-05
E1668A	PCB-38	53555-66-1	mg/kg	6.94e-07 U	6.38e-06	6.53e-06	2.56e-06	8.72e-07 J	1.77e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	4.29e-06	8.22e-06	8.47e-06	7.97e-07 U	8.92e-07 J	3.96e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000801	0.000564	0.000671	0.000227	0.000257	0.000777
E1668A	PCB-41	52663-59-9	mg/kg	4.15e-05	2.78e-05	4.29e-05	1.77e-05	1.04e-05	4.38e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.000821 J	0.00048	0.000537	0.000196	0.000189	0.000635 J
E1668A	PCB-43	70362-46-8	mg/kg	8.41e-05	5.24e-05	6.45e-05	2.3e-05	2.2e-05	7.78e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00334 J	0.0018 J	0.00207 J	0.000769	9e-04	0.00247 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000183	0.000148	0.000152	6.53e-05	R	0.000207
E1668A	PCB-46	41464-47-5	mg/kg	6.86e-05	5.44e-05	6.58e-05	2.82e-05	2.32e-05	9.08e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000207	0.000159	0.000172	6.29e-05	4.06e-05	0.000203
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00281 J	0.00147 J	0.00179 J	0.000584	0.000755	0.00186 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000328	0.000244	0.000272	0.000103	0.000113	0.000354
E1668A	PCB-51	68194-04-7	mg/kg	0.000193	0.000109	0.000143	6.28e-05	7.14e-05	0.00022
E1668A	PCB-52	35693-99-3	mg/kg	0.00388 J	0.0022 J	0.00246 J	0.000871 J	0.000968 J	0.00296 J

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471	NB03FBLC475	NB03FBLC476
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-54	15968-05-5	mg/kg	2.29e-05	1.53e-05	1.92e-05	1.1e-05	1.25e-05	2.81e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.19e-06 U	1.01e-05	9.51e-06	4.95e-06 J	1.2e-06 U	1.17e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000439	0.000447	0.000434	0.000167	8.73e-05	0.000366
E1668A	PCB-57	70424-67-8	mg/kg	1.7e-05	1.54e-05	2.14e-05	5.19e-06	2.92e-05	1.34e-05
E1668A	PCB-58	41464-49-7	mg/kg	1.95e-05	1.82e-05	2.04e-05	6.17e-06	5.62e-06	1.65e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000299	0.000152	0.000182	6.47e-05	8.47e-05	0.000221
E1668A	PCB-60	33025-41-1	mg/kg	0.000306	0.000194	0.000252	8.47e-05	7.99e-05	0.000251
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00335 J	0.00233	0.00282 J	0.000956	0.000685	0.00249 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000165	0.000101	0.00014	4.55e-05	3.82e-05	0.000126
E1668A	PCB-64	52663-58-8	mg/kg	0.00114 J	0.000622 J	0.000695 J	0.000247	0.000306	0.000816 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00271 J	0.00164 J	0.00217 J	0.000691 J	0.00057	0.00192 J
E1668A	PCB-67	73575-53-8	mg/kg	5.26e-05	5.01e-05	5.31e-05	2.19e-05	1.25e-05	4.37e-05
E1668A	PCB-68	73575-52-7	mg/kg	7.28e-05	5.2e-05	7.39e-05	2.48e-05	2.05e-05	5.92e-05
E1668A	PCB-72	41464-42-0	mg/kg	9.51e-05	6.88e-05	9.87e-05	3.24e-05	2.93e-05	8.15e-05
E1668A	PCB-73	74338-23-1	mg/kg	1.67e-05	8.05e-06	1.01e-05	3.37e-06 J	5.05e-06	1.12e-05
E1668A	PCB-77	32598-13-3	mg/kg	5.1e-05	8.32e-05	8.82e-05	3.44e-05	1.41e-05	8.15e-05
E1668A	PCB-78	70362-49-1	mg/kg	1.59e-06 U	1.58e-06 U	1.53e-06 U	1.59e-06 U	1.6e-06 U	1.57e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	3.49e-05	4.81e-05	5.61e-05	2.29e-05	1.09e-05	3.02e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.09e-06 U	1.09e-06 U	1.88e-06 J	1.1e-06 U	1.1e-06 U	1.08e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	3.31e-06 J	3.4e-06 J	1.72e-06 U	1.79e-06 U	R	4.13e-06 J
E1668A	PCB-82	52663-62-4	mg/kg	0.000319	0.000177	0.000229	7.99e-05	0.000103	0.00023
E1668A	PCB-83	60145-20-2	mg/kg	0.000231	0.000133	0.000178	5.92e-05	8.6e-05	0.000146
E1668A	PCB-84	52663-60-2	mg/kg	0.000554	0.000322	0.000408	0.000121	0.000185	0.000432
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000995	0.000577	0.000854	0.000294	4e-04	0.000828
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00274	0.00151	0.00219	0.000714	0.00102	0.00211
E1668A	PCB-88	55215-17-3	mg/kg	2.18e-06 U	2.17e-06 U	2.11e-06 U	2.19e-06 U	2.2e-06 U	2.15e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.49e-05	1.06e-05	1.23e-05	4.17e-06 J	5.02e-06	1.53e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00586 J	0.0033 J	0.00504 J	0.00162 J	0.00256 J	0.00491 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000769 J	0.000409	0.000578 J	0.000175	0.000385	0.00064 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00127 J	0.000676 J	0.00101 J	0.000343	0.00055	0.00107 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000207	0.000101	0.000136	9.42e-05	0.000115	0.000185
E1668A	PCB-94	73575-55-0	mg/kg	2.89e-05	1.78e-05	2.17e-05	6.81e-06	9.76e-06	2.36e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00281 J	0.00154 J	0.00204 J	0.000621 J	0.000801 J	0.00187 J
E1668A	PCB-96	73575-54-9	mg/kg	1.76e-05	1.13e-05	1.41e-05	4.91e-06 J	6.97e-06	1.76e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000123	7.45e-05	0.000101	2.9e-05	5.95e-05	0.000116
E1668A	PCB-99	38380-01-7	mg/kg	0.00481 J	0.00295 J	0.00475 J	0.00166 J	0.0023 J	0.0045 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000131	8.05e-05	0.000117	4.51e-05	7.28e-05	0.000111
E1668A	PCB-104	56558-16-8	mg/kg	6.92e-06	4.31e-06 J	5.32e-06	4.04e-06 J	1.4e-06 U	6.93e-06
E1668A	PCB-105	32598-14-4	mg/kg	0.00122 J	0.000937 J	0.00137 J	0.000534	0.000498	0.00135 J
E1668A	PCB-106	70424-69-0	mg/kg	1.69e-06 U	1.68e-06 U	1.63e-06 U	1.69e-06 U	1.7e-06 U	1.66e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000649 J	0.000587	0.00088 J	0.000344	0.000275	0.000752 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000102	9.69e-05	0.000131	4.92e-05	4.04e-05	0.000112
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00462 J	0.0026 J	0.00365 J	0.00111	0.00191 J	0.00326 J
E1668A	PCB-111	39635-32-0	mg/kg	2.94e-05	2.39e-05	3.34e-05	1.65e-05	1.65e-05	3.2e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.39e-06 U	1.38e-06 U	1.34e-06 U	1.39e-06 U	1.4e-06 U	1.37e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	7.23e-05	5.06e-05	7.17e-05	2.96e-05	3.02e-05	8.24e-05

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471	NB03FBLC475	NB03FBLC476
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-118	31508-00-6	mg/kg	0.00503 J	0.0039 J	0.00596 J	0.00228 J	0.00204 J	0.00591 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000118	9.67e-05	0.000145	6.88e-05	6.79e-05	0.000132
E1668A	PCB-121	56558-18-0	mg/kg	8.93e-06	5.5e-06	8.25e-06	4.36e-06 J	4.98e-06 J	9.33e-06
E1668A	PCB-122	76842-07-4	mg/kg	2.15e-05	1.64e-05	1.66e-05	7.27e-06	1.2e-06 U	1.92e-05
E1668A	PCB-123	65510-44-3	mg/kg	8.74e-05	4.88e-05	7.12e-05	2.68e-05	2.56e-05	5.5e-05
E1668A	PCB-126	57465-28-8	mg/kg	1.27e-05	1.58e-06 U	8.03e-05	1.59e-06 U	1.6e-06 U	1.57e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	8.15e-06	6.85e-06	7.15e-06	4.78e-06 J	2.62e-06 J	7.99e-06
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000917	0.000728	0.00108	0.000467	0.000555	0.00104
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00935 J	0.00785 J	0.0107 J	0.00495 J	0.00559 J	0.0111 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000531	0.000439	0.00058 J	0.000256	0.000307	0.000566
E1668A	PCB-131	61798-70-7	mg/kg	4.37e-05	2.86e-05	4.14e-05	1.58e-05	2.32e-05	3.76e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.00113 J	0.000822 J	0.00115 J	0.000381	0.00059	0.00102 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000313	0.000298	0.000389	0.00021	0.000188	0.000439
E1668A	PCB-134	52704-70-8	mg/kg	0.000297	2e-04	0.000287	0.000105	0.000144	0.000248
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00218 J	0.00152 J	0.00207 J	0.000856	0.00126 J	0.00216 J
E1668A	PCB-136	38411-22-2	mg/kg	0.000372	0.000242	0.000364	0.000129	0.000236	0.000358
E1668A	PCB-137	35694-06-5	mg/kg	0.00025	0.000165	0.000237	0.000106	0.00014	0.00026
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000139	0.000104	0.000151	6.25e-05	8.43e-05	0.000141
E1668A	PCB-141	52712-04-6	mg/kg	0.000665 J	0.000442	0.000498	0.000231	0.00033	0.000638 J
E1668A	PCB-142	41411-61-4	mg/kg	1.69e-06 U	1.68e-06 U	1.63e-06 U	1.69e-06 U	1.7e-06 U	1.66e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.27e-06 U	3.26e-06 U	3.16e-06 U	3.29e-06 U	3.3e-06 U	3.23e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000197	0.000129	0.000172	6.89e-05	0.00011	0.000188
E1668A	PCB-145	74472-40-5	mg/kg	1.59e-06 U	1.58e-06 U	1.53e-06 U	1.59e-06 U	1.6e-06 U	1.57e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00244 J	0.00219 J	0.00273 J	0.00144 J	0.00157 J	0.00303 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00486 J	0.00369 J	0.0049 J	0.00195 J	0.00297 J	0.00481 J
E1668A	PCB-148	74472-41-6	mg/kg	8.39e-05	8.63e-05	0.000109	7.39e-05	6.71e-05	0.000132
E1668A	PCB-150	68194-08-1	mg/kg	4.02e-05	3.66e-05	5.18e-05	3.03e-05	4.68e-05	5.42e-05
E1668A	PCB-152	68194-09-2	mg/kg	1.39e-06 U	2.73e-06 J	3.48e-06 J	1.53e-06 J	1.4e-06 U	4.01e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0108 J	0.0102 J	0.0135 J	0.00676 J	0.00728 J	0.0147 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000436	0.000403	0.000551	0.000368	0.000399	0.000689 J
E1668A	PCB-155	33979-03-2	mg/kg	7.31e-05	6.88e-05	7.23e-05	5.51e-05	5.7e-05	9.62e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000535	0.000443	0.000608	0.000291	0.000297	0.000726
E1668A	PCB-158	74472-42-7	mg/kg	0.000467	0.000347	0.000485	0.000216	0.000274	0.000476
E1668A	PCB-159	39635-35-3	mg/kg	1.39e-06 U	2.46e-06 J	1.34e-06 U	1.75e-06 J	1.4e-06 U	2.78e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.25e-06 U	6.23e-06 U	6.03e-06 U	6.27e-06 U	6.29e-06 U	6.16e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.29e-06 U	1.28e-06 U	1.24e-06 U	1.29e-06 U	1.3e-06 U	1.27e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	9.64e-05	8.68e-05	0.000102	5.42e-05	4.86e-05	0.000114
E1668A	PCB-164	74472-45-0	mg/kg	0.000284	0.000203	0.000269	0.000106	0.000169	0.000254
E1668A	PCB-165	74472-46-1	mg/kg	3.69e-05	3.64e-05	4.7e-05	2.4e-05	2.15e-05	4.41e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.000257	0.00023	0.000303	0.000152	0.000149	0.00039
E1668A	PCB-169	32774-16-6	mg/kg	1.49e-06 U	1.48e-06 U	1.44e-06 U	1.49e-06 U	1.5e-06 U	2.33e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.00119 J	0.000928 J	0.00112 J	0.000584	0.000826 J	0.00143 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000472	0.000383	0.000474	0.000241	3e-04	0.00052
E1668A	PCB-172	52663-74-8	mg/kg	0.000335	0.000271	0.000328	0.000189	0.000214	0.000398
E1668A	PCB-174	38411-25-5	mg/kg	0.000779 J	0.000612 J	0.000715 J	0.000314	0.000463	0.000746 J
E1668A	PCB-175	40186-70-7	mg/kg	0.00012	0.000104	0.000132	7.92e-05	7.88e-05	0.000149

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471	NB03FBLC475	NB03FBLC476
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-176	52663-65-7	mg/kg	0.000143	0.000112	0.000143	7.03e-05	0.000102	0.000153
E1668A	PCB-177	52663-70-4	mg/kg	0.00121 J	0.00111 J	0.0013 J	0.000607 J	0.00076 J	0.00136 J
E1668A	PCB-178	52663-67-9	mg/kg	0.000947 J	0.000893 J	0.00111 J	0.000702 J	0.000651 J	0.00126 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000601 J	0.000484	0.000623 J	0.000295	0.000428	0.000619 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00356 J	0.00301 J	0.00342 J	0.00184 J	0.00248 J	0.00443 J
E1668A	PCB-181	74472-47-2	mg/kg	1.4e-05	9.98e-06	1.27e-05	6.49e-06	1.04e-05	1.62e-05
E1668A	PCB-182	60145-23-5	mg/kg	4.16e-05	3.73e-05	4.66e-05	3.3e-05	2.55e-05	5.3e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00157 J	0.00135 J	0.00164 J	0.000968	0.00103	0.00189 J
E1668A	PCB-184	74472-48-3	mg/kg	3.1e-05	2.59e-05	2.75e-05	2.33e-05	2.19e-05	3.81e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.49e-06 U	1.48e-06 U	1.44e-06 U	1.49e-06 U	1.5e-06 U	1.47e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00528 J	0.00502 J	0.00612 J	0.00379 J	0.00377 J	0.00726 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000112	0.000157	0.000178	0.000163	0.00013	0.000237
E1668A	PCB-189	39635-31-9	mg/kg	4.8e-05	4.72e-05	5.51e-05	3.23e-05	3.58e-05	8.02e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.000239	0.000181	0.000211	0.000108	0.00018	0.000266
E1668A	PCB-191	74472-50-7	mg/kg	5.42e-05	4.28e-05	4.99e-05	2.51e-05	3.36e-05	6.27e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.29e-06 U	1.28e-06 U	1.24e-06 U	1.29e-06 U	1.3e-06 U	1.27e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000624	0.000669	0.000842	6e-04	0.000535	0.0013 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000175	0.000172	0.000194	0.000113	0.000161	0.000298
E1668A	PCB-196	42740-50-1	mg/kg	0.000508 J	0.000507	0.000631	0.000493	4e-04	0.000925 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.00015	4.25e-06 U	0.000179	0.000129	0.000124	0.000244
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00166	0.00162	0.00195 J	0.0018 J	0.00128	0.00323 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000357	0.000391	0.000485	0.000399	0.000293	0.000652
E1668A	PCB-202	2136-99-4	mg/kg	0.00111 J	0.00127 J	0.00155 J	0.00134 J	0.000882	0.00218 J
E1668A	PCB-203	52663-76-0	mg/kg	0.000811	0.000717	0.000901 J	0.000887	0.000684	0.00161 J
E1668A	PCB-204	74472-52-9	mg/kg	6.04e-06	6.37e-06	5.53e-06	5.82e-06	4.72e-06 J	8.78e-06
E1668A	PCB-205	74472-53-0	mg/kg	2.96e-05	3.14e-05	3.5e-05	1.97e-05	2.62e-05	5.06e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00129 J	0.00163 J	0.0021 J	0.00214 J	0.00123 J	0.00307 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000184	0.000233	0.000266	0.000237	0.000169	0.000362
E1668A	PCB-208	52663-77-1	mg/kg	0.000766	0.00108 J	0.00119 J	0.00102 J	0.000743	0.00158 J
E1668A	PCB-209	2051-24-3	mg/kg	R	0.0011 J	0.00113 J	0.000764	0.00077	0.00123 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.113 J	0.0873 J	0.113 J	0.0544 J	0.0591 J	0.124 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.121 J	0.0931 J	0.122 J	0.0577 J	0.0622 J	0.133 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.5e-06	3.45e-07 J	8.3e-06	2.45e-07 J	2.58e-07 J	3.55e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404	NB03FBLN405	NB03FBLN406
			Sample Date	01/12/16	01/12/16	01/12/16	12/01/15	12/01/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-1	2051-60-7	mg/kg	2.01e-05	9.62e-06	7.74e-06	2.09e-05	1.05e-05	5.8e-05
E1668A	PCB-2	2051-61-8	mg/kg	6.87e-07 U	1.32e-06 J	6.8e-07 U	1.06e-06 J	7.07e-07 J	1.61e-06 J
E1668A	PCB-3	2051-62-9	mg/kg	1.49e-06 J	1.54e-06 J	1.14e-06 J	1.09e-06 U	1.09e-06 U	2.66e-06 J
E1668A	PCB-4	13029-08-8	mg/kg	0.000367 J	0.000133 J	0.000161 J	0.000317 J	0.000154	0.000901 J
E1668A	PCB-5	16605-91-7	mg/kg	1.9e-06 J	7.82e-07 J	7.77e-07 U	1.94e-06 J	1.41e-06 J	4.54e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	4.14e-05 J	1.14e-05 J	1.36e-05 J	6.75e-05	2.42e-05	0.000162 J
E1668A	PCB-7	33284-50-3	mg/kg	4.57e-06	2.97e-05	2.25e-06	5.95e-06	2.15e-06	1.49e-05
E1668A	PCB-8	34883-43-7	mg/kg	0.000129 J	4.35e-05 J	4.65e-05 J	0.000127 J	6.28e-05 J	0.000293 J
E1668A	PCB-9	34883-39-1	mg/kg	1.18e-05	5.04e-06	4.3e-06	1.3e-05	6.47e-06	3.3e-05
E1668A	PCB-10	33146-45-1	mg/kg	4.14e-05	1.27e-05	1.49e-05	2.25e-05	1.47e-05	6.78e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.34e-06 U	3.26e-06 U	3.3e-06 U	3.36e-06 U	3.36e-06 U	5.06e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.1e-06 J	4.18e-06 J	1.85e-06 U	1.88e-06 U	1.88e-06 U	8.03e-06
E1668A	PCB-14	34883-41-5	mg/kg	7.85e-07 U	1.92e-06 U	7.77e-07 U	7.91e-07 U	7.9e-07 U	7.68e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	7.91e-06	1.16e-05	6.01e-06	1.58e-06 U	1.58e-06 U	3.45e-05
E1668A	PCB-16	38444-78-9	mg/kg	0.000193 J	4.74e-05 J	8.58e-05 J	0.000255	0.000152	0.000621 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000331 J	7.29e-05 J	0.000154 J	0.000389 J	0.000277	0.000769 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000658 J	0.000137 J	0.000259 J	0.000898 J	0.000512 J	0.00248 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000248	5.59e-05	0.000106	0.000181	0.000127	0.000537 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.000975 J	0.000274 J	0.000468 J	0.00192 J	0.00111 J	0.00681 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000147	4.35e-05	6.44e-05	0.000261	0.000152	0.000597 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000194 J	5.42e-05 J	8.33e-05 J	0.000349 J	2e-04	0.00104 J
E1668A	PCB-23	55720-44-0	mg/kg	8.47e-07 J	6.72e-07 U	6.8e-07 U	1.29e-06 J	8.46e-07 J	2.79e-06
E1668A	PCB-24	55702-45-9	mg/kg	9.81e-07 U	1.66e-06 J	9.72e-07 U	9.89e-07 U	9.87e-07 U	9.6e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000122	3.09e-05	4.08e-05	0.000236	7.84e-05	0.00091 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000262	6.43e-05	0.000104	0.000431	0.000219	0.00127 J
E1668A	PCB-27	38444-76-7	mg/kg	0.000135	2.37e-05	4.84e-05	0.000138	8.13e-05	0.000369 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000626 J	0.000163 J	0.000211 J	0.00106 J	0.000497 J	0.00377 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000402 J	7.15e-05 J	0.000155 J	0.000436 J	0.000328 J	0.00108 J
E1668A	PCB-34	37680-68-5	mg/kg	1.13e-05	2.46e-06	4.08e-06	2.04e-05	9.93e-06	5.28e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.83e-07 U	8.64e-07 U	8.75e-07 U	8.9e-07 U	8.88e-07 U	8.64e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.85e-07 U	7.68e-07 U	1.37e-05	7.91e-07 U	7.9e-07 U	7.68e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	2.01e-05	1.97e-05	9.12e-06	2.29e-05	1.04e-05	8.41e-05
E1668A	PCB-38	53555-66-1	mg/kg	1.25e-06 J	1.73e-06 J	7.29e-07 J	2.78e-06	1.7e-06 J	5.21e-06
E1668A	PCB-39	38444-88-1	mg/kg	3.49e-06	1.4e-06 J	1.61e-06 J	7.27e-06	4.18e-06	1.68e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000618	0.000121	0.000295	0.00127 J	0.00079	0.00287 J
E1668A	PCB-41	52663-59-9	mg/kg	2.54e-05	7.81e-06 J	1.89e-05	5.45e-05	6.16e-05	8.24e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.000461	0.00012	0.000227	0.000955 J	0.000576	0.00239 J
E1668A	PCB-43	70362-46-8	mg/kg	5.69e-05	1e-05	3.26e-05	0.000103	7.43e-05	0.000205
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00176	0.000494	0.000916	0.00386 J	0.00235 J	0.0108 J
E1668A	PCB-45	70362-45-7	mg/kg	R	2.87e-05	R	0.000245	0.000152	
E1668A	PCB-46	41464-47-5	mg/kg	6.55e-05	1.23e-05	3e-05	8.75e-05	6.23e-05	0.000217
E1668A	PCB-48	70362-47-9	mg/kg	0.00016	2.61e-05	7.68e-05	0.000377	0.000226	0.00094 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00144 J	0.000441	0.000691	0.00333 J	0.00173 J	0.00907 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000308	5.1e-05	0.000117	0.000487	3e-04	0.00129 J
E1668A	PCB-51	68194-04-7	mg/kg	0.000155	2.85e-05	6.88e-05	0.000261	0.000244	0.000563
E1668A	PCB-52	35693-99-3	mg/kg	0.00208 J	0.000596 J	0.0011 J	0.00441 J	0.00245 J	0.0133 J

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404	NB03FBLN405	NB03FBLN406
			Sample Date	01/12/16	01/12/16	01/12/16	12/01/15	12/01/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-54	15968-05-5	mg/kg	2.23e-05	4.43e-06 J	1.03e-05	2.45e-05	2.38e-05	7.64e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.18e-06 U	1.15e-06 U	3.32e-06 J	1.19e-06 U	1.18e-06 U	3.99e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.000292	0.000129	0.000144	0.000643 J	0.000332	0.00204 J
E1668A	PCB-57	70424-67-8	mg/kg	8.23e-06	5.53e-06	2.53e-05	1.48e-05	8.69e-06	0.000198
E1668A	PCB-58	41464-49-7	mg/kg	1e-05	7.14e-06	4.81e-06 J	2.13e-05	8.4e-06	4.79e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00015	4.15e-05	8.54e-05	0.000308	0.000203	0.000808
E1668A	PCB-60	33025-41-1	mg/kg	0.000138	7.76e-05	8.37e-05	0.000313	0.000241	0.000735 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00152	0.000825	0.000809	0.00382 J	0.00214	0.0118 J
E1668A	PCB-63	74472-34-7	mg/kg	6.66e-05	4.26e-05	3.74e-05	0.000145	9.21e-05	0.000337
E1668A	PCB-64	52663-58-8	mg/kg	0.000596 J	0.000155	0.000309	0.00132 J	0.000857 J	0.00389 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00102 J	0.000653 J	0.000574	0.00261 J	0.00166 J	0.0077 J
E1668A	PCB-67	73575-53-8	mg/kg	3.08e-05	1.67e-05	1.55e-05	7.61e-05	3.74e-05	0.000204
E1668A	PCB-68	73575-52-7	mg/kg	3.31e-05	2.9e-05	1.65e-05	6.78e-05	3.15e-05	0.000144
E1668A	PCB-72	41464-42-0	mg/kg	4.41e-05	3.5e-05	2.37e-05	9.28e-05	4.09e-05	0.000178
E1668A	PCB-73	74338-23-1	mg/kg	8.9e-06	2.09e-06 J	1.36e-06 U	3.92e-05	1.66e-05	3.9e-05
E1668A	PCB-77	32598-13-3	mg/kg	5.06e-05	4.81e-05	2.2e-05	6.59e-05	3.4e-05	0.000264
E1668A	PCB-78	70362-49-1	mg/kg	1.57e-06 U	1.54e-06 U	6.8e-06	1.58e-06 U	1.58e-06 U	1.54e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	1.39e-05	2.48e-05	9.27e-06	3.54e-05	1.61e-05	4.98e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.08e-06 U	1.72e-06 J	1.07e-06 U	1.09e-06 U	1.09e-06 U	1.16e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	R	1.73e-06 U	R	1.78e-06 U	3.25e-06 J	R
E1668A	PCB-82	52663-62-4	mg/kg	0.000146	7.84e-05	9.74e-05	0.000289	0.000193	0.000685 J
E1668A	PCB-83	60145-20-2	mg/kg	0.00011	6.88e-05	5.85e-05	0.000235	0.000119	0.000433
E1668A	PCB-84	52663-60-2	mg/kg	0.000324	0.000101	0.000177	0.000615 J	0.000352	0.00158 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000448	0.000345	0.000288	0.000853	0.000552	0.00192 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00121	0.000791	0.000777	0.00256	0.00143	0.00551 J
E1668A	PCB-88	55215-17-3	mg/kg	2.16e-06 U	2.11e-06 U	2.14e-06 U	2.18e-06 U	2.17e-06 U	2.11e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.08e-05	2.59e-06 J	7.09e-06	1.91e-05	1.77e-05	4.59e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00269 J	0.00199 J	0.00173 J	0.00572 J	0.00284 J	0.0126 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000394	0.00018	0.000238	0.001 J	0.000385	0.00179 J
E1668A	PCB-92	52663-61-3	mg/kg	0.000586	4e-04	0.000379	0.00118 J	0.000622 J	0.00234 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	9.61e-05	5.43e-05	6.93e-05	0.000293	0.000152	0.000496
E1668A	PCB-94	73575-55-0	mg/kg	1.76e-05	4.95e-06	9.12e-06	3.56e-05	2.57e-05	7.52e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00119 J	0.000594 J	0.000655 J	0.00335 J	0.00164 J	0.006 J
E1668A	PCB-96	73575-54-9	mg/kg	1.18e-05	2.96e-06 J	6.59e-06	1.91e-05	1.38e-05	4.74e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	7.54e-05	2.68e-05	4.94e-05	0.000154	0.000106	0.000349
E1668A	PCB-99	38380-01-7	mg/kg	0.00229 J	0.00217 J	0.00141 J	0.00436 J	0.00234 J	0.00901 J
E1668A	PCB-103	60145-21-3	mg/kg	6.96e-05	4.75e-05	4.21e-05	0.000198	6.65e-05	0.000267
E1668A	PCB-104	56558-16-8	mg/kg	4.6e-06 J	1.34e-06 U	2.8e-06 J	1.09e-05	1.05e-05	2.12e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.000641 J	0.000604 J	0.000366	0.00105 J	0.000778 J	0.00224 J
E1668A	PCB-106	70424-69-0	mg/kg	1.67e-06 U	1.63e-06 U	1.65e-06 U	1.68e-06 U	1.68e-06 U	1.63e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000317	0.000429	0.000174	0.000464	0.000305	0.00101 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	5.88e-05	5.65e-05	3.49e-05	0.000128	6.93e-05	0.000227
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00203 J	0.00128 J	0.00126 J	0.00465 J	0.00256 J	0.0108 J
E1668A	PCB-111	39635-32-0	mg/kg	1.67e-05	2.06e-05	9.27e-06	1.75e-05	1.2e-05	3.71e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.37e-06 U	1.34e-06 U	1.36e-06 U	1.38e-06 U	1.38e-06 U	1.34e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	3.54e-05	2.85e-05	2.31e-05	6.7e-05	5.2e-05	0.000144

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404	NB03FBLN405	NB03FBLN406
			Sample Date	01/12/16	01/12/16	01/12/16	12/01/15	12/01/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-118	31508-00-6	mg/kg	0.00253 J	0.00262 J	0.00143 J	0.00413 J	0.00292 J	0.00938 J
E1668A	PCB-120	68194-12-7	mg/kg	6.76e-05	8.69e-05	3.79e-05	8.43e-05	5.13e-05	0.00016
E1668A	PCB-121	56558-18-0	mg/kg	5.13e-06	4.34e-06 J	2.93e-06 J	9.38e-06	1.18e-06 U	1.55e-05
E1668A	PCB-122	76842-07-4	mg/kg	9.84e-06	6.52e-06	7.51e-06	2.62e-05	1.42e-05	5.2e-05
E1668A	PCB-123	65510-44-3	mg/kg	3.1e-05	2.87e-05	1.97e-05	8.24e-05	5.47e-05	0.000148
E1668A	PCB-126	57465-28-8	mg/kg	1.57e-06 U	1.54e-06 U	1.53e-05	1.05e-05	7.88e-06	7.27e-05
E1668A	PCB-127	39635-33-1	mg/kg	2.69e-06 J	7.74e-06	1.92e-06 J	8.34e-06	4.64e-06 J	8.43e-06
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000527	0.000608	0.000292	0.000777	0.000495	0.0014 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00505 J	0.00644 J	0.00286 J	0.00817 J	0.00494 J	0.0154 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00028	0.000346	0.000159	0.000459	0.000241	0.000751 J
E1668A	PCB-131	61798-70-7	mg/kg	1.93e-05	1.6e-05	1.38e-05	4.12e-05	2.3e-05	7.01e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.000541	0.000482	0.000329	0.0012 J	0.000537	0.002 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000181	0.000279	0.000111	0.000243	0.00015	0.000415
E1668A	PCB-134	52704-70-8	mg/kg	0.000132	0.000127	8.25e-05	0.000264	0.000126	0.000427
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00109	0.00108	0.000698	0.00238 J	0.00109	0.00357 J
E1668A	PCB-136	38411-22-2	mg/kg	2e-04	0.000149	0.000127	0.000513	0.000185	0.000736 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000119	0.000122	8.41e-05	0.000245	0.000157	0.000407
E1668A	PCB-139/140	PCB-139/140	mg/kg	6.76e-05	8.62e-05	4.32e-05	0.00013	7.18e-05	0.000218
E1668A	PCB-141	52712-04-6	mg/kg	0.00029	0.000259	0.000192	0.00085 J	0.000466	0.00106 J
E1668A	PCB-142	41411-61-4	mg/kg	1.67e-06 U	1.63e-06 U	1.65e-06 U	1.68e-06 U	1.68e-06 U	1.63e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.24e-06 U	3.17e-06 U	3.21e-06 U	3.26e-06 U	3.26e-06 U	3.17e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	8.97e-05	8.2e-05	6.09e-05	0.00022	0.000111	0.000367
E1668A	PCB-145	74472-40-5	mg/kg	1.57e-06 U	1.54e-06 U	1.55e-06 U	1.58e-06 U	1.58e-06 U	2.13e-06 J
E1668A	PCB-146	51908-16-8	mg/kg	0.00138 J	0.00199 J	0.000831 J	0.00196 J	0.00115 J	0.00333 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00232 J	0.00253 J	0.00147 J	0.00568 J	0.0022 J	0.00816 J
E1668A	PCB-148	74472-41-6	mg/kg	5.83e-05	8.9e-05	4.85e-05	7.02e-05	3.6e-05	0.000163
E1668A	PCB-150	68194-08-1	mg/kg	2.55e-05	3.33e-05	2.14e-05	7.75e-05	1.67e-05	7.47e-05
E1668A	PCB-152	68194-09-2	mg/kg	1.7e-06 J	1.34e-06 U	2.01e-06 J	4.37e-06 J	3.46e-06 J	8.06e-06
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00641 J	0.00923 J	0.00368 J	0.00952 J	0.00562 J	0.0196 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000313	0.000428	0.00023	0.000489	0.00021	0.000775 J
E1668A	PCB-155	33979-03-2	mg/kg	4.43e-05	5.93e-05	3.39e-05	0.000101	4.92e-05	0.000126
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000283	0.000355	0.000166	0.000504	0.00035	0.000764
E1668A	PCB-158	74472-42-7	mg/kg	0.000228	0.000262	0.000149	0.000448	0.000297	0.000777 J
E1668A	PCB-159	39635-35-3	mg/kg	1.37e-06 U	2.61e-06 J	1.36e-06 U	1.38e-06 U	1.38e-06 U	2.75e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.18e-06 U	6.05e-06 U	6.12e-06 U	6.23e-06 U	6.22e-06 U	6.05e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.28e-06 U	1.25e-06 U	1.26e-06 U	1.29e-06 U	1.28e-06 U	1.25e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	4.52e-05	7.99e-05	2.57e-05	1.29e-06 U	5.18e-05	9.38e-05
E1668A	PCB-164	74472-45-0	mg/kg	0.000133	0.000126	8.52e-05	0.000338	0.000158	0.000479
E1668A	PCB-165	74472-46-1	mg/kg	2.13e-05	3.69e-05	1.21e-05	2e-05	1.59e-05	4.47e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.00015	0.000194	8.58e-05	R	0.000161	0.000365
E1668A	PCB-169	32774-16-6	mg/kg	1.47e-06 U	2.5e-06 J	1.46e-06 U	1.48e-06 U	1.48e-06 U	1.72e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.000678 J	0.000834 J	0.000384	0.00159 J	0.000872 J	0.0015 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000247	0.000342	0.000144	0.00051	0.000312	0.000572
E1668A	PCB-172	52663-74-8	mg/kg	0.000193	0.000271	0.000126	0.000448	0.000229	0.00043
E1668A	PCB-174	38411-25-5	mg/kg	0.000403	0.000441	0.000238	0.00117 J	0.000491	0.00128 J
E1668A	PCB-175	40186-70-7	mg/kg	7.51e-05	0.000105	5.47e-05	0.000114	6.74e-05	0.000173

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404	NB03FBLN405	NB03FBLN406
			Sample Date	01/12/16	01/12/16	01/12/16	12/01/15	12/01/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1668A	PCB-176	52663-65-7	mg/kg	7.66e-05	9.39e-05	5.08e-05	0.000195	7.42e-05	0.000213
E1668A	PCB-177	52663-70-4	mg/kg	0.000657 J	0.000991 J	0.000351	0.0012 J	0.000559	0.00135 J
E1668A	PCB-178	52663-67-9	mg/kg	0.000637 J	0.000993 J	0.000466	0.000855 J	0.000504	0.00137 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000355	0.000428	0.000216	0.000832 J	0.000331	0.000902 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00205 J	0.00266 J	0.00127 J	0.00475 J	0.00283 J	0.005 J
E1668A	PCB-181	74472-47-2	mg/kg	6.9e-06	9.76e-06	5.21e-06	1.9e-05	1.03e-05	1.85e-05
E1668A	PCB-182	60145-23-5	mg/kg	2.61e-05	4.3e-05	2.03e-05	3.85e-05	2.12e-05	6.06e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	9e-04	0.00128 J	0.000589	0.00179 J	0.00106	0.00214 J
E1668A	PCB-184	74472-48-3	mg/kg	2.05e-05	3.34e-05	1.38e-05	3.99e-05	1.46e-05	5.36e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.47e-06 U	1.44e-06 U	1.46e-06 U	1.48e-06 U	1.48e-06 U	1.44e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00339 J	0.00536 J	0.00232 J	0.0052 J	0.00306 J	0.00722 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000107	0.000193	9.13e-05	0.000165	5.41e-05	0.000215
E1668A	PCB-189	39635-31-9	mg/kg	3.24e-05	4.94e-05	1.89e-05	6.12e-05	3.66e-05	6.43e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.000138	0.000156	8.08e-05	0.000367	0.000199	0.000314
E1668A	PCB-191	74472-50-7	mg/kg	2.74e-05	3.58e-05	1.84e-05	6.15e-05	4.39e-05	6.83e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.28e-06 U	1.25e-06 U	1.26e-06 U	1.29e-06 U	1.28e-06 U	1.25e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000593	0.000754	0.00038	0.00126 J	0.000606	0.000939 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000147	0.000176	7.33e-05	4e-04	0.000182	0.000217
E1668A	PCB-196	42740-50-1	mg/kg	0.000471	0.000584	0.000347	0.000844 J	0.00044 J	0.000856
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000128	0.000182	7.96e-05	0.000329	0.000105	0.00022
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00169	0.00188 J	0.00131	0.00329 J	0.00119	0.00288 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000325	5e-04	0.000241	0.000579	0.00023	0.000531
E1668A	PCB-202	2136-99-4	mg/kg	0.00108 J	0.0016 J	0.000863	0.00147 J	0.000722	0.00182 J
E1668A	PCB-203	52663-76-0	mg/kg	0.000791	0.000828	0.000645	0.00157 J	0.000733	0.00149 J
E1668A	PCB-204	74472-52-9	mg/kg	5.51e-06	9.03e-06	3.46e-06 J	1.96e-05	2.07e-06 U	7.54e-06
E1668A	PCB-205	74472-53-0	mg/kg	2.7e-05	3.25e-05	1.27e-05	6.96e-05	3.01e-05	3.48e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00322 J	0.00182 J	0.00142 J	0.00775 J	0.000982 J	0.00268 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000318	0.000274	0.000152	0.000954 J	0.000135	0.000305
E1668A	PCB-208	52663-77-1	mg/kg	0.00168 J	0.00118 J	0.000657	0.00426 J	0.000517	0.0013 J
E1668A	PCB-209	2051-24-3	mg/kg	0.00287 J	0.00115 J	0.000532	0.0108 J	R	0.000814
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0712 J	0.0643 J	0.0402 J	0.146 J	0.0677 J	0.245 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0749 J	0.0682 J	0.0423 J	0.152 J	0.0721 J	0.258 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	2.79e-07 J	3.21e-07 J	1.6e-06	1.24e-06	9.29e-07	7.74e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11	NB03FSBDUP-12
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/20/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	1.1e-05	3.59e-05	0.000508 J	R	R
E1668A	PCB-2	2051-61-8	mg/kg	7e-07 U	1.01e-06 J	6.33e-06 J	3.2e-06 J	1.5e-06 J
E1668A	PCB-3	2051-62-9	mg/kg	1.28e-06 J	1.46e-06 J	1.01e-05 J	3.76e-06 J	2.3e-06 J
E1668A	PCB-4	13029-08-8	mg/kg	0.000125 J	0.000483 J	0.00431 J	0.000272 J	0.000511 J
E1668A	PCB-5	16605-91-7	mg/kg	8.37e-07 J	2.58e-06 J	1.71e-05 J	1.85e-06 J	3.44e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	1.24e-05 J	5.77e-05 J	0.00137 J	3.74e-05	0.000108 J
E1668A	PCB-7	33284-50-3	mg/kg	2.38e-06	6.47e-06	9.66e-05 J	0.000108 J	1.05e-05
E1668A	PCB-8	34883-43-7	mg/kg	4.64e-05 J	0.000168 J	0.00231 J	0.000108 J	0.000285 J
E1668A	PCB-9	34883-39-1	mg/kg	3.58e-06	1.47e-05	0.000158 J	9.59e-06	2.14e-05
E1668A	PCB-10	33146-45-1	mg/kg	1.02e-05	4.02e-05	0.000439 J	4.12e-05	7.34e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.4e-06 U	3.38e-06 U	5.37e-05 J	0.000128 J	3.3e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.9e-06 U	3.88e-06 J	3.74e-05 J	1.34e-05	5.97e-06
E1668A	PCB-14	34883-41-5	mg/kg	8e-07 U	7.95e-07 U	3.95e-06 U	1.54e-06 U	7.77e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	6.32e-06	1.02e-05	4.68e-05 J	3.8e-05	2.29e-05
E1668A	PCB-16	38444-78-9	mg/kg	6.11e-05 J	0.000271 J	0.00417 J	0.000146 J	0.00073 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000107 J	0.000426 J	0.00906 J	0.000409 J	0.00139 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000185 J	0.000747 J	0.014 J	0.000523	0.0021 J
E1668A	PCB-19	38444-73-4	mg/kg	7.62e-05	0.000291	0.00277 J	0.000125	0.000454 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.000508 J	0.00141 J	0.0539 J		0.0057 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	5.27e-05	0.000249	0.00604 J	0.000342	0.000693 J
E1668A	PCB-22	38444-85-8	mg/kg	7.57e-05 J	0.000286 J	0.00846 J	0.000448 J	0.000926 J
E1668A	PCB-23	55720-44-0	mg/kg	7e-07 U	1.09e-06 J	2.26e-05 J	1.6e-06 J	3e-06
E1668A	PCB-24	55702-45-9	mg/kg	1e-06 U	9.94e-07 U	4.94e-06 U	6.23e-06	9.72e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	2.58e-05	0.000136	0.00721 J	0.000271	0.000526 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	8.73e-05	3e-04	0.00975 J	0.000479	0.000912 J
E1668A	PCB-27	38444-76-7	mg/kg	3.18e-05	0.000145	0.00214 J	0.000117	0.000381 J
E1668A	PCB-31	16606-02-3	mg/kg	0.000179 J	0.000738 J	0.031 J	0.00111 J	0.00259 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00012 J	0.000412 J	0.0072 J	0.000343	0.00102 J
E1668A	PCB-34	37680-68-5	mg/kg	3.23e-06	1.22e-05	0.000415 J	2.59e-05	3.93e-05
E1668A	PCB-35	37680-69-6	mg/kg	9e-07 U	8.95e-07 U	4.45e-06 U	1.74e-06 U	8.75e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	8e-07 U	7.95e-07 U	3.95e-06 U	1.54e-06 U	7.77e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	1.72e-05	2.93e-05	0.000728 J	6.32e-05	8.11e-05
E1668A	PCB-38	53555-66-1	mg/kg	2.29e-06	2.29e-06	3.87e-05 J	4.31e-06	4.13e-06
E1668A	PCB-39	38444-88-1	mg/kg	9.32e-07 J	5.92e-06	0.000218 J	2e-05	2.31e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00028	0.00077	0.0226 J	0.00205	0.00283 J
E1668A	PCB-41	52663-59-9	mg/kg	1.09e-05	5.55e-05	0.00148	0.000108	0.000194
E1668A	PCB-42	36559-22-5	mg/kg	0.000549	0.000552	0.0171 J		0.00222 J
E1668A	PCB-43	70362-46-8	mg/kg	3.63e-05	7.82e-05	0.0018 J	0.000164	0.000286
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00264 J	0.00215 J	0.0714 J		0.00936 J
E1668A	PCB-45	70362-45-7	mg/kg	R	0.000219	0.00406 J	0.000218	0.000613 J
E1668A	PCB-46	41464-47-5	mg/kg	2.1e-05	8.56e-05	0.00161 J	7.87e-05	2e-04
E1668A	PCB-48	70362-47-9	mg/kg	4.17e-05	0.000243	0.0077 J	0.000638	0.000987 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00183 J	0.00161 J	0.0554 J		0.00737 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	8.85e-05	0.000334	0.00717 J	0.000501	0.000951
E1668A	PCB-51	68194-04-7	mg/kg	5.41e-05	0.000179	0.00608 J	0.000437	0.000704 J
E1668A	PCB-52	35693-99-3	mg/kg	0.00329 J	0.00247 J	0.0759 J	0.00611 J	0.0106 J

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11	NB03FSBDUP-12
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/20/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	1.4e-06 U	2.71e-05	0.000412 J	8.56e-06 J	5.24e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.2e-06 U	1.19e-06 U	0.000347 J	2.32e-06 U	1.17e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000139	0.000476	0.0178 J		0.00154 J
E1668A	PCB-57	70424-67-8	mg/kg	7.84e-06	1e-05	0.000324 J	4.44e-05	4.19e-05
E1668A	PCB-58	41464-49-7	mg/kg	1.72e-05	1.39e-05	0.000342 J	6.64e-05	4.84e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000257	0.000191	0.00499 J	0.000418	0.000733
E1668A	PCB-60	33025-41-1	mg/kg	0.000296	0.00024	0.00636 J	0.00072	0.00103 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00205	0.00243 J	0.101 J		5.73e-06 U
E1668A	PCB-63	74472-34-7	mg/kg	0.000153	0.000103	0.00265 J	0.000403	0.000416
E1668A	PCB-64	52663-58-8	mg/kg	0.00115 J	0.000718 J	0.0244 J		0.00296 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00242 J	0.00164 J	0.0638 J	0.00633 J	0.00871 J
E1668A	PCB-67	73575-53-8	mg/kg	2.33e-05	4.93e-05	0.00146 J	0.000148	0.000152
E1668A	PCB-68	73575-52-7	mg/kg	5.93e-05	4.72e-05	0.000925 J	0.000209	0.000155
E1668A	PCB-72	41464-42-0	mg/kg	8.32e-05	6.16e-05	0.00122 J	0.000253	0.000205
E1668A	PCB-73	74338-23-1	mg/kg	1.4e-06 U	7.36e-06	0.000261	3.13e-05	1.36e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	2.6e-05	6.87e-05	0.00201 J	0.00026	0.000271
E1668A	PCB-78	70362-49-1	mg/kg	1.6e-06 U	1.59e-06 U	7.91e-06 U	3.09e-06 U	1.55e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	4.12e-05	2.65e-05	0.000378 J	0.000107	6.65e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.1e-06 U	1.09e-06 U	5.43e-06 U	8.29e-06 J	1.07e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	R	1.79e-06 U	0.000115 J	R	1.63e-05
E1668A	PCB-82	52663-62-4	mg/kg	0.000448	0.000204	0.00415 J	0.00075	0.00072 J
E1668A	PCB-83	60145-20-2	mg/kg	0.000351	0.000142	0.00185 J	0.00042	0.000414
E1668A	PCB-84	52663-60-2	mg/kg	0.000614 J	0.000422	0.00808 J	0.00107	0.00117 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00167	0.000642	0.0091 J	0.0027	0.00251 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00375 J	0.00177	0.0283 J		0.00629 J
E1668A	PCB-88	55215-17-3	mg/kg	2.2e-06 U	2.19e-06 U	1.09e-05 U	4.58e-06 J	2.14e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	8.84e-06	1.68e-05	0.00045 J	4.02e-05	4.65e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00847 J	0.00407 J	0.0533 J	0.0157 J	0.0144 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00104 J	0.000544	0.00954 J		0.00185 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00192 J	0.000808 J	0.00945 J	0.00309 J	0.00266 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000214	0.000165	0.00268 J	0.000428	0.000488
E1668A	PCB-94	73575-55-0	mg/kg	1.8e-05	2.51e-05	0.000344 J	3.89e-05	3.68e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00259 J	0.00174 J	0.0277 J		0.00473 J
E1668A	PCB-96	73575-54-9	mg/kg	1.37e-05	1.88e-05	0.000412 J	3.84e-05	6.2e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	9.45e-05	0.000107	0.00219 J	0.000337	0.00037
E1668A	PCB-99	38380-01-7	mg/kg	0.00761 J	0.00382 J	0.0339 J		0.0124 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000157	9.06e-05	0.00124 J	0.000357	0.000294
E1668A	PCB-104	56558-16-8	mg/kg	2.57e-06 J	8.11e-06	0.000195 J	1.37e-05	1.83e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00215 J	0.00124 J	0.0146 J		0.00355 J
E1668A	PCB-106	70424-69-0	mg/kg	1.7e-06 U	1.69e-06 U	8.4e-06 U	3.28e-06 U	1.65e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000869 J	0.000673 J	0.00414 J		0.0012 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	9.32e-05	0.000119	0.0016 J	0.000419	0.000282
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00731 J	0.00285 J	0.0509 J		0.00993 J
E1668A	PCB-111	39635-32-0	mg/kg	3.96e-05	2.83e-05	5.53e-05 J	8.82e-05	4.01e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.4e-06 U	1.39e-06 U	6.92e-06 U	1.82e-05	1.36e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00014	7.14e-05	0.00113 J	0.000256	0.000294

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11	NB03FSBDUP-12
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/20/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.00909 J	0.00547 J	0.052 J	0.0213 J	0.017 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000174	0.000119	0.000287 J	0.000376	0.000186
E1668A	PCB-121	56558-18-0	mg/kg	1.19e-05	7.58e-06	5.35e-05 J	3.02e-05	1.87e-05
E1668A	PCB-122	76842-07-4	mg/kg	1.24e-05	2.76e-05	0.000441	5.51e-05	1.17e-06 U
E1668A	PCB-123	65510-44-3	mg/kg	0.000107	6.85e-05	0.000912 J	0.000231	0.00021
E1668A	PCB-126	57465-28-8	mg/kg	1.6e-06 U	1.59e-06 U	0.000367	3.09e-06 U	R
E1668A	PCB-127	39635-33-1	mg/kg	8.51e-06	7e-06	5.62e-05 J	R	1.61e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00163 J	0.000905	0.00465 J		0.00183 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0169 J	0.00818 J	0.0423 J	0.0275 J	0.0201 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000897 J	0.000421	0.00208 J		0.000878 J
E1668A	PCB-131	61798-70-7	mg/kg	7.03e-05	3.24e-05	0.00038 J	0.000117	9.25e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.00185 J	0.000853 J	0.0088 J		0.00191 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000439	0.000394	0.00096 J	0.000896	0.000481
E1668A	PCB-134	52704-70-8	mg/kg	0.000474	0.000195	0.00142 J	0.000601	0.00038
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00327 J	0.00187 J	0.0133 J		
E1668A	PCB-136	38411-22-2	mg/kg	0.000569	0.000359	0.00374 J		
E1668A	PCB-137	35694-06-5	mg/kg	0.000488	0.000218	0.00179 J	0.000661	0.000657 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000216	0.000119	0.000751 J	0.00041	0.000296
E1668A	PCB-141	52712-04-6	mg/kg	0.00101 J	0.000546	0.00647 J	0.00155 J	0.00136 J
E1668A	PCB-142	41411-61-4	mg/kg	1.7e-06 U	1.69e-06 U	8.4e-06 U	3.28e-06 U	1.65e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.3e-06 U	3.28e-06 U	1.63e-05 U	6.37e-06 U	3.21e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000282	0.00017	0.00173 J	0.000701	
E1668A	PCB-145	74472-40-5	mg/kg	1.6e-06 U	1.59e-06 U	1.31e-05 J	3.25e-06 J	R
E1668A	PCB-146	51908-16-8	mg/kg	0.00377 J	0.00222 J	0.00726 J	0.00736 J	0.00415 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00739 J	0.00349 J	0.0274 J	0.0116 J	0.00826 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000109	0.000145	0.000215 J	0.000327	R
E1668A	PCB-150	68194-08-1	mg/kg	5.6e-05	6.55e-05	0.000202 J	0.000159	R
E1668A	PCB-152	68194-09-2	mg/kg	3.59e-06 J	4.46e-06 J	6.01e-05 J	9.16e-06 J	R
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0199 J	0.0112 J	0.0445 J	0.0359 J	0.0252 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000586	0.000731 J	0.0014 J		
E1668A	PCB-155	33979-03-2	mg/kg	7.58e-05	9.61e-05	0.000519 J	0.000209	0.000123
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00101	0.000695	0.00419 J	0.00202	0.00145 J
E1668A	PCB-158	74472-42-7	mg/kg	0.000871 J	0.000423	0.00332 J		0.00113 J
E1668A	PCB-159	39635-35-3	mg/kg	2.34e-06 J	2.63e-06 J	6.92e-06 U	7.82e-06 J	3.8e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.3e-06 U	6.26e-06 U	3.11e-05 U	1.22e-05 U	6.12e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.3e-06 U	1.29e-06 U	6.42e-06 U	4.02e-06 J	1.26e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000116	9.03e-05	0.000358 J	0.00029	0.00015
E1668A	PCB-164	74472-45-0	mg/kg	0.000443	2e-04	0.00188 J	0.000542	0.000433
E1668A	PCB-165	74472-46-1	mg/kg	4.41e-05	3.37e-05	3.92e-05 J	0.000112	4.48e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.000461	0.000351	0.00169 J	0.00111	0.00069 J
E1668A	PCB-169	32774-16-6	mg/kg	1.5e-06 U	2.37e-06 J	7.41e-06 U	5.45e-06 J	1.46e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00204 J	0.00116 J	0.00693 J		0.00221 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000736	0.000405	0.00225 J	0.0013	0.000668
E1668A	PCB-172	52663-74-8	mg/kg	0.00049	0.000356	0.00152 J	0.000876	0.000517
E1668A	PCB-174	38411-25-5	mg/kg	0.00121 J	0.00066 J	0.00517 J		0.00107 J
E1668A	PCB-175	40186-70-7	mg/kg	0.000183	0.000148	0.000405 J	0.000372	0.000237

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11	NB03FSBDUP-12
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/20/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000226	0.00013	0.000814 J	0.000433	0.000277
E1668A	PCB-177	52663-70-4	mg/kg	0.00189 J	0.000955 J	0.00358 J		0.0017 J
E1668A	PCB-178	52663-67-9	mg/kg	0.00141 J	0.0012 J	0.00218 J		0.00151 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000926 J	0.000545	0.00272 J		0.00112 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00658 J	0.00355 J	0.0208 J		0.00777 J
E1668A	PCB-181	74472-47-2	mg/kg	2.04e-05	1.41e-05	8.83e-05 J	3.41e-05	2.85e-05
E1668A	PCB-182	60145-23-5	mg/kg	4.78e-05	6.35e-05	8.49e-05 J	0.000101	4.2e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00242 J	0.00179 J	0.00698 J		0.00304 J
E1668A	PCB-184	74472-48-3	mg/kg	2.25e-05	3.95e-05	0.000225 J	7.78e-05	4.4e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.5e-06 U	1.49e-06 U	7.41e-06 U	2.9e-06 U	1.46e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00812 J	0.00634 J	0.0157 J	0.0168 J	0.0105 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000106	0.000298	9.37e-05 J	0.000324	0.000131
E1668A	PCB-189	39635-31-9	mg/kg	8.38e-05	7.7e-05	0.000333 J	0.000203	0.000117
E1668A	PCB-190	41411-64-7	mg/kg	0.000415	0.000232	0.00162 J	0.000645	0.00053
E1668A	PCB-191	74472-50-7	mg/kg	9.45e-05	5.22e-05	0.000322 J	0.000139	0.000107
E1668A	PCB-192	74472-51-8	mg/kg	1.3e-06 U	1.29e-06 U	6.42e-06 U	2.51e-06 U	1.26e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00115 J	0.00167 J	0.00451 J		0.00136 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000337	0.00025	0.00142 J	0.000731	0.000429
E1668A	PCB-196	42740-50-1	mg/kg	0.000807	0.00138 J	0.00243 J		0.00108 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000188	0.000271	0.000589 J	0.00048	0.000242
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00244 J	0.00461 J	0.00627 J		0.00295 J
E1668A	PCB-201	40186-71-8	mg/kg	0.00041	0.00077	0.000738 J	0.00118	0.000562
E1668A	PCB-202	2136-99-4	mg/kg	0.00158 J	0.00263 J	0.00196 J		0.00148 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00133 J	0.00262 J	0.00435 J		0.00176 J
E1668A	PCB-204	74472-52-9	mg/kg	4.14e-06 J	1.23e-05	1.33e-05 J	1.44e-05	7.06e-06
E1668A	PCB-205	74472-53-0	mg/kg	5.33e-05	4.52e-05	0.000223 J	0.000133	7.5e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00138 J	0.00633 J	0.00356 J		0.00238 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000154	0.000651	0.000414 J	0.000666	0.000306
E1668A	PCB-208	52663-77-1	mg/kg	0.000789	0.00241 J	0.00138 J		0.00124 J
E1668A	PCB-209	2051-24-3	mg/kg	0.00061	0.00209 J	0.00181 J		0.00168 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.154 J	0.116 J	1.19 J	0.164 J	0.246 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.168 J	0.124 J	1.27 J	0.189 J	0.269 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	4.2e-07 J	3.35e-07 J	3.93e-05	9.87e-07 J	7.48e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323	NB03FSBS324
			Sample Date	12/01/15	12/10/15	12/10/15	12/10/15	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	1.17e-05	1.78e-05 J	2.12e-05 J	1.72e-05 J	3.28e-05
E1668A	PCB-2	2051-61-8	mg/kg	2.42e-06	1.69e-06 J	1.13e-06 J	1.31e-06 J	3.41e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	1.06e-06 U	1.06e-06 U	1.07e-06 U	1.09e-06 U	R
E1668A	PCB-4	13029-08-8	mg/kg	0.000291 J	0.000186	0.000213	0.00014	0.00024
E1668A	PCB-5	16605-91-7	mg/kg	3.27e-06 J	7.71e-07 U	7.77e-07 U	7.96e-07 U	3.89e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000147	2.54e-05	2.18e-05	1.4e-05	2.78e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	1.52e-05	1.38e-05	4.15e-06	2.37e-06	5.81e-06 J
E1668A	PCB-8	34883-43-7	mg/kg	0.000346 J	7.71e-05 J	7.28e-05 J	4.63e-05 J	8.19e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	2.64e-05	5.98e-06	5.31e-06	3.42e-06	6.2e-06 J
E1668A	PCB-10	33146-45-1	mg/kg	3.7e-05	3.34e-05	3.27e-05	2.02e-05	3.67e-05
E1668A	PCB-11	2050-67-1	mg/kg	5.76e-05 J	5.48e-05	2.99e-05	4.9e-05	9.71e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	6.92e-06	3.84e-06 J	3.18e-06 J	3.98e-06 J	9.25e-06 U
E1668A	PCB-14	34883-41-5	mg/kg	7.69e-07 U	1.81e-06 J	7.77e-07 U	7.96e-07 U	3.89e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	1.54e-06 U	1.54e-06 U	1.55e-06 U	1.59e-06 U	2.85e-05
E1668A	PCB-16	38444-78-9	mg/kg	0.000729 J	0.00014	0.000147	6.31e-05	0.000151
E1668A	PCB-17	37680-66-3	mg/kg	0.00162 J	0.000236	0.000265	0.000133	0.000423 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00236 J	0.000401	0.000414	0.000191	0.000551 J
E1668A	PCB-19	38444-73-4	mg/kg	0.00053 J	9.31e-05	0.00011	5.59e-05	0.000108
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00473 J	0.00109 J	0.00107 J	0.00062 J	0.00189 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000665 J	0.000159	0.000137	8.21e-05	0.000257
E1668A	PCB-22	38444-85-8	mg/kg	0.000909 J	0.000186 J	0.000184 J	9.71e-05 J	0.000322 J
E1668A	PCB-23	55720-44-0	mg/kg	4.06e-06	7.35e-07 J	8.54e-07 J	6.97e-07 U	3.41e-06 U
E1668A	PCB-24	55702-45-9	mg/kg	9.62e-07 U	9.63e-07 U	9.71e-07 U	9.95e-07 U	5.9e-06 J
E1668A	PCB-25	55712-37-3	mg/kg	0.000593 J	0.000105	0.000118	6.59e-05	0.000202
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00108 J	0.000202	0.000235	0.000131	0.000361
E1668A	PCB-27	38444-76-7	mg/kg	0.000488 J	7.72e-05	8.7e-05	4.37e-05	0.00012
E1668A	PCB-31	16606-02-3	mg/kg	0.00273 J	0.000609 J	0.00055 J	0.000303 J	0.000872 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00143 J	0.000192 J	0.000219 J	0.000106 J	0.000341 J
E1668A	PCB-34	37680-68-5	mg/kg	4.66e-05	9.06e-06	1.13e-05	7.52e-06	1.91e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.65e-07 U	8.67e-07 U	8.74e-07 U	8.96e-07 U	4.38e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	7.69e-07 U	7.71e-07 U	7.77e-07 U	7.96e-07 U	3.89e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000103	4.08e-05	3.1e-05	2.25e-05	5.91e-05
E1668A	PCB-38	53555-66-1	mg/kg	6.73e-07 U	9.29e-07 J	6.8e-07 U	6.97e-07 U	4.3e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	2.54e-05	5.36e-06	7.19e-06	4.24e-06	1.5e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00399 J	0.000773	0.00115	0.000666	0.00206
E1668A	PCB-41	52663-59-9	mg/kg	0.000208	3.55e-05	5.57e-05	2.93e-05	9.02e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.00285 J	0.000642 J	0.000832 J	0.000541	0.00165
E1668A	PCB-43	70362-46-8	mg/kg	0.000376	6.93e-05	0.000112	6.23e-05	0.000174
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0113 J	0.00242 J	0.00345 J	0.00211 J	0.00594 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000707 J	0.000109	0.000136	5.86e-05	0.000235
E1668A	PCB-46	41464-47-5	mg/kg	0.000235 J	4.33e-05	4.55e-05	2.35e-05	7.64e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.00129 J	0.000227	0.000321	0.000186	0.000637
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00976 J	0.00217 J	0.00311 J	0.00198 J	0.0052
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00125 J	0.000207	0.000275	0.000146	0.000504
E1668A	PCB-51	68194-04-7	mg/kg	0.000719 J	1e-04	0.000167	9.76e-05	0.000411
E1668A	PCB-52	35693-99-3	mg/kg	0.012 J	0.00284 J	0.00356 J	0.00211 J	0.00637 J

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323	NB03FSBS324
			Sample Date	12/01/15	12/10/15	12/10/15	12/10/15	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	3.59e-05	4.77e-06 J	6.32e-06	2.92e-06 J	6.82e-06 U
E1668A	PCB-55	74338-24-2	mg/kg	4.17e-05	1.16e-06 U	1.17e-06 U	1.19e-06 U	3.46e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.00195 J	0.000554	0.000601 J	0.000385	0.00101
E1668A	PCB-57	70424-67-8	mg/kg	7.53e-05	2.03e-05	2.55e-05	1.96e-05	5e-05
E1668A	PCB-58	41464-49-7	mg/kg	8.31e-05	2.53e-05	2.76e-05	2.27e-05	5.46e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000913	0.000199	0.000274	0.000158	0.000439
E1668A	PCB-60	33025-41-1	mg/kg	0.000993 J	0.000354	0.000415	0.000264	0.000621
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0119 J	0.00396 J	0.00421 J	0.00283 J	0.00678
E1668A	PCB-63	74472-34-7	mg/kg	0.000618 J	0.000185	0.000233	0.000169	0.000338
E1668A	PCB-64	52663-58-8	mg/kg	0.00354 J	0.000817 J	0.00103 J	6e-04 J	0.0018 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00966 J	0.00287 J	0.00324 J	0.00247 J	0.00516 J
E1668A	PCB-67	73575-53-8	mg/kg	0.00023	6.96e-05	8.16e-05	5.62e-05	0.000124
E1668A	PCB-68	73575-52-7	mg/kg	0.000312 J	0.000107	0.00012	9.61e-05	0.000187
E1668A	PCB-72	41464-42-0	mg/kg	1.25e-06 U	0.000116	0.000141	0.000104	0.000221
E1668A	PCB-73	74338-23-1	mg/kg	5.43e-05 J	1.35e-06 U	1.36e-06 U	1.39e-06 U	3.14e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.000313	0.000167	0.000132	9.53e-05	0.000215
E1668A	PCB-78	70362-49-1	mg/kg	1.54e-06 U	1.54e-06 U	1.55e-06 U	1.59e-06 U	7.79e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000156 J	6.24e-05	6.16e-05	5.12e-05	0.00011
E1668A	PCB-80	33284-52-5	mg/kg	1.01e-05	4.22e-06 J	2.22e-06 J	2.61e-06 J	6.77e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	1.5e-05	1.73e-06 U	1.75e-06 U	1.79e-06 U	1.11e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	0.0011 J	0.000427	0.00047	0.000322	0.000735
E1668A	PCB-83	60145-20-2	mg/kg	0.000845 J	0.000315	0.000296	0.000165	0.000483
E1668A	PCB-84	52663-60-2	mg/kg	0.00168 J	0.000635 J	0.000643 J	0.000364	0.00106
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00471 J	0.00163	0.00184 J	0.00143	0.00257
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0118 J	0.00426 J	0.00452 J	0.00338	0.00708
E1668A	PCB-88	55215-17-3	mg/kg	2.12e-06 U	2.12e-06 U	2.14e-06 U	2.19e-06 U	1.07e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	5.94e-05	2.01e-05	2.62e-05	1.32e-05	3.98e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.027 J	0.00937 J	0.0096 J	0.00729 J	0.0154 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00318 J	0.00097 J	0.00121 J	0.000807 J	0.00193
E1668A	PCB-92	52663-61-3	mg/kg	0.00562 J	0.00186 J	0.00199 J	0.00144 J	0.00307 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.001 J	0.000183	0.000266	0.000175	0.000446
E1668A	PCB-94	73575-55-0	mg/kg	5.74e-05	2.3e-05	2.49e-05	1.34e-05	3.93e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00826 J	0.00294 J	0.00274 J	0.00176 J	
E1668A	PCB-96	73575-54-9	mg/kg	5.14e-05	1.34e-05	1.88e-05	1.08e-05	3.58e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000487	0.000136	2e-04	0.000145	0.000318
E1668A	PCB-99	38380-01-7	mg/kg	0.028 J	0.00839 J	0.00882 J	0.00713 J	0.0136 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000576 J	0.000171	0.000206	0.00015	0.000377
E1668A	PCB-104	56558-16-8	mg/kg	1.46e-05	1.35e-06 U	4.61e-06 J	2.93e-06 J	1.27e-05 J
E1668A	PCB-105	32598-14-4	mg/kg	0.00447 J	0.00239 J	0.00242 J	0.00194 J	0.0031 J
E1668A	PCB-106	70424-69-0	mg/kg	1.63e-06 U	1.64e-06 U	1.65e-06 U	1.69e-06 U	8.28e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00329 J	0.00136 J	0.00134 J	0.00115 J	0.00198
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000536 J	0.000224	0.00025	0.000176	0.000306
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0166 J				0.00963 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000175 J	5.1e-05	4.9e-05	4.6e-05	8.43e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.35e-06 U	1.35e-06 U	1.36e-06 U	1.39e-06 U	2.56e-05
E1668A	PCB-114	74472-37-0	mg/kg	0.000298	0.000123	0.000147	0.000118	0.000188

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323	NB03FSBS324
			Sample Date	12/01/15	12/10/15	12/10/15	12/10/15	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0252 J	0.0116 J	0.0115 J	0.00986 J	0.0148 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000751 J	0.000233	0.000219	0.000203	0.000377
E1668A	PCB-121	56558-18-0	mg/kg	6.19e-05	1.55e-05	1.63e-05	1.45e-05	2.92e-05
E1668A	PCB-122	76842-07-4	mg/kg	7.45e-05	2.92e-05	3.42e-05	2.42e-05	4e-05
E1668A	PCB-123	65510-44-3	mg/kg	0.000384 J	9.77e-05	0.00016	0.000111	0.000174
E1668A	PCB-126	57465-28-8	mg/kg	4.86e-05	2.82e-05	2.83e-05	1.86e-05	7.79e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	4.62e-05	2.14e-05	1.98e-05	1.69e-05	2.31e-05 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00453 J	0.0019 J	0.00189 J	0.00162 J	0.0027
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0555 J	0.0192 J	0.0185 J	0.0152 J	0.0265 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00283 J	0.00102 J	0.000987 J	8e-04 J	0.00143
E1668A	PCB-131	61798-70-7	mg/kg	0.000174	7.59e-05	7.51e-05	5.8e-05	0.000116
E1668A	PCB-132	38380-05-1	mg/kg	0.00422 J				0.00266 J
E1668A	PCB-133	35694-04-3	mg/kg	0.00156 J	0.000615 J	0.000568	0.000455	0.000855
E1668A	PCB-134	52704-70-8	mg/kg	0.000929 J	R	R	R	0.000564
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.0104 J	0.00487 J	0.00457 J	0.00342 J	
E1668A	PCB-136	38411-22-2	mg/kg	0.00147 J	0.000738 J	0.000698 J	0.000496	0.00101
E1668A	PCB-137	35694-06-5	mg/kg	0.0012 J	0.000433	0.000465	0.000351	0.00062
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000832 J	0.000275	0.000274	0.000222	0.000383
E1668A	PCB-141	52712-04-6	mg/kg	0.00309 J	0.001 J	0.0012 J	0.000852 J	0.00153 J
E1668A	PCB-142	41411-61-4	mg/kg	1.63e-06 U	R	R	R	8.28e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.17e-06 U	R	R	R	1.61e-05 U
E1668A	PCB-144	68194-14-9	mg/kg	0.00101 J	0.000468	0.000444	0.000339	0.000602
E1668A	PCB-145	74472-40-5	mg/kg	3.26e-06 J	1.54e-06 U	1.95e-06 J	1.59e-06 U	7.79e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0152 J				0.00715 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0209 J	0.00841 J	0.00776 J	0.00582 J	0.0122 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000514 J	0.000187	0.000158	0.00015	0.000277
E1668A	PCB-150	68194-08-1	mg/kg	0.000236	8.12e-05	7.98e-05	7.12e-05	0.000133
E1668A	PCB-152	68194-09-2	mg/kg	1.36e-05	4.68e-06 J	6.48e-06	5.64e-06	8.76e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0781 J	0.0238 J	0.0222 J	0.0184 J	0.0339 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00306 J	0.000975 J	0.000936 J	0.000783 J	0.00146
E1668A	PCB-155	33979-03-2	mg/kg	0.000385 J	0.000103	0.000108	9.66e-05	0.00019
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0027 J	0.00124 J	0.00126 J	0.001	0.00151
E1668A	PCB-158	74472-42-7	mg/kg	0.00246 J	0.000876 J	0.000909 J	0.000758 J	0.00121
E1668A	PCB-159	39635-35-3	mg/kg	1.35e-06 U	1.35e-06 U	1.36e-06 U	1.39e-06 U	7.68e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.06e-06 U	6.07e-06 U	6.12e-06 U	6.27e-06 U	3.07e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	1.25e-06 U	R	R	R	6.33e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000556 J	0.000181	0.000166	0.000133	0.00025
E1668A	PCB-164	74472-45-0	mg/kg	0.00103 J	0.000412	0.000434	0.000314	0.000549
E1668A	PCB-165	74472-46-1	mg/kg	0.000235 J	R	R	R	0.000104
E1668A	PCB-167	52663-72-6	mg/kg	0.00161 J	0.00067 J	0.000674 J	0.000531	0.000852
E1668A	PCB-169	32774-16-6	mg/kg	7.88e-06	1.45e-06 U	1.46e-06 U	1.49e-06 U	7.3e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00806 J	0.00245 J	0.0027 J	0.00189 J	
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00325 J	R	R	R	0.00121
E1668A	PCB-172	52663-74-8	mg/kg	0.00234 J	0.000625 J	0.000646 J	0.000443	0.000841
E1668A	PCB-174	38411-25-5	mg/kg	0.00337 J				0.00145
E1668A	PCB-175	40186-70-7	mg/kg	0.000794 J	R	R	R	0.000327

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323	NB03FSBS324
			Sample Date	12/01/15	12/10/15	12/10/15	12/10/15	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000766 J	0.000301	0.000302	0.000207	0.000367
E1668A	PCB-177	52663-70-4	mg/kg	0.0072 J				0.00278
E1668A	PCB-178	52663-67-9	mg/kg	0.00554 J				0.00235
E1668A	PCB-179	52663-64-6	mg/kg	0.00352 J	0.00132 J	0.00129 J	0.000858 J	0.0015
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0263 J	0.00754 J	0.00826 J	0.00554 J	0.0103 J
E1668A	PCB-181	74472-47-2	mg/kg	8.13e-05	R	R	R	3.17e-05
E1668A	PCB-182	60145-23-5	mg/kg	0.000265 J	R	R	R	9.57e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.0109 J				0.00401
E1668A	PCB-184	74472-48-3	mg/kg	0.000163	4.74e-05	4.26e-05	3.32e-05	6.88e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.44e-06 U	1.45e-06 U	1.46e-06 U	1.49e-06 U	7.3e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0367 J				0.015 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000669 J	0.000201	0.00016	0.000145	0.000291
E1668A	PCB-189	39635-31-9	mg/kg	0.00034	0.000124	0.000129	8.72e-05	0.000158
E1668A	PCB-190	41411-64-7	mg/kg	0.00168 J	0.00047	0.000536	0.00035	0.000659
E1668A	PCB-191	74472-50-7	mg/kg	0.000374 J	0.000107	0.000109	7.81e-05	0.000141
E1668A	PCB-192	74472-51-8	mg/kg	1.25e-06 U	R	R	R	6.33e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00504 J	0.00165 J	0.00183 J	0.00111 J	0.00249
E1668A	PCB-195	52663-78-2	mg/kg	0.00148 J	0.000434	0.000516	0.000323	0.000634
E1668A	PCB-196	42740-50-1	mg/kg	0.00411 J	0.00124 J	0.00115 J	0.000838	0.00154
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.00102 J	0.000323	0.000297	0.000217	0.000375
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0119 J	0.00384 J	0.0035 J	0.00246 J	0.00444
E1668A	PCB-201	40186-71-8	mg/kg	0.0025 J	0.000758	0.000658	0.000528	0.000902
E1668A	PCB-202	2136-99-4	mg/kg	0.00619 J	0.00246 J	0.00189 J	0.00147 J	0.0027
E1668A	PCB-203	52663-76-0	mg/kg	0.00561 J	0.00171 J	0.00184 J	0.00116 J	0.00224
E1668A	PCB-204	74472-52-9	mg/kg	4.15e-05	1.17e-05	7.73e-06	5.82e-06	1.2e-05 J
E1668A	PCB-205	74472-53-0	mg/kg	0.000265	7.79e-05	8.65e-05	5.13e-05	0.000112
E1668A	PCB-206	40186-72-9	mg/kg	0.0115 J	0.00306 J	0.00283 J	0.00206 J	
E1668A	PCB-207	52663-79-3	mg/kg	0.00155 J	0.000369	0.000373	0.000281	0.000591
E1668A	PCB-208	52663-77-1	mg/kg	0.0061 J	0.00175 J	0.00152 J	0.00118 J	0.00238
E1668A	PCB-209	2051-24-3	mg/kg		0.00205 J	0.00213 J	0.00176 J	0.00324 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.59 J	0.155 J	0.158 J	0.117 J	0.266 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.625 J	0.171 J	0.174 J	0.131 J	0.287 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	6.18e-06	3.34e-06	3.34e-06	2.29e-06	1.45e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329	NB03FSBS330
			Sample Date	01/13/16	12/10/15	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	2.67e-05	2.67e-05 J	3.75e-05 J	1.78e-05 J	1.52e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	3.39e-06 U	2.06e-06	2.06e-06	1.32e-06 J	8.57e-07 J
E1668A	PCB-3	2051-62-9	mg/kg	R	1.08e-06 U	1.1e-06 U	1.06e-06 U	1.07e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.000232 J	0.000312 J	0.000374 J	0.000168	0.00018
E1668A	PCB-5	16605-91-7	mg/kg	3.87e-06 U	1.41e-06 J	1.48e-06 J	1.02e-06 J	7.75e-07 U
E1668A	PCB-6	25569-80-6	mg/kg	2.61e-05 J	2.87e-05	3.8e-05	1.49e-05	2.39e-05
E1668A	PCB-7	33284-50-3	mg/kg	1.09e-05	4.19e-06	5.35e-06	3.08e-06	4.23e-06
E1668A	PCB-8	34883-43-7	mg/kg	9e-05 J	9.1e-05 J	0.00012 J	5.09e-05 J	6.91e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	3.39e-06 U	6.39e-06	8.31e-06	6.74e-07 U	4.74e-06
E1668A	PCB-10	33146-45-1	mg/kg	3e-05	4.74e-05	5.57e-05	2.24e-05	2.62e-05
E1668A	PCB-11	2050-67-1	mg/kg	7.23e-05 J	9.75e-05	9.29e-05	3.6e-05	2.86e-05
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.2e-06 U	7.24e-06	6.8e-06	3.01e-06 J	3.3e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	3.87e-06 U	7.86e-07 U	7.99e-07 U	7.71e-07 U	7.75e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	2.33e-05 J	1.57e-06 U	1.6e-06 U	1.54e-06 U	1.55e-06 U
E1668A	PCB-16	38444-78-9	mg/kg	0.000131 J	0.000143	0.000171	6.23e-05	0.00019
E1668A	PCB-17	37680-66-3	mg/kg	0.000318 J	0.000335 J	3e-04 J	0.000111	0.000485 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000433 J	0.000476	0.000478	0.000177	0.000659 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000119	0.000166	0.000164	5.78e-05	0.000127
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00135 J	0.00112 J	0.00116 J	0.000489 J	0.00218 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000177 J	0.000157	0.000194	7.35e-05	0.000238
E1668A	PCB-22	38444-85-8	mg/kg	0.000205 J	0.00018 J	0.000202 J	8.25e-05 J	0.000359 J
E1668A	PCB-23	55720-44-0	mg/kg	3.39e-06 U	1.03e-06 J	9.22e-07 J	6.74e-07 U	1.45e-06 J
E1668A	PCB-24	55702-45-9	mg/kg	4.84e-06 U	9.82e-07 U	9.99e-07 U	9.63e-07 U	9.69e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000148 J	0.000134	0.000131	5.4e-05	0.000195
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000262 J	0.000282	0.000249	9.99e-05	0.000431
E1668A	PCB-27	38444-76-7	mg/kg	9.28e-05 J	0.000152	0.000105	3.88e-05	0.000156
E1668A	PCB-31	16606-02-3	mg/kg	0.000731 J	0.000687 J	0.000658 J	0.000276 J	0.000911 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000264 J	0.000285 J	0.000246 J	9.39e-05 J	0.000399 J
E1668A	PCB-34	37680-68-5	mg/kg	1.27e-05	1.55e-05	1.16e-05	4.96e-06	2.12e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.36e-06 U	1.06e-06 J	1.06e-06 J	8.67e-07 U	8.72e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	6.71e-05 J	7.86e-07 U	7.99e-07 U	7.71e-07 U	7.75e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	5.46e-05	4.68e-05	5.42e-05	2.12e-05	3.12e-05
E1668A	PCB-38	53555-66-1	mg/kg	3.39e-06 U	8.15e-07 J	1.2e-06 J	8.46e-07 J	2.52e-06
E1668A	PCB-39	38444-88-1	mg/kg	8.3e-06 J	6.1e-06	6.25e-06	2.82e-06	9.22e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00102 J	0.00105	0.000874	0.000419	0.0016 J
E1668A	PCB-41	52663-59-9	mg/kg	4.26e-05 J	3.52e-05	3.64e-05	1.68e-05	8.9e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.000879 J	0.000785 J	0.000636 J	0.000333	0.001 J
E1668A	PCB-43	70362-46-8	mg/kg	0.000102 J	9.88e-05	7.21e-05	3.74e-05	0.000177
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00331 J	0.00303 J	0.00243 J	0.00124	0.00526 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000108 J	0.000133	0.000125	5.21e-05	0.000316
E1668A	PCB-46	41464-47-5	mg/kg	4.04e-05 J	5.31e-05	5.32e-05	2.02e-05	9.14e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000328 J	0.000271	0.000236	0.000116	0.000427
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00324 J	0.00296 J	0.00219 J	0.00117 J	0.004 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000239	0.000339	0.000257	0.000105	0.000523
E1668A	PCB-51	68194-04-7	mg/kg	0.000144	0.000172	0.000134	6.07e-05	0.000302
E1668A	PCB-52	35693-99-3	mg/kg	0.00407 J	0.00347 J	0.00284 J	0.0014 J	0.006 J

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329	NB03FSBS330
			Sample Date	01/13/16	12/10/15	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.78e-06 U	9.2e-06	8.44e-06	3.85e-06 J	1.26e-05
E1668A	PCB-55	74338-24-2	mg/kg	5.81e-06 U	1.18e-06 U	1.2e-06 U	1.16e-06 U	1.16e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000677 J	0.000548	0.00053	0.000266	0.000723 J
E1668A	PCB-57	70424-67-8	mg/kg	0.000157 J	2.91e-05	1.98e-05	1.37e-05	2.86e-05
E1668A	PCB-58	41464-49-7	mg/kg	4.26e-05	3.13e-05	2.43e-05	1.68e-05	1.87e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000264	0.000244	2e-04	1e-04	0.000462
E1668A	PCB-60	33025-41-1	mg/kg	0.000485 J	0.000345	0.000283	0.000171	0.000577
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00526 J	0.00415 J	0.00342 J	0.00191	0.00459 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000282 J	0.000223	0.000163	9.6e-05	0.000284
E1668A	PCB-64	52663-58-8	mg/kg	0.00105 J	0.000946 J	0.00078 J	0.000387 J	0.00146 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00387 J	0.00313 J	0.0025 J	0.00161 J	0.00313 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000109	7.98e-05	6.71e-05	3.81e-05	7.16e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.00018 J	0.000131	9.73e-05	6.78e-05	0.000103
E1668A	PCB-72	41464-42-0	mg/kg	0.000212 J	0.000152	0.000112	7.42e-05	0.000146
E1668A	PCB-73	74338-23-1	mg/kg	1.11e-05 J	1.38e-06 U	1.4e-06 U	1.35e-06 U	1.36e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000254 J	0.00018	0.000159	7.98e-05	0.000153
E1668A	PCB-78	70362-49-1	mg/kg	7.74e-06 U	1.57e-06 U	1.6e-06 U	1.54e-06 U	1.55e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	6.27e-05 J	7.16e-05	4.59e-05	3.27e-05	3.16e-05
E1668A	PCB-80	33284-52-5	mg/kg	7.09e-06 J	4.78e-06 J	4.14e-06 J	2.84e-06 J	1.07e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	8.71e-06 U	1.77e-06 U	5.1e-06	1.73e-06 U	1.74e-06 U
E1668A	PCB-82	52663-62-4	mg/kg	0.000535 J	0.000415	0.000326	0.000201	0.000281
E1668A	PCB-83	60145-20-2	mg/kg	0.000405 J	0.00027	0.00023	0.000148	0.000175
E1668A	PCB-84	52663-60-2	mg/kg	0.000585 J	0.000615 J	0.00055	0.000276	0.000621 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00222 J	0.0017	0.00117	0.00091	0.0013
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00601 J	0.00433 J	0.00309	0.00218	0.00249
E1668A	PCB-88	55215-17-3	mg/kg	1.06e-05 U	2.16e-06 U	2.2e-06 U	2.12e-06 U	2.13e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	2.38e-05 J	1.92e-05	1.86e-05	1.07e-05	2.16e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0145 J	0.00937 J	0.00683 J	0.00506 J	0.00577 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00134 J	0.0011 J	0.000851 J	0.000525	0.000856 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00284 J	0.00195 J	0.00145 J	0.001 J	0.00151 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000288 J	0.000224	0.000165	0.000103	0.000232
E1668A	PCB-94	73575-55-0	mg/kg	2.83e-05	2.67e-05	2.24e-05	1.21e-05	2.16e-05
E1668A	PCB-95	38379-99-6	mg/kg		0.00286 J	0.00233 J	0.00132 J	0.00279 J
E1668A	PCB-96	73575-54-9	mg/kg	1.94e-05 U	1.75e-05	1.51e-05	1.45e-06 U	2.96e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000249 J	0.000159	0.000143	9.22e-05	0.000176
E1668A	PCB-99	38380-01-7	mg/kg	0.0129 J	0.00905 J	0.00641 J	0.00501 J	0.00567 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000318 J	0.000207	0.000159	0.000106	0.000145
E1668A	PCB-104	56558-16-8	mg/kg	6.78e-06 U	3.43e-06 J	1.4e-06 U	1.35e-06 U	6.65e-06
E1668A	PCB-105	32598-14-4	mg/kg	0.00325 J	0.00242 J	0.0018 J	0.0013 J	0.00187 J
E1668A	PCB-106	70424-69-0	mg/kg	8.23e-06 U	1.67e-06 U	1.7e-06 U	1.64e-06 U	1.65e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.0021 J	0.00145 J	0.00105 J	0.000807 J	0.000663 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000319 J	0.000245	0.000181	0.000126	0.000119
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00787 J				
E1668A	PCB-111	39635-32-0	mg/kg	8.53e-05	5.77e-05	4.26e-05	3.26e-05	2.05e-05
E1668A	PCB-112	74472-36-9	mg/kg	6.78e-06 U	1.38e-06 U	1.4e-06 U	1.35e-06 U	1.36e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000168 J	0.000137	8.77e-05	6.26e-05	0.000141

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329	NB03FSBS330
			Sample Date	01/13/16	12/10/15	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0148 J	0.0122 J	0.00841 J	0.00698 J	0.00749 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000387 J	0.000254	0.000183	0.00014	8.85e-05
E1668A	PCB-121	56558-18-0	mg/kg	2.51e-05	1.66e-05	1.27e-05	1.02e-05	9.68e-06
E1668A	PCB-122	76842-07-4	mg/kg	3.9e-05	2.74e-05	2.54e-05	1.46e-05	1.82e-05
E1668A	PCB-123	65510-44-3	mg/kg	8.23e-06 U	0.000171	9.15e-05	7.79e-05	8e-05
E1668A	PCB-126	57465-28-8	mg/kg	0.00017	3.34e-05	2.48e-05	1.72e-05	1.19e-05
E1668A	PCB-127	39635-33-1	mg/kg	R	1.6e-05	1.4e-06 U	1.19e-05	1.51e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00246 J	0.00193 J	0.00133 J	0.00104	0.000932
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0267 J	0.0181 J	0.0129 J	0.0102 J	0.00866 J
E1668A	PCB-130	52663-66-8	mg/kg	0.0015 J	0.00101 J	0.000736 J	0.000526	0.000384
E1668A	PCB-131	61798-70-7	mg/kg	0.000104 J	7.15e-05	5.07e-05	3.59e-05	3.46e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.00219 J				
E1668A	PCB-133	35694-04-3	mg/kg	0.000864 J	0.000645 J	0.000454	0.000331	0.000263
E1668A	PCB-134	52704-70-8	mg/kg	5e-04 J	R	R	R	R
E1668A	PCB-135/151	PCB-135/151	mg/kg		0.00444 J	0.00348 J	0.00235 J	0.00248 J
E1668A	PCB-136	38411-22-2	mg/kg	0.000744 J	0.000664 J	0.000548	0.000338	0.000351
E1668A	PCB-137	35694-06-5	mg/kg	0.000637 J	0.000414	0.000272	0.000222	0.00034
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000387 J	0.000274	0.000186	0.000146	0.00013
E1668A	PCB-141	52712-04-6	mg/kg	0.00146 J	0.00105 J	0.000695 J	5e-04 J	0.00076 J
E1668A	PCB-142	41411-61-4	mg/kg	8.23e-06 U	R	R	R	R
E1668A	PCB-143	68194-15-0	mg/kg	1.6e-05 U	R	R	R	R
E1668A	PCB-144	68194-14-9	mg/kg	0.000618 J	0.000409	0.000289	0.000207	0.000231
E1668A	PCB-145	74472-40-5	mg/kg	7.74e-06 U	1.67e-06 J	1.6e-06 U	1.54e-06 U	1.55e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00767 J				
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0111 J	0.00753 J	0.00597 J	0.00408 J	0.00343 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000286 J	0.000178	0.000145	0.000111	5.75e-05
E1668A	PCB-150	68194-08-1	mg/kg	0.000135	8.09e-05	7.51e-05	4.85e-05	2.7e-05
E1668A	PCB-152	68194-09-2	mg/kg	7.05e-06 J	4.05e-06 J	4.4e-06 J	4.68e-06 J	5.18e-06
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.036 J	0.0231 J	0.0156 J	0.0128 J	0.00995 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00154 J	0.00101 J	0.000771 J	0.000563	0.000371
E1668A	PCB-155	33979-03-2	mg/kg	0.000138 J	0.000106	8.91e-05	6.58e-05	5.09e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0016 J	0.00125 J	0.000856	0.000642	0.000779
E1668A	PCB-158	74472-42-7	mg/kg	0.00121 J	0.00086 J	0.000558	0.000459	0.000526
E1668A	PCB-159	39635-35-3	mg/kg	5.59e-05 J	1.38e-06 U	1.4e-06 U	1.35e-06 U	1.36e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	3.05e-05 U	6.19e-06 U	6.29e-06 U	6.07e-06 U	6.1e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	6.29e-06 U	R	R	R	R
E1668A	PCB-162	39635-34-2	mg/kg	0.000239 J	0.000178	0.000128	9.54e-05	6.03e-05
E1668A	PCB-164	74472-45-0	mg/kg	0.000532 J	0.000388	0.000306	0.000233	0.000228
E1668A	PCB-165	74472-46-1	mg/kg	0.000113 J	R	R	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.00091 J	0.000689 J	0.000483	0.000383	0.000321
E1668A	PCB-169	32774-16-6	mg/kg	7.26e-06 U	1.47e-06 U	1.5e-06 U	1.45e-06 U	1.45e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0029 J	0.00242 J	0.00159 J	0.00125 J	0.00136 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00111 J	R	R	R	R
E1668A	PCB-172	52663-74-8	mg/kg	0.000844 J	0.000632 J	0.000405	0.000339	0.000275
E1668A	PCB-174	38411-25-5	mg/kg	0.00134 J				R
E1668A	PCB-175	40186-70-7	mg/kg	0.000344 J	R	R	R	R

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329	NB03FSBS330
			Sample Date	01/13/16	12/10/15	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000368 J	0.000272	0.000196	0.000145	7.82e-05
E1668A	PCB-177	52663-70-4	mg/kg	0.00282 J				
E1668A	PCB-178	52663-67-9	mg/kg	0.00252 J				
E1668A	PCB-179	52663-64-6	mg/kg	0.00147 J	0.00123 J	0.000902 J	0.000671 J	0.000435
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00981 J	0.00745 J	0.00479 J	0.00389 J	0.00392 J
E1668A	PCB-181	74472-47-2	mg/kg	2.93e-05	R	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	8.78e-05	R	R	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.0041 J				
E1668A	PCB-184	74472-48-3	mg/kg	6.92e-05	4.75e-05	3.49e-05	2.79e-05	1.39e-05
E1668A	PCB-186	74472-49-4	mg/kg	7.26e-06 U	1.47e-06 U	1.5e-06 U	1.45e-06 U	1.45e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0156 J				
E1668A	PCB-188	74487-85-7	mg/kg	0.000295 J	0.000185	0.000174	0.000167	4.7e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000157 J	0.000131	8.32e-05	6.3e-05	5.57e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.000572 J	0.000477	0.000313	0.000226	0.000313
E1668A	PCB-191	74472-50-7	mg/kg	0.000137 J	0.000101	6.41e-05	5.46e-05	6.22e-05
E1668A	PCB-192	74472-51-8	mg/kg	6.29e-06 U	R	R	R	R
E1668A	PCB-194	35694-08-7	mg/kg	0.00211 J	0.00185 J	0.00113 J	0.000847	0.000725
E1668A	PCB-195	52663-78-2	mg/kg	0.000491 J	0.000474	0.000299	0.00022	0.000233
E1668A	PCB-196	42740-50-1	mg/kg	0.00146 J	0.00123 J	0.000858	0.000751	0.000486
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000398 J	0.000322	0.000235	0.000185	0.000108
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00447 J	0.0036 J	0.00267 J	0.00258 J	0.00135
E1668A	PCB-201	40186-71-8	mg/kg	0.001 J	0.000761	0.000559	0.000513	0.000224
E1668A	PCB-202	2136-99-4	mg/kg	0.00279 J	0.00215 J	0.0016 J	0.00207 J	0.000684
E1668A	PCB-203	52663-76-0	mg/kg	0.00201 J	0.00175 J	0.00118 J	0.000961 J	0.000942 J
E1668A	PCB-204	74472-52-9	mg/kg	1.2e-05 J	9.4e-06	6.41e-06	8.42e-06	5.13e-06
E1668A	PCB-205	74472-53-0	mg/kg	0.000105	8.78e-05	5.58e-05	3.88e-05	3.53e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00394 J	0.00328 J	0.00295 J	0.00176 J	0.00148 J
E1668A	PCB-207	52663-79-3	mg/kg	0.000517 J	0.000442	0.000372	0.00023	0.00018
E1668A	PCB-208	52663-77-1	mg/kg	0.00219 J	0.00168 J	0.00164 J	0.00112 J	0.000752
E1668A	PCB-209	2051-24-3	mg/kg	0.0028 J	0.00231 J	0.00243 J	0.00137 J	0.00122 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.25 J	0.157 J	0.117 J	0.0836 J	0.105 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.272 J	0.174 J	0.129 J	0.0932 J	0.116 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.77e-05	3.88e-06	2.86e-06	2.02e-06	1.54e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334	NB03FSBS335
			Sample Date	01/12/16	12/10/15	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	R	0.000349 J	2.8e-05	2.97e-05	2.25e-05
E1668A	PCB-2	2051-61-8	mg/kg	1.23e-05 J	1.38e-06 J	3.45e-06 U	3.4e-06 U	6.72e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	2.45e-05 J	1.09e-06 U	5.42e-06 U	5.34e-06 U	R
E1668A	PCB-4	13029-08-8	mg/kg	0.008 J	0.00413 J	0.00023 J	0.000386	0.000187
E1668A	PCB-5	16605-91-7	mg/kg	3.04e-05 J	2.77e-06 J	3.94e-06 U	3.89e-06 U	8.58e-07 J
E1668A	PCB-6	25569-80-6	mg/kg	0.00281 J	0.000344 J	2.61e-05 J	3.6e-05 J	2.05e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	0.00021 J	1.42e-05	3.94e-06 U	3.89e-06 U	5.94e-06
E1668A	PCB-8	34883-43-7	mg/kg	0.00487 J	0.000765 J	7.21e-05 J	0.000117 J	6.6e-05 J
E1668A	PCB-9	34883-39-1	mg/kg	0.000341 J	4.24e-05	5.12e-06 J	8.17e-06 J	4.49e-06
E1668A	PCB-10	33146-45-1	mg/kg	0.000935 J	0.00077 J	3.48e-05	6.42e-05	2.54e-05
E1668A	PCB-11	2050-67-1	mg/kg	0.000175 J	2.51e-05	9.08e-05 J	9.89e-05 J	6.42e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	8.03e-05 J	1.31e-05	9.36e-06 U	9.23e-06 U	3.62e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.48e-06 U	7.94e-07 U	3.94e-06 U	3.89e-06 U	7.68e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	9.23e-05 J	1.59e-06 U	2.23e-05 J	R	1.94e-05
E1668A	PCB-16	38444-78-9	mg/kg	0.00743 J	0.00066 J	7.72e-05 J	0.000198	8.79e-05
E1668A	PCB-17	37680-66-3	mg/kg	0.0179 J	0.00242 J	0.000345 J	0.000392 J	0.000207 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.0269 J	0.00302 J	0.000383 J	0.000591 J	0.00029 J
E1668A	PCB-19	38444-73-4	mg/kg	0.00571 J	0.00189 J	0.000109	0.000167	8.67e-05
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0897 J	0.00418 J	0.00453 J	0.00104 J	0.000905 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.0125 J	0.000617 J	0.000158	0.000168	0.000134
E1668A	PCB-22	38444-85-8	mg/kg	0.017 J	0.000826 J	0.000274 J	0.000177 J	0.000141 J
E1668A	PCB-23	55720-44-0	mg/kg	4.47e-05 J	4.31e-06	3.45e-06 U	3.4e-06 U	8.34e-07 J
E1668A	PCB-24	55702-45-9	mg/kg	0.000283	9.92e-07 U	4.93e-06 U	4.86e-06 U	9.6e-07 U
E1668A	PCB-25	55712-37-3	mg/kg	0.0149 J	0.000984 J	0.00148 J	0.000113	0.000102
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.0193 J	0.00182 J	0.00255 J	0.000227	0.000193
E1668A	PCB-27	38444-76-7	mg/kg	0.00428 J	0.00123 J	9.09e-05	0.000139	6.36e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0541 J	0.00382 J	0.00184 J	0.00067 J	0.000481 J
E1668A	PCB-32	38444-77-8	mg/kg	0.0133 J	0.00176 J	0.000317 J	0.000292 J	0.000177 J
E1668A	PCB-34	37680-68-5	mg/kg	0.000855 J	8.91e-05	5.15e-05	1.01e-05	1.12e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.41e-06 U	8.93e-07 U	4.43e-06 U	4.37e-06 U	8.64e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.48e-06 U	7.94e-07 U	3.94e-06 U	5.23e-05	4.6e-05
E1668A	PCB-37	38444-90-5	mg/kg	0.00152 J	4.64e-05	5.78e-05	5.92e-05	3.46e-05
E1668A	PCB-38	53555-66-1	mg/kg	8.4e-05 J	4.1e-06	9.47e-06 J	3.4e-06 U	1.29e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	0.000462 J	2.26e-05	1.22e-05	6.63e-06 J	5.82e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.0416 J	0.00384 J	0.00289 J	0.000971	0.000782
E1668A	PCB-41	52663-59-9	mg/kg	0.00233	0.000139	2.07e-05 U	4.01e-05 J	2.98e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.0315 J	0.00252 J	0.00177 J	0.000745	
E1668A	PCB-43	70362-46-8	mg/kg	0.00357 J	0.000345	0.000104	8.37e-05	7.3e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.119 J	0.00967 J	0.00889 J	0.00281 J	0.00243 J
E1668A	PCB-45	70362-45-7	mg/kg	0.00679 J	0.000793 J	0.000138 J	0.000142	8.98e-05
E1668A	PCB-46	41464-47-5	mg/kg	0.00301 J	0.000298	5.31e-05	6.32e-05	3.06e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.014 J	0.000692 J	0.000363 J	0.000249	0.000232
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0928 J	0.00863 J	0.0148 J	0.00247	
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.0138 J	0.00131 J	0.000751 J	0.000293	0.000196
E1668A	PCB-51	68194-04-7	mg/kg	0.0121 J	0.000718 J	0.000656 J	0.000159	0.000118
E1668A	PCB-52	35693-99-3	mg/kg	0.125 J	0.0115 J	0.0151 J	0.00326 J	0.00273 J

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334	NB03FSBS335
			Sample Date	01/12/16	12/10/15	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	0.000792 J	5.58e-05	6.9e-06 U	8.36e-06 J	4.42e-06 J
E1668A	PCB-55	74338-24-2	mg/kg	0.00066 J	1.19e-06 U	4.39e-05	5.83e-06 U	1.15e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.0316 J	0.00153 J	0.000825 J	0.000496	0.00043
E1668A	PCB-57	70424-67-8	mg/kg	0.00064 J	6.02e-05	0.000179 J	0.000115	9.99e-05
E1668A	PCB-58	41464-49-7	mg/kg	0.000633 J	6.63e-05	7.3e-05	2.95e-05	2.82e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00912 J	0.000806	0.000726 J	0.000218	0.000191
E1668A	PCB-60	33025-41-1	mg/kg	0.0122 J	0.000753 J	0.000586 J	0.000307	0.000275
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.159 J	0.00928 J	0.0063 J	0.00349	
E1668A	PCB-63	74472-34-7	mg/kg	0.00507 J	0.000466	0.00039 J	0.000165	0.000176
E1668A	PCB-64	52663-58-8	mg/kg	0.0428 J	0.00315 J	0.00217 J	0.000902 J	0.000736 J
E1668A	PCB-66	32598-10-0	mg/kg	0.1 J	0.0063 J	0.00448 J	0.00263 J	0.00252 J
E1668A	PCB-67	73575-53-8	mg/kg	0.00275 J	0.000156	0.000454 J	6.69e-05	5.92e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.00183 J	0.000221	0.000476 J	0.000115	0.000113
E1668A	PCB-72	41464-42-0	mg/kg	0.00227 J	0.000307	0.000678 J	0.000136	0.000129
E1668A	PCB-73	74338-23-1	mg/kg	1.31e-05 U	1.39e-06 U	5.12e-05	6.8e-06 U	1.51e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.0039 J	0.000225	0.000242 J	0.000177	0.000146
E1668A	PCB-78	70362-49-1	mg/kg	1.5e-05 U	1.59e-06 U	7.88e-06 U	7.77e-06 U	1.54e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000789 J	0.000102	0.000114 J	0.000105	7.58e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.37e-05 J	6e-06	5.42e-06 U	5.34e-06 U	4.76e-06 J
E1668A	PCB-81	70362-50-4	mg/kg	R	8.21e-06	8.87e-06 U	8.75e-06 U	1.73e-06 U
E1668A	PCB-82	52663-62-4	mg/kg	0.0082 J	0.000747 J	0.000391 J	0.000444	0.000273
E1668A	PCB-83	60145-20-2	mg/kg	0.00377 J	0.000598 J	0.000307 J	0.000302	0.000212
E1668A	PCB-84	52663-60-2	mg/kg	0.016 J	0.00177 J	0.00076 J	0.000632	0.000393
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0186 J	0.00251 J	0.00172 J	0.0018	0.00115
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0579 J	0.00625 J	0.00567 J	0.00478	0.00293
E1668A	PCB-88	55215-17-3	mg/kg	0.000366	2.18e-06 U	1.08e-05 U	1.07e-05 U	2.11e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000912 J	6.25e-05	1.77e-05 J	2.21e-05 J	1.43e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.102 J	0.0125 J	0.0117 J	0.0112 J	0.00701 J
E1668A	PCB-91	68194-05-8	mg/kg	0.0188 J	0.00235 J	0.00296 J	R	
E1668A	PCB-92	52663-61-3	mg/kg	0.0197 J	0.00301 J	0.00261 J	0.00215 J	0.00143 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00525 J	0.000426	0.000531 J	0.000256	0.000172
E1668A	PCB-94	73575-55-0	mg/kg	0.000692 J	7.66e-05	1.75e-05 J	2.69e-05	1.93e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.0506 J	0.00541 J	0.00472 J	0.00262	
E1668A	PCB-96	73575-54-9	mg/kg	0.000823 J	5.92e-05	4.87e-05	1.94e-05 U	1.09e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00438 J	0.000423	0.000757 J	0.000158	0.00014
E1668A	PCB-99	38380-01-7	mg/kg	0.0671 J	0.0121 J	0.0118 J	0.0108 J	0.00667 J
E1668A	PCB-103	60145-21-3	mg/kg	0.00249 J	3e-04	0.000495 J	0.000257	0.000171
E1668A	PCB-104	56558-16-8	mg/kg	0.000345 J	1.08e-05	1e-05 J	6.8e-06 U	2.65e-06 J
E1668A	PCB-105	32598-14-4	mg/kg		0.00304 J	0.00261 J	0.00206 J	0.00151 J
E1668A	PCB-106	70424-69-0	mg/kg	1.59e-05 U	1.69e-06 U	8.37e-06 U	8.26e-06 U	1.63e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00875 J	0.00182 J	0.00144 J	0.00156	
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.0033 J	0.000274	0.000307 J	0.00022	0.000143
E1668A	PCB-110/115	PCB-110/115	mg/kg			0.00929 J	0.00688 J	0.00418 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000114 J	7e-05	4.69e-05	7.58e-05	4.6e-05
E1668A	PCB-112	74472-36-9	mg/kg	7.43e-05	1.39e-06 U	6.9e-06 U	2.11e-05 J	1.34e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.00237 J	0.000167	0.000182 J	0.000101	8.27e-05

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334	NB03FSBS335
			Sample Date	01/12/16	12/10/15	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0999 J	0.0149 J	0.0136 J	0.0109 J	0.00768 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000565 J	0.000297	0.000213 J	0.000333	0.000199
E1668A	PCB-121	56558-18-0	mg/kg	0.000103 J	2.34e-05	1.98e-05 J	2.54e-05	1.41e-05
E1668A	PCB-122	76842-07-4	mg/kg	0.000707	3.37e-05	5.37e-05	2.68e-05	1.76e-05
E1668A	PCB-123	65510-44-3	mg/kg	0.00172 J	0.000233	0.000214 J	8.26e-06 U	1.63e-06 U
E1668A	PCB-126	57465-28-8	mg/kg	1.5e-05 U	3.8e-05	7.88e-06 U	7.77e-06 U	1.54e-06 U
E1668A	PCB-127	39635-33-1	mg/kg	R	1.99e-05	1.9e-05 J	1.35e-05 J	R
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00854 J	0.00221 J	0.0016 J	0.00217	0.00114
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0773 J	0.019 J	0.0151 J	0.0219 J	0.0124 J
E1668A	PCB-130	52663-66-8	mg/kg	0.00385 J	0.00109 J	0.000799 J	0.00116	
E1668A	PCB-131	61798-70-7	mg/kg	0.000717 J	8.92e-05	9.61e-05	8.6e-05	3.84e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.0164 J		0.00158 J	0.00186 J	0.0011 J
E1668A	PCB-133	35694-04-3	mg/kg	0.00166 J	0.000601 J	0.00052 J	0.000622	0.000443
E1668A	PCB-134	52704-70-8	mg/kg	0.00251 J		0.000398 J	0.000373	0.000267
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.0288 J	0.0053 J	0.00358 J	R	
E1668A	PCB-136	38411-22-2	mg/kg	0.00806 J	0.00104 J	0.00082 J	R	0.000411
E1668A	PCB-137	35694-06-5	mg/kg	0.00343 J	0.000512	0.000451 J	0.000442	0.000272
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00138 J	0.00031	0.000274	0.000324	0.000184
E1668A	PCB-141	52712-04-6	mg/kg	0.0116 J	0.00112 J	0.000917 J	0.000905 J	0.000599 J
E1668A	PCB-142	41411-61-4	mg/kg	1.59e-05 U	R	8.37e-06 U	8.26e-06 U	1.63e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	0.000121	R	1.63e-05 U	1.6e-05 U	3.17e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	0.00371 J	0.000435	0.00034 J	R	0.000256
E1668A	PCB-145	74472-40-5	mg/kg	2.27e-05 J	3.04e-06 J	7.88e-06 U	R	1.54e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.0138 J		0.00359 J	0.00631 J	0.00344 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0503 J	0.00984 J	0.00855 J	0.00867 J	0.0052 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000458 J	0.000181	0.000132 J	R	0.00015
E1668A	PCB-150	68194-08-1	mg/kg	0.000442 J	9.32e-05	0.000102	R	6.14e-05
E1668A	PCB-152	68194-09-2	mg/kg	0.000133 J	1.25e-05	8.16e-06 J	R	3.45e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0797 J	0.0224 J	0.0186 J	0.028 J	0.0167 J
E1668A	PCB-154	60145-22-4	mg/kg	0.003 J	0.000908 J	0.000902 J	R	
E1668A	PCB-155	33979-03-2	mg/kg	0.000944 J	0.000108	6.95e-05	0.000131	8.15e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00889 J	0.00137 J	0.00115 J	0.00108	0.000704
E1668A	PCB-158	74472-42-7	mg/kg	0.00626 J	0.000948 J	0.000898 J	0.000909	0.000518
E1668A	PCB-159	39635-35-3	mg/kg	1.38e-05 J	1.39e-06 U	6.9e-06 U	6.8e-06 U	3.14e-06 J
E1668A	PCB-160	41411-62-5	mg/kg	6.32e-05 J	6.25e-06 U	3.1e-05 U	3.06e-05 U	6.05e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.21e-05 U	R	6.4e-06 U	6.32e-06 U	1.25e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000682 J	0.00016	0.000141	0.000176	0.000102
E1668A	PCB-164	74472-45-0	mg/kg	0.00357 J	0.000596 J	0.000394 J	0.000426	0.000261
E1668A	PCB-165	74472-46-1	mg/kg	7.26e-05 J	R	5.01e-05	0.000106	5.71e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.00349 J	0.000669 J	0.000662 J	0.000628	0.000401
E1668A	PCB-169	32774-16-6	mg/kg	1.4e-05 U	1.49e-06 U	7.39e-06 U	7.29e-06 U	2.26e-06 J
E1668A	PCB-170	35065-30-6	mg/kg	0.013 J	0.00206 J	0.00158 J	0.0023	
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00435 J	R	0.000629 J	0.000914	0.000514
E1668A	PCB-172	52663-74-8	mg/kg	0.00284 J	0.000463	0.000371 J	0.000622	0.000349
E1668A	PCB-174	38411-25-5	mg/kg	0.0102 J		0.000733 J	0.00109	
E1668A	PCB-175	40186-70-7	mg/kg	0.00087 J	R	0.000148	R	0.000153

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334	NB03FSBS335
			Sample Date	01/12/16	12/10/15	01/12/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.00174 J	0.00025	0.000172 J	0.000287	0.000143
E1668A	PCB-177	52663-70-4	mg/kg	0.00697 J		0.00138 J	0.00215	
E1668A	PCB-178	52663-67-9	mg/kg	0.00461 J		0.00101 J	0.002	
E1668A	PCB-179	52663-64-6	mg/kg	0.00574 J	0.00102 J	0.000689 J	0.00124	
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.039 J	0.00574 J	0.00465 J	0.00726 J	0.00395 J
E1668A	PCB-181	74472-47-2	mg/kg	0.000177 J	R	2.36e-05 J	1.94e-05 J	1.28e-05
E1668A	PCB-182	60145-23-5	mg/kg	0.000167 J	R	4.11e-05	7.78e-05	4.43e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.0137 J		0.00192 J	0.00304	
E1668A	PCB-184	74472-48-3	mg/kg	0.000467 J	3.17e-05	6.9e-06 U	5.37e-05	2.99e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.4e-05 U	1.49e-06 U	7.39e-06 U	7.29e-06 U	1.44e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.0337 J		0.0066 J		0.00675 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000189 J	0.000104	0.000125	0.000196	0.000149
E1668A	PCB-189	39635-31-9	mg/kg	0.000695 J	9.47e-05	8.36e-05	0.000112	6.78e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.00296 J	0.000366	0.000329 J	0.000433	0.000242
E1668A	PCB-191	74472-50-7	mg/kg	0.000598 J	8.44e-05	7.18e-05	0.000102	5.47e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.21e-05 U	R	6.4e-06 U	6.32e-06 U	1.25e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00806 J	0.000938 J	0.000975 J	0.00167	
E1668A	PCB-195	52663-78-2	mg/kg	0.00261 J	0.000289	0.000268	0.000424	0.000251
E1668A	PCB-196	42740-50-1	mg/kg	0.00494 J	0.000729	0.000648 J	0.0012	0.000719
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.0012 J	0.000189	0.000161	0.000316	0.000191
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.0125 J	0.00226 J	0.00183 J	0.0036	
E1668A	PCB-201	40186-71-8	mg/kg	0.00157 J	0.000396	0.000373 J	0.000758	0.000475
E1668A	PCB-202	2136-99-4	mg/kg	0.00362 J	0.00129 J	0.00113 J	0.00207	
E1668A	PCB-203	52663-76-0	mg/kg	0.00867 J	0.00105 J	0.000926 J	0.00167	
E1668A	PCB-204	74472-52-9	mg/kg	2.05e-05 J	5.39e-06	1.03e-05 U	1.02e-05 U	5.36e-06
E1668A	PCB-205	74472-53-0	mg/kg	0.000424 J	4.53e-05	4.49e-05	8.04e-05	4.69e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.00635 J	0.00116 J	0.00166 J	0.003	
E1668A	PCB-207	52663-79-3	mg/kg	0.000766 J	0.000157	0.000225	0.000413	0.000254
E1668A	PCB-208	52663-77-1	mg/kg	0.00268 J	0.000722	0.000917 J	0.00169	
E1668A	PCB-209	2051-24-3	mg/kg	0.00344 J	0.000817	0.00111 J	0.00224 J	0.0015 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	2.06 J	0.232 J	0.223 J	0.185 J	0.0997 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	2.18 J	0.253 J	0.241 J	0.201 J	0.11 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	4.2e-06 J	4.45e-06	1.39e-06 J	1.15e-06 J	4.14e-07 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486	NB03FSFC487
			Sample Date	01/20/16	01/20/16	12/01/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	0.000419 J	R	0.000289	1.97e-05 J	1.46e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	2.47e-06	1.46e-06 J	2.76e-06	2.15e-06	1.37e-06 J
E1668A	PCB-3	2051-62-9	mg/kg	5.22e-06	2.28e-06 J	1.09e-06 U	1.06e-06 U	1.09e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.00462 J	0.000506 J	0.0036 J	0.00031 J	0.000183
E1668A	PCB-5	16605-91-7	mg/kg	6.11e-06	2.98e-06 J	7.92e-07 U	1.79e-06 J	1.29e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	0.000397 J	9.19e-05 J	0.000238	4.02e-05	3.32e-05
E1668A	PCB-7	33284-50-3	mg/kg	2.58e-05	8.87e-06	1.07e-05	6.68e-06	5.31e-06
E1668A	PCB-8	34883-43-7	mg/kg	0.00104 J	0.000254 J	0.000701 J	0.000154 J	0.000128 J
E1668A	PCB-9	34883-39-1	mg/kg	6.1e-05	1.83e-05	3.46e-05	1.13e-05	8.82e-06
E1668A	PCB-10	33146-45-1	mg/kg	0.000756 J	6.43e-05	0.000412 J	4.11e-05	2.53e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.3e-06 U	3.29e-06 U	6.23e-05 J	3e-05	2.03e-05
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.23e-05	5.44e-06	1.24e-05	3.62e-06 J	3.04e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.77e-07 U	7.73e-07 U	7.92e-07 U	7.7e-07 U	7.96e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	R	1.96e-05	4.3e-05 J	1.54e-06 U	1.59e-06 U
E1668A	PCB-16	38444-78-9	mg/kg	0.0023 J	0.000639 J	0.000454 J	7.07e-05	5.09e-05
E1668A	PCB-17	37680-66-3	mg/kg	0.00638 J	0.00124 J	0.00191 J	0.000551 J	0.000411 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00935 J	0.00187 J	0.00216 J	0.001 J	0.000711 J
E1668A	PCB-19	38444-73-4	mg/kg	0.00285 J	0.00042 J	0.00166 J	0.000208	0.000142
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0271 J	0.00465 J	0.0024 J	0.00189 J	0.00154 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00223 J	0.000584 J	0.00029	0.00022	0.000184
E1668A	PCB-22	38444-85-8	mg/kg	0.00322 J	0.000779 J	0.000348 J	0.000349 J	0.000246 J
E1668A	PCB-23	55720-44-0	mg/kg	9.17e-06	2.73e-06	2.43e-06	9.16e-07 J	7.44e-07 J
E1668A	PCB-24	55702-45-9	mg/kg	0.000139 J	9.66e-07 U	9.9e-07 U	1.39e-05	8.68e-06
E1668A	PCB-25	55712-37-3	mg/kg	0.00193 J	0.000445 J	0.000318 J	0.000151	8.63e-05
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00357 J	0.000769 J	0.000807 J	0.000364	0.00024
E1668A	PCB-27	38444-76-7	mg/kg	0.00217 J	0.000333 J	0.00079 J	0.000114	7.81e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.0122 J	0.00215 J	0.00178 J	0.00124 J	0.000811 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00476 J	0.000914 J	0.00163 J	0.000436 J	0.000314 J
E1668A	PCB-34	37680-68-5	mg/kg	0.000157	3.31e-05	4.43e-05	1.04e-05	8.34e-06
E1668A	PCB-35	37680-69-6	mg/kg	3.36e-06	8.7e-07 U	9.63e-07 J	8.66e-07 U	8.96e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.77e-07 U	7.73e-07 U	7.92e-07 U	7.7e-07 U	7.96e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000474 J	6.91e-05	7.68e-05	2.21e-05	1.45e-05
E1668A	PCB-38	53555-66-1	mg/kg	1.46e-05	3.66e-06	3.65e-06	1.15e-06 J	6.97e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	8.88e-05	1.98e-05	1.14e-05	4.36e-06	3.51e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.0135 J	0.00238 J	0.00211 J	0.000603	0.000428
E1668A	PCB-41	52663-59-9	mg/kg	0.000786 J	0.000161	7.74e-05	5.21e-05	3.55e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.00914 J	0.00189 J	0.00118 J	0.000456	0.000271
E1668A	PCB-43	70362-46-8	mg/kg	0.00118 J	0.000243	0.000204	5.97e-05	4.38e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0458 J	0.00782 J	0.00561 J	0.00157	0.00128
E1668A	PCB-45	70362-45-7	mg/kg	0.00295 J	0.000526	0.000433	0.000226	0.000134
E1668A	PCB-46	41464-47-5	mg/kg	0.00101 J	0.000168	0.000203	9.68e-06	6.3e-06
E1668A	PCB-48	70362-47-9	mg/kg	0.00382 J	0.000832 J	0.000461	0.000237	0.000174
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0358 J	0.00609 J	0.00517 J	0.00161 J	0.000991
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.0045 J	0.000798	0.00103	0.000289	0.000206
E1668A	PCB-51	68194-04-7	mg/kg	0.00237 J	0.00058 J	0.000476	0.000203	0.000139
E1668A	PCB-52	35693-99-3	mg/kg	0.0535 J	0.00871 J	0.00687 J	0.0036 J	0.00189 J

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486	NB03FSFC487
			Sample Date	01/20/16	01/20/16	12/01/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	0.000156	4.65e-05	5.2e-05	3.28e-05	2.06e-05
E1668A	PCB-55	74338-24-2	mg/kg	5.92e-05 J	1.16e-06 U	1.19e-06 U	1.02e-05	5.7e-06
E1668A	PCB-56	41464-43-1	mg/kg	0.00663 J	0.00128 J	0.000708 J	0.000366	0.00021
E1668A	PCB-57	70424-67-8	mg/kg	0.000147	3.24e-05	3.47e-05	9.56e-06	5.62e-06
E1668A	PCB-58	41464-49-7	mg/kg	0.00015	3.59e-05	3.44e-05	6.38e-06	3.34e-06 J
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00347 J	0.000622	0.000486	0.000208	0.000147
E1668A	PCB-60	33025-41-1	mg/kg	0.00451 J	0.000875 J	0.000401	0.000246	0.000227
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0508 J	0.00843 J	0.00462 J	0.00243 J	0.00162
E1668A	PCB-63	74472-34-7	mg/kg	0.00157 J	0.000351	0.000267	0.000135	6.44e-05
E1668A	PCB-64	52663-58-8	mg/kg	0.014 J	0.00249 J	0.00153 J	0.000748 J	0.00047 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0401 J	0.00698 J	0.00312 J	0.00144 J	0.00137 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000544	0.000127	9.39e-05	3.5e-05	1.98e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.000536	0.000129	0.000137	3.9e-05	1.8e-05
E1668A	PCB-72	41464-42-0	mg/kg	0.000788 J	0.000172	0.00019	5.5e-05	1.29e-06 U
E1668A	PCB-73	74338-23-1	mg/kg	0.000142 J	1.35e-06 U	6.69e-05	1.35e-06 U	1.39e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.00146 J	0.000235	0.000198	7.24e-05	4.15e-05
E1668A	PCB-78	70362-49-1	mg/kg	1.55e-06 U	1.55e-06 U	1.58e-06 U	1.54e-06 U	1.59e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000184 J	5.64e-05	4.82e-05	7.06e-06	5.09e-06
E1668A	PCB-80	33284-52-5	mg/kg	4.3e-06 J	1.73e-06 J	3.42e-06 J	1.06e-06 U	1.09e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	7.32e-05	1.47e-05	7.21e-06	3.53e-06 J	2.76e-06 J
E1668A	PCB-82	52663-62-4	mg/kg	0.00276 J	0.000594 J	4e-04	6.95e-05	3.8e-05
E1668A	PCB-83	60145-20-2	mg/kg	0.00164 J	0.000323	0.000376	1.26e-05	9.24e-06 J
E1668A	PCB-84	52663-60-2	mg/kg	0.00618 J	0.000964 J	0.000895 J	0.000134	8.06e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00992 J	0.00208 J	0.00158	0.000388	0.000321
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0222 J	0.00512 J	0.00377 J	0.000799	0.000495
E1668A	PCB-88	55215-17-3	mg/kg	7.59e-05 J	2.13e-06 U	0.00131 J	2.12e-06 U	2.19e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000231	3.83e-05	3.1e-05	1.11e-05	7.78e-06
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0513 J	0.0117 J	0.00848 J	0.00171 J	0.000947 J
E1668A	PCB-91	68194-05-8	mg/kg		0.00154 J	0.00126 J	0.000246	0.000162
E1668A	PCB-92	52663-61-3	mg/kg	0.0103 J	0.0022 J	0.00196 J	0.000618 J	0.000288
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00198 J	0.000401	0.000262	6.69e-05	7.78e-05
E1668A	PCB-94	73575-55-0	mg/kg	0.00023	2.99e-05	5.59e-05	8.75e-06	6.23e-06
E1668A	PCB-95	38379-99-6	mg/kg	0.0219 J	0.00385 J	0.00449 J	0.00111 J	0.000648 J
E1668A	PCB-96	73575-54-9	mg/kg	0.000286 J	4.83e-05	3.48e-05	1.29e-05	8.18e-06
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00142 J	0.000312	0.000296	5.88e-05	4.61e-05
E1668A	PCB-99	38380-01-7	mg/kg	0.0451 J	0.0101 J	0.00765 J	0.00178 J	0.00147 J
E1668A	PCB-103	60145-21-3	mg/kg	0.00106 J	0.000241	0.000198	3.73e-05	1.96e-05
E1668A	PCB-104	56558-16-8	mg/kg	5.56e-05	1.56e-05	7.86e-06	5.74e-06	3.58e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.013 J	0.00285 J	0.00184 J	0.000543	0.000479
E1668A	PCB-106	70424-69-0	mg/kg	1.77e-05 J	1.64e-06 U	1.68e-06 U	1.64e-06 U	1.69e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00336 J	0.00103 J	0.000981 J	0.000288	0.000167
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000824 J	0.000232	0.00018	5.95e-05	2.49e-05
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0422 J	0.008 J	0.00635 J	3.75e-06 U	0.000844 J
E1668A	PCB-111	39635-32-0	mg/kg	0.000108	3.31e-05	3.91e-05	8.57e-06	4.58e-06 J
E1668A	PCB-112	74472-36-9	mg/kg	0.001 J	1.35e-06 U	1.39e-06 U	6.81e-06	2.08e-06 J
E1668A	PCB-114	74472-37-0	mg/kg	0.00102 J	0.000231	0.000101	6.06e-05	4.16e-05

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486	NB03FSFC487
			Sample Date	01/20/16	01/20/16	12/01/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0576 J	0.0135 J	0.00811 J	0.00281 J	0.00188 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000492 J	0.000154	0.000172	3.4e-05	2.12e-05
E1668A	PCB-121	56558-18-0	mg/kg	6.52e-05	1.57e-05	1.1e-05	3.76e-06 J	2.81e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	0.000153 J	1.16e-06 U	3.02e-05	5.64e-06	2.86e-06 J
E1668A	PCB-123	65510-44-3	mg/kg	0.000749 J	0.00021	0.000128	3.92e-05	2.64e-05
E1668A	PCB-126	57465-28-8	mg/kg	0.000334 J	R	2.49e-05	R	R
E1668A	PCB-127	39635-33-1	mg/kg	5.37e-05 J	1.35e-06 U	1.2e-05	3.55e-06 J	2.7e-06 J
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00599 J	0.00151 J	0.00155 J	0.000188	0.000173
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0677 J	0.0164 J	0.0151 J	0.00249 J	0.00175
E1668A	PCB-130	52663-66-8	mg/kg	0.00259 J	0.000732 J	0.000842 J	0.000198	8.39e-05
E1668A	PCB-131	61798-70-7	mg/kg	0.000304	7.35e-05	6.01e-05	7.13e-06	4.24e-06 J
E1668A	PCB-132	38380-05-1	mg/kg	0.00746 J	0.00156 J	0.00171 J	0.000202	0.000119
E1668A	PCB-133	35694-04-3	mg/kg	0.00149 J	0.000395	0.000413	9.88e-05	5.54e-05
E1668A	PCB-134	52704-70-8	mg/kg	0.00149 J	0.000305	0.000382	4.45e-05	2.43e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg			0.00318 J	0.000882	0.00042
E1668A	PCB-136	38411-22-2	mg/kg			0.000552	1e-04	6.09e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.00255 J	0.000544	0.000395	0.000109	8.62e-05
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00103 J	0.000243	0.000214	2.23e-05	2.64e-05
E1668A	PCB-141	52712-04-6	mg/kg	0.00474 J	0.00114 J	0.000838 J	0.000241 J	0.000113 J
E1668A	PCB-142	41411-61-4	mg/kg	1.65e-06 U	1.64e-06 U	1.68e-06 U	1.64e-06 U	1.69e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	6.02e-05 J	3.19e-06 U	3.27e-06 U	3.18e-06 U	3.28e-06 U
E1668A	PCB-144	68194-14-9	mg/kg		R	0.000287	7.99e-05	3.91e-05
E1668A	PCB-145	74472-40-5	mg/kg	R	R	1.84e-06 J	1.54e-06 U	1.59e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.012 J	0.00344 J	0.00325 J	0.000752 J	0.000435
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0284 J	0.00661 J	0.00694 J	0.000941 J	0.000541 J
E1668A	PCB-148	74472-41-6	mg/kg	R	R	6.86e-05	1.81e-05	1.28e-05
E1668A	PCB-150	68194-08-1	mg/kg	R	R	5.1e-05	7.24e-06	4.6e-06 J
E1668A	PCB-152	68194-09-2	mg/kg	R	R	6.24e-06	1.6e-06 J	1.39e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0853 J	0.0205 J	0.0155 J	0.0027 J	0.00216 J
E1668A	PCB-154	60145-22-4	mg/kg			0.000414	0.000104	9.44e-05
E1668A	PCB-155	33979-03-2	mg/kg	0.000334	0.000106	5.77e-05	1.29e-05	1.66e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00461 J	0.00117 J	0.000821	0.000307	0.000203
E1668A	PCB-158	74472-42-7	mg/kg	0.0044 J	0.000952 J	0.000694 J	9.93e-05	0.000114
E1668A	PCB-159	39635-35-3	mg/kg	1.08e-05	3.11e-06 J	1.39e-06 U	1.35e-06 U	1.39e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	8.64e-05 J	6.09e-06 U	6.24e-06 U	9.19e-06 J	6.27e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	3.06e-05 J	1.26e-06 U	1.29e-06 U	2.32e-06 J	1.29e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000366 J	0.000122	0.000127	2.57e-05	1.47e-05
E1668A	PCB-164	74472-45-0	mg/kg	0.00178 J	0.000365	0.00039	5.38e-05	3.15e-05
E1668A	PCB-165	74472-46-1	mg/kg	0.00012	3.71e-05	4.88e-05	6.96e-06	3.67e-06 J
E1668A	PCB-167	52663-72-6	mg/kg	0.00191 J	0.000555	0.000437	0.000134	8.47e-05
E1668A	PCB-169	32774-16-6	mg/kg	4.51e-06 J	1.45e-06 U	1.88e-06 J	1.44e-06 U	1.49e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00787 J	0.00187 J	0.00194 J	0.000439	0.000291
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00306 J	0.000764	0.000786	R	R
E1668A	PCB-172	52663-74-8	mg/kg	0.00185 J	0.00044	0.000471	9.48e-05	6.15e-05
E1668A	PCB-174	38411-25-5	mg/kg	0.00427 J	0.000877 J	0.00103 J	0.000106	6.79e-05
E1668A	PCB-175	40186-70-7	mg/kg		0.000198	0.000141	R	R

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486	NB03FSFC487
			Sample Date	01/20/16	01/20/16	12/01/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000876 J	0.000227	0.000198	2.06e-05	1.12e-05
E1668A	PCB-177	52663-70-4	mg/kg	0.0047 J	0.00141 J	0.00179 J	0.000324	0.00015
E1668A	PCB-178	52663-67-9	mg/kg	0.00443 J	0.00127 J	0.0011 J	0.000255	0.000148
E1668A	PCB-179	52663-64-6	mg/kg	0.00355 J	0.000907 J	0.000883 J	0.000103	5.8e-05
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0293 J	0.00654 J	0.00548 J	0.00137 J	0.000998
E1668A	PCB-181	74472-47-2	mg/kg	0.000115	2.5e-05	2.3e-05	R	R
E1668A	PCB-182	60145-23-5	mg/kg	0.000138	4.27e-05	4.2e-05	5.47e-06	4.59e-06 J
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00987 J	0.00251 J	0.00199 J	R	R
E1668A	PCB-184	74472-48-3	mg/kg	0.000105	3.75e-05	1.57e-05	3.32e-06 J	3.38e-06 J
E1668A	PCB-186	74472-49-4	mg/kg	1.46e-06 U	1.45e-06 U	1.49e-06 U	1.44e-06 U	1.49e-06 U
E1668A	PCB-187	52663-68-0	mg/kg		0.00869 J	0.00691 J	0.00142 J	0.000922 J
E1668A	PCB-188	74487-85-7	mg/kg	0.000207	0.000107	9.32e-05	1.63e-05	1.05e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.00038	9.29e-05	6.44e-05	1.85e-05	1.42e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.00194 J	0.000448	0.000406	9.28e-05	7.29e-05
E1668A	PCB-191	74472-50-7	mg/kg	0.000417 J	9.04e-05	8.37e-05	2.07e-05	1.52e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.26e-06 U	1.26e-06 U	1.39e-06 J	1.25e-06 U	1.29e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.00404 J	0.00114 J	0.000933 J	0.000177	0.000141
E1668A	PCB-195	52663-78-2	mg/kg	0.0013 J	0.000361	0.000281	4.88e-05	4.5e-05
E1668A	PCB-196	42740-50-1	mg/kg	0.003 J	0.000877 J	0.000575 J	0.000104	0.000104
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000664	0.000201	0.000145	2e-05	1.62e-05
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00763 J	0.00245 J	0.00191 J	0.000312	0.000267
E1668A	PCB-201	40186-71-8	mg/kg	0.00126 J	0.000467	0.000256	5.13e-05	4.19e-05
E1668A	PCB-202	2136-99-4	mg/kg	0.00333 J	0.00124 J	0.00103 J	0.000208	0.000144
E1668A	PCB-203	52663-76-0	mg/kg	0.00509 J	0.00151 J	0.000924 J	0.000207	0.000191
E1668A	PCB-204	74472-52-9	mg/kg	1.77e-05	6.59e-06	3.03e-06 J	2.02e-06 U	2.09e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	0.00021	6.06e-05	4.17e-05	6.56e-06	5.66e-06
E1668A	PCB-206	40186-72-9	mg/kg	0.00448 J	0.00202 J	0.00163 J	0.000139	0.000147
E1668A	PCB-207	52663-79-3	mg/kg	0.000556	0.000254	0.000153	1.81e-05	1.97e-05
E1668A	PCB-208	52663-77-1	mg/kg	0.0021 J	0.00101 J	0.000812	8.69e-05	8.1e-05
E1668A	PCB-209	2051-24-3	mg/kg	0.00239 J	0.0014 J		8.77e-05	8.91e-05
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.946 J	0.211 J	0.182 J	0.0446 J	0.0313 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	1.03 J	0.23 J	0.193 J	0.0486 J	0.0341 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	3.61e-05 J	6e-07 J	2.91e-06	1.31e-07 J	9.07e-08 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC488	NB03FSFC489	NB03FSFC490	NB03FSFC491
			Sample Date	12/10/15	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-1	2051-60-7	mg/kg	1.95e-05 J	1.01e-05 J	3.07e-05 J	3.53e-05
E1668A	PCB-2	2051-61-8	mg/kg	1.85e-06 J	1.15e-06 J	2.85e-06	3.1e-06
E1668A	PCB-3	2051-62-9	mg/kg	1.09e-06 U	1.53e-06 J	2.62e-06 J	1.09e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.000306 J	0.000112 J	0.000402 J	0.000543 J
E1668A	PCB-5	16605-91-7	mg/kg	1.57e-06 J	1.05e-06 J	3.83e-06 J	5.36e-06
E1668A	PCB-6	25569-80-6	mg/kg	4.07e-05	2.89e-05 J	0.000105 J	0.000107
E1668A	PCB-7	33284-50-3	mg/kg	9.74e-06	4.63e-06	1.7e-05	1.49e-05
E1668A	PCB-8	34883-43-7	mg/kg	0.000146 J	0.000125 J	0.000423 J	0.000371 J
E1668A	PCB-9	34883-39-1	mg/kg	1.17e-05	7.24e-06	2.78e-05	2.73e-05
E1668A	PCB-10	33146-45-1	mg/kg	5.12e-05	1.63e-05	5.61e-05	7.27e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.11e-05	3.3e-06 U	3.32e-06 U	5.67e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	3.81e-06 J	2.19e-06 J	6.72e-06	7.28e-06
E1668A	PCB-14	34883-41-5	mg/kg	7.92e-07 U	7.77e-07 U	7.8e-07 U	7.95e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	1.58e-06 U	6.93e-06	2.64e-05	3.8e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	8.6e-05	2.77e-05 J	9.71e-05 J	0.000255
E1668A	PCB-17	37680-66-3	mg/kg	0.000604 J	0.000284 J	0.00111 J	0.00162 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00115 J	0.000491 J	0.00186 J	0.00281 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000281	9.77e-05	0.000346 J	0.000559 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00284 J	0.00111 J	0.00473 J	0.00963 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000219	0.000178	0.000762 J	0.000824 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000446 J	0.000305 J	0.000855 J	0.00119 J
E1668A	PCB-23	55720-44-0	mg/kg	1.36e-06 J	7.36e-07 J	2.8e-06	4.2e-06
E1668A	PCB-24	55702-45-9	mg/kg	1.64e-05	6.31e-06	2.47e-05	4.2e-05
E1668A	PCB-25	55712-37-3	mg/kg	0.000226	8.51e-05	0.000375 J	0.000437 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000732 J	0.000245	0.000905 J	0.00126 J
E1668A	PCB-27	38444-76-7	mg/kg	0.00017	5.06e-05	0.000182	0.000377 J
E1668A	PCB-31	16606-02-3	mg/kg	0.00195 J	0.000778 J	0.00305 J	0.00418 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000545 J	0.000247	0.000933 J	0.0015 J
E1668A	PCB-34	37680-68-5	mg/kg	1.94e-05	8.19e-06	3.19e-05	4.46e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.91e-07 U	8.74e-07 U	8.78e-07 U	8.95e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.92e-07 U	7.77e-07 U	7.8e-07 U	7.95e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	2.34e-05	1.07e-05	4.75e-05	0.000104
E1668A	PCB-38	53555-66-1	mg/kg	2.46e-06	1.11e-06 J	3.55e-06	1.09e-05
E1668A	PCB-39	38444-88-1	mg/kg	4.66e-06	4.32e-06	1.64e-05	2.53e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000923	0.000336	0.00138 J	0.0035 J
E1668A	PCB-41	52663-59-9	mg/kg	3.96e-05	2.59e-05	0.000106	0.000273
E1668A	PCB-42	36559-22-5	mg/kg	0.000922 J	0.000206	0.000806 J	0.00283 J
E1668A	PCB-43	70362-46-8	mg/kg	0.000104	3.14e-05	0.000138	0.000381
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00437 J	0.000725	0.00315 J	0.0147 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000357	8.4e-05	0.000352	0.000918 J
E1668A	PCB-46	41464-47-5	mg/kg	1.25e-05	3.6e-06	1.21e-05	3.5e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000243	0.000144	0.000596 J	0.00138 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00536 J	0.000869	0.00347 J	0.013 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000361	0.000158	0.000582	0.00118
E1668A	PCB-51	68194-04-7	mg/kg	0.000245	0.000125	0.000493	0.000887 J
E1668A	PCB-52	35693-99-3	mg/kg	0.00785 J	0.00174 J	0.00736 J	0.0179 J

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC488	NB03FSFC489	NB03FSFC490	NB03FSFC491
			Sample Date	12/10/15	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-54	15968-05-5	mg/kg	4e-05	1.52e-05	5.31e-05	9.43e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.46e-05	1.17e-06 U	1.17e-06 U	1.19e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000602 J	0.00018	0.000837 J	0.00173 J
E1668A	PCB-57	70424-67-8	mg/kg	3.45e-05	5.34e-06	2.97e-05	5.73e-05
E1668A	PCB-58	41464-49-7	mg/kg	1.6e-05	4.04e-06 J	1.66e-05	4.54e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000508	0.000102	0.000418	0.00156
E1668A	PCB-60	33025-41-1	mg/kg	0.00059	0.000147	0.000638 J	0.00231 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0058 J	0.00121	0.00576 J	0.0189 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000336	7.37e-05	0.000355	0.000839 J
E1668A	PCB-64	52663-58-8	mg/kg	0.00207 J	0.000388	0.0016 J	0.00538 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00424 J	0.000829 J	0.00391 J	0.0188 J
E1668A	PCB-67	73575-53-8	mg/kg	6.76e-05	1.65e-05	7.92e-05	0.000165
E1668A	PCB-68	73575-52-7	mg/kg	0.000128	2.2e-05	0.000107	0.000245
E1668A	PCB-72	41464-42-0	mg/kg	0.000203	3.21e-05	0.000151	0.00035
E1668A	PCB-73	74338-23-1	mg/kg	1.39e-06 U	1.36e-06 U	1.37e-06 U	6.08e-05
E1668A	PCB-77	32598-13-3	mg/kg	3.76e-05	1.68e-05	0.000113	0.000244
E1668A	PCB-78	70362-49-1	mg/kg	1.58e-06 U	1.55e-06 U	1.56e-06 U	1.59e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	3.37e-05	4.62e-06 J	1.88e-05	8.4e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.09e-06 U	1.07e-06 U	1.07e-06 U	1.09e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	3.72e-05	1.75e-06 U	1.76e-06 U	2.06e-05
E1668A	PCB-82	52663-62-4	mg/kg	0.000178	2.56e-05	9.92e-05	0.000621 J
E1668A	PCB-83	60145-20-2	mg/kg	4.07e-05	5.86e-06 J	1.92e-05	2.88e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000296	4.74e-05	0.000173	0.000828 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00163	0.000181	0.000946	0.00559 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00343	0.000397	0.00178	0.00989 J
E1668A	PCB-88	55215-17-3	mg/kg	2.18e-06 U	2.14e-06 U	2.15e-06 U	2.19e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	1.63e-05	5.7e-06	2.22e-05	7.95e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00817 J	0.000915 J	0.00449 J	0.0214 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00123 J	0.000128	0.000587 J	0.00277 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00204 J	0.000288 J	0.0014 J	0.00472 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000313	3.21e-05	0.000154	0.00124 J
E1668A	PCB-94	73575-55-0	mg/kg	2.13e-05	3.97e-06 J	1.38e-05	5.05e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.00241 J	0.00051	0.00209 J	0.00853 J
E1668A	PCB-96	73575-54-9	mg/kg	2.32e-05	5.45e-06	2.1e-05	5.86e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000124	3.59e-05	0.000149	0.000454
E1668A	PCB-99	38380-01-7	mg/kg	0.00827 J	0.000813 J	0.00442 J	0.0247 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000152	2.16e-05	9.39e-05	0.00041
E1668A	PCB-104	56558-16-8	mg/kg	1.25e-05	1.36e-06 U	1.02e-05	4.34e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00228 J	0.000375	0.00165 J	0.00734 J
E1668A	PCB-106	70424-69-0	mg/kg	1.68e-06 U	1.65e-06 U	1.66e-06 U	1.69e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000909 J	0.000166	0.000927 J	0.00217 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000162	3.02e-05	0.000152	0.000414
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00679 J	0.000712 J	0.00339 J	0.0176 J
E1668A	PCB-111	39635-32-0	mg/kg	3.01e-05	4.27e-06 J	1.83e-05	6.71e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.39e-06 U	1.36e-06 U	1.37e-06 U	1.39e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000183	3.56e-05	0.00017	0.000615 J

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC488	NB03FSFC489	NB03FSFC490	NB03FSFC491
			Sample Date	12/10/15	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-118	31508-00-6	mg/kg	0.0105 J	0.00165 J	0.00811 J	0.0293 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000142	1.73e-05	7.9e-05	0.000287
E1668A	PCB-121	56558-18-0	mg/kg	1.13e-05	1.76e-06 J	8.69e-06	3.82e-05
E1668A	PCB-122	76842-07-4	mg/kg	1.12e-05	2.82e-06 J	1.84e-05	4.1e-05
E1668A	PCB-123	65510-44-3	mg/kg	0.000128	2.23e-05	9.52e-05	0.000519
E1668A	PCB-126	57465-28-8	mg/kg	R	1.19e-05	5.76e-05	4.56e-05
E1668A	PCB-127	39635-33-1	mg/kg	1.16e-05	1.38e-06 J	1.21e-05	3.97e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00117	0.000119	0.000542	0.00352 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0115 J	0.00136	0.00642 J	0.0377 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000567	9.42e-05	0.000482	0.00131 J
E1668A	PCB-131	61798-70-7	mg/kg	3.29e-05	3.46e-06 J	1.25e-05	9.65e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.00101 J	0.000111	0.000477	0.00288 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000329	5.96e-05	0.000292	0.000934 J
E1668A	PCB-134	52704-70-8	mg/kg	0.000146	1.7e-05	6.45e-05	0.000396
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00264 J	0.000443	0.00204 J	0.00611 J
E1668A	PCB-136	38411-22-2	mg/kg	0.000305	5.35e-05	0.000191	0.00085 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000488	5.35e-05	0.000271	0.00176 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000164	1.4e-05	6.76e-05	0.000642
E1668A	PCB-141	52712-04-6	mg/kg	0.000934 J	0.000128 J	0.000626 J	0.00315 J
E1668A	PCB-142	41411-61-4	mg/kg	1.68e-06 U	1.65e-06 U	1.66e-06 U	2.1e-06 J
E1668A	PCB-143	68194-15-0	mg/kg	3.27e-06 U	3.2e-06 U	3.22e-06 U	3.28e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	0.000257	4.11e-05	0.000185	0.000767 J
E1668A	PCB-145	74472-40-5	mg/kg	1.58e-06 U	1.55e-06 U	1.56e-06 U	2.82e-06 J
E1668A	PCB-146	51908-16-8	mg/kg	0.0027 J	0.000387	0.00196 J	0.0073 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00503 J	0.000524 J	0.00228 J	0.0118 J
E1668A	PCB-148	74472-41-6	mg/kg	6e-05	1.15e-05	4.01e-05	0.000177
E1668A	PCB-150	68194-08-1	mg/kg	2.88e-05	4.51e-06 J	1.6e-05	6.47e-05
E1668A	PCB-152	68194-09-2	mg/kg	5.57e-06	1.36e-06 U	3.72e-06 J	1.45e-05
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0137 J	0.00149 J	0.00695 J	0.0468 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000446	6.41e-05	0.000239	0.00133 J
E1668A	PCB-155	33979-03-2	mg/kg	6.42e-05	7.08e-06	2.33e-05	0.000285
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00111	0.00018	0.000956	0.00314 J
E1668A	PCB-158	74472-42-7	mg/kg	0.000724 J	6.34e-05	0.000287	0.0029 J
E1668A	PCB-159	39635-35-3	mg/kg	1.39e-06 U	1.36e-06 U	1.95e-06 J	1.39e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.24e-06 U	6.12e-06 U	6.15e-06 U	6.26e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.29e-06 U	1.26e-06 U	1.27e-06 U	1.29e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	8.47e-05	1.79e-05	8.6e-05	0.000274
E1668A	PCB-164	74472-45-0	mg/kg	0.000331	3.23e-05	0.000154	0.000866 J
E1668A	PCB-165	74472-46-1	mg/kg	2.42e-05	4.15e-06 J	1.74e-05	6.98e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.000476	7.74e-05	0.00044	0.00127 J
E1668A	PCB-169	32774-16-6	mg/kg	1.49e-06 U	1.46e-06 U	1.46e-06 U	1.49e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00178 J	0.000205	0.00109 J	0.00636 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	6.06e-05	0.000302	0.00229 J
E1668A	PCB-172	52663-74-8	mg/kg	0.000379	4.85e-05	0.000257	0.00141 J
E1668A	PCB-174	38411-25-5	mg/kg	0.000629 J	7.23e-05	0.000297	0.00208 J
E1668A	PCB-175	40186-70-7	mg/kg	R	1.8e-05	7.72e-05	0.000382

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC488	NB03FSFC489	NB03FSFC490	NB03FSFC491
			Sample Date	12/10/15	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-176	52663-65-7	mg/kg	9.02e-05	1.36e-05	5.44e-05	0.000331
E1668A	PCB-177	52663-70-4	mg/kg	0.00094 J	0.000174	0.000794 J	0.00254 J
E1668A	PCB-178	52663-67-9	mg/kg	0.000774 J	0.00015	0.000703 J	0.0025 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000395	5.82e-05	0.000213	0.00123 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00548 J	0.000667	0.00354 J	0.0208 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	8.6e-05
E1668A	PCB-182	60145-23-5	mg/kg	2.26e-05	3.69e-06 J	1.33e-05	0.000104
E1668A	PCB-183/185	PCB-183/185	mg/kg		0.000202	0.000939	0.00732 J
E1668A	PCB-184	74472-48-3	mg/kg	1.19e-05	2.05e-06 J	6.14e-06	4.8e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.49e-06 U	1.46e-06 U	1.46e-06 U	1.49e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00494 J	0.000828 J	0.00396 J	0.0154 J
E1668A	PCB-188	74487-85-7	mg/kg	3.16e-05	1.14e-05	2.1e-05	0.000102
E1668A	PCB-189	39635-31-9	mg/kg	8.52e-05	1.18e-05	6.06e-05	0.000238
E1668A	PCB-190	41411-64-7	mg/kg	0.000409	4.32e-05	0.000222	0.00156 J
E1668A	PCB-191	74472-50-7	mg/kg	8.14e-05	1.06e-05	5.24e-05	0.000347
E1668A	PCB-192	74472-51-8	mg/kg	1.29e-06 U	1.26e-06 U	1.27e-06 U	3.04e-06 J
E1668A	PCB-194	35694-08-7	mg/kg	0.000935 J	0.000109	0.000551	0.00271 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000279	3.19e-05	0.000152	0.000909 J
E1668A	PCB-196	42740-50-1	mg/kg	0.000494	7.22e-05	0.000313	0.00203 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	9.9e-05	1.74e-05	5.72e-05	0.000328
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00145	0.000217	0.000995	0.00452 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000212	4.28e-05	0.000134	0.000731
E1668A	PCB-202	2136-99-4	mg/kg	0.000699	0.000146	0.000662	0.00197 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00103 J	0.00013	0.000654	0.00352 J
E1668A	PCB-204	74472-52-9	mg/kg	2.08e-06 U	2.04e-06 U	2.05e-06 U	7.63e-06
E1668A	PCB-205	74472-53-0	mg/kg	4.51e-05	5.1e-06	2.31e-05	0.000121
E1668A	PCB-206	40186-72-9	mg/kg	0.000782	0.00011	0.000417	0.00187 J
E1668A	PCB-207	52663-79-3	mg/kg	8.11e-05	1.61e-05	4.55e-05	0.000218
E1668A	PCB-208	52663-77-1	mg/kg	0.000373	7.3e-05	0.000255	0.000772
E1668A	PCB-209	2051-24-3	mg/kg	0.000444	8.58e-05	0.000211	R
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.147 J	0.0248 J	0.111 J	0.452 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.162 J	0.0272 J	0.122 J	0.495 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	4.68e-07 J	1.27e-06	6.13e-06	5.88e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFN407	NB03FSFN408	NB03FSFN409	NB03FSFN410
			Sample Date	01/13/16	01/13/16	12/10/15	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-1	2051-60-7	mg/kg	1.27e-05	8.13e-06	1.69e-05 J	1.87e-05
E1668A	PCB-2	2051-61-8	mg/kg	1.75e-06 J	1.1e-06 J	6.74e-07 U	2.07e-06
E1668A	PCB-3	2051-62-9	mg/kg	1.08e-06 U	1.86e-06 J	1.06e-06 U	1.07e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.00015	9.6e-05	0.000254	0.000321 J
E1668A	PCB-5	16605-91-7	mg/kg	1.51e-06 J	8.45e-07 J	1.47e-06 J	2.44e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	3.68e-05 J	1.84e-05 J	4.04e-05	4.65e-05
E1668A	PCB-7	33284-50-3	mg/kg	1.91e-05	1.11e-05	7e-06	8.42e-06
E1668A	PCB-8	34883-43-7	mg/kg	0.000159 J	8.1e-05 J	0.000145 J	0.000186 J
E1668A	PCB-9	34883-39-1	mg/kg	9.19e-06	5.33e-06	1.13e-05	1.27e-05
E1668A	PCB-10	33146-45-1	mg/kg	2.24e-05	1.38e-05	4.04e-05	3.73e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.35e-06 U	3.35e-06 U	3.1e-05	4.67e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.89e-06 J	1.87e-06 U	3.38e-06 J	4.46e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	2.8e-06	1.65e-06 J	7.7e-07 U	7.79e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	1.18e-05	1.02e-05	1.54e-06 U	2.67e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	5.16e-05	3.19e-05	8.5e-05	8.81e-05
E1668A	PCB-17	37680-66-3	mg/kg	0.000409 J	0.000169 J	0.000533 J	0.000534 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000621 J	0.000288 J	0.000951 J	0.000962 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000131	7.22e-05	0.000189	0.000205
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00281 J	0.00159 J	0.00307 J	0.00368 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000272	0.000114	0.000229	0.000257
E1668A	PCB-22	38444-85-8	mg/kg	0.000399 J	0.000199 J	0.000391 J	0.000457 J
E1668A	PCB-23	55720-44-0	mg/kg	1.02e-06 J	6.9e-07 U	6.74e-07 U	6.82e-07 U
E1668A	PCB-24	55702-45-9	mg/kg	6.74e-06	4.24e-06	1.28e-05	1.61e-05
E1668A	PCB-25	55712-37-3	mg/kg	9.27e-05	5.16e-05	0.000138	0.000159
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000292	0.000143	0.000391	0.000394
E1668A	PCB-27	38444-76-7	mg/kg	7.06e-05	3.4e-05	0.000101	0.000115
E1668A	PCB-31	16606-02-3	mg/kg	0.00104 J	0.000496 J	0.00132 J	0.00134 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000351 J	0.000158 J	0.000436 J	0.000482 J
E1668A	PCB-34	37680-68-5	mg/kg	1.09e-05	4.52e-06	1.12e-05	1.04e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.86e-07 U	8.87e-07 U	8.66e-07 U	8.76e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.87e-07 U	7.88e-07 U	7.7e-07 U	7.79e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	2.68e-05	2.03e-05	4.45e-05	5.25e-05
E1668A	PCB-38	53555-66-1	mg/kg	1.64e-06 J	8.88e-07 J	2.43e-06	2.8e-06
E1668A	PCB-39	38444-88-1	mg/kg	6.13e-06	2.53e-06	7.08e-06	4.88e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.000537	0.000211	0.000782	0.000631
E1668A	PCB-41	52663-59-9	mg/kg	4.78e-05	1.58e-05	4.64e-05	5.6e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.000315	0.000149	0.000495	0.000458
E1668A	PCB-43	70362-46-8	mg/kg	5.04e-05	2.08e-05	5.79e-05	6.14e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00209 J	0.00112 J	0.00437 J	0.00378 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000126	6.37e-05	0.000224	0.000259
E1668A	PCB-46	41464-47-5	mg/kg	5.7e-06	3.83e-06	9.13e-06	1.22e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.000229	8.43e-05	0.000309	0.00024
E1668A	PCB-49/69	PCB-49/69	mg/kg		0.000497	0.00352 J	0.00214 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000194	8.1e-05	0.000268	0.000272
E1668A	PCB-51	68194-04-7	mg/kg	0.000183	6.09e-05	0.000237	0.000166
E1668A	PCB-52	35693-99-3	mg/kg	0.00199 J	0.000872 J	0.00487 J	0.00324 J

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFN407	NB03FSFN408	NB03FSFN409	NB03FSFN410
			Sample Date	01/13/16	01/13/16	12/10/15	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-54	15968-05-5	mg/kg	2.15e-05	1.04e-05	3.23e-05	2.63e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.18e-06 U	1.18e-06 U	1.15e-06 U	1.17e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.000259	0.000121	0.000391	0.000396
E1668A	PCB-57	70424-67-8	mg/kg	5.3e-06	2.96e-06 J	1.12e-05	1.24e-05
E1668A	PCB-58	41464-49-7	mg/kg	5.89e-06	2.29e-06 J	6.13e-06	7.22e-06
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000215	0.000109	0.000441	0.000375
E1668A	PCB-60	33025-41-1	mg/kg	0.000497	0.000269	0.000919 J	0.000747 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg		0.00135	0.00557 J	0.00423 J
E1668A	PCB-63	74472-34-7	mg/kg	8.82e-05	3.39e-05	0.00022	0.000125
E1668A	PCB-64	52663-58-8	mg/kg	0.000678 J	0.000269 J	0.00161 J	0.000933 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00311 J	0.0017 J	0.00627 J	0.00483 J
E1668A	PCB-67	73575-53-8	mg/kg	1.98e-05	1.02e-05	4.24e-05	3.61e-05
E1668A	PCB-68	73575-52-7	mg/kg	2.74e-05	1.24e-05	5.78e-05	4.93e-05
E1668A	PCB-72	41464-42-0	mg/kg	3.37e-05	1.36e-05	8.06e-05	6.08e-05
E1668A	PCB-73	74338-23-1	mg/kg	1.38e-06 U	1.38e-06 U	1.35e-06 U	1.59e-05
E1668A	PCB-77	32598-13-3	mg/kg	6.03e-05	4.29e-05	0.000111	0.000123
E1668A	PCB-78	70362-49-1	mg/kg	1.57e-06 U	1.58e-06 U	1.54e-06 U	1.56e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	7.12e-06	3.48e-06 J	1.88e-05	1.31e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.08e-06 U	1.08e-06 U	1.06e-06 U	1.07e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	4.43e-06 J	2.74e-06 J	6.28e-06	8.23e-06
E1668A	PCB-82	52663-62-4	mg/kg	4.22e-05	1.79e-05	6.65e-05	5.31e-05
E1668A	PCB-83	60145-20-2	mg/kg	9.89e-06	5.15e-06 J	2.79e-06 U	2.82e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	7.31e-05	3.84e-05	0.00012	0.000123
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00056	0.000267	0.00176 J	0.00116
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000708	0.000278	0.00276	0.00136
E1668A	PCB-88	55215-17-3	mg/kg	2.17e-06 U	2.17e-06 U	2.12e-06 U	2.14e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	9.15e-06	3.08e-06 J	1.46e-05	1.27e-06 U
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00112 J	0.00042 J	0.00569 J	0.00263 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000193	7.11e-05	0.000736 J	0.000342
E1668A	PCB-92	52663-61-3	mg/kg	0.00029 J	0.000113 J	0.00119 J	0.000627 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000137	7.28e-05	0.000494	0.000285
E1668A	PCB-94	73575-55-0	mg/kg	5.61e-06	2.43e-06 J	8.38e-06	8.06e-06
E1668A	PCB-95	38379-99-6	mg/kg		0.000296	0.00178 J	0.00119 J
E1668A	PCB-96	73575-54-9	mg/kg	7.23e-06	3.94e-06 U	1.38e-05	9.91e-06
E1668A	PCB-98/102	PCB-98/102	mg/kg	5.14e-05	1.74e-05 J	8.96e-05	5.07e-05
E1668A	PCB-99	38380-01-7	mg/kg	0.00231 J	0.00115 J	0.00751 J	0.00586 J
E1668A	PCB-103	60145-21-3	mg/kg	2.59e-05	9.53e-06	0.000119	6.35e-05
E1668A	PCB-104	56558-16-8	mg/kg	4.95e-06	1.98e-06 J	1.53e-05	5.65e-06
E1668A	PCB-105	32598-14-4	mg/kg	0.00116 J	0.000569 J	0.00298 J	0.00185 J
E1668A	PCB-106	70424-69-0	mg/kg	1.67e-06 U	1.67e-06 U	1.64e-06 U	1.66e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000259	1e-04	0.000683 J	0.000467
E1668A	PCB-108/124	PCB-108/124	mg/kg	3.37e-05	1.16e-05	0.000111	4.83e-05
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00125 J	0.000428 J	0.00493 J	0.00236 J
E1668A	PCB-111	39635-32-0	mg/kg	5.97e-06	2.99e-06 J	1.84e-05	1.92e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.38e-06 U	1.38e-06 U	1.35e-06 U	1.36e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	9.88e-05	4.71e-05	0.000244	0.000151

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFN407	NB03FSFN408	NB03FSFN409	NB03FSFN410
			Sample Date	01/13/16	01/13/16	12/10/15	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-118	31508-00-6	mg/kg	0.00395 J	0.00186 J	0.011 J	0.0068 J
E1668A	PCB-120	68194-12-7	mg/kg	2.67e-05	1.37e-05	8.57e-05	7.94e-05
E1668A	PCB-121	56558-18-0	mg/kg	3.17e-06 J	1.98e-06 J	1.21e-05	1.03e-05
E1668A	PCB-122	76842-07-4	mg/kg	3.59e-06 J	1.18e-06 U	6.04e-06	4.23e-06 J
E1668A	PCB-123	65510-44-3	mg/kg	8.21e-05	4.23e-05	0.000158	0.000148
E1668A	PCB-126	57465-28-8	mg/kg	1.57e-06 U	1.58e-06 U	1.84e-05	1.46e-05
E1668A	PCB-127	39635-33-1	mg/kg	4.48e-06 J	2.67e-06 J	1.02e-05	8.45e-06
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000357	0.000147	0.00111	8e-04
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00285 J	0.00123 J	0.0104 J	0.00753 J
E1668A	PCB-130	52663-66-8	mg/kg	8.76e-05	3.16e-05	0.000357	0.000209
E1668A	PCB-131	61798-70-7	mg/kg	5.15e-06	1.67e-06 U	1.39e-05	7.16e-06
E1668A	PCB-132	38380-05-1	mg/kg	0.000152 J	4.92e-05 J	0.000651 J	0.000297
E1668A	PCB-133	35694-04-3	mg/kg	9.5e-05	3.99e-05	0.00026	0.000197
E1668A	PCB-134	52704-70-8	mg/kg	2.39e-05	8.27e-06 J	4.61e-05	3.22e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000404	0.000155	0.00199 J	0.00078
E1668A	PCB-136	38411-22-2	mg/kg	6.7e-05	2.39e-05	0.000233	9.79e-05
E1668A	PCB-137	35694-06-5	mg/kg	0.000153	7.19e-05	0.000493	0.000348
E1668A	PCB-139/140	PCB-139/140	mg/kg	5.35e-05	2.53e-05	0.000188	0.000137
E1668A	PCB-141	52712-04-6	mg/kg	0.000156 J	4.82e-05 J	0.000851 J	0.000315
E1668A	PCB-142	41411-61-4	mg/kg	1.67e-06 U	1.67e-06 U	1.64e-06 U	1.66e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.25e-06 U	3.25e-06 U	3.18e-06 U	3.21e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	4.31e-05	1.46e-05	0.000251	8.75e-05
E1668A	PCB-145	74472-40-5	mg/kg	1.57e-06 U	1.58e-06 U	1.54e-06 U	1.56e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000495 J	0.000261 J	0.00201 J	0.00151 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.000585 J	0.000219 J	0.00349 J	0.00155 J
E1668A	PCB-148	74472-41-6	mg/kg	1.81e-05	1.08e-05	6.4e-05	4.68e-05
E1668A	PCB-150	68194-08-1	mg/kg	5.11e-06	1.54e-06 J	3.08e-05	1.14e-05
E1668A	PCB-152	68194-09-2	mg/kg	1.38e-06 U	1.38e-06 U	4.25e-06 J	1.36e-06 U
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00303 J	0.00161 J	0.0126 J	0.00954 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000141	8.02e-05	0.000517	0.000337
E1668A	PCB-155	33979-03-2	mg/kg	3.75e-05	1.83e-05	0.000124	6.99e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000388	0.000175	0.00114	0.000721
E1668A	PCB-158	74472-42-7	mg/kg	0.000232	0.00011	0.000876 J	0.000599 J
E1668A	PCB-159	39635-35-3	mg/kg	1.38e-06 U	1.38e-06 U	1.35e-06 U	1.36e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.2e-06 U	6.21e-06 U	6.06e-06 U	6.13e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.28e-06 U	1.28e-06 U	1.25e-06 U	1.27e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	2.59e-05	9.08e-06	6.99e-05	5.45e-05
E1668A	PCB-164	74472-45-0	mg/kg	4.11e-05	1.26e-05	0.000238	9.78e-05
E1668A	PCB-165	74472-46-1	mg/kg	4.4e-06 J	2.13e-06 J	1.51e-05	1.9e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.000161	7.24e-05	0.000431	R
E1668A	PCB-169	32774-16-6	mg/kg	1.48e-06 U	1.48e-06 U	1.44e-06 U	1.46e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000443	0.000162	0.00173 J	0.00106 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000181	7.05e-05	0.000578	0.000427
E1668A	PCB-172	52663-74-8	mg/kg	8.1e-05	3.33e-05	0.000339	0.000224
E1668A	PCB-174	38411-25-5	mg/kg	8.41e-05	2.37e-05	5e-04	0.000192
E1668A	PCB-175	40186-70-7	mg/kg	2.76e-05	1.42e-05	0.000104	6.92e-05

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFN407	NB03FSFN408	NB03FSFN409	NB03FSFN410
			Sample Date	01/13/16	01/13/16	12/10/15	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-176	52663-65-7	mg/kg	1.46e-05	4.09e-06 J	8.46e-05	3.19e-05
E1668A	PCB-177	52663-70-4	mg/kg	0.000151	4.86e-05	0.000616 J	0.000365
E1668A	PCB-178	52663-67-9	mg/kg	0.000197	9.38e-05	0.000679 J	0.000503
E1668A	PCB-179	52663-64-6	mg/kg	6.05e-05	1.65e-05	0.000276	0.000116
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00143 J	0.000648 J	0.00549 J	0.00392 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	2.32e-05	1.69e-05
E1668A	PCB-182	60145-23-5	mg/kg	6.5e-06	3.34e-06 J	2.14e-05	2.25e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000448	0.000228	0.00183 J	0.00136 J
E1668A	PCB-184	74472-48-3	mg/kg	5.32e-06	2.81e-06 J	1.5e-05	1.17e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.48e-06 U	1.48e-06 U	1.44e-06 U	1.46e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00114 J	0.000551 J	0.00449 J	0.00292 J
E1668A	PCB-188	74487-85-7	mg/kg	3.23e-05	1.49e-05	3.36e-05	2.76e-05
E1668A	PCB-189	39635-31-9	mg/kg	2.38e-05	1.01e-05	7.72e-05	4.88e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.000112	4.35e-05	0.000439	0.000275
E1668A	PCB-191	74472-50-7	mg/kg	2.4e-05	1.15e-05	9.12e-05	6.04e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.28e-06 U	1.28e-06 U	1.25e-06 U	1.27e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000253	8.76e-05	0.000755	0.000463
E1668A	PCB-195	52663-78-2	mg/kg	8.49e-05	2.67e-05	0.000264	0.000136
E1668A	PCB-196	42740-50-1	mg/kg	0.00019	8.37e-05	0.000534	0.000356 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	2.51e-05	1.04e-05	8.19e-05	5.42e-05
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000449	0.000185	0.00121	0.00101
E1668A	PCB-201	40186-71-8	mg/kg	6.9e-05	3.8e-05	0.000169	0.000139
E1668A	PCB-202	2136-99-4	mg/kg	0.000228	9.09e-05	0.000503	0.000513
E1668A	PCB-203	52663-76-0	mg/kg	0.00028	0.000119	0.000913 J	0.000637
E1668A	PCB-204	74472-52-9	mg/kg	2.07e-06 U	2.07e-06 U	2.02e-06 U	2.04e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	8.55e-06	3.22e-06 J	3.51e-05	1.69e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.000249	8.48e-05	0.000534	0.000519
E1668A	PCB-207	52663-79-3	mg/kg	3.12e-05	1.13e-05	6.15e-05	5.55e-05
E1668A	PCB-208	52663-77-1	mg/kg	0.000149	4.76e-05	0.000226	0.000268
E1668A	PCB-209	2051-24-3	mg/kg	0.000186 J	7.45e-05 J	0.000251	0.000285
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.0406 J	0.0211 J	0.127 J	0.0902 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0466 J	0.0239 J	0.144 J	0.1 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	3.48e-07 J	2.5e-07 J	2.34e-06	1.77e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFN411	NB03FSFN412	NB03FSFS351	NB03FSFS354
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-1	2051-60-7	mg/kg	1.26e-05 J	1.67e-05 J	3.86e-05 J	R
E1668A	PCB-2	2051-61-8	mg/kg	1.21e-06 J	1.71e-06 J	3.24e-06	6.84e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	1.05e-06 U	1.07e-06 U	3.11e-06 J	1.07e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.000155	0.000249	0.000531 J	0.000157 J
E1668A	PCB-5	16605-91-7	mg/kg	7.63e-07 U	2.4e-06 J	3.47e-06 J	1.32e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	2.66e-05	5.61e-05	0.000112 J	3.74e-05 J
E1668A	PCB-7	33284-50-3	mg/kg	6.77e-06	9.83e-06	1.64e-05	4.95e-06
E1668A	PCB-8	34883-43-7	mg/kg	0.000109 J	0.000208 J	0.000423 J	0.000136 J
E1668A	PCB-9	34883-39-1	mg/kg	7.52e-06	1.39e-05	2.74e-05	8.85e-06
E1668A	PCB-10	33146-45-1	mg/kg	2.15e-05	3.14e-05	9.34e-05	2.79e-05
E1668A	PCB-11	2050-67-1	mg/kg	1.83e-05	2.04e-05	3.32e-06 U	3.32e-06 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.1e-06 J	3.53e-06 J	8.71e-06	2.77e-06 J
E1668A	PCB-14	34883-41-5	mg/kg	7.63e-07 U	7.76e-07 U	7.82e-07 U	7.81e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	1.53e-06 U	1.55e-06 U	3.6e-05	8.78e-06
E1668A	PCB-16	38444-78-9	mg/kg	2.74e-05	0.000127	0.000129 J	3.43e-05 J
E1668A	PCB-17	37680-66-3	mg/kg	0.000336 J	0.000792 J	0.0013 J	0.000451 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.000581 J	0.0014 J	0.00215 J	0.000721 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000104	0.000204	0.00043 J	0.000127
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00123 J	0.00248 J	0.00544 J	0.00172 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000171	0.00048	0.000704 J	0.000247
E1668A	PCB-22	38444-85-8	mg/kg	0.000236 J	0.000607 J	0.000974 J	0.00032 J
E1668A	PCB-23	55720-44-0	mg/kg	6.68e-07 U	1.54e-06 J	2.91e-06	1.08e-06 J
E1668A	PCB-24	55702-45-9	mg/kg	9.46e-06	1.75e-05	2.21e-05	1.08e-05
E1668A	PCB-25	55712-37-3	mg/kg	8.42e-05	0.000175	0.000462 J	0.000133
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.000244	0.000478	0.00113 J	0.000395
E1668A	PCB-27	38444-76-7	mg/kg	4.99e-05	0.000143	0.000247	7.93e-05
E1668A	PCB-31	16606-02-3	mg/kg	0.000808 J	0.0018 J	0.00353 J	0.00119 J
E1668A	PCB-32	38444-77-8	mg/kg	0.000277 J	0.00061 J	0.00105 J	0.000354 J
E1668A	PCB-34	37680-68-5	mg/kg	7.47e-06	1.66e-05	3.56e-05	1.36e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.59e-07 U	8.73e-07 U	8.8e-07 U	8.79e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.63e-07 U	7.76e-07 U	7.82e-07 U	7.81e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	1.09e-05	2.18e-05	6.99e-05	1.74e-05
E1668A	PCB-38	53555-66-1	mg/kg	7.81e-07 J	2.06e-06	4.17e-06	6.84e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	4.36e-06	8.55e-06	1.78e-05	6.64e-06
E1668A	PCB-40/71	PCB-40/71	mg/kg	2.85e-05	0.00119 J	0.00162 J	0.000622
E1668A	PCB-41	52663-59-9	mg/kg	3.36e-05	9.54e-05	0.000141	4.42e-05
E1668A	PCB-42	36559-22-5	mg/kg	0.000249	0.000885 J	0.00107 J	0.00035
E1668A	PCB-43	70362-46-8	mg/kg	3.46e-05	0.000135	0.000167	5.51e-05
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00124	0.00307 J	0.00413 J	0.0015
E1668A	PCB-45	70362-45-7	mg/kg	0.000115	0.000319	0.000448	0.000149
E1668A	PCB-46	41464-47-5	mg/kg	3.8e-06	1.7e-05	1.61e-05	5.23e-06
E1668A	PCB-48	70362-47-9	mg/kg	0.000182	0.000498	0.000624 J	0.000247
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0015 J	0.003 J	0.00462 J	0.00178 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000176	0.000514	0.000662	0.000254
E1668A	PCB-51	68194-04-7	mg/kg	0.000122	0.000456	0.000427	0.000176
E1668A	PCB-52	35693-99-3	mg/kg	0.00231 J	0.00532 J	0.00928 J	0.00357 J

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFN411	NB03FSFN412	NB03FSFS351	NB03FSFS354
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-54	15968-05-5	mg/kg	1.34e-06 U	5.01e-05	5.18e-05	1.82e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.15e-06 U	1.16e-06 U	1.17e-06 U	5.22e-06
E1668A	PCB-56	41464-43-1	mg/kg	0.00022	0.000533	0.00103 J	0.000285
E1668A	PCB-57	70424-67-8	mg/kg	7.6e-06	1.07e-05	3.22e-05	1.27e-05
E1668A	PCB-58	41464-49-7	mg/kg	6.04e-06	1.01e-05	2.31e-05	7.19e-06
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000152	0.000354	0.000539	0.000194
E1668A	PCB-60	33025-41-1	mg/kg	0.000226	0.000415	0.000829 J	0.000289
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.00217	0.00399 J	0.00711 J	0.00236 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00011	0.000182	0.000451	0.000167
E1668A	PCB-64	52663-58-8	mg/kg	0.000591 J	0.00149 J	0.00202 J	0.000714 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00159 J	0.00268 J	0.00478 J	0.00147 J
E1668A	PCB-67	73575-53-8	mg/kg	2.5e-05	4.68e-05	9.75e-05	3.09e-05
E1668A	PCB-68	73575-52-7	mg/kg	3.6e-05	5.17e-05	0.000142	5.33e-05
E1668A	PCB-72	41464-42-0	mg/kg	4.94e-05	7.62e-05	0.000206	8.11e-05
E1668A	PCB-73	74338-23-1	mg/kg	1.34e-06 U	1.36e-06 U	1.37e-06 U	1.57e-05
E1668A	PCB-77	32598-13-3	mg/kg	2.5e-05	4.1e-05	0.000192	4.38e-05
E1668A	PCB-78	70362-49-1	mg/kg	1.53e-06 U	1.55e-06 U	1.56e-06 U	1.56e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	7.74e-06	1.68e-05	2.91e-05	9.27e-06
E1668A	PCB-80	33284-52-5	mg/kg	1.05e-06 U	1.07e-06 U	1.08e-06 U	1.07e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	1.72e-06 U	2.73e-06 J	1e-05	R
E1668A	PCB-82	52663-62-4	mg/kg	3.93e-05	0.00017	0.000176	4.95e-05
E1668A	PCB-83	60145-20-2	mg/kg	2.77e-06 U	3.43e-05	3.9e-05	1.41e-05
E1668A	PCB-84	52663-60-2	mg/kg	6.05e-05	0.000254	0.000282	8.39e-05
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.000511	0.000727	0.00129	0.000444
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.000932	0.00177	0.00276	0.000853
E1668A	PCB-88	55215-17-3	mg/kg	2.1e-06 U	2.13e-06 U	2.15e-06 U	2.15e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	7.65e-06	2.72e-05	2.85e-05	9.88e-06
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00239 J	0.0036 J	0.0067 J	0.00206 J
E1668A	PCB-91	68194-05-8	mg/kg	0.000264	0.000579	0.000869 J	0.000302
E1668A	PCB-92	52663-61-3	mg/kg	0.000583 J	0.000925 J	0.00204 J	0.000722 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	8.08e-05	0.000182	0.000178	7.98e-05
E1668A	PCB-94	73575-55-0	mg/kg	4.99e-06	2.39e-05	1.92e-05	6.6e-06
E1668A	PCB-95	38379-99-6	mg/kg	0.000777 J	0.00202 J	0.00302 J	0.001 J
E1668A	PCB-96	73575-54-9	mg/kg	7.08e-06	2.55e-05	2.73e-05	1.04e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	5.71e-05	0.000132	0.000177	8.79e-05
E1668A	PCB-99	38380-01-7	mg/kg	0.00246 J	0.00325 J	0.00554 J	0.00201 J
E1668A	PCB-103	60145-21-3	mg/kg	4.8e-05	8.63e-05	0.000136	5.19e-05
E1668A	PCB-104	56558-16-8	mg/kg	4.26e-06 J	1.45e-05	9.62e-06	4.57e-06 J
E1668A	PCB-105	32598-14-4	mg/kg	0.000963 J	0.00098 J	0.00237 J	
E1668A	PCB-106	70424-69-0	mg/kg	1.62e-06 U	1.65e-06 U	1.66e-06 U	1.66e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.000333	0.000396	0.00121 J	0.000392
E1668A	PCB-108/124	PCB-108/124	mg/kg	5.62e-05	9.48e-05	0.000194	6.9e-05
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00192 J	0.00335 J	0.00514 J	
E1668A	PCB-111	39635-32-0	mg/kg	8.25e-06	1.06e-05	3.19e-05	9.63e-06
E1668A	PCB-112	74472-36-9	mg/kg	1.34e-06 U	1.36e-06 U	1.37e-06 U	8.11e-06
E1668A	PCB-114	74472-37-0	mg/kg	6.85e-05	8.6e-05	0.000222	9.03e-05

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFN411	NB03FSFN412	NB03FSFS351	NB03FSFS354
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-118	31508-00-6	mg/kg	0.00384 J	0.00419 J	0.0113 J	0.00397 J
E1668A	PCB-120	68194-12-7	mg/kg	4.26e-05	4.53e-05	0.000128	3.99e-05
E1668A	PCB-121	56558-18-0	mg/kg	3.11e-06 J	1.16e-06 U	1.27e-05	4.82e-06 J
E1668A	PCB-122	76842-07-4	mg/kg	4.2e-06 J	9.01e-06	1.73e-05	5.23e-06
E1668A	PCB-123	65510-44-3	mg/kg	7.58e-05	6.29e-05	0.000172	4.35e-05
E1668A	PCB-126	57465-28-8	mg/kg	5.49e-06	R	1.56e-06 U	2.64e-05
E1668A	PCB-127	39635-33-1	mg/kg	4.29e-06 J	6.25e-06	1.09e-05	R
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.000427	0.00038	0.000883	0.000289
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.00394 J	0.00423 J	0.01 J	0.00338 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000186	0.000259	0.000711 J	0.000233
E1668A	PCB-131	61798-70-7	mg/kg	6.63e-06	1.63e-05	2.39e-05	7.55e-06
E1668A	PCB-132	38380-05-1	mg/kg	0.00024	0.000508	0.000872 J	0.000238
E1668A	PCB-133	35694-04-3	mg/kg	0.000114	0.000141	0.000431	0.000146
E1668A	PCB-134	52704-70-8	mg/kg	2.77e-05	8.43e-05	0.000139	3.63e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.000768	0.00151 J	0.00323 J	0.00112
E1668A	PCB-136	38411-22-2	mg/kg	9.45e-05	0.000222	0.000352	0.000118
E1668A	PCB-137	35694-06-5	mg/kg	0.000135	0.000174	0.000374	0.000152
E1668A	PCB-139/140	PCB-139/140	mg/kg	4.97e-05	6.04e-05	9.64e-05	3.43e-05
E1668A	PCB-141	52712-04-6	mg/kg	0.000268 J	0.000418 J	0.000852 J	0.000324 J
E1668A	PCB-142	41411-61-4	mg/kg	1.62e-06 U	1.65e-06 U	1.66e-06 U	1.66e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.15e-06 U	3.2e-06 U	3.23e-06 U	3.22e-06 U
E1668A	PCB-144	68194-14-9	mg/kg	7.77e-05	0.00014	0.000277	0.000106
E1668A	PCB-145	74472-40-5	mg/kg	1.53e-06 U	1.55e-06 U	1.56e-06 U	1.56e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.000827 J	0.00108 J	0.00298 J	0.000932 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00126 J	0.00222 J	0.00426 J	0.00117 J
E1668A	PCB-148	74472-41-6	mg/kg	2.29e-05	3.93e-05	8e-05	2.92e-05
E1668A	PCB-150	68194-08-1	mg/kg	1.15e-05	1.85e-05	2.94e-05	1.04e-05
E1668A	PCB-152	68194-09-2	mg/kg	1.68e-06 J	3.96e-06 J	4.51e-06 J	2.21e-06 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.00462 J	0.00492 J	0.0112 J	0.00363 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000172	0.000265	0.000384	0.000165
E1668A	PCB-155	33979-03-2	mg/kg	2.4e-05	3.91e-05	4.07e-05	1.64e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.000366	0.000411	0.00131 J	0.000486
E1668A	PCB-158	74472-42-7	mg/kg	0.000248	0.000244	0.000457	0.00016
E1668A	PCB-159	39635-35-3	mg/kg	1.34e-06 U	1.36e-06 U	2.48e-06 J	1.37e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.01e-06 U	6.11e-06 U	6.16e-06 U	6.15e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.24e-06 U	1.26e-06 U	1.27e-06 U	1.27e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	3.1e-05	3.89e-05	0.000123	3.87e-05
E1668A	PCB-164	74472-45-0	mg/kg	9.51e-05	0.000138	0.000256	7.28e-05
E1668A	PCB-165	74472-46-1	mg/kg	6.59e-06	9.79e-06	3.49e-05	1.04e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.000155	0.000184	0.000558	0.000201
E1668A	PCB-169	32774-16-6	mg/kg	1.43e-06 U	1.45e-06 U	2.03e-06 J	1.46e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.000492	0.000662 J	0.00143 J	0.000549
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.000175	R	0.000396	0.000153
E1668A	PCB-172	52663-74-8	mg/kg	0.000106	0.000142	0.000323	0.00013
E1668A	PCB-174	38411-25-5	mg/kg	0.000158	0.000285	0.000529	0.000173
E1668A	PCB-175	40186-70-7	mg/kg	3.79e-05	R	0.000124	4.49e-05

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFN411	NB03FSFN412	NB03FSFS351	NB03FSFS354
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-176	52663-65-7	mg/kg	3.39e-05	4.78e-05	0.000104	3.26e-05
E1668A	PCB-177	52663-70-4	mg/kg	0.000365	0.000468	0.0012 J	4e-04
E1668A	PCB-178	52663-67-9	mg/kg	0.000299	0.000382	0.00104 J	0.000375
E1668A	PCB-179	52663-64-6	mg/kg	0.000141	0.000209	0.000451	0.00014
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00154 J	0.00205 J	0.00449 J	0.00175 J
E1668A	PCB-181	74472-47-2	mg/kg	6.03e-06	R	R	6.09e-06
E1668A	PCB-182	60145-23-5	mg/kg	6.54e-06	1.03e-05	2.47e-05	9.43e-06
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.000568	R	0.00135 J	0.000494
E1668A	PCB-184	74472-48-3	mg/kg	5.02e-06	7.13e-06	1.1e-05	5.73e-06
E1668A	PCB-186	74472-49-4	mg/kg	1.43e-06 U	1.45e-06 U	1.47e-06 U	1.46e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00175 J	0.00229 J	0.00586 J	0.002 J
E1668A	PCB-188	74487-85-7	mg/kg	2.04e-05	3.82e-05	4.88e-05	2.46e-05
E1668A	PCB-189	39635-31-9	mg/kg	2.48e-05	2.89e-05	8.15e-05	3.24e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.00012	0.000157	0.00029	0.000118
E1668A	PCB-191	74472-50-7	mg/kg	2.59e-05	3.65e-05	6.48e-05	2.52e-05
E1668A	PCB-192	74472-51-8	mg/kg	1.24e-06 U	1.26e-06 U	1.27e-06 U	1.27e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000253	0.000301	0.000703	0.00028
E1668A	PCB-195	52663-78-2	mg/kg	7.34e-05	9e-05	0.000184	7.58e-05
E1668A	PCB-196	42740-50-1	mg/kg	0.000153	0.000197	0.000442	0.000177
E1668A	PCB-197/200	PCB-197/200	mg/kg	3.83e-05	4.38e-05	9.63e-05	3.68e-05
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.000408	0.000508	0.0014	0.000547
E1668A	PCB-201	40186-71-8	mg/kg	9.46e-05	9.48e-05	0.000235	9.38e-05
E1668A	PCB-202	2136-99-4	mg/kg	0.000347	0.000305	0.000941 J	0.000339
E1668A	PCB-203	52663-76-0	mg/kg	0.000289	0.000349	0.000879	0.00038
E1668A	PCB-204	74472-52-9	mg/kg	2e-06 U	2.04e-06 U	2.05e-06 U	2.05e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	1.2e-05	1.23e-05	2.85e-05	1.21e-05
E1668A	PCB-206	40186-72-9	mg/kg	0.000215	0.000269	0.000616	0.000287
E1668A	PCB-207	52663-79-3	mg/kg	2.68e-05	3.84e-05	7.49e-05	3.39e-05
E1668A	PCB-208	52663-77-1	mg/kg	0.000122	0.000162	0.000384	0.000169
E1668A	PCB-209	2051-24-3	mg/kg	0.00013	0.000176	0.000308	0.00016
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.048 J	0.0796 J	0.152 J	0.0505 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.0536 J	0.0856 J	0.168 J	0.0554 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	7.23e-07	1.9e-07 J	5.88e-07 J	2.79e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS355	NB03FSFS356	NB03FSFS357	NB03FSFS359
			Sample Date	01/20/16	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-1	2051-60-7	mg/kg	3.49e-05 J	4.11e-05 J	1.32e-05 J	2e-05
E1668A	PCB-2	2051-61-8	mg/kg	2.75e-06	2.68e-06	1.19e-06 J	6.9e-07 U
E1668A	PCB-3	2051-62-9	mg/kg	3.7e-06 J	3.14e-06 J	1.52e-06 J	1.08e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.000478 J	0.000537 J	0.000172 J	0.000308 J
E1668A	PCB-5	16605-91-7	mg/kg	6.35e-06	4.08e-06 J	1.23e-06 J	2.73e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	0.000126 J	9.74e-05 J	3.79e-05 J	5.83e-05
E1668A	PCB-7	33284-50-3	mg/kg	2.54e-05	1.58e-05	5.23e-06	9.92e-06
E1668A	PCB-8	34883-43-7	mg/kg	0.000584 J	0.000396 J	0.000155 J	0.000251 J
E1668A	PCB-9	34883-39-1	mg/kg	3.55e-05	2.59e-05	8.25e-06	1.53e-05
E1668A	PCB-10	33146-45-1	mg/kg	6.89e-05	8.02e-05	2.61e-05	3.64e-05
E1668A	PCB-11	2050-67-1	mg/kg	3.26e-06 U	3.36e-06 U	3.36e-06 U	4.74e-05 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	8.43e-06	7.34e-06	2.91e-06 J	5.36e-06
E1668A	PCB-14	34883-41-5	mg/kg	7.67e-07 U	7.9e-07 U	7.91e-07 U	7.88e-07 U
E1668A	PCB-15	2050-68-2	mg/kg	3.92e-05	3.06e-05	9.09e-06	3.29e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	0.00031 J	0.00011 J	4.43e-05 J	0.000114
E1668A	PCB-17	37680-66-3	mg/kg	0.00132 J	0.00101 J	0.000415 J	0.000835 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00235 J	0.00179 J	0.000677 J	0.00143 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000423 J	0.000334 J	0.000129	0.000243
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0069 J	0.00532 J	0.00167 J	0.00504 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00107 J	0.000616 J	0.000256	0.000496
E1668A	PCB-22	38444-85-8	mg/kg	0.00118 J	0.000853 J	0.000413 J	0.000594 J
E1668A	PCB-23	55720-44-0	mg/kg	3.63e-06	2.7e-06	1.09e-06 J	2.27e-06
E1668A	PCB-24	55702-45-9	mg/kg	9.59e-07 U	2.51e-05	9.18e-06	2.16e-05
E1668A	PCB-25	55712-37-3	mg/kg	0.00039 J	0.000383 J	0.000115	0.000177
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00103 J	0.000946 J	0.000351	0.000576
E1668A	PCB-27	38444-76-7	mg/kg	0.000252	0.000184	7.96e-05	0.000136
E1668A	PCB-31	16606-02-3	mg/kg	0.0041 J	0.00334 J	0.00113 J	0.0022 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00111 J	0.000802 J	0.000306 J	0.000756 J
E1668A	PCB-34	37680-68-5	mg/kg	3.48e-05	2.55e-05	1.15e-05	2.07e-05
E1668A	PCB-35	37680-69-6	mg/kg	8.63e-07 U	8.88e-07 U	8.9e-07 U	8.87e-07 U
E1668A	PCB-36	38444-87-0	mg/kg	7.67e-07 U	7.9e-07 U	7.91e-07 U	7.88e-07 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000101	6.32e-05	1.62e-05	7.47e-05
E1668A	PCB-38	53555-66-1	mg/kg	6.21e-06	2.97e-06	1.42e-06 J	6.9e-07 U
E1668A	PCB-39	38444-88-1	mg/kg	2.28e-05	1.34e-05	5.81e-06	1.2e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00202 J	0.0011	0.000512	0.00136 J
E1668A	PCB-41	52663-59-9	mg/kg	0.000136	0.000105	4.54e-05	0.00011
E1668A	PCB-42	36559-22-5	mg/kg	0.00114 J	0.000805 J	0.000332	0.000693 J
E1668A	PCB-43	70362-46-8	mg/kg	0.000161	0.000129	5.85e-05	0.000124
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00619 J	0.00288 J	0.00112	0.00608 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000585 J	0.000428	0.000156	0.000345
E1668A	PCB-46	41464-47-5	mg/kg	2.82e-05	1.3e-05	5.39e-06	1.35e-05
E1668A	PCB-48	70362-47-9	mg/kg	0.00085 J	0.000469	0.000213	0.000679 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00589 J	0.00295 J	0.00119 J	0.00457 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.000662	0.000462	0.000222	0.000399
E1668A	PCB-51	68194-04-7	mg/kg	0.000437	0.000248	0.000123	0.000327
E1668A	PCB-52	35693-99-3	mg/kg	0.00996 J	0.0081 J	0.00304 J	0.00808 J

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS355	NB03FSFS356	NB03FSFS357	NB03FSFS359
			Sample Date	01/20/16	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-54	15968-05-5	mg/kg	4.49e-05	3.53e-05	1.52e-05	2.68e-05
E1668A	PCB-55	74338-24-2	mg/kg	1.15e-06 U	1.18e-06 U	1.19e-06 U	1.18e-06 U
E1668A	PCB-56	41464-43-1	mg/kg	0.00113 J	0.000865 J	0.000289	0.000576
E1668A	PCB-57	70424-67-8	mg/kg	2.99e-05	2.8e-05	1.11e-05	2.04e-05
E1668A	PCB-58	41464-49-7	mg/kg	2.23e-05	1.55e-05	6.67e-06	1.16e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000698	0.000392	0.000151	0.000646
E1668A	PCB-60	33025-41-1	mg/kg	0.00136 J	0.00083 J	0.000294	0.00137 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0109 J	0.0067 J	0.00225	0.00868 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000571	0.000367	0.000143	0.000357
E1668A	PCB-64	52663-58-8	mg/kg	0.00286 J	0.00138 J	0.000556	0.00197 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00926 J	0.00404 J	0.00147 J	0.00914 J
E1668A	PCB-67	73575-53-8	mg/kg	8.52e-05	9.08e-05	2.72e-05	5.7e-05
E1668A	PCB-68	73575-52-7	mg/kg	0.000134	8.32e-05	3.51e-05	9.97e-05
E1668A	PCB-72	41464-42-0	mg/kg	0.00021	0.000117	5.29e-05	0.00014
E1668A	PCB-73	74338-23-1	mg/kg	1.98e-05	1.38e-06 U	1.38e-06 U	1.38e-06 U
E1668A	PCB-77	32598-13-3	mg/kg	0.000182	0.000233	4.25e-05	0.000156
E1668A	PCB-78	70362-49-1	mg/kg	1.53e-06 U	1.58e-06 U	1.58e-06 U	1.58e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	3.64e-05	1.5e-05	7.02e-06	2.31e-05
E1668A	PCB-80	33284-52-5	mg/kg	1.05e-06 U	1.09e-06 U	1.09e-06 U	1.08e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	1.73e-06 U	1.61e-05	2.89e-06 J	1.02e-05
E1668A	PCB-82	52663-62-4	mg/kg	0.000156	0.000137	5.6e-05	8.67e-05
E1668A	PCB-83	60145-20-2	mg/kg	2.78e-06 U	2.37e-05	1.02e-05	2.86e-06 U
E1668A	PCB-84	52663-60-2	mg/kg	0.000326	0.000233	9.87e-05	0.000162
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00225 J	0.000833	0.000317	0.00215 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00385 J	0.00163	0.000658	0.00288
E1668A	PCB-88	55215-17-3	mg/kg	2.11e-06 U	2.17e-06 U	2.18e-06 U	2.17e-06 U
E1668A	PCB-89	73575-57-2	mg/kg	3.43e-05	2.17e-05	9.81e-06	1.98e-05
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.00894 J	0.00356 J	0.00148 J	0.00654 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00112 J	0.000439	0.000198	0.000737 J
E1668A	PCB-92	52663-61-3	mg/kg	0.00215 J	0.00147 J	0.000563 J	0.0017 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000406	9.57e-05	3.75e-05	0.000413
E1668A	PCB-94	73575-55-0	mg/kg	1.77e-05	1.22e-05	6.69e-06	1.12e-05
E1668A	PCB-95	38379-99-6	mg/kg	0.0032 J	0.00232 J	0.000902 J	0.00263 J
E1668A	PCB-96	73575-54-9	mg/kg	3.55e-05	2.07e-05	9.79e-06	1.38e-05
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00021	0.000102	5.83e-05	0.00018
E1668A	PCB-99	38380-01-7	mg/kg	0.0101 J	0.00407 J	0.00148 J	0.00976 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000192	5.83e-05	2.74e-05	0.000137
E1668A	PCB-104	56558-16-8	mg/kg	1.56e-05	5.41e-06	2.55e-06 J	1.28e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00441 J	0.00199 J	0.00071 J	0.00331 J
E1668A	PCB-106	70424-69-0	mg/kg	1.63e-06 U	1.68e-06 U	1.68e-06 U	1.67e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00141 J	0.000829 J	0.000318	0.00084 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000254	0.000203	6.88e-05	0.000145
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0069 J	0.00282 J	0.00116 J	0.00491 J
E1668A	PCB-111	39635-32-0	mg/kg	2.56e-05	1.42e-05	6.25e-06	2.04e-05
E1668A	PCB-112	74472-36-9	mg/kg	1.34e-06 U	1.38e-06 U	1.38e-06 U	1.38e-06 U
E1668A	PCB-114	74472-37-0	mg/kg	0.000408	0.000223	8.53e-05	3e-04

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS355	NB03FSFS356	NB03FSFS357	NB03FSFS359
			Sample Date	01/20/16	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-118	31508-00-6	mg/kg	0.0175 J	0.00905 J	0.00325 J	0.0125 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000124	6.33e-05	2.65e-05	1e-04
E1668A	PCB-121	56558-18-0	mg/kg	1.65e-05	6.53e-06	2.75e-06 J	1.29e-05
E1668A	PCB-122	76842-07-4	mg/kg	1.15e-06 U	2.1e-05	4.75e-06 J	1.01e-05
E1668A	PCB-123	65510-44-3	mg/kg	0.000299	0.000107	1.68e-06 U	0.000257
E1668A	PCB-126	57465-28-8	mg/kg	0.000112	5.55e-05	2.12e-05	3.07e-05
E1668A	PCB-127	39635-33-1	mg/kg	1.34e-06 U	1.3e-05	3.96e-06 J	1.46e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00118 J	0.000461	0.000178	0.00111
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0134 J	0.00576 J	0.00235 J	0.0114 J
E1668A	PCB-130	52663-66-8	mg/kg	0.000578 J	0.00043	0.000178	0.000458
E1668A	PCB-131	61798-70-7	mg/kg	2.16e-05	1.47e-05	6.12e-06	1.4e-05
E1668A	PCB-132	38380-05-1	mg/kg	0.000896 J	0.000422	0.000188	0.00061 J
E1668A	PCB-133	35694-04-3	mg/kg	0.000417	0.000215	9.7e-05	0.000277
E1668A	PCB-134	52704-70-8	mg/kg	1e-04	9.5e-05	3.76e-05	7.26e-05
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00314 J	0.00213 J	0.000864	0.00185 J
E1668A	PCB-136	38411-22-2	mg/kg	0.000373	0.000206	8.87e-05	0.000171
E1668A	PCB-137	35694-06-5	mg/kg	0.000582 J	0.000298	0.000111	0.000611 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000168	4.89e-05	1.96e-05	0.000184
E1668A	PCB-141	52712-04-6	mg/kg	0.00116 J	0.000671 J	0.000281 J	0.000921 J
E1668A	PCB-142	41411-61-4	mg/kg	1.63e-06 U	1.68e-06 U	1.68e-06 U	1.67e-06 U
E1668A	PCB-143	68194-15-0	mg/kg	3.16e-06 U	3.26e-06 U	3.26e-06 U	7.45e-06 J
E1668A	PCB-144	68194-14-9	mg/kg	0.00035	0.000209	8.25e-05	0.000222
E1668A	PCB-145	74472-40-5	mg/kg	1.53e-06 U	1.58e-06 U	1.58e-06 U	1.58e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	0.00302 J	0.00149 J	0.00065 J	0.00242 J
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00439 J	0.00182 J	0.000829 J	0.00325 J
E1668A	PCB-148	74472-41-6	mg/kg	8.4e-05	3.33e-05	1.46e-05	5e-05
E1668A	PCB-150	68194-08-1	mg/kg	3.26e-05	1.41e-05	6.23e-06	1.78e-05
E1668A	PCB-152	68194-09-2	mg/kg	5.4e-06	2.38e-06 J	1.38e-06 U	5.65e-06
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.016 J	0.00629 J	0.00245 J	0.0137 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000613 J	0.00021	7.39e-05	0.000355
E1668A	PCB-155	33979-03-2	mg/kg	7.38e-05	1.58e-05	6.73e-06	7.52e-05
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00175 J	0.000963	0.000395	0.00125 J
E1668A	PCB-158	74472-42-7	mg/kg	0.000854 J	0.000255	9.72e-05	0.000898 J
E1668A	PCB-159	39635-35-3	mg/kg	1.34e-06 U	1.59e-06 J	1.38e-06 U	1.38e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	6.04e-06 U	6.22e-06 U	6.23e-06 U	6.21e-06 U
E1668A	PCB-161	74472-43-8	mg/kg	1.25e-06 U	1.28e-06 U	1.29e-06 U	1.28e-06 U
E1668A	PCB-162	39635-34-2	mg/kg	0.000129	7e-05	3.2e-05	8.72e-05
E1668A	PCB-164	74472-45-0	mg/kg	0.000376	0.000122	5.21e-05	0.000208
E1668A	PCB-165	74472-46-1	mg/kg	1.95e-05	1.23e-05	5.84e-06	1.61e-05
E1668A	PCB-167	52663-72-6	mg/kg	0.000675 J	0.000388	0.00016	R
E1668A	PCB-169	32774-16-6	mg/kg	1.44e-06 U	1.48e-06 U	1.48e-06 U	1.48e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00199 J	0.000949 J	0.000457	0.00187 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	0.00059	0.000228	0.000106	0.000616
E1668A	PCB-172	52663-74-8	mg/kg	0.000425	0.000198	9.85e-05	0.000427
E1668A	PCB-174	38411-25-5	mg/kg	0.000661 J	0.00025	0.000122	0.000501
E1668A	PCB-175	40186-70-7	mg/kg	0.000139	6.64e-05	3.2e-05	0.000114

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS355	NB03FSFS356	NB03FSFS357	NB03FSFS359
			Sample Date	01/20/16	01/20/16	01/20/16	12/01/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1668A	PCB-176	52663-65-7	mg/kg	9.72e-05	4.22e-05	1.99e-05	6.93e-05
E1668A	PCB-177	52663-70-4	mg/kg	0.00106 J	0.000609 J	0.000299	0.000739 J
E1668A	PCB-178	52663-67-9	mg/kg	0.000893 J	0.000501	0.00025	0.000713 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000386	0.000223	9.71e-05	0.000258
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00646 J	0.00292 J	0.0014 J	0.00644 J
E1668A	PCB-181	74472-47-2	mg/kg	2.37e-05	7.83e-06	3.36e-06 J	2.45e-05
E1668A	PCB-182	60145-23-5	mg/kg	2.47e-05	9.95e-06	4.87e-06 J	2.87e-05
E1668A	PCB-183/185	PCB-183/185	mg/kg	0.00191 J	0.000719	0.000332	0.00197 J
E1668A	PCB-184	74472-48-3	mg/kg	1.56e-05	5.63e-06	2.1e-06 J	1.56e-05
E1668A	PCB-186	74472-49-4	mg/kg	1.44e-06 U	1.48e-06 U	1.48e-06 U	1.48e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	0.00649 J	0.00284 J	0.00141 J	0.00466 J
E1668A	PCB-188	74487-85-7	mg/kg	4.19e-05	2e-05	9.88e-06	2.69e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000107	5.17e-05	2.44e-05	8.07e-05
E1668A	PCB-190	41411-64-7	mg/kg	0.000472	0.000191	8.98e-05	0.000463
E1668A	PCB-191	74472-50-7	mg/kg	1e-04	4.5e-05	2.07e-05	0.000107
E1668A	PCB-192	74472-51-8	mg/kg	1.31e-06 J	1.28e-06 U	1.29e-06 U	1.28e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.000973 J	0.000425	0.000244	0.000805
E1668A	PCB-195	52663-78-2	mg/kg	0.000291	0.000109	6.19e-05	0.000224
E1668A	PCB-196	42740-50-1	mg/kg	0.00059	0.000253	0.000138	0.000559 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	0.000103	4.35e-05	2.22e-05	8.32e-05
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00154	0.000702	0.000399	0.00144
E1668A	PCB-201	40186-71-8	mg/kg	0.000236	0.000104	5.55e-05	0.000192
E1668A	PCB-202	2136-99-4	mg/kg	0.000763	0.000397	0.00023	0.000574
E1668A	PCB-203	52663-76-0	mg/kg	0.00122 J	0.000505	0.000275	0.00104 J
E1668A	PCB-204	74472-52-9	mg/kg	2.29e-06 J	2.07e-06 U	2.08e-06 U	2.07e-06 U
E1668A	PCB-205	74472-53-0	mg/kg	4.65e-05	1.61e-05	8.61e-06	2.96e-05
E1668A	PCB-206	40186-72-9	mg/kg	6e-04	0.000272	0.000181	0.000636
E1668A	PCB-207	52663-79-3	mg/kg	6.95e-05	3.01e-05	1.95e-05	7.08e-05
E1668A	PCB-208	52663-77-1	mg/kg	0.000287	0.00015	0.000105	0.000295
E1668A	PCB-209	2051-24-3	mg/kg	0.000262	0.000141	0.000105	0.000301
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.196 J	0.103 J	0.0412 J	0.157 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.221 J	0.116 J	0.0459 J	0.175 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	1.2e-05	5.97e-06	2.27e-06	3.63e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10	NB03FWPC-COMP11
			Sample Date	04/27/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	R	R	0.000109 J	R	4.78e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	3.38e-06 U	3.38e-06 U	3.41e-06 U	3.41e-06 U	3.41e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.31e-06 U	5.3e-06 U	R	5.36e-06 U	R
E1668A	PCB-4	13029-08-8	mg/kg	0.00065	0.000519	0.00144 J	0.00066 J	0.000631 J
E1668A	PCB-5	16605-91-7	mg/kg	6.46e-06 J	3.86e-06 U	4.97e-06 J	3.89e-06 U	4.38e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	0.000313	0.000143	0.000355	0.000306	0.000234
E1668A	PCB-7	33284-50-3	mg/kg	2.61e-05	1.27e-05	2.05e-05	1.85e-05	1.56e-05
E1668A	PCB-8	34883-43-7	mg/kg	0.000604 J	0.000307 J	0.000619 J	0.000477 J	0.000421 J
E1668A	PCB-9	34883-39-1	mg/kg	4.82e-05	2.27e-05	4.11e-05	3.25e-05	3.29e-05
E1668A	PCB-10	33146-45-1	mg/kg	3.98e-05	4.5e-05	0.00016	7.1e-05	5.55e-05
E1668A	PCB-11	2050-67-1	mg/kg	1.64e-05 U	1.64e-05 U	R	0.000157 J	1.66e-05 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.4e-05 J	1.07e-05 J	1.73e-05 J	1.72e-05 J	9.26e-06 U
E1668A	PCB-14	34883-41-5	mg/kg	3.86e-06 U	3.86e-06 U	3.9e-06 U	3.89e-06 U	3.9e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	7.72e-06 U	1.73e-05 J	R	7.79e-06 U	R
E1668A	PCB-16	38444-78-9	mg/kg	0.00142 J	0.000747 J	0.00174 J	0.00125 J	0.0014 J
E1668A	PCB-17	37680-66-3	mg/kg	0.00265 J	0.00155 J	0.00382 J	0.00268 J	0.00272 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00449 J	0.0024 J	0.00583 J	0.00433 J	0.00451 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000628	0.000364	0.00092	0.000583	0.000541
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0139 J	0.00888 J	0.0183 J	0.0151 J	0.0151 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00243	0.00112	0.00224	0.00172	0.00185
E1668A	PCB-22	38444-85-8	mg/kg	0.00263	0.00147	0.00291 J	0.00229 J	0.00236 J
E1668A	PCB-23	55720-44-0	mg/kg	6.85e-06 J	4.53e-06 J	6.64e-06 J	5.44e-06 J	6.05e-06 J
E1668A	PCB-24	55702-45-9	mg/kg	5.3e-05	4.82e-06 U	4.87e-06 U	4.87e-06 U	4.87e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00209	0.00116	0.00283	0.00222	0.00205
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00279	0.00178	0.00384	0.00338	0.00297
E1668A	PCB-27	38444-76-7	mg/kg	0.000519	0.00033	0.00081	0.000574	0.000565
E1668A	PCB-31	16606-02-3	mg/kg	0.00694 J	0.00412 J	0.0102 J	0.0092 J	0.00795 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00282	0.00155	0.00316 J	0.00244 J	0.00243 J
E1668A	PCB-34	37680-68-5	mg/kg	0.000125	7.72e-05	0.000192	0.000129	0.000143
E1668A	PCB-35	37680-69-6	mg/kg	4.34e-06 U	4.34e-06 U	4.39e-06 U	4.38e-06 U	4.39e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	3.86e-06 U	3.86e-06 U	3.9e-06 U	3.89e-06 U	3.9e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.00036	0.00019	0.000324	0.00038	0.000155
E1668A	PCB-38	53555-66-1	mg/kg	1.19e-05	9.24e-06 J	2.02e-05	1.71e-05	1.71e-05
E1668A	PCB-39	38444-88-1	mg/kg	5.87e-05	3.78e-05	7.74e-05	5.53e-05	6.97e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00753	0.00558	0.0119 J	0.0102	0.0101
E1668A	PCB-41	52663-59-9	mg/kg	0.000493	0.000327	0.000384	0.000438	0.000464
E1668A	PCB-42	36559-22-5	mg/kg	0.00504	0.0044	0.00849 J	0.00701 J	0.00684 J
E1668A	PCB-43	70362-46-8	mg/kg	0.000739	0.000526	0.00104	0.000962	0.000937
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0201 J	0.0161 J	0.0319 J	0.0269 J	0.026 J
E1668A	PCB-45	70362-45-7	mg/kg	1.06e-05 U	0.00106	0.00214	0.00181	0.00173
E1668A	PCB-46	41464-47-5	mg/kg	0.000685	0.000399	0.000873	0.000673	0.000735
E1668A	PCB-48	70362-47-9	mg/kg	0.00249	0.00183	0.00332	0.00276	0.00322
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0151 J	0.013 J	0.0276 J	0.0235 J	0.0219 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00297	0.00177	0.00385	0.003	0.00309
E1668A	PCB-51	68194-04-7	mg/kg	0.00268	0.00102	0.00236	0.00159	0.00162
E1668A	PCB-52	35693-99-3	mg/kg	0.0219 J	0.0179 J	0.0371 J	0.0317 J	0.0327 J

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10	NB03FWPC-COMP11
			Sample Date	04/27/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	0.000206	4.66e-05	0.000114	5.48e-05	7.28e-05
E1668A	PCB-55	74338-24-2	mg/kg	0.000109	6.92e-05	0.00012	0.000153	0.000129
E1668A	PCB-56	41464-43-1	mg/kg	0.0055	0.00423	0.00719 J	0.00614 J	0.00654 J
E1668A	PCB-57	70424-67-8	mg/kg	0.000101	9.44e-05	0.000156	0.000121	0.000131
E1668A	PCB-58	41464-49-7	mg/kg	0.000101	0.000106	0.000187	0.00016	0.000161
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00166	0.00136	0.00262	0.00231	0.00225
E1668A	PCB-60	33025-41-1	mg/kg	0.00189	0.00164	0.00289	0.00304	0.00298
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0277 J	0.0248 J	0.0448 J	0.0391 J	0.0399 J
E1668A	PCB-63	74472-34-7	mg/kg	0.000909	0.000872	0.00152	0.00151	0.00133
E1668A	PCB-64	52663-58-8	mg/kg	0.00737 J	0.00616 J	0.0124 J	0.0108 J	0.0105 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0179 J	0.0185 J	0.0322 J	0.0295 J	0.0293 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000538	0.000381	0.000753	0.000571	0.000644
E1668A	PCB-68	73575-52-7	mg/kg	0.000304	0.000292	0.000539	0.000436	0.000418
E1668A	PCB-72	41464-42-0	mg/kg	0.000412	0.000415	0.000778	0.000652	0.000624
E1668A	PCB-73	74338-23-1	mg/kg	8.41e-05	5.82e-05	0.000125	9.26e-05	6.78e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.000934	0.000737	0.00112	0.00106	0.00105
E1668A	PCB-78	70362-49-1	mg/kg	7.72e-06 U	7.71e-06 U	7.8e-06 U	7.79e-06 U	7.8e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000142	0.000146	0.00026	0.000214	0.000205
E1668A	PCB-80	33284-52-5	mg/kg	5.31e-06 U	5.3e-06 U	5.36e-06 U	5.36e-06 U	5.36e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	3.04e-05	3.18e-05	8.77e-06 U	3.61e-05	4.39e-05
E1668A	PCB-82	52663-62-4	mg/kg	0.00122	0.00117	0.00203	0.00178	0.00163
E1668A	PCB-83	60145-20-2	mg/kg	0.000844	R	R	0.00113	R
E1668A	PCB-84	52663-60-2	mg/kg	0.00331	0.00277	0.00526	0.00418	0.00466
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0033	0.00393	0.00668	0.00637	0.00526
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0103	0.0102	0.0184 J	0.016	0.0153
E1668A	PCB-88	55215-17-3	mg/kg	1.06e-05 U	1.06e-05 U	1.07e-05 U	1.07e-05 U	1.07e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000201	0.000158	0.000304	0.000278	0.000275
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0189 J	0.0192 J	0.0365 J	0.0316 J	0.0303 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00345	0.00326	0.00643 J	0.00538	0.00516
E1668A	PCB-92	52663-61-3	mg/kg	0.00394	R	R	R	R
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00111	0.000698	0.00133	0.00102	0.001
E1668A	PCB-94	73575-55-0	mg/kg	0.000269	0.000158	0.00033	0.000241	0.000269
E1668A	PCB-95	38379-99-6	mg/kg	0.0117 J	0.0106 J	0.0226 J	0.0185 J	0.0197 J
E1668A	PCB-96	73575-54-9	mg/kg	0.000159	9.67e-05	0.000188	0.00015	0.000169
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00113	0.000889	0.00193	0.00144	0.00154
E1668A	PCB-99	38380-01-7	mg/kg	0.0122 J	R	0.0255 J	R	0.0213 J
E1668A	PCB-103	60145-21-3	mg/kg	0.00046	0.000391	0.000709	0.000568	0.000547
E1668A	PCB-104	56558-16-8	mg/kg	9.3e-05	6.75e-06 U	7.15e-05	4.42e-05	5.45e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00537	0.006 J	0.00895 J	0.00915 J	0.00802 J
E1668A	PCB-106	70424-69-0	mg/kg	8.2e-06 U	8.2e-06 U	8.28e-06 U	8.28e-06 U	8.28e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.0017	0.00206	0.00309	0.00306	0.00267
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000666	0.000679	0.00104	0.000922	0.000919
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0187 J	0.0177 J	0.0341 J	0.0287 J	0.0296 J
E1668A	PCB-111	39635-32-0	mg/kg	2.52e-05	2.94e-05	4.92e-05	4.79e-05	3.95e-05
E1668A	PCB-112	74472-36-9	mg/kg	7.61e-05	R	0.000119	R	0.000178
E1668A	PCB-114	74472-37-0	mg/kg	0.000389	0.000466	0.00066	0.000694	0.000632

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10	NB03FWPC-COMP11
			Sample Date	04/27/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0198 J	0.0235 J	0.0344 J	0.0334 J	0.0308 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000118	0.000151	0.000265	0.000239	0.000208
E1668A	PCB-121	56558-18-0	mg/kg	1.87e-05 J	1.85e-05 J	2.94e-05	2.43e-05 J	2.6e-05
E1668A	PCB-122	76842-07-4	mg/kg	0.000169	0.00019	0.000229	0.000197	0.000273
E1668A	PCB-123	65510-44-3	mg/kg	0.000385	0.000505	0.00075	0.000677	0.000669
E1668A	PCB-126	57465-28-8	mg/kg	4.83e-05	4.87e-05	7.21e-05	6.34e-05	7.77e-05
E1668A	PCB-127	39635-33-1	mg/kg	2.86e-05	3.29e-05	4.48e-05	4.03e-05	3.71e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00204	0.00246	0.00375	0.00348	0.00279
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0202 J	0.0229 J	0.0375 J	0.0377 J	0.0308 J
E1668A	PCB-130	52663-66-8	mg/kg	R	R	R	R	R
E1668A	PCB-131	61798-70-7	mg/kg	R	R	R	R	R
E1668A	PCB-132	38380-05-1	mg/kg	R	R	R	R	R
E1668A	PCB-133	35694-04-3	mg/kg	0.000528	0.000614	0.000897	0.000818	0.000688
E1668A	PCB-134	52704-70-8	mg/kg	R	R	R	R	R
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00588	0.00525	0.00924	0.00845	0.00771
E1668A	PCB-136	38411-22-2	mg/kg	0.00147	0.00118	0.0022	0.00184	0.00187
E1668A	PCB-137	35694-06-5	mg/kg	0.000853	0.000946	0.00156	0.00147	0.00129
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.00036	R	0.000665	0.000581	0.000511
E1668A	PCB-141	52712-04-6	mg/kg	0.00332	0.00296	0.00489	0.00436	0.00387
E1668A	PCB-142	41411-61-4	mg/kg	R	R	R	R	R
E1668A	PCB-143	68194-15-0	mg/kg	R	R	R	R	R
E1668A	PCB-144	68194-14-9	mg/kg	R	R	R	R	R
E1668A	PCB-145	74472-40-5	mg/kg	7.72e-06 U	7.71e-06 U	7.8e-06 U	8.29e-06 J	9.11e-06 J
E1668A	PCB-146	51908-16-8	mg/kg	R	R	R	R	R
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0134 J	0.0126 J	0.0227 J	0.0196 J	0.0184 J
E1668A	PCB-148	74472-41-6	mg/kg	8.05e-05	7.93e-05	0.000133	0.000122	0.000105
E1668A	PCB-150	68194-08-1	mg/kg	7.91e-05	7.27e-05	0.000131	0.000112	0.000106
E1668A	PCB-152	68194-09-2	mg/kg	3.14e-05	1.48e-05 J	3.36e-05	2.22e-05 J	2.6e-05
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0209 J	0.0255 J	0.0416 J	0.0436 J	0.0345 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000571	0.000641	0.00108	0.000992	0.000872
E1668A	PCB-155	33979-03-2	mg/kg	0.000219	0.000166	0.000291	0.000247	0.00027
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0019	0.00218	0.00335	0.00325	0.00287
E1668A	PCB-158	74472-42-7	mg/kg	0.00156	0.00161	0.00273	0.00266	0.00225
E1668A	PCB-159	39635-35-3	mg/kg	6.76e-06 U	6.75e-06 U	6.82e-06 U	6.82e-06 U	6.82e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	3.04e-05 U	3.04e-05 U	3.07e-05 U	3.07e-05 U	3.07e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	R	R	R	R	R
E1668A	PCB-162	39635-34-2	mg/kg	6.27e-06 U	0.000102	6.34e-06 U	0.000144	0.000147
E1668A	PCB-164	74472-45-0	mg/kg	0.00105	R	0.00171	0.00145	0.00148
E1668A	PCB-165	74472-46-1	mg/kg	R	R	R	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.000736	0.000896	0.00142	0.00139	0.00116
E1668A	PCB-169	32774-16-6	mg/kg	7.24e-06 U	7.23e-06 U	7.31e-06 U	7.3e-06 U	7.31e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00376	0.00409	0.00644 J	0.00677 J	0.00499
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	R	R	R	R
E1668A	PCB-172	52663-74-8	mg/kg	0.000758	0.000881	R	0.00148	R
E1668A	PCB-174	38411-25-5	mg/kg	R	R	R	R	R
E1668A	PCB-175	40186-70-7	mg/kg	R	0.000193	R	R	R

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10	NB03FWPC-COMP11
			Sample Date	04/27/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.000333	0.000252	0.000503	0.000491	0.000395
E1668A	PCB-177	52663-70-4	mg/kg	R	R	R	R	R
E1668A	PCB-178	52663-67-9	mg/kg	0.00107	0.00117	0.00199	0.00206	0.00156
E1668A	PCB-179	52663-64-6	mg/kg	0.00114	0.000964	0.00178	0.00166	0.00146
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0107	0.012 J	0.0189 J	0.0206 J	0.0146 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	R	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	R	R	R	R	R
E1668A	PCB-184	74472-48-3	mg/kg	2.17e-05 J	2.29e-05 J	5.81e-05	4.98e-05	4.32e-05
E1668A	PCB-186	74472-49-4	mg/kg	7.24e-06 U	7.23e-06 U	7.31e-06 U	7.3e-06 U	7.31e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	R	R	R	R	R
E1668A	PCB-188	74487-85-7	mg/kg	3.62e-05	R	7.52e-05	7.98e-05	6e-05
E1668A	PCB-189	39635-31-9	mg/kg	R	0.000165	R	0.000283	R
E1668A	PCB-190	41411-64-7	mg/kg	0.000819	0.000934	0.00144	0.00151	0.00113
E1668A	PCB-191	74472-50-7	mg/kg	0.000163	0.000172	0.000277	0.000304	0.000218
E1668A	PCB-192	74472-51-8	mg/kg	R	6.27e-06 U	R	R	R
E1668A	PCB-194	35694-08-7	mg/kg	0.00189	0.00214	0.00376	0.00374	0.0027
E1668A	PCB-195	52663-78-2	mg/kg	0.00067	0.000751	0.00128	0.00129	0.000943
E1668A	PCB-196	42740-50-1	mg/kg	0.000936	0.00104	0.00192	0.00191	0.00135
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	R	R	R	R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00241	0.00268	0.00519	0.00496	0.00366
E1668A	PCB-201	40186-71-8	mg/kg	0.00025	0.000302	0.000583	0.000562	0.000435
E1668A	PCB-202	2136-99-4	mg/kg	0.000725	0.00103	0.00178	0.00172	0.00131
E1668A	PCB-203	52663-76-0	mg/kg	0.00164	0.00199	0.00354	0.00341	0.00261
E1668A	PCB-204	74472-52-9	mg/kg	1.01e-05 U	1.01e-05 U	1.04e-05 J	1.02e-05 U	1.02e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	7.6e-05	8.81e-05	0.000156	0.000152	0.000115
E1668A	PCB-206	40186-72-9	mg/kg	0.00104	R	R	R	R
E1668A	PCB-207	52663-79-3	mg/kg	9.99e-05	0.000134	0.000303	0.00029	0.000212
E1668A	PCB-208	52663-77-1	mg/kg	0.000367	R	R	0.000813	R
E1668A	PCB-209	2051-24-3	mg/kg	0.000491	0.000633	0.00133	0.00125	0.000978
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.386 J	0.333 J	0.647 J	0.558 J	0.539 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.416 J	0.368 J	0.698 J	0.608 J	0.584 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	5.84e-06	6.01e-06	8.86e-06	7.97e-06	9.26e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07
			Sample Date	04/27/16	04/27/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	FD	FD	FD	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	R	R	3.64e-05 J		R
E1668A	PCB-2	2051-61-8	mg/kg	3.44e-06 U	3.48e-06 U	3.48e-06 U		3.43e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.41e-06 U	5.47e-06 U	R		5.39e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.000766	0.00078	0.00067 J		4e-04
E1668A	PCB-5	16605-91-7	mg/kg	4.27e-06 J	5.39e-06 J	5.1e-06 J		3.92e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000216	0.000222	0.000137		0.000163
E1668A	PCB-7	33284-50-3	mg/kg	1.58e-05	1.97e-05	1.45e-05		1.08e-05
E1668A	PCB-8	34883-43-7	mg/kg	0.000381 J	0.000403 J	0.000402 J		0.000264 J
E1668A	PCB-9	34883-39-1	mg/kg	2.98e-05	3.22e-05	2.67e-05		2.4e-05
E1668A	PCB-10	33146-45-1	mg/kg	7.82e-05	8.53e-05	7.44e-05		2.7e-05
E1668A	PCB-11	2050-67-1	mg/kg	1.67e-05 U	1.69e-05 U	1.69e-05 U		1.67e-05 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	9.62e-06 J	1.06e-05 J	1.19e-05 J		9.3e-06 U
E1668A	PCB-14	34883-41-5	mg/kg	3.93e-06 U	3.98e-06 U	3.98e-06 U		3.92e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	1.47e-05 J	1.19e-05 J	R		7.84e-06 U
E1668A	PCB-16	38444-78-9	mg/kg	0.000917 J	0.000935 J	0.0012 J		0.000902 J
E1668A	PCB-17	37680-66-3	mg/kg	0.00186 J	0.0019 J	0.00229 J		0.00168 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00309 J	0.00324 J	0.00347 J		0.00271 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000547	0.000604	0.00065		0.00038
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0106 J	0.0107 J	0.0114 J		0.00796 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00135	0.00135	0.00142		0.00117
E1668A	PCB-22	38444-85-8	mg/kg	0.0016	0.00163	0.0018 J		0.00148
E1668A	PCB-23	55720-44-0	mg/kg	4.94e-06 J	5.56e-06 J	4.92e-06 J		4.46e-06 J
E1668A	PCB-24	55702-45-9	mg/kg	4.92e-06 U	4.98e-06 U	4.97e-06 U		4.9e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.00138	0.00147	0.00101		0.000938
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00211	0.00228	0.00191		0.00164
E1668A	PCB-27	38444-76-7	mg/kg	0.000466	0.000476	0.000686		0.000341
E1668A	PCB-31	16606-02-3	mg/kg	0.00475 J	0.00485 J	0.00608 J		0.00299 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00203	0.00198	0.00194 J		0.0018
E1668A	PCB-34	37680-68-5	mg/kg	9.19e-05	9.45e-05	7.36e-05		7.17e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.42e-06 U	4.48e-06 U	4.47e-06 U		4.41e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	3.93e-06 U	3.98e-06 U	3.98e-06 U		3.92e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000251	0.000252	0.000328		7.17e-05
E1668A	PCB-38	53555-66-1	mg/kg	3.44e-06 U	3.48e-06 U	1.15e-05		8.69e-06 J
E1668A	PCB-39	38444-88-1	mg/kg	4.8e-05	4.45e-05	4.21e-05		3.89e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00584	0.00626	0.00593		0.00547
E1668A	PCB-41	52663-59-9	mg/kg	0.000281	0.000277	0.00029		0.000348
E1668A	PCB-42	36559-22-5	mg/kg	0.00385	0.00406	0.00364		0.00393
E1668A	PCB-43	70362-46-8	mg/kg	0.000595	0.000633	0.000609		0.000531
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0154 J	0.0164 J	0.0177		0.0148 J
E1668A	PCB-45	70362-45-7	mg/kg	0.00114	0.00132	0.00119		0.00104
E1668A	PCB-46	41464-47-5	mg/kg	0.000479	0.000497	0.000506		0.000447
E1668A	PCB-48	70362-47-9	mg/kg	0.00198	0.00206	0.00172		0.0019
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.0124 J	0.0132 J	0.0135 J		0.011 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00209	0.00222	0.00239		0.00201
E1668A	PCB-51	68194-04-7	mg/kg	0.00125	0.00118	0.00179		0.0018
E1668A	PCB-52	35693-99-3	mg/kg	0.0191 J	0.0203 J	0.0192 J		0.0153 J

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07
			Sample Date	04/27/16	04/27/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	FD	FD	FD	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	6.52e-05	6.62e-05	0.000101		0.000105
E1668A	PCB-55	74338-24-2	mg/kg	9.27e-05	6.98e-05	1e-04		5.03e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.00414	0.00456	0.00385		0.00342
E1668A	PCB-57	70424-67-8	mg/kg	8.15e-05	8.37e-05	8.47e-05		6.3e-05
E1668A	PCB-58	41464-49-7	mg/kg	9.28e-05	0.000104	9.06e-05		7.25e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.0014	0.00153	0.00157		0.00118
E1668A	PCB-60	33025-41-1	mg/kg	0.00168	0.00192	0.00207		0.00153
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.024 J	0.0258 J	0.0228 J		0.0179
E1668A	PCB-63	74472-34-7	mg/kg	0.000895	0.000956	0.000914		0.000655
E1668A	PCB-64	52663-58-8	mg/kg	0.00587 J	0.00645 J	0.0055		0.00539 J
E1668A	PCB-66	32598-10-0	mg/kg	0.0171 J	0.0184 J	0.0156 J		0.0131 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000394	0.000425	0.000397		0.000342
E1668A	PCB-68	73575-52-7	mg/kg	0.000271	0.000295	0.000316		0.000208
E1668A	PCB-72	41464-42-0	mg/kg	0.000392	0.000413	0.000423		0.00027
E1668A	PCB-73	74338-23-1	mg/kg	6.16e-05	4.63e-05	9.72e-05		5.88e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.000873	0.000944	0.000954		0.000469
E1668A	PCB-78	70362-49-1	mg/kg	7.87e-06 U	7.96e-06 U	7.95e-06 U		7.84e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000125	0.000148	0.000116		9.43e-05
E1668A	PCB-80	33284-52-5	mg/kg	5.41e-06 U	5.47e-06 U	5.47e-06 U		5.39e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	3.59e-05	4.26e-05	4.27e-05		2.28e-05 J
E1668A	PCB-82	52663-62-4	mg/kg	0.000888	0.000956	0.000853		0.00107
E1668A	PCB-83	60145-20-2	mg/kg	R	R	R		0.000561
E1668A	PCB-84	52663-60-2	mg/kg	0.00268	0.00286	0.00257		0.00247
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.0031	0.0034	0.0034		0.00271
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00861	0.00934	0.00857		0.00774
E1668A	PCB-88	55215-17-3	mg/kg	1.08e-05 U	1.09e-05 U	1.09e-05 U		1.08e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000147	0.000157	0.000109		0.000148
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0164 J	0.0178 J	0.0175 J		0.0144 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00285	0.00304	0.00285		0.00255
E1668A	PCB-92	52663-61-3	mg/kg	R	R	R		0.00279
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000649	0.000696	0.00125		0.000931
E1668A	PCB-94	73575-55-0	mg/kg	0.000162	0.000168	0.000244		0.000198
E1668A	PCB-95	38379-99-6	mg/kg	0.0101 J	0.0112 J	0.0114 J		0.00859 J
E1668A	PCB-96	73575-54-9	mg/kg	0.000107	0.000108	0.000114		0.000105
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000818	0.000873	0.00106		0.00083
E1668A	PCB-99	38380-01-7	mg/kg	R	R	0.0159 J		0.00938 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000344	0.00038	0.000511		0.000367
E1668A	PCB-104	56558-16-8	mg/kg	3.52e-05	3.62e-05	7.35e-05		8.39e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00567	0.00621 J	0.00518		0.00428
E1668A	PCB-106	70424-69-0	mg/kg	8.36e-06 U	8.46e-06 U	8.45e-06 U		8.33e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00197	0.0022	0.00183		0.00127
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000628	0.000706	0.000548		0.000495
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0155 J	0.017 J	0.0137 J		0.0134 J
E1668A	PCB-111	39635-32-0	mg/kg	2.97e-05	3.37e-05	5.14e-05		1.91e-05 J
E1668A	PCB-112	74472-36-9	mg/kg	R	R	7.42e-05		3.23e-05
E1668A	PCB-114	74472-37-0	mg/kg	0.000469	0.000513	0.000423		0.000314

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07
			Sample Date	04/27/16	04/27/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	FD	FD	FD	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0217 J	0.0243 J	0.0211 J		0.0149 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000145	0.000159	0.000203		9.01e-05
E1668A	PCB-121	56558-18-0	mg/kg	1.84e-05 J	2.01e-05 J	3.72e-05		1.6e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	0.000145	0.00016	0.000116		0.000129
E1668A	PCB-123	65510-44-3	mg/kg	0.000429	5e-04	0.000415		0.000291
E1668A	PCB-126	57465-28-8	mg/kg	6.21e-05	5.76e-05	5.25e-05		2.84e-05
E1668A	PCB-127	39635-33-1	mg/kg	3.28e-05	3.83e-05	3.61e-05		2.5e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00182	0.00203	0.00225		0.00177
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0215 J	0.0243 J	0.0267 J		0.0167 J
E1668A	PCB-130	52663-66-8	mg/kg	R	R	R		R
E1668A	PCB-131	61798-70-7	mg/kg	R	R	R		R
E1668A	PCB-132	38380-05-1	mg/kg	R	R	R		R
E1668A	PCB-133	35694-04-3	mg/kg	0.000665	0.00069	0.000894		0.000442
E1668A	PCB-134	52704-70-8	mg/kg	R	R	R		R
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00506	0.00557	0.00575		0.00453
E1668A	PCB-136	38411-22-2	mg/kg	0.00115	0.00126	0.00116		0.00113
E1668A	PCB-137	35694-06-5	mg/kg	0.000954	0.00102	0.00105		0.000657
E1668A	PCB-139/140	PCB-139/140	mg/kg	R	R	0.000451		0.000287
E1668A	PCB-141	52712-04-6	mg/kg	0.00262	0.00296	0.00261		0.00253
E1668A	PCB-142	41411-61-4	mg/kg	R	R	R		R
E1668A	PCB-143	68194-15-0	mg/kg	R	R	R		R
E1668A	PCB-144	68194-14-9	mg/kg	R	R	R		R
E1668A	PCB-145	74472-40-5	mg/kg	7.87e-06 U	7.96e-06 U	7.95e-06 U		7.84e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	R	R	R		R
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0114 J	0.0131 J	0.0117 J		0.0107 J
E1668A	PCB-148	74472-41-6	mg/kg	8.03e-05	8.43e-05	0.000167		6.33e-05
E1668A	PCB-150	68194-08-1	mg/kg	6.22e-05	6.95e-05	8.5e-05		6.77e-05
E1668A	PCB-152	68194-09-2	mg/kg	1.51e-05 J	1.75e-05 J	3.58e-05		2.61e-05
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0253 J	0.0282 J	0.0329 J		0.0172 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000609	0.000668	0.00112		0.000466
E1668A	PCB-155	33979-03-2	mg/kg	0.000126	0.000131	0.000185		0.000195
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00225	0.00251	0.00234		0.00151
E1668A	PCB-158	74472-42-7	mg/kg	0.00151	0.00172	0.00185		0.00127
E1668A	PCB-159	39635-35-3	mg/kg	6.88e-06 U	6.97e-06 U	6.96e-06 U		6.86e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	3.1e-05 U	3.13e-05 U	3.13e-05 U		3.09e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	R	R	R		R
E1668A	PCB-162	39635-34-2	mg/kg	9.88e-05	0.000126	0.000128		6.37e-06 U
E1668A	PCB-164	74472-45-0	mg/kg	R	R	0.000931		0.000749
E1668A	PCB-165	74472-46-1	mg/kg	R	R	R		R
E1668A	PCB-167	52663-72-6	mg/kg	0.000949	0.00107	0.000956		0.000602
E1668A	PCB-169	32774-16-6	mg/kg	7.37e-06 U	7.46e-06 U	7.46e-06 U		7.35e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00381	0.00454	0.00432		0.00339
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	R	R		R
E1668A	PCB-172	52663-74-8	mg/kg	0.000851	0.00101	R		7e-04
E1668A	PCB-174	38411-25-5	mg/kg	R	R	R		R
E1668A	PCB-175	40186-70-7	mg/kg	0.000186	0.00022	R		R

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14	NB03FWPN-COMP07
			Sample Date	04/27/16	04/27/16	04/26/16	04/27/16	04/27/16
			Sample Type	N	FD	FD	FD	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.00023	0.000277	0.000238		0.000272
E1668A	PCB-177	52663-70-4	mg/kg	R	R	R		R
E1668A	PCB-178	52663-67-9	mg/kg	0.00117	0.00137	0.00172		0.000989
E1668A	PCB-179	52663-64-6	mg/kg	0.000904	0.00108	0.00105		0.00102
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0118 J	0.0142 J	0.0144 J		0.00973
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R		R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	R		R
E1668A	PCB-183/185	PCB-183/185	mg/kg	R	R	R		R
E1668A	PCB-184	74472-48-3	mg/kg	2.01e-05 J	1.76e-05 J	3.05e-05		1.5e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	7.37e-06 U	7.46e-06 U	7.46e-06 U		7.35e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	R	R	R		R
E1668A	PCB-188	74487-85-7	mg/kg	R	R	8.73e-05		3.36e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000167	0.000196	R		R
E1668A	PCB-190	41411-64-7	mg/kg	0.000906	0.00109	0.00109		0.00078
E1668A	PCB-191	74472-50-7	mg/kg	0.000165	0.000201	0.000213		0.000154
E1668A	PCB-192	74472-51-8	mg/kg	6.39e-06 U	6.47e-06 U	R		R
E1668A	PCB-194	35694-08-7	mg/kg	0.00233	0.00265	0.00275		0.00187
E1668A	PCB-195	52663-78-2	mg/kg	0.000737	0.00084	0.000886		0.00066
E1668A	PCB-196	42740-50-1	mg/kg	0.00104	0.0012	0.00152		0.000931
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	R	R		R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00276	0.00316	0.00329		0.00229
E1668A	PCB-201	40186-71-8	mg/kg	0.000306	0.000315	0.000416		0.000232
E1668A	PCB-202	2136-99-4	mg/kg	0.00102	0.00112	0.00141		0.000706
E1668A	PCB-203	52663-76-0	mg/kg	0.00206	0.00234	0.00273		0.00161
E1668A	PCB-204	74472-52-9	mg/kg	1.03e-05 U	1.04e-05 U	1.04e-05 U		1.03e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000101	0.000113	0.000109		7.96e-05
E1668A	PCB-206	40186-72-9	mg/kg	R	R	R		0.000931
E1668A	PCB-207	52663-79-3	mg/kg	0.000171	0.000155	0.000219		9.11e-05
E1668A	PCB-208	52663-77-1	mg/kg	R	R	R		0.000304
E1668A	PCB-209	2051-24-3	mg/kg	0.00108	0.00118	0.000899		0.000426
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.324 J	0.354 J	0.369 J		0.285 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.356 J	0.39 J	0.4 J		0.307 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	7.31e-06	6.98e-06	6.33e-06		3.59e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg	R	4.78e-05 J	2.13e-05 J	4.01e-05 J	R
E1668A	PCB-2	2051-61-8	mg/kg	3.48e-06 U	3.45e-06 U	3.41e-06 U	3.46e-06 U	3.33e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.47e-06 U	5.42e-06 U	R	R	5.24e-06 U
E1668A	PCB-4	13029-08-8	mg/kg	0.00101 J	0.000497	0.000319 J	0.000518 J	0.000682 J
E1668A	PCB-5	16605-91-7	mg/kg	1.07e-05 J	4.44e-06 J	3.89e-06 U	4.7e-06 J	3.81e-06 U
E1668A	PCB-6	25569-80-6	mg/kg	0.000304	0.000156 J	9.79e-05	0.00017	0.000138
E1668A	PCB-7	33284-50-3	mg/kg	3.85e-05	1.25e-05	3.89e-06 U	1.39e-05	1.44e-05
E1668A	PCB-8	34883-43-7	mg/kg	0.000863 J	0.000309 J	0.000219 J	0.000356 J	0.000401 J
E1668A	PCB-9	34883-39-1	mg/kg	5.93e-05	2.69e-05	1.7e-05	2.78e-05	2.67e-05
E1668A	PCB-10	33146-45-1	mg/kg	0.000107	3.99e-05	2.79e-05	4.32e-05	7.12e-05
E1668A	PCB-11	2050-67-1	mg/kg	0.00018 J	1.68e-05 U	1.66e-05 U	1.68e-05 U	1.62e-05 U
E1668A	PCB-12/13	PCB-12/13	mg/kg	2.06e-05 J	1.28e-05 J	9.25e-06 U	9.4e-06 U	1.32e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	3.98e-06 U	3.94e-06 U	3.89e-06 U	3.96e-06 U	3.81e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	3.43e-05	7.89e-06 U	R	R	1.76e-05 J
E1668A	PCB-16	38444-78-9	mg/kg	0.00224 J	0.00111 J	0.000674 J	0.00107 J	0.00114 J
E1668A	PCB-17	37680-66-3	mg/kg	0.0039 J	0.00205 J	0.00123 J	0.00212 J	0.0022 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00642 J	0.00346 J	0.002 J	0.00397 J	0.00334 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000878	0.000444	0.000318	0.00046	0.000631
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.0211 J	0.0103 J	0.00661 J	0.0113 J	0.0108 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.00314	0.00131 J	0.000862	0.00148	0.00137
E1668A	PCB-22	38444-85-8	mg/kg	0.00336 J	0.00162 J	0.00117 J	0.00175 J	0.00173 J
E1668A	PCB-23	55720-44-0	mg/kg	9.8e-06 J	6.49e-06 J	3.41e-06 U	5.51e-06 J	4.56e-06 J
E1668A	PCB-24	55702-45-9	mg/kg	4.97e-06 U	4.93e-06 U	4.87e-06 U	4.95e-06 U	4.76e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.0023	0.00101	0.000673	0.00117	0.000958
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00381	0.00177	0.00122	0.00239	0.00184
E1668A	PCB-27	38444-76-7	mg/kg	0.000919	0.000444	0.000334	0.000711	0.00065
E1668A	PCB-31	16606-02-3	mg/kg	0.0117 J	0.00379 J	0.00338 J	0.0056 J	0.00588 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00314 J	0.00201 J	0.00118 J	0.00191 J	0.00186 J
E1668A	PCB-34	37680-68-5	mg/kg	0.000147	7.54e-05	4.59e-05	6.89e-05	7.06e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.47e-06 U	4.44e-06 U	4.38e-06 U	4.45e-06 U	4.29e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	3.98e-06 U	3.94e-06 U	3.89e-06 U	3.96e-06 U	3.81e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000515	0.000207 J	8.01e-05	0.000139	0.000301
E1668A	PCB-38	53555-66-1	mg/kg	1.91e-05	3.33e-05	8.62e-06 J	1.22e-05	1.03e-05
E1668A	PCB-39	38444-88-1	mg/kg	9.28e-05	6.11e-05	2.88e-05	4.48e-05	3.65e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.0109	0.00754	0.00393	0.00676	0.00582
E1668A	PCB-41	52663-59-9	mg/kg	0.000799	0.000488	0.000245	0.000455	0.000318
E1668A	PCB-42	36559-22-5	mg/kg	0.00725 J	0.00513	0.00266	0.00454	0.00368
E1668A	PCB-43	70362-46-8	mg/kg	0.0011	0.000726	0.000362	0.000637	0.000592
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.0316 J	0.0208 J	0.0105	0.0197 J	0.0178 J
E1668A	PCB-45	70362-45-7	mg/kg	0.0021	0.0016	0.00076	0.00133	0.00123
E1668A	PCB-46	41464-47-5	mg/kg	0.000914	0.000583	0.000291	0.000582	0.000502
E1668A	PCB-48	70362-47-9	mg/kg	0.00414	0.00247	0.00129	0.00228	0.00175
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.025 J	0.016 J	0.00835	0.0171 J	0.0134 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00414	0.00258	0.00124	0.00311	0.00231
E1668A	PCB-51	68194-04-7	mg/kg	0.00274	0.00179	0.000727	0.0018	0.00166
E1668A	PCB-52	35693-99-3	mg/kg	0.0389 J	0.0233 J	0.0125 J	0.0244 J	0.0191 J

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg	0.000124	7.09e-05	3.24e-05	6.58e-05	9.39e-05
E1668A	PCB-55	74338-24-2	mg/kg	0.000148	9.62e-05	3.93e-05	5.75e-05	6.9e-05
E1668A	PCB-56	41464-43-1	mg/kg	0.00777 J	0.00434	0.00261	0.00419	0.00376
E1668A	PCB-57	70424-67-8	mg/kg	0.000172	8.76e-05	5.65e-05	0.000101	9.26e-05
E1668A	PCB-58	41464-49-7	mg/kg	0.000163	9.25e-05	6.34e-05	8.64e-05	8.54e-05
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.00251	0.00176	0.000971	0.00168	0.00156
E1668A	PCB-60	33025-41-1	mg/kg	0.00394	0.00221	0.00163	0.0028	0.00191
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.045 J	0.0263 J	0.0151	0.0281 J	0.0219
E1668A	PCB-63	74472-34-7	mg/kg	0.00147	0.000945	0.000611	0.00111	0.00089
E1668A	PCB-64	52663-58-8	mg/kg	0.0104 J	0.00792 J	0.00412	0.00739 J	0.00544
E1668A	PCB-66	32598-10-0	mg/kg	0.0305 J	0.021 J	0.0115 J	0.0213 J	0.0152 J
E1668A	PCB-67	73575-53-8	mg/kg	0.000809	0.000419	0.000248	0.000352	0.000376
E1668A	PCB-68	73575-52-7	mg/kg	0.000492	0.000275	0.000179	0.00034	0.000312
E1668A	PCB-72	41464-42-0	mg/kg	0.000668	0.000404	0.000259	0.000445	0.000415
E1668A	PCB-73	74338-23-1	mg/kg	0.00014	7.37e-05	4.53e-05	9.51e-05	9.96e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.00151	0.000789	0.000539	0.000759	0.000953
E1668A	PCB-78	70362-49-1	mg/kg	7.95e-06 U	7.89e-06 U	7.79e-06 U	7.91e-06 U	7.62e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	0.000258	0.000202	9.42e-05	0.000152	0.000126
E1668A	PCB-80	33284-52-5	mg/kg	5.47e-06 U	5.42e-06 U	5.36e-06 U	5.44e-06 U	5.24e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	6.02e-05	8.88e-06 U	2.48e-05	3.79e-05	3.55e-05
E1668A	PCB-82	52663-62-4	mg/kg	0.00201	0.00152	0.000796	0.00135	0.000782
E1668A	PCB-83	60145-20-2	mg/kg	0.00123	0.00101	R	R	0.000601
E1668A	PCB-84	52663-60-2	mg/kg	0.00497	0.00391	0.00194	0.00333	0.00237
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00617	0.00496	0.00275	0.00472	0.00316
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.0167	0.0135	0.00695	0.0121	0.00801
E1668A	PCB-88	55215-17-3	mg/kg	1.09e-05 U	1.08e-05 U	1.07e-05 U	1.09e-05 U	1.05e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	0.000299	0.000227	9.19e-05	0.000199	0.000102
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0349 J	0.0261 J	0.0139 J	0.0234 J	0.016 J
E1668A	PCB-91	68194-05-8	mg/kg	0.0051	0.0044	0.00214	0.0037	0.00264
E1668A	PCB-92	52663-61-3	mg/kg	0.00657 J	R	R	R	0.00386
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.00141	0.00134	0.00049	0.000817	0.00117
E1668A	PCB-94	73575-55-0	mg/kg	0.000362	0.000275	0.000108	0.000202	0.000222
E1668A	PCB-95	38379-99-6	mg/kg	0.0207 J	0.0118 J	0.00869 J	0.0142 J	0.0103 J
E1668A	PCB-96	73575-54-9	mg/kg	0.000214	0.000164	6.1e-05	0.000112	0.000113
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.00167	0.0013	0.000561	0.00106	0.000934
E1668A	PCB-99	38380-01-7	mg/kg	0.0242 J	0.0188 J	0.0114 J	0.0185 J	0.0148 J
E1668A	PCB-103	60145-21-3	mg/kg	0.00067	0.000568	0.000251	0.000449	0.000473
E1668A	PCB-104	56558-16-8	mg/kg	8.61e-05	7.23e-05	2.3e-05 J	4.37e-05	6.63e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00993 J	0.00782 J	0.00465	0.00776 J	0.00482
E1668A	PCB-106	70424-69-0	mg/kg	8.45e-06 U	8.38e-06 U	8.28e-06 U	8.41e-06 U	8.1e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00297	0.00235	0.00146	0.0025	0.00171
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.00108	0.00074	0.000441	0.00075	5e-04
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.0318 J	0.0258 J	0.0126 J	0.0225 J	0.0126 J
E1668A	PCB-111	39635-32-0	mg/kg	4.83e-05	3.43e-05	2.58e-05	4.41e-05	4.87e-05
E1668A	PCB-112	74472-36-9	mg/kg	0.00013	6.62e-05	3.55e-05	8.27e-05	7.68e-05
E1668A	PCB-114	74472-37-0	mg/kg	0.000772	0.000557	0.000329	0.000582	0.000416

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg	0.0375 J	0.0274 J	0.0175 J	0.0294 J	0.0197 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000222	0.000176	0.00013	0.00019	0.00019
E1668A	PCB-121	56558-18-0	mg/kg	3.27e-05	2.52e-05	1.3e-05 J	2.54e-05	3.47e-05
E1668A	PCB-122	76842-07-4	mg/kg	0.000294	0.000164	0.000103	0.00015	0.000116
E1668A	PCB-123	65510-44-3	mg/kg	0.000632	0.000543	0.000262	0.000508	0.000382
E1668A	PCB-126	57465-28-8	mg/kg	7.88e-05	5.09e-05	4.47e-05	6.56e-05	4.91e-05
E1668A	PCB-127	39635-33-1	mg/kg	5.6e-05	6.14e-05	2.44e-05	3.98e-05	3.24e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00393	0.00305	0.00188	0.00308	0.00207
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0397 J	0.0332 J	0.0195 J	0.0343 J	0.0241 J
E1668A	PCB-130	52663-66-8	mg/kg	R	R	R	R	R
E1668A	PCB-131	61798-70-7	mg/kg	R	R	R	R	R
E1668A	PCB-132	38380-05-1	mg/kg	R	R	R	R	R
E1668A	PCB-133	35694-04-3	mg/kg	0.000816	0.00069	0.000479	0.000744	0.000858
E1668A	PCB-134	52704-70-8	mg/kg	R	R	R	R	R
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00982	0.00871	0.00389	0.00627	0.00543
E1668A	PCB-136	38411-22-2	mg/kg	0.00237	0.00196	0.000825	0.00138	0.00108
E1668A	PCB-137	35694-06-5	mg/kg	0.00183	R	0.000726	0.00131	0.00101
E1668A	PCB-139/140	PCB-139/140	mg/kg	0.000657	R	0.000274	0.00048	0.000413
E1668A	PCB-141	52712-04-6	mg/kg	0.00432	0.00379 J	0.00178	0.00351	0.00244
E1668A	PCB-142	41411-61-4	mg/kg	R	R	R	R	R
E1668A	PCB-143	68194-15-0	mg/kg	R	R	R	R	R
E1668A	PCB-144	68194-14-9	mg/kg	R	0.00099	R	R	R
E1668A	PCB-145	74472-40-5	mg/kg	1.04e-05 J	7.89e-06 U	7.79e-06 U	7.91e-06 U	7.62e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	R	R	R	R	R
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.0236 J	0.0185 J	0.00934 J	0.0154 J	0.0106 J
E1668A	PCB-148	74472-41-6	mg/kg	0.000135	0.00015	6.6e-05	8.88e-05	0.000158
E1668A	PCB-150	68194-08-1	mg/kg	0.000125	0.000139	5.32e-05	6.83e-05	8.01e-05
E1668A	PCB-152	68194-09-2	mg/kg	3.99e-05	3.9e-05	1.18e-05 J	1.54e-05 J	3.12e-05
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0457 J	0.0351 J	0.022 J	0.039 J	0.0314 J
E1668A	PCB-154	60145-22-4	mg/kg	0.00105	0.000942	0.000536	0.000675	0.00108
E1668A	PCB-155	33979-03-2	mg/kg	0.000198	0.000262	0.000104	0.000129	0.000182
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.00371	0.00293	0.00183	0.00311	0.00216
E1668A	PCB-158	74472-42-7	mg/kg	0.0028	0.00243	0.00136	0.00245	0.00171
E1668A	PCB-159	39635-35-3	mg/kg	6.96e-06 U	6.9e-06 U	6.82e-06 U	6.92e-06 U	6.67e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	3.13e-05 U	3.11e-05 U	3.07e-05 U	3.12e-05 U	3e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	R	R	R	R	R
E1668A	PCB-162	39635-34-2	mg/kg	0.000144	0.000233	0.000155	0.000186	0.000112
E1668A	PCB-164	74472-45-0	mg/kg	0.00184	R	0.000772	0.00133	0.000861
E1668A	PCB-165	74472-46-1	mg/kg	R	R	R	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.00143	0.00107	0.00077	0.00134	0.000879
E1668A	PCB-169	32774-16-6	mg/kg	7.46e-06 U	7.4e-06 U	7.3e-06 U	7.42e-06 U	7.14e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.00562	0.00567	0.00306	0.00613 J	0.00399
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	R	R	R	R
E1668A	PCB-172	52663-74-8	mg/kg	0.00118	R	R	R	0.000913
E1668A	PCB-174	38411-25-5	mg/kg	R	R	R	R	R
E1668A	PCB-175	40186-70-7	mg/kg	R	R	R	R	R

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11	NB03FWPN-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg	0.00049	0.000427	0.000187	0.000338	0.000218
E1668A	PCB-177	52663-70-4	mg/kg	R	R	R	R	R
E1668A	PCB-178	52663-67-9	mg/kg	R	R	0.0011	0.00173	R
E1668A	PCB-179	52663-64-6	mg/kg	0.00173	0.00153	0.000809	0.00115	0.00093
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.0162 J	0.017 J	0.00957	0.0184 J	1.43e-05 U
E1668A	PCB-181	74472-47-2	mg/kg	R	R	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R	R	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	R	R	R	R	R
E1668A	PCB-184	74472-48-3	mg/kg	3.49e-05	2.48e-05	1.72e-05 J	2.28e-05 J	2.82e-05
E1668A	PCB-186	74472-49-4	mg/kg	7.46e-06 U	7.4e-06 U	7.3e-06 U	7.42e-06 U	7.14e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	R	R	R	R	R
E1668A	PCB-188	74487-85-7	mg/kg	5.93e-05	5.82e-05	5.08e-05	5.24e-05	7.86e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000243	R	R	R	0.000179
E1668A	PCB-190	41411-64-7	mg/kg	0.00122	0.00129	0.000679	0.00132	0.00102
E1668A	PCB-191	74472-50-7	mg/kg	0.000233	0.000263	0.000145	0.000275	0.000201
E1668A	PCB-192	74472-51-8	mg/kg	6.46e-06 U	R	R	R	6.19e-06 U
E1668A	PCB-194	35694-08-7	mg/kg	0.0025	0.00287	0.00179	0.0031	0.00273
E1668A	PCB-195	52663-78-2	mg/kg	0.000936	0.00102	0.000552	0.00107	0.000881
E1668A	PCB-196	42740-50-1	mg/kg	0.0013	0.00162	0.000899	0.00163	0.00155
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	R	R	R	R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00365	0.00368	0.00227	0.00416	0.00331
E1668A	PCB-201	40186-71-8	mg/kg	0.000426	0.000362	0.000309	0.000446	0.000418
E1668A	PCB-202	2136-99-4	mg/kg	0.00126	0.00115	0.00114	0.00136	0.00136
E1668A	PCB-203	52663-76-0	mg/kg	0.00256	0.00274	0.00173	0.00264	0.0028
E1668A	PCB-204	74472-52-9	mg/kg	1.04e-05 U	1.04e-05 U	1.02e-05 U	1.04e-05 U	1e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	0.000114	0.000119	7.01e-05	0.000124	0.000103
E1668A	PCB-206	40186-72-9	mg/kg	R	0.00143	R	R	R
E1668A	PCB-207	52663-79-3	mg/kg	0.000168	0.000146	0.000125	0.000201	0.000224
E1668A	PCB-208	52663-77-1	mg/kg	0.000584	0.000482	R	R	0.000464
E1668A	PCB-209	2051-24-3	mg/kg	0.000856	0.000777	0.000513	0.000888	0.000845
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.645 J	0.452 J	0.255 J	0.452 J	0.341 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.701 J	0.494 J	0.281 J	0.496 J	0.371 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	9.73e-06	6.42e-06	5.33e-06	7.97e-06	5.92e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09	NB03FWPS-COMP10
			Sample Date	04/27/16	04/27/16	04/27/16	04/27/16	04/26/16
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-1	2051-60-7	mg/kg		R	R	R	R
E1668A	PCB-2	2051-61-8	mg/kg		3.43e-06 U	3.38e-06 U	3.4e-06 U	3.39e-06 U
E1668A	PCB-3	2051-62-9	mg/kg		5.39e-06 U	5.31e-06 U	5.34e-06 U	5.33e-06 U
E1668A	PCB-4	13029-08-8	mg/kg		0.000568	0.000463	0.000712	0.000804 J
E1668A	PCB-5	16605-91-7	mg/kg		4.61e-06 J	3.86e-06 U	3.88e-06 U	5.59e-06 J
E1668A	PCB-6	25569-80-6	mg/kg		0.000208	0.000195	0.000198	0.000202
E1668A	PCB-7	33284-50-3	mg/kg		1.51e-05	1.67e-05	1.73e-05	2e-05
E1668A	PCB-8	34883-43-7	mg/kg		0.000374 J	0.000326 J	0.000414 J	0.000546 J
E1668A	PCB-9	34883-39-1	mg/kg		3.03e-05	2.32e-05	3.29e-05	3.5e-05
E1668A	PCB-10	33146-45-1	mg/kg		5.07e-05	3.94e-05	6.63e-05	8.81e-05
E1668A	PCB-11	2050-67-1	mg/kg		1.67e-05 U	1.64e-05 U	1.65e-05 U	0.000139 J
E1668A	PCB-12/13	PCB-12/13	mg/kg		1.17e-05 J	1.08e-05 J	1.1e-05 J	1.59e-05 J
E1668A	PCB-14	34883-41-5	mg/kg		3.92e-06 U	3.86e-06 U	3.88e-06 U	3.88e-06 U
E1668A	PCB-15	2050-68-2	mg/kg		1.86e-05 J	1.65e-05 J	1.26e-05 J	2.58e-05
E1668A	PCB-16	38444-78-9	mg/kg		0.00117 J	0.000644 J	0.0011 J	0.00138 J
E1668A	PCB-17	37680-66-3	mg/kg		0.00235 J	0.00147 J	0.00211 J	0.00274 J
E1668A	PCB-18/30	PCB-18/30	mg/kg		0.00383 J	0.00241 J	0.00349 J	0.00427 J
E1668A	PCB-19	38444-73-4	mg/kg		0.000502	0.000352	0.00061	0.000623
E1668A	PCB-20/28	PCB-20/28	mg/kg		0.0119 J	0.00809 J	0.00863 J	0.0143 J
E1668A	PCB-21/33	PCB-21/33	mg/kg		0.00167	0.00121	0.00155	0.002
E1668A	PCB-22	38444-85-8	mg/kg		0.0019	0.00132	0.00159	0.00227 J
E1668A	PCB-23	55720-44-0	mg/kg		5.33e-06 J	4.18e-06 J	6.13e-06 J	7.35e-06 J
E1668A	PCB-24	55702-45-9	mg/kg		4.9e-06 U	4.83e-06 U	4.85e-06 U	4.84e-06 U
E1668A	PCB-25	55712-37-3	mg/kg		0.00169	0.00144	0.00105	0.00145
E1668A	PCB-26/29	PCB-26/29	mg/kg		0.0026	0.00212	0.00203	0.00252
E1668A	PCB-27	38444-76-7	mg/kg		0.000486	0.000401	0.000615	0.000728
E1668A	PCB-31	16606-02-3	mg/kg		0.00513 J	0.0041 J	0.00407 J	0.00818 J
E1668A	PCB-32	38444-77-8	mg/kg		0.00225	0.0015	0.00203	0.00225 J
E1668A	PCB-34	37680-68-5	mg/kg		0.000114	8.65e-05	6.77e-05	9.19e-05
E1668A	PCB-35	37680-69-6	mg/kg		4.41e-06 U	4.35e-06 U	4.37e-06 U	4.36e-06 U
E1668A	PCB-36	38444-87-0	mg/kg		3.92e-06 U	3.86e-06 U	3.88e-06 U	3.88e-06 U
E1668A	PCB-37	38444-90-5	mg/kg		2e-04	0.00016	0.000165	0.00033
E1668A	PCB-38	53555-66-1	mg/kg		1.43e-05	8.45e-06 J	1.09e-05	1.51e-05
E1668A	PCB-39	38444-88-1	mg/kg		5.26e-05	3.91e-05	4.43e-05	6.4e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg		0.00794	0.00527	0.00637	0.00859
E1668A	PCB-41	52663-59-9	mg/kg		0.000473	0.000298	0.000427	0.00054
E1668A	PCB-42	36559-22-5	mg/kg		0.00558	0.00357 J	0.00422	0.00598 J
E1668A	PCB-43	70362-46-8	mg/kg		0.000762	0.000487	0.000625	0.000874
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg		0.0213 J	0.014 J	0.0182 J	0.026 J
E1668A	PCB-45	70362-45-7	mg/kg		0.0016	0.000886	0.00109	0.00157
E1668A	PCB-46	41464-47-5	mg/kg		0.000658	0.000392	0.000542	0.000684
E1668A	PCB-48	70362-47-9	mg/kg		0.00273	0.00173	0.00244	0.00319
E1668A	PCB-49/69	PCB-49/69	mg/kg		0.0172 J	0.0119 J	0.0152 J	0.0206 J
E1668A	PCB-50/53	PCB-50/53	mg/kg		0.00282	0.00193	0.00279	0.00323
E1668A	PCB-51	68194-04-7	mg/kg		0.00176	0.00114	0.00226	0.00219
E1668A	PCB-52	35693-99-3	mg/kg		0.0258 J	0.0173 J	0.0215 J	0.0315 J

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09	NB03FWPS-COMP10
			Sample Date	04/27/16	04/27/16	04/27/16	04/27/16	04/26/16
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-54	15968-05-5	mg/kg		9.27e-05	5.37e-05	0.000123	9.22e-05
E1668A	PCB-55	74338-24-2	mg/kg		9.03e-05	8.87e-05	9.81e-05	8.58e-05
E1668A	PCB-56	41464-43-1	mg/kg		0.00533	0.00395	0.00416	0.00583 J
E1668A	PCB-57	70424-67-8	mg/kg		0.000118	8.87e-05	9.52e-05	0.000137
E1668A	PCB-58	41464-49-7	mg/kg		0.00012	7.53e-05	7.08e-05	0.000126
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg		0.00186	0.00117	0.00149	0.00217
E1668A	PCB-60	33025-41-1	mg/kg		0.00199	0.00143	0.0019	0.0031
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg		0.0289 J	0.0209	0.022	0.0369 J
E1668A	PCB-63	74472-34-7	mg/kg		0.00103	0.000766	0.000866	0.00135
E1668A	PCB-64	52663-58-8	mg/kg		0.0081 J	0.00527 J	0.0063 J	0.00915 J
E1668A	PCB-66	32598-10-0	mg/kg		0.0209 J	0.0146 J	0.0152 J	0.0271 J
E1668A	PCB-67	73575-53-8	mg/kg		0.00053	0.00036	0.000416	0.000575
E1668A	PCB-68	73575-52-7	mg/kg		0.000323	0.000274	0.00032	0.000434
E1668A	PCB-72	41464-42-0	mg/kg		0.000463	0.00038	0.000394	0.000585
E1668A	PCB-73	74338-23-1	mg/kg		0.000117	6.67e-05	0.000135	0.000117
E1668A	PCB-77	32598-13-3	mg/kg		0.000901	0.000594	0.00067	0.00112
E1668A	PCB-78	70362-49-1	mg/kg		7.84e-06 U	7.73e-06 U	7.77e-06 U	7.75e-06 U
E1668A	PCB-79	41464-48-6	mg/kg		0.000162	0.000121	0.000167	0.000193
E1668A	PCB-80	33284-52-5	mg/kg		5.39e-06 U	5.31e-06 U	5.34e-06 U	5.33e-06 U
E1668A	PCB-81	70362-50-4	mg/kg		3.55e-05	2.11e-05 J	2.33e-05 J	4.56e-05
E1668A	PCB-82	52663-62-4	mg/kg		0.00144	0.000943	0.00156	0.00172
E1668A	PCB-83	60145-20-2	mg/kg		0.00129	R	0.001	0.00117
E1668A	PCB-84	52663-60-2	mg/kg		0.00387	0.0024	0.00338	0.00413
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg		0.00422	0.00289	0.0042	0.00636
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg		0.0118	0.00848	0.0124	0.0161
E1668A	PCB-88	55215-17-3	mg/kg		1.08e-05 U	1.06e-05 U	1.07e-05 U	1.07e-05 U
E1668A	PCB-89	73575-57-2	mg/kg		0.000225	0.000157	0.000217	0.000259
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg		0.022 J	0.016 J	0.0248 J	0.0337 J
E1668A	PCB-91	68194-05-8	mg/kg		0.00401	0.0027	0.00364	0.00478
E1668A	PCB-92	52663-61-3	mg/kg		0.00453	R	0.00494	0.00721 J
E1668A	PCB-93/100	PCB-93/100	mg/kg		0.000904	0.00056	0.0011	0.00138
E1668A	PCB-94	73575-55-0	mg/kg		0.000255	0.000161	0.000281	0.000302
E1668A	PCB-95	38379-99-6	mg/kg		0.0123 J	0.00954 J	0.0124 J	0.0181 J
E1668A	PCB-96	73575-54-9	mg/kg		0.000161	8.96e-05	0.000141	0.000163
E1668A	PCB-98/102	PCB-98/102	mg/kg		0.00123	0.000831	0.00126	0.00141
E1668A	PCB-99	38380-01-7	mg/kg		0.0155 J	R	0.0147 J	0.0248 J
E1668A	PCB-103	60145-21-3	mg/kg		0.00046	0.000319	0.000541	0.000674
E1668A	PCB-104	56558-16-8	mg/kg		5.74e-05	3e-05	7.44e-05	6.57e-05
E1668A	PCB-105	32598-14-4	mg/kg		0.00611 J	0.00471	0.00634 J	0.00937 J
E1668A	PCB-106	70424-69-0	mg/kg		8.33e-06 U	8.21e-06 U	8.25e-06 U	8.24e-06 U
E1668A	PCB-107	70424-68-9	mg/kg		0.00196	0.00159	0.00199	0.00293
E1668A	PCB-108/124	PCB-108/124	mg/kg		0.000746	0.00057	0.000771	0.000999
E1668A	PCB-110/115	PCB-110/115	mg/kg		0.0216 J	0.0148 J	0.0215 J	0.028 J
E1668A	PCB-111	39635-32-0	mg/kg		3.13e-05	2.3e-05 J	3.7e-05	5.66e-05
E1668A	PCB-112	74472-36-9	mg/kg		6.95e-05	R	0.00017	8.34e-05
E1668A	PCB-114	74472-37-0	mg/kg		0.000465	0.00036	0.000476	0.000698

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09	NB03FWPS-COMP10
			Sample Date	04/27/16	04/27/16	04/27/16	04/27/16	04/26/16
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-118	31508-00-6	mg/kg		0.023 J	0.017 J	0.0229 J	0.0357 J
E1668A	PCB-120	68194-12-7	mg/kg		0.00015	0.000114	0.00015	0.000244
E1668A	PCB-121	56558-18-0	mg/kg		2.09e-05 J	1.67e-05 J	2.47e-05	3.63e-05
E1668A	PCB-122	76842-07-4	mg/kg		0.000206	0.000146	0.00018	0.000214
E1668A	PCB-123	65510-44-3	mg/kg		0.000516	0.000364	0.000468	0.000741
E1668A	PCB-126	57465-28-8	mg/kg		5.04e-05	3.3e-05	4.99e-05	6.58e-05
E1668A	PCB-127	39635-33-1	mg/kg		3.75e-05	2.63e-05	4.5e-05	5.65e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg		0.00235	0.00176	0.00307	0.00397
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg		0.0237 J	0.0174 J	0.0296 J	0.041 J
E1668A	PCB-130	52663-66-8	mg/kg		R	R	R	R
E1668A	PCB-131	61798-70-7	mg/kg		R	R	R	R
E1668A	PCB-132	38380-05-1	mg/kg		R	R	R	R
E1668A	PCB-133	35694-04-3	mg/kg		0.00059	0.000497	7e-04	0.000909
E1668A	PCB-134	52704-70-8	mg/kg		R	R	R	R
E1668A	PCB-135/151	PCB-135/151	mg/kg		0.00641	0.00453	0.00768	0.00985
E1668A	PCB-136	38411-22-2	mg/kg		0.00157	0.00106	0.00182	0.00199
E1668A	PCB-137	35694-06-5	mg/kg		0.00102	0.000739	0.00114	0.00162
E1668A	PCB-139/140	PCB-139/140	mg/kg		0.000397	R	0.000471	0.00061
E1668A	PCB-141	52712-04-6	mg/kg		0.00317	0.00256	0.00411	0.00478
E1668A	PCB-142	41411-61-4	mg/kg		R	R	R	R
E1668A	PCB-143	68194-15-0	mg/kg		R	R	R	R
E1668A	PCB-144	68194-14-9	mg/kg		R	R	R	R
E1668A	PCB-145	74472-40-5	mg/kg		7.84e-06 U	7.73e-06 U	7.77e-06 U	7.75e-06 U
E1668A	PCB-146	51908-16-8	mg/kg		R	R	R	R
E1668A	PCB-147/149	PCB-147/149	mg/kg		0.0139 J	0.0105 J	0.0167 J	0.0196 J
E1668A	PCB-148	74472-41-6	mg/kg		8.85e-05	5.98e-05	0.000106	0.000145
E1668A	PCB-150	68194-08-1	mg/kg		8.18e-05	5.32e-05	8.29e-05	0.000104
E1668A	PCB-152	68194-09-2	mg/kg		2.61e-05	1.47e-05 J	3.24e-05	3e-05
E1668A	PCB-153/168	PCB-153/168	mg/kg		0.0251 J	0.0185 J	0.0307 J	0.0435 J
E1668A	PCB-154	60145-22-4	mg/kg		0.000663	0.000433	0.000669	0.00101
E1668A	PCB-155	33979-03-2	mg/kg		0.000168	9.76e-05	0.000132	0.000205
E1668A	PCB-156/157	PCB-156/157	mg/kg		0.00229	0.00175	0.00263	0.00359
E1668A	PCB-158	74472-42-7	mg/kg		0.00171	0.00126	0.00212	0.0027
E1668A	PCB-159	39635-35-3	mg/kg		6.86e-06 U	6.76e-06 U	6.8e-06 U	6.78e-06 U
E1668A	PCB-160	41411-62-5	mg/kg		3.09e-05 U	3.04e-05 U	3.06e-05 U	3.05e-05 U
E1668A	PCB-161	74472-43-8	mg/kg		R	R	R	R
E1668A	PCB-162	39635-34-2	mg/kg		9.04e-05	6.67e-05	0.000123	0.000195
E1668A	PCB-164	74472-45-0	mg/kg		0.00111	R	0.00134	0.00156
E1668A	PCB-165	74472-46-1	mg/kg		R	R	R	R
E1668A	PCB-167	52663-72-6	mg/kg		0.000884	0.000706	0.00105	0.00153
E1668A	PCB-169	32774-16-6	mg/kg		7.35e-06 U	7.25e-06 U	7.28e-06 U	7.27e-06 U
E1668A	PCB-170	35065-30-6	mg/kg		0.00372	0.00301	0.00469	0.00678 J
E1668A	PCB-171/173	PCB-171/173	mg/kg		R	R	R	R
E1668A	PCB-172	52663-74-8	mg/kg		0.000781	0.000656	0.000972	0.00131
E1668A	PCB-174	38411-25-5	mg/kg		R	R	R	R
E1668A	PCB-175	40186-70-7	mg/kg		R	0.000144	R	R

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09	NB03FWPS-COMP10
			Sample Date	04/27/16	04/27/16	04/27/16	04/27/16	04/26/16
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
E1668A	PCB-176	52663-65-7	mg/kg		0.000321	0.000237	0.000389	0.000424
E1668A	PCB-177	52663-70-4	mg/kg		R	R	R	R
E1668A	PCB-178	52663-67-9	mg/kg		R	0.000892	R	R
E1668A	PCB-179	52663-64-6	mg/kg		0.00123	0.000847	0.0014	0.00152
E1668A	PCB-180/193	PCB-180/193	mg/kg		0.0106	0.00883	0.0133 J	0.0182 J
E1668A	PCB-181	74472-47-2	mg/kg		R	R	R	R
E1668A	PCB-182	60145-23-5	mg/kg		R	R	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg		R	R	R	R
E1668A	PCB-184	74472-48-3	mg/kg		2.67e-05	1.83e-05 J	2.22e-05 J	3.22e-05
E1668A	PCB-186	74472-49-4	mg/kg		7.35e-06 U	7.25e-06 U	7.28e-06 U	7.27e-06 U
E1668A	PCB-187	52663-68-0	mg/kg		R	R	R	R
E1668A	PCB-188	74487-85-7	mg/kg		4.14e-05	R	3.96e-05	6.71e-05
E1668A	PCB-189	39635-31-9	mg/kg		0.000159	0.000133	0.000197	0.000264
E1668A	PCB-190	41411-64-7	mg/kg		0.000867	0.000673	0.00111	0.00156
E1668A	PCB-191	74472-50-7	mg/kg		0.000155	0.000124	0.000195	0.00026
E1668A	PCB-192	74472-51-8	mg/kg		6.37e-06 U	6.28e-06 U	6.31e-06 U	6.3e-06 U
E1668A	PCB-194	35694-08-7	mg/kg		0.00183	0.00171	0.00234	0.0034
E1668A	PCB-195	52663-78-2	mg/kg		0.000626	0.000571	0.000846	0.00116
E1668A	PCB-196	42740-50-1	mg/kg		0.000857	0.000734	0.00109	0.00165
E1668A	PCB-197/200	PCB-197/200	mg/kg		R	R	R	R
E1668A	PCB-198/199	PCB-198/199	mg/kg		0.00233	0.00213	0.00297	0.00445
E1668A	PCB-201	40186-71-8	mg/kg		0.000284	0.000237	0.000333	0.000501
E1668A	PCB-202	2136-99-4	mg/kg		0.000845	0.000745	0.00102	0.00159
E1668A	PCB-203	52663-76-0	mg/kg		0.00172	0.00143	0.00208	0.00302
E1668A	PCB-204	74472-52-9	mg/kg		1.03e-05 U	1.01e-05 U	1.02e-05 U	1.02e-05 U
E1668A	PCB-205	74472-53-0	mg/kg		8.46e-05	7.47e-05	0.000113	0.000149
E1668A	PCB-206	40186-72-9	mg/kg		R	R	R	R
E1668A	PCB-207	52663-79-3	mg/kg		0.000121	0.000107	0.000146	0.000218
E1668A	PCB-208	52663-77-1	mg/kg		0.000415	R	0.000517	0.000687
E1668A	PCB-209	2051-24-3	mg/kg		0.000604	0.000649	0.000857	0.00112
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg		0.415 J	0.281 J	0.407 J	0.575 J
E1668A	Total PCB (a)	PCB-Total	mg/kg		0.449 J	0.307 J	0.442 J	0.628 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg		6.2e-06	4.15e-06	6.14e-06	8.31e-06

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/27/16	04/26/16
			Sample Type	N	N
Method	Analyte	CAS	Unit		
E1668A	PCB-1	2051-60-7	mg/kg	R	4.69e-05 J
E1668A	PCB-2	2051-61-8	mg/kg	3.38e-06 U	3.46e-06 U
E1668A	PCB-3	2051-62-9	mg/kg	5.31e-06 U	R
E1668A	PCB-4	13029-08-8	mg/kg	0.000564 J	0.000599 J
E1668A	PCB-5	16605-91-7	mg/kg	4.31e-06 J	4.41e-06 J
E1668A	PCB-6	25569-80-6	mg/kg	0.00016 J	0.000165
E1668A	PCB-7	33284-50-3	mg/kg	2.49e-05	1.54e-05
E1668A	PCB-8	34883-43-7	mg/kg	0.000327 J	0.000399 J
E1668A	PCB-9	34883-39-1	mg/kg	2.49e-05	2.68e-05
E1668A	PCB-10	33146-45-1	mg/kg	5.46e-05	5.92e-05
E1668A	PCB-11	2050-67-1	mg/kg	0.000132 J	0.000149 J
E1668A	PCB-12/13	PCB-12/13	mg/kg	1.59e-05 J	1.49e-05 J
E1668A	PCB-14	34883-41-5	mg/kg	3.86e-06 U	3.96e-06 U
E1668A	PCB-15	2050-68-2	mg/kg	2.99e-05 J	R
E1668A	PCB-16	38444-78-9	mg/kg	0.000597 J	0.00105 J
E1668A	PCB-17	37680-66-3	mg/kg	0.00122 J	0.00208 J
E1668A	PCB-18/30	PCB-18/30	mg/kg	0.00196 J	0.0034 J
E1668A	PCB-19	38444-73-4	mg/kg	0.000485 J	0.000463 J
E1668A	PCB-20/28	PCB-20/28	mg/kg	0.00562 J	0.0112 J
E1668A	PCB-21/33	PCB-21/33	mg/kg	0.000816 J	0.00156 J
E1668A	PCB-22	38444-85-8	mg/kg	0.000952 J	0.00174 J
E1668A	PCB-23	55720-44-0	mg/kg	4.62e-06 J	5.82e-06 J
E1668A	PCB-24	55702-45-9	mg/kg	4.83e-06 U	4.95e-06 U
E1668A	PCB-25	55712-37-3	mg/kg	0.000755 J	0.00123 J
E1668A	PCB-26/29	PCB-26/29	mg/kg	0.00136 J	0.00219 J
E1668A	PCB-27	38444-76-7	mg/kg	0.000418 J	0.00057 J
E1668A	PCB-31	16606-02-3	mg/kg	0.003 J	0.0062 J
E1668A	PCB-32	38444-77-8	mg/kg	0.00124 J	0.00173 J
E1668A	PCB-34	37680-68-5	mg/kg	4.99e-05 J	8.11e-05
E1668A	PCB-35	37680-69-6	mg/kg	4.35e-06 U	4.45e-06 U
E1668A	PCB-36	38444-87-0	mg/kg	3.86e-06 U	3.96e-06 U
E1668A	PCB-37	38444-90-5	mg/kg	0.000219 J	0.000341 J
E1668A	PCB-38	53555-66-1	mg/kg	3.38e-06 U	1.24e-05
E1668A	PCB-39	38444-88-1	mg/kg	2.58e-05 J	5.96e-05
E1668A	PCB-40/71	PCB-40/71	mg/kg	0.00304 J	0.00662 J
E1668A	PCB-41	52663-59-9	mg/kg	0.000199 J	0.000371 J
E1668A	PCB-42	36559-22-5	mg/kg	0.00198 J	0.00442 J
E1668A	PCB-43	70362-46-8	mg/kg	0.000307 J	0.000662
E1668A	PCB-44/47/65	PCB-44/47/65	mg/kg	0.00846 J	0.0188 J
E1668A	PCB-45	70362-45-7	mg/kg	0.000664 J	0.00131 J
E1668A	PCB-46	41464-47-5	mg/kg	0.000283 J	0.000553 J
E1668A	PCB-48	70362-47-9	mg/kg	0.000958 J	0.00254 J
E1668A	PCB-49/69	PCB-49/69	mg/kg	0.00684 J	0.0152 J
E1668A	PCB-50/53	PCB-50/53	mg/kg	0.00132 J	0.00254 J
E1668A	PCB-51	68194-04-7	mg/kg	0.000639 J	0.00144 J
E1668A	PCB-52	35693-99-3	mg/kg	0.0115 J	0.0247 J

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/27/16	04/26/16
			Sample Type	N	N
Method	Analyte	CAS	Unit		
E1668A	PCB-54	15968-05-5	mg/kg	4.14e-05 J	5.42e-05
E1668A	PCB-55	74338-24-2	mg/kg	6.93e-05 J	0.000111 J
E1668A	PCB-56	41464-43-1	mg/kg	0.00224 J	0.00509 J
E1668A	PCB-57	70424-67-8	mg/kg	6.42e-05 J	0.000103
E1668A	PCB-58	41464-49-7	mg/kg	4.21e-05 J	0.000114
E1668A	PCB-59/62/75	PCB-59/62/75	mg/kg	0.000764 J	0.00169 J
E1668A	PCB-60	33025-41-1	mg/kg	0.00094 J	0.00239 J
E1668A	PCB-61/70/74/76	PCB-61/70/74/76	mg/kg	0.0115 J	0.0288 J
E1668A	PCB-63	74472-34-7	mg/kg	0.00053 J	0.0011 J
E1668A	PCB-64	52663-58-8	mg/kg	0.00304 J	0.0067 J
E1668A	PCB-66	32598-10-0	mg/kg	0.00741 J	0.0205 J
E1668A	PCB-67	73575-53-8	mg/kg	2e-04 J	0.000455 J
E1668A	PCB-68	73575-52-7	mg/kg	0.000183 J	0.000333
E1668A	PCB-72	41464-42-0	mg/kg	0.000257 J	0.00049 J
E1668A	PCB-73	74338-23-1	mg/kg	6.59e-05 J	8.78e-05
E1668A	PCB-77	32598-13-3	mg/kg	0.00053 J	0.00102 J
E1668A	PCB-78	70362-49-1	mg/kg	7.73e-06 U	7.91e-06 U
E1668A	PCB-79	41464-48-6	mg/kg	6.9e-05 J	0.000165 J
E1668A	PCB-80	33284-52-5	mg/kg	5.31e-06 U	5.44e-06 U
E1668A	PCB-81	70362-50-4	mg/kg	1.83e-05 J	3.66e-05
E1668A	PCB-82	52663-62-4	mg/kg	0.000596 J	0.00112 J
E1668A	PCB-83	60145-20-2	mg/kg	R	R
E1668A	PCB-84	52663-60-2	mg/kg	0.00155 J	0.00316 J
E1668A	PCB-85/116/117	PCB-85/116/117	mg/kg	0.00179 J	0.00395 J
E1668A	PCB-86/87/97/109/119	PCB-86/87/97/109	mg/kg	0.00507 J	0.0109 J
E1668A	PCB-88	55215-17-3	mg/kg	1.06e-05 U	1.09e-05 U
E1668A	PCB-89	73575-57-2	mg/kg	7.75e-05 J	0.000187
E1668A	PCB-90/101/113	PCB-90/101/113	mg/kg	0.0101 J	0.0221 J
E1668A	PCB-91	68194-05-8	mg/kg	0.00153 J	0.00324 J
E1668A	PCB-92	52663-61-3	mg/kg	R	0.00486 J
E1668A	PCB-93/100	PCB-93/100	mg/kg	0.000316 J	0.000744
E1668A	PCB-94	73575-55-0	mg/kg	0.000104 J	0.000203
E1668A	PCB-95	38379-99-6	mg/kg	0.00655 J	0.0141 J
E1668A	PCB-96	73575-54-9	mg/kg	5.92e-05 J	0.000114
E1668A	PCB-98/102	PCB-98/102	mg/kg	0.000427 J	0.000959
E1668A	PCB-99	38380-01-7	mg/kg	R	0.0168 J
E1668A	PCB-103	60145-21-3	mg/kg	0.000194 J	0.000403
E1668A	PCB-104	56558-16-8	mg/kg	1.59e-05 J	3.53e-05
E1668A	PCB-105	32598-14-4	mg/kg	0.00331 J	0.00673 J
E1668A	PCB-106	70424-69-0	mg/kg	8.21e-06 U	8.41e-06 U
E1668A	PCB-107	70424-68-9	mg/kg	0.00132 J	0.00238 J
E1668A	PCB-108/124	PCB-108/124	mg/kg	0.000409 J	0.000785
E1668A	PCB-110/115	PCB-110/115	mg/kg	0.00934 J	0.0192 J
E1668A	PCB-111	39635-32-0	mg/kg	2.58e-05	4.01e-05
E1668A	PCB-112	74472-36-9	mg/kg	R	7.2e-05
E1668A	PCB-114	74472-37-0	mg/kg	0.000272 J	0.000501 J

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/27/16	04/26/16
			Sample Type	N	N
Method	Analyte	CAS	Unit		
E1668A	PCB-118	31508-00-6	mg/kg	0.0132 J	0.0266 J
E1668A	PCB-120	68194-12-7	mg/kg	0.000105 J	0.000187
E1668A	PCB-121	56558-18-0	mg/kg	1.41e-05 J	2.25e-05 J
E1668A	PCB-122	76842-07-4	mg/kg	8.68e-05 J	0.000192
E1668A	PCB-123	65510-44-3	mg/kg	0.000215 J	0.000486
E1668A	PCB-126	57465-28-8	mg/kg	3.64e-05	5.84e-05 J
E1668A	PCB-127	39635-33-1	mg/kg	1.5e-05 J	4.99e-05
E1668A	PCB-128/166	PCB-128/166	mg/kg	0.00123 J	0.00237 J
E1668A	PCB-129/138/163	PCB-129/138/163	mg/kg	0.0155 J	0.0284 J
E1668A	PCB-130	52663-66-8	mg/kg	R	R
E1668A	PCB-131	61798-70-7	mg/kg	R	R
E1668A	PCB-132	38380-05-1	mg/kg	R	R
E1668A	PCB-133	35694-04-3	mg/kg	0.000553 J	0.000726 J
E1668A	PCB-134	52704-70-8	mg/kg	R	R
E1668A	PCB-135/151	PCB-135/151	mg/kg	0.00439 J	0.00666 J
E1668A	PCB-136	38411-22-2	mg/kg	0.000789 J	0.00144 J
E1668A	PCB-137	35694-06-5	mg/kg	0.000661 J	0.00123 J
E1668A	PCB-139/140	PCB-139/140	mg/kg	R	0.000432
E1668A	PCB-141	52712-04-6	mg/kg	0.00201 J	0.00306 J
E1668A	PCB-142	41411-61-4	mg/kg	R	R
E1668A	PCB-143	68194-15-0	mg/kg	R	R
E1668A	PCB-144	68194-14-9	mg/kg	R	R
E1668A	PCB-145	74472-40-5	mg/kg	7.73e-06 U	7.91e-06 U
E1668A	PCB-146	51908-16-8	mg/kg	R	R
E1668A	PCB-147/149	PCB-147/149	mg/kg	0.00801 J	0.0143 J
E1668A	PCB-148	74472-41-6	mg/kg	5.34e-05 J	9.64e-05
E1668A	PCB-150	68194-08-1	mg/kg	3.23e-05 J	6.62e-05
E1668A	PCB-152	68194-09-2	mg/kg	9.9e-06 J	1.88e-05 J
E1668A	PCB-153/168	PCB-153/168	mg/kg	0.0166 J	0.0313 J
E1668A	PCB-154	60145-22-4	mg/kg	0.000326 J	0.000686 J
E1668A	PCB-155	33979-03-2	mg/kg	2.99e-05 J	0.000104 J
E1668A	PCB-156/157	PCB-156/157	mg/kg	0.0018 J	0.0029 J
E1668A	PCB-158	74472-42-7	mg/kg	0.000968 J	0.0019 J
E1668A	PCB-159	39635-35-3	mg/kg	6.76e-06 U	6.92e-06 U
E1668A	PCB-160	41411-62-5	mg/kg	3.04e-05 U	3.12e-05 U
E1668A	PCB-161	74472-43-8	mg/kg	R	R
E1668A	PCB-162	39635-34-2	mg/kg	9.31e-05	0.00016 J
E1668A	PCB-164	74472-45-0	mg/kg	R	0.00118 J
E1668A	PCB-165	74472-46-1	mg/kg	R	R
E1668A	PCB-167	52663-72-6	mg/kg	0.000727 J	0.00116 J
E1668A	PCB-169	32774-16-6	mg/kg	7.25e-06 U	7.42e-06 U
E1668A	PCB-170	35065-30-6	mg/kg	0.0027 J	0.00471 J
E1668A	PCB-171/173	PCB-171/173	mg/kg	R	R
E1668A	PCB-172	52663-74-8	mg/kg	0.00061 J	R
E1668A	PCB-174	38411-25-5	mg/kg	R	R
E1668A	PCB-175	40186-70-7	mg/kg	0.000138 J	R

Table A-26
Analytical Data for Polychlorinated Biphenyls
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/27/16	04/26/16
			Sample Type	N	N
Method	Analyte	CAS	Unit		
E1668A	PCB-176	52663-65-7	mg/kg	0.000179 J	0.000316
E1668A	PCB-177	52663-70-4	mg/kg	R	R
E1668A	PCB-178	52663-67-9	mg/kg	0.00104 J	0.0016 J
E1668A	PCB-179	52663-64-6	mg/kg	0.000741 J	0.00123 J
E1668A	PCB-180/193	PCB-180/193	mg/kg	0.00844 J	0.0145 J
E1668A	PCB-181	74472-47-2	mg/kg	R	R
E1668A	PCB-182	60145-23-5	mg/kg	R	R
E1668A	PCB-183/185	PCB-183/185	mg/kg	R	R
E1668A	PCB-184	74472-48-3	mg/kg	1.02e-05 J	2.3e-05 J
E1668A	PCB-186	74472-49-4	mg/kg	7.25e-06 U	7.42e-06 U
E1668A	PCB-187	52663-68-0	mg/kg	R	R
E1668A	PCB-188	74487-85-7	mg/kg	R	5.16e-05
E1668A	PCB-189	39635-31-9	mg/kg	0.000126 J	R
E1668A	PCB-190	41411-64-7	mg/kg	0.000629 J	0.00111 J
E1668A	PCB-191	74472-50-7	mg/kg	0.000121	0.000195
E1668A	PCB-192	74472-51-8	mg/kg	6.28e-06 U	R
E1668A	PCB-194	35694-08-7	mg/kg	0.00149 J	0.00272 J
E1668A	PCB-195	52663-78-2	mg/kg	0.000458 J	0.000871 J
E1668A	PCB-196	42740-50-1	mg/kg	0.000672 J	0.00121 J
E1668A	PCB-197/200	PCB-197/200	mg/kg	R	R
E1668A	PCB-198/199	PCB-198/199	mg/kg	0.00185 J	0.00367 J
E1668A	PCB-201	40186-71-8	mg/kg	0.000221 J	0.000417
E1668A	PCB-202	2136-99-4	mg/kg	0.000866 J	0.0014 J
E1668A	PCB-203	52663-76-0	mg/kg	0.00134 J	0.00248 J
E1668A	PCB-204	74472-52-9	mg/kg	1.01e-05 U	1.04e-05 U
E1668A	PCB-205	74472-53-0	mg/kg	6.39e-05 J	0.00013
E1668A	PCB-206	40186-72-9	mg/kg	R	R
E1668A	PCB-207	52663-79-3	mg/kg	8.87e-05	0.000209
E1668A	PCB-208	52663-77-1	mg/kg	R	R
E1668A	PCB-209	2051-24-3	mg/kg	0.000601 J	0.00139 J
E1668A	Total non-DLC PCB (a)	PCB-nonDLC	mg/kg	0.197 J	0.421 J
E1668A	Total PCB (a)	PCB-Total	mg/kg	0.217 J	0.461 J
E1668A	PCB TEQ (b)	KMTEQPCB	mg/kg	4.32e-06	7.17e-06 J

Notes:
J - Estimated Concentration
R - Rejected data
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Sum of detected and non-detected congeners. All values were as originally reported.
(b) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FAEC-COMP01	NB03FAEC-COMP02	NB03FAEC-COMP03	NB03FAEC076	NB03FAEC502	NB03FAEC508
			Sample Date	01/12/16	01/12/16	01/12/16	01/13/16	01/13/16	09/29/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	5.8e-06	4.34e-06	7.38e-06	1.4e-05	1.45e-05	4.82e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.32e-07 J	4e-07 J	4.02e-07 J	1.18e-06 J	1.25e-06 J	3.47e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.25e-07 J	1.06e-07 J	2.18e-07 J	3.88e-07 J	9.32e-07 J	1.63e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.29e-06 J	8.19e-07 J	1.33e-06 J	2.4e-06 J	3.25e-06 J	7.17e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.54e-07 J	8.14e-08 J	1.5e-07 J	4.51e-07 J	5.37e-07 J	1.39e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.42e-06 J	1.46e-07 J	4.8e-07 J	1.91e-06 J	2.6e-06 J	4.39e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.23e-05 J	7.07e-07 J	7.55e-07 J	2.37e-06 J	3.57e-06 J	7.91e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.81e-07 U	1.45e-07 U	1.62e-07 U	1.89e-07 U	1.58e-07 J	1.41e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.1e-06 J	3.91e-07 J	1.14e-06 J	1.51e-06 J	2.25e-06 J	3.95e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.57e-06 J	1.06e-06 J	1.27e-06 J	5.27e-06 J	1.88e-06 J	9.13e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.35e-06 J	7.85e-07 J	9.03e-07 J	4.17e-06 J	3.38e-06 J	1.11e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.65e-06 J	1.09e-06 J	1.76e-06 J	2.35e-06 J	2.33e-06 J	5.42e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	8.01e-08 U	1.54e-07 J	1.19e-07 J	7.26e-08 U	1.14e-07 J	4.59e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.92e-07 J	9.69e-08 J	1.79e-07 J	5.85e-07 J	5.4e-07 J	1.9e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	4.38e-06 J	3.21e-06 J	2.77e-06 J	4.85e-06 J	6.56e-06 J	1.52e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.62e-07 J	1.1e-07 U	1.19e-07 U	1.28e-07 U	2.27e-07 J	5.45e-08 J
E1613B	OCDF	39001-02-0	mg/kg	6.77e-07 J	1.88e-07 J	1.41e-07 J	2.8e-07 J	6.33e-07 J	2.47e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	7.4e-06	5.42e-06	8.7e-06	1.79e-05	1.76e-05	5.78e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FAEN-COMP01	NB03FAEN-COMP02	NB03FAEN-COMP03	NB03FAEN-COMP04	NB03FAEN-COMP05	NB03FAEN-COMP06
			Sample Date	10/01/15	10/01/15	01/12/16	01/12/16	09/29/15	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.81e-06 J	3.05e-06 J	1.03e-05	1.47e-05	7.99e-06 J	9.11e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.85e-07 J	2.7e-07 J	2.3e-07 U	8.17e-07 J	4.48e-07 J	6.62e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.17e-07 J	1.11e-07 J	3.26e-07 J	3.27e-07 J	2.07e-07 J	7.57e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.66e-07 J	3.93e-07 J	2.08e-06 J	1.35e-06 J	7.14e-07 J	1.23e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	9.2e-08 J	5.28e-08 J	2.02e-07 J	2.49e-07 J	1.8e-07 J	2.4e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	4.92e-07 J	2.33e-07 J	1.09e-06 J	9.64e-07 J	7.34e-07 J	8.92e-07 J
E1613B	OCDD	3268-87-9	mg/kg	6.06e-07 J	3.11e-07 J	2.06e-06 J	1.77e-06 J	1.13e-06 J	1.84e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	8.2e-08 U	6.11e-08 U	2.17e-07 U	2.61e-07 U	5.64e-08 J	2.11e-07 U
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	6.82e-07 J	4.79e-07 J	1.49e-06 J	2.26e-06 J	1.09e-06 J	1.08e-07 U
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.51e-06 J	1.48e-06 J	3.39e-06 J	9.23e-06 J	1.93e-06 J	4.22e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.23e-06 J	9.18e-07 J	3.52e-06 J	4.71e-06 J	2.18e-06 J	2.92e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.46e-06 J	9.88e-07 J	2.67e-06 J	3.85e-06 J	1.24e-06 J	1.86e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	6.02e-08 J	7.03e-08 J	9.47e-08 U	9.11e-08 U	7.36e-08 J	1.06e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.33e-07 J	8.97e-08 J	3.79e-07 J	4.63e-07 J	2.82e-07 J	3.03e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.15e-06 J	2.27e-06 J	8.22e-06 J	8.58e-06 J	3.35e-06 J	5.69e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.12e-07 J	5.18e-08 J	2.08e-07 J	2.57e-07 J	9.39e-08 J	1.57e-07 J
E1613B	OCDF	39001-02-0	mg/kg	1.9e-07 J	8.21e-08 J	3.23e-07 J	4.52e-07 J	3.44e-07 J	2.89e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	5.47e-06 J	4.07e-06 J	1.24e-05	1.96e-05	9.59e-06 J	1.18e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless	American Eel-Fillet-skinless
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FAES-COMP01	NB03FAES018	NB03FAES019	NB03FAES347	NB03FAES364	NB03FAES365
			Sample Date	01/13/16	10/01/15	10/01/15	01/13/16	01/13/16	01/13/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	5.66e-08 U	2.48e-06 J	3.87e-06 J	5.05e-06	6.66e-06	8.66e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.22e-07 U	1.87e-07 J	6.34e-07 J	1.35e-07 U	7.92e-07 J	1.26e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	8.19e-08 J	9.77e-08 J	2.61e-07 J	3.64e-07 J	2.46e-07 J	7.53e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.69e-07 J	4.16e-07 J	1.28e-06 J	1.48e-06 J	1.32e-06 J	3.76e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	5.06e-08 J	9.22e-08 J	2.24e-07 J	3.56e-07 J	2.77e-07 J	7.6e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.48e-07 J	2.87e-07 J	6.17e-07 J	1.31e-06 J	7.18e-07 J	2.85e-06 J
E1613B	OCDD	3268-87-9	mg/kg	3.93e-07 J	5.09e-07 J	8.48e-07 J	2.05e-06 J	1.04e-06 J	2.8e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.67e-08 U	6.88e-08 U	7.86e-08 U	1.12e-07 U	1.18e-07 U	1.51e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.26e-07 J	1.93e-07 J	6.97e-07 J	9.34e-07 J	7.91e-07 J	3.25e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	7.88e-07 J	6.84e-07 J	1.48e-06 J	2.41e-06 J	2.11e-06 J	5.66e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.84e-07 J	2.81e-07 J	9.01e-07 J	1.53e-06 J	9.33e-07 J	2.22e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	3.97e-07 J	3.98e-07 J	1.21e-06 J	1.23e-06 J	1.65e-06 J	2.92e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	6.46e-08 J	7.03e-08 J	5.61e-08 J	1.29e-07 J	2.54e-07 J	1.07e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	9.56e-08 J	1.02e-07 J	2.23e-07 J	4e-07 J	3.49e-07 J	6.3e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	5.41e-07 J	5.83e-07 J	2.1e-06 J	2.69e-06 J	1.57e-06 J	5.77e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	9.67e-08 J	3.72e-08 J	6.5e-08 J	1.21e-07 J	1.86e-07 J	1.91e-07 J
E1613B	OCDF	39001-02-0	mg/kg	1.59e-07 J	1.16e-07 J	1.05e-07 J	2.56e-07 J	2.79e-07 J	4.62e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	3.98e-07 J	3.04e-06 J	5.42e-06 J	6.42e-06	8.64e-06	1.29e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127
			Sample ID	NB03CRB-HEP122	NB03CRB-HEP123	NB03CRB-HEP124	NB03CRB-HEP125	NB03CRB-HEP126	NB03CRB-HEP127
			Sample Date	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	0.000103	8e-05	6.09e-05 J	4.44e-05	6.01e-05 J	4.8e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	2.84e-06 J	2.58e-06 J	1.97e-06 J	1.2e-06 J	1.68e-06 J	9.99e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	7.58e-07 J	5.31e-07 J	5.07e-07 J	2.86e-07 J	5.26e-07 J	4.17e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.37e-06 J	1.3e-06 J	1.76e-06 J	1.18e-06 J	1.4e-06 J	1.16e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	7.77e-07 J	4.36e-07 J	5.12e-07 J	3.5e-07 J	4.79e-07 J	4.04e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.28e-06 J	1.08e-06 J	1.93e-06 J	1.34e-06 J	1.44e-06 J	1.21e-06 J
E1613B	OCDD	3268-87-9	mg/kg	6.62e-06 J	2.5e-06 J	5.33e-06 J	3.75e-06 J	4.74e-06 J	4.56e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	3.79e-05 J	2.39e-05 J	2.71e-05 J	1.97e-05 J	2.62e-05 J	2.5e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	9.29e-06 J	5.43e-06 J	6.1e-06 J	4.3e-06 J	5.39e-06 J	4.8e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.42e-05 J	1.39e-05 J	1.85e-05 J	8.63e-06 J	1.41e-05 J	9.29e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.05e-05 J	1.35e-05 J	1.07e-05 J	5.83e-06 J	6.98e-06 J	4.3e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	6.01e-06 J	3.41e-06 J	4.78e-06 J	2.58e-06 J	3.02e-06 J	1.89e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	3.12e-07 J	8.72e-08 J	5.25e-08 J	1.35e-07 J	7.39e-08 J	1.07e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.09e-06 J	8.88e-07 J	8.11e-07 J	6.12e-07 J	6.88e-07 J	5.61e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	2.83e-05 J	1.5e-05 J	1.23e-05 J	6.52e-06 J	9.18e-06 J	4.74e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	3.23e-07 J	1.09e-07 J	1.52e-07 J	1.1e-07 U	1.21e-07 U	1.09e-07 U
E1613B	OCDF	39001-02-0	mg/kg	1.73e-06 J	3.52e-07 J	4.4e-07 J	3.69e-07 J	3.16e-07 J	3.86e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	0.000122	9.15e-05	7.34e-05 J	5.15e-05	7.02e-05 J	5.44e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRB129	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134
			Sample ID	NB03CRB-HEP129	NB03CRB-HEP130	NB03CRB-HEP131	NB03CRB-HEP132	NB03CRB-HEP133	NB03CRB-HEP134
			Sample Date	08/19/15	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	4.36e-05	7.68e-05	7.29e-05	0.000113	0.000139	1.57e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	2.37e-06 J	8.69e-08 U	1.94e-06 J	3.38e-06 J	3.05e-06 J	1.81e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.21e-07 J	6.41e-07 J	5.15e-07 J	8.41e-07 J	9.34e-07 J	5.1e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.49e-06 J	2.02e-06 J	1.59e-06 J	2.68e-06 J	2.62e-06 J	1.44e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	5.24e-07 J	6.1e-07 J	5.86e-07 J	8.73e-07 J	8.67e-07 J	5.65e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.66e-06 J	1.97e-06 J	2.19e-06 J	2.76e-06 J	2.89e-06 J	1.77e-06 J
E1613B	OCDD	3268-87-9	mg/kg	5.38e-06 J	4.75e-06 J	6.29e-06 J	4.85e-06 J	5.94e-06 J	3.52e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.75e-05 J	3.28e-05 J	3.41e-05 J	3.91e-05 J	3.42e-05 J	1.93e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	5.35e-06 J	6.04e-06 J	5.44e-06 J	8.59e-06 J	9.17e-06 J	3.6e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.11e-05 J	1.35e-05 J	1.14e-05 J	2.12e-05 J	2.01e-05 J	5.82e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.84e-06 J	6.92e-06 J	5.73e-06 J	2.47e-05 J	2.6e-05 J	2.13e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	3.39e-06 J	3.52e-06 J	2.82e-06 J	5.22e-06 J	6.78e-06 J	1.62e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.11e-07 J	1.14e-07 J	6.49e-08 J	1.08e-07 J	1.5e-07 J	8.81e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	8.15e-07 J	9.48e-07 J	7.71e-07 J	1.91e-06 J	1.85e-06 J	6.06e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	8.14e-06 J	8.93e-06 J	8.8e-06 J	1.97e-05 J	3.42e-05 J	3.39e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.15e-07 U	2e-07 J	1.23e-07 U	1.31e-07 U	1.17e-07 U	7.56e-08 J
E1613B	OCDF	39001-02-0	mg/kg	3.3e-07 J	3.63e-07 J	4.45e-07 J	5.61e-07 J	8.68e-07 J	1.89e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	5.35e-05	8.59e-05	8.32e-05	0.000131	0.000156	2.2e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-HEP-C001	NB03CRB-HEP-C002	NB03CRB-HEP-C003	NB03CRB-HEP-C004	NB03CRB-HEP-C005	NB03CRB-HEP-C006
			Sample Date	08/30/15	08/26/15	08/19/15	09/08/15	08/26/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	8.04e-05	0.000103	8.24e-05	0.000111 J	9.53e-05	9.64e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.97e-06 J	2.9e-06 J	2.52e-06 J	2.54e-06 J	2.27e-06 J	3.02e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.3e-07 J	8.66e-07 J	7.44e-07 J	6.14e-07 J	6.96e-07 J	7.67e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.22e-06 J	2.47e-06 J	2.13e-06 J	2.08e-06 J	1.82e-06 J	2.17e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	8.28e-07 J	8.81e-07 J	7.96e-07 J	5.87e-07 J	6.95e-07 J	8.33e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.21e-06 J	2.49e-06 J	2.4e-06 J	1.64e-06 J	2.08e-06 J	2.3e-06 J
E1613B	OCDD	3268-87-9	mg/kg	4.51e-06 J	4.83e-06 J	4.98e-06 J	4.14e-06 J	5.07e-06 J	4.15e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	3.23e-05 J	4.23e-05 J	3.31e-05 J	2.83e-05 J	2.85e-05 J	3.91e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	6.55e-06 J	8.69e-06 J	8.22e-06 J	6.92e-06 J	6.09e-06 J	8.57e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.83e-05 J	2.18e-05 J	1.96e-05 J	1.79e-05 J	1.21e-05 J	1.96e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.28e-05 J	1.87e-05 J	1.66e-05 J	1.19e-05 J	1.16e-05 J	1.99e-05 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	4.64e-06 J	6.94e-06 J	5.2e-06 J	4.86e-06 J	4.15e-06 J	6.25e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.43e-07 J	9.85e-08 U	1.36e-07 J	6.43e-08 J	1.27e-07 J	1.27e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.32e-06 J	1.41e-06 J	1.37e-06 J	8.02e-07 J	8.81e-07 J	1.33e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.09e-05 J	2.2e-05 J	1.45e-05 J	1.52e-05 J	1.36e-05 J	1.84e-05 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.65e-07 J	1.47e-07 U	1.09e-07 J	1.33e-07 U	1.46e-07 U	1.29e-07 U
E1613B	OCDF	39001-02-0	mg/kg	5.78e-07 J	3.88e-07 J	5.25e-07 J	3.13e-07 J	4.28e-07 J	5.28e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	9.37e-05	0.00012	9.72e-05	0.000124 J	0.000106	0.000113

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-HEP-C007	NB03CRB-HEP-C008	NB03CRB-HEP-N001	NB03CRB-HEP-N002	NB03CRB-HEP-N003	NB03CRB-HEP-N004
			Sample Date	09/01/15	08/30/15	08/30/15	08/30/15	08/25/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	8.72e-05	0.000132	7.36e-05	6.96e-05	8.72e-05	1e-04
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	9.37e-08 U	3.15e-06 J	2.04e-06 J	2.19e-06 J	2.76e-06 J	7.3e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	8.79e-07 J	9.26e-07 J	7.88e-07 J	6.44e-07 J	7.65e-07 J	6.37e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.33e-06 J	2.5e-06 J	2.5e-06 J	1.96e-06 J	2.34e-06 J	1.99e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	8.06e-07 J	1.01e-06 J	8.91e-07 J	6.59e-07 J	8.39e-07 J	5.61e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.42e-06 J	2.71e-06 J	2.94e-06 J	2.24e-06 J	2.91e-06 J	1.95e-06 J
E1613B	OCDD	3268-87-9	mg/kg	5.01e-06 J	5.93e-06 J	8.73e-06 J	6.73e-06 J	8.52e-06 J	5.3e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	4.55e-05 J	3.96e-05 J	2.54e-05 J	2.79e-05 J	3.63e-05 J	2.85e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	8.97e-06 J	9.95e-06 J	6.89e-06 J	7.02e-06 J	1.03e-05 J	6.73e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.95e-05 J	2.15e-05 J	2.19e-05 J	1.81e-05 J	2.41e-05 J	1.68e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.63e-05 J	2.02e-05 J	2.54e-05 J	2.16e-05 J	2.91e-05 J	1.92e-05 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	5.14e-06 J	6.66e-06 J	6.14e-06 J	6.04e-06 J	7.76e-06 J	5.97e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.48e-08 J	1.92e-07 J	1.64e-07 J	1.27e-07 J	2.71e-07 J	9.18e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.24e-06 J	1.47e-06 J	1.9e-06 J	1.53e-06 J	1.82e-06 J	1.27e-06 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.52e-05 J	2.07e-05 J	2.52e-05 J	2.16e-05 J	2.23e-05 J	2.07e-05 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	9.77e-08 U	1.22e-07 U	3.37e-07 J	1.74e-07 J	2.19e-07 J	7.1e-08 U
E1613B	OCDF	39001-02-0	mg/kg	5.28e-07 J	4.77e-07 J	1.77e-06 J	1.01e-06 J	1.33e-06 J	8.26e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	0.000101	0.000149	8.9e-05	8.37e-05	0.000106	0.000111

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-N005	NB03CRB-HEP-N006	NB03CRB-HEP-N007	NB03CRB-HEP-N008	NB03CRB-HEP-S001	NB03CRB-HEP-S002
			Sample Date	08/26/15	08/24/15	08/24/15	09/01/15	08/26/15	09/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	0.000165	9.96e-05	0.000128	0.000119	5.07e-05	9.55e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	3.01e-06 J	2.36e-06 J	2.76e-06 J	7.82e-08 U	1.74e-06 J	5.47e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.04e-06 J	6.97e-07 J	7.93e-07 J	6.1e-07 J	5.27e-07 J	6.58e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.2e-06 J	1.88e-06 J	2.54e-06 J	1.99e-06 J	1.54e-06 J	2e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	9.57e-07 J	6.77e-07 J	7.98e-07 J	5.67e-07 J	6.7e-07 J	6.29e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	3.25e-06 J	2.09e-06 J	2.57e-06 J	3.18e-06 J	2.11e-06 J	1.93e-06 J
E1613B	OCDD	3268-87-9	mg/kg	6.27e-06 J	5.91e-06 J	5.99e-06 J	2.04e-05 J	5.8e-06 J	4.56e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	3.59e-05 J	2.58e-05 J	3.7e-05 J	2.81e-05 J	3.14e-05 J	3.52e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.06e-05 J	5.91e-06 J	7.61e-06 J	6.64e-06 J	5.99e-06 J	6.84e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.24e-05 J	1.6e-05 J	2.19e-05 J	1.86e-05 J	1.18e-05 J	1.55e-05 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	2.76e-05 J	1.81e-05 J	2.64e-05 J	1.59e-05 J	7.14e-06 J	1.13e-05 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	8.32e-06 J	3.92e-06 J	6.16e-06 J	5.07e-06 J	3.07e-06 J	4.48e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.37e-08 J	8.95e-08 J	1.01e-07 J	9.02e-08 J	6.29e-08 J	1.55e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.01e-06 J	1.3e-06 J	1.86e-06 J	1.08e-06 J	8.83e-07 J	9.5e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.52e-05 J	1.3e-05 J	2.38e-05 J	1.57e-05 J	8.22e-06 J	1.4e-05 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	3.68e-07 J	1.41e-07 J	5.04e-08 J	8.57e-08 U	1.27e-07 U	8.18e-08 U
E1613B	OCDF	39001-02-0	mg/kg	8.6e-07 J	6.52e-07 J	5.78e-07 J	7.95e-07 J	3.72e-07 J	3.58e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	0.000183	0.000112	0.000145	0.00013	6.08e-05	0.000106

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas	Blue Crab-Hepatopancreas
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-HEP-S003	NB03CRB-HEP-S004	NB03CRB-HEP-S005	NB03CRB-HEP-S006	NB03CRB-HEP-S007	NB03CRB-HEP-S008
			Sample Date	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	08/26/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	6.13e-05	8.51e-05	7.65e-05	4.3e-05 J	4.45e-05	3.66e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.1e-08 U	2.49e-06 J	7.38e-08 U	1.63e-06 J	1.99e-06 J	1.72e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	4.93e-07 J	6.4e-07 J	7.22e-07 J	4.66e-07 J	5.05e-07 J	4.47e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.4e-06 J	2.25e-06 J	2.23e-06 J	1.64e-06 J	1.43e-06 J	1.3e-06 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	4.52e-07 J	7.06e-07 J	6.54e-07 J	5.44e-07 J	5.73e-07 J	4.73e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.53e-06 J	2.2e-06 J	2.22e-06 J	1.53e-06 J	1.58e-06 J	1.22e-06 J
E1613B	OCDD	3268-87-9	mg/kg	3.18e-06 J	4.92e-06 J	5.64e-06 J	5.19e-06 J	5.61e-06 J	3.44e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.98e-05 J	3.46e-05 J	3.27e-05 J	3.2e-05 J	3.25e-05 J	2.43e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	5.51e-06 J	6.69e-06 J	7.18e-06 J	5.41e-06 J	5.56e-06 J	4.92e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.12e-05 J	1.57e-05 J	1.65e-05 J	1.23e-05 J	1.14e-05 J	9.4e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	8.05e-06 J	9.87e-06 J	1.53e-05 J	6.61e-06 J	5.26e-06 J	5.34e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	2.55e-06 J	4.05e-06 J	4.2e-06 J	2.94e-06 J	3.2e-06 J	2.48e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.35e-07 J	1.02e-07 J	1.27e-07 J	1.14e-07 J	1.22e-07 J	1.64e-07 U
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	6.25e-07 J	1.07e-06 J	1.07e-06 J	6.91e-07 J	8.72e-07 J	6.04e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	6.55e-06 J	9.6e-06 J	1.36e-05 J	7.08e-06 J	5.36e-06 J	6.61e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	7.55e-08 U	1.3e-07 U	7.88e-08 U	1.81e-07 J	1.06e-07 U	2.06e-07 U
E1613B	OCDF	39001-02-0	mg/kg	2.55e-07 J	3.95e-07 J	3.75e-07 J	3.69e-07 J	5.29e-07 J	3.37e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	6.93e-05	9.79e-05	8.76e-05	5.31e-05 J	5.46e-05	4.49e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Hepatopancreas	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123	NB03CRB124	NB03CRB125	NB03CRB126	NB03CRB127	NB03CRB129
			Sample ID	NB03CRB-HEP-S009	NB03CRB-MUS122	NB03CRB-MUS123	NB03CRB-MUS124	NB03CRB-MUS125	NB03CRB-MUS126	NB03CRB-MUS127	NB03CRB-MUS129
			Sample Date	08/24/15	08/19/15	08/24/15	09/08/15	08/30/15	09/08/15	08/30/15	08/19/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	6.51e-05	7.15e-06	8.53e-06	1.34e-06 J	3.67e-06	1.93e-06 J	4.14e-06	2.2e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	2.76e-06 J	2.21e-07 J	3.67e-07 J	5.95e-08 U	1.36e-07 J	6.44e-08 U	9.22e-08 J	1.03e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.06e-07 J	3.47e-08 J	2.05e-08 J	2.6e-08 J	3.33e-08 J	2.63e-08 U	2.37e-08 U	1.98e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.53e-06 J	1.39e-07 J	6.46e-08 J	2.67e-08 J	2.3e-08 J	2.64e-08 U	7.28e-08 J	5.39e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	5.77e-07 J	3.75e-08 J	6.16e-08 J	2.92e-08 U	6e-08 J	3.14e-08 J	2.5e-08 U	3.18e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.77e-06 J	1.85e-07 J	1.75e-07 J	7.66e-08 J	1.29e-07 J	6.96e-08 J	1.14e-07 J	1e-07 J
E1613B	OCDD	3268-87-9	mg/kg	5.29e-06 J	7.01e-07 J	3.68e-07 J	6.38e-07 J	4.4e-07 J	3.89e-07 J	6.74e-07 J	3.08e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	5.87e-05 J	1.63e-06 J	2.3e-06 J	4.26e-07 J	1.29e-06 J	6.81e-07 J	1.71e-06 J	1.28e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	7.86e-06 J	4.87e-07 J	5.14e-07 J	1.22e-07 J	2.62e-07 J	2.03e-07 J	3.19e-07 J	2.84e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.36e-05 J	8.69e-07 J	9.76e-07 J	1.6e-07 J	2.49e-07 J	3.07e-08 U	4.44e-07 J	3.18e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	6.51e-06 J	1.25e-06 J	1.26e-06 J	1.73e-07 J	3.8e-07 J	1.64e-07 J	2.44e-07 J	2.54e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	2.76e-06 J	2.81e-07 J	3.34e-07 J	8.09e-08 J	1.22e-07 J	3e-08 J	1.08e-07 J	7.34e-08 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.9e-08 J	4.93e-08 J	8.66e-08 J	2.29e-08 J	5.37e-08 J	4.8e-08 J	8.97e-08 J	7.36e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	8.11e-07 J	8.36e-08 J	4.63e-08 J	2.52e-08 J	4.23e-08 J	1.92e-08 U	5.35e-08 J	2.59e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	6.59e-06 J	7.36e-07 J	7.29e-07 J	7.06e-08 J	2.56e-07 J	1.01e-07 J	2.49e-07 J	1.52e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	6.91e-08 U	1.79e-08 U	2.7e-08 U	2.97e-08 J	4.08e-08 J	3.09e-08 J	3.76e-08 J	1.37e-08 U
E1613B	OCDF	39001-02-0	mg/kg	3.22e-07 J	1.73e-07 J	4.82e-08 J	8.98e-08 J	7.82e-08 J	6.44e-08 J	1.09e-07 J	8.57e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	7.94e-05	8.01e-06	9.63e-06	1.48e-06 J	4.09e-06	2.04e-06 J	4.61e-06	2.59e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRB130	NB03CRB131	NB03CRB132	NB03CRB133	NB03CRB134	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03CRB-MUS130	NB03CRB-MUS131	NB03CRB-MUS132	NB03CRB-MUS133	NB03CRB-MUS134	NB03CRB-MUS-C001	NB03CRB-MUS-C002	NB03CRB-MUS-C003
			Sample Date	09/01/15	08/26/15	08/24/15	08/24/15	08/24/15	08/19/15	08/26/15	08/19/15
			Sample Type	N	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit								
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.18e-06	2.17e-06	3.49e-06	7.1e-06	1.31e-06	3.13e-06	2.45e-06	2.64e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.48e-08 J	1.25e-07 J	5.16e-07 J	3.86e-07 J	5.32e-07 J	1.82e-07 J	1.01e-07 J	2.09e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	3.24e-08 J	1.66e-08 U	3.92e-08 J	1.99e-08 U	4.59e-08 J	2.27e-08 J	2.42e-08 U	2.67e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.52e-08 J	1.9e-08 J	6.75e-08 J	9.88e-08 J	1.39e-07 J	6.82e-08 J	2.99e-08 U	5.33e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.88e-08 J	1.75e-08 U	2.54e-08 J	4.78e-08 J	2.89e-08 U	1.78e-08 U	3.9e-08 J	2.43e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.29e-07 J	1.18e-07 J	1.21e-07 J	1.63e-07 J	2.39e-07 J	1.8e-07 J	1.07e-07 J	1.14e-07 J
E1613B	OCDD	3268-87-9	mg/kg	4.59e-07 J	7.07e-07 J	4.09e-07 J	4.65e-07 J	6.53e-07 J	4.15e-07 J	2.13e-07 J	3.08e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.21e-07 J	8.19e-07 J	9.8e-07	1.74e-06 J	1.08e-06 J	1.07e-06 J	8.72e-07 J	9.39e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.88e-07 J	1.29e-07 J	2.19e-07 J	4.14e-07 J	2.63e-07 J	1.6e-07 J	2.37e-07 J	2.21e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.48e-07 J	2e-07 J	3.86e-07 J	8.89e-07 J	3.08e-07 J	4.18e-07 J	2.73e-07 J	4.09e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.77e-07 J	1.14e-07 J	6.85e-07 J	1.14e-06 J	1.65e-07 J	4.98e-07 J	2.7e-07 J	4.31e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	7.66e-08 J	9.17e-08 J	1.58e-07 J	2.82e-07 J	9.36e-08 J	1.2e-07 J	8e-08 J	1.09e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7.61e-08 J	3.41e-08 J	5.79e-08 J	7.97e-08 J	9.15e-08 J	5.74e-08 J	6.08e-08 J	9.47e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.64e-08 J	3.35e-08 J	4.67e-08 J	8.58e-08 J	5.75e-08 J	3.64e-08 J	2.99e-08 J	5.19e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.94e-07 J	1.21e-07 J	4.49e-07 J	8.81e-07 J	1.76e-07 J	2.95e-07 J	2.4e-07 J	2.89e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	3.18e-08 J	1.78e-08 U	2.74e-08 J	3e-08 J	3.77e-08 J	2.81e-08 J	2.35e-08 J	3.57e-08 J
E1613B	OCDF	39001-02-0	mg/kg	9.12e-08 J	9.94e-08 J	1.22e-07 J	1.31e-07 J	7.6e-08 J	5.49e-08 J	6.37e-08 J	7.81e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.52e-06	2.47e-06	4.34e-06	8.12e-06	2.12e-06	3.63e-06	2.78e-06	3.16e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03CRB-MUS-C004	NB03CRB-MUS-C005	NB03CRB-MUS-C006	NB03CRB-MUS-C007	NB03CRB-MUS-C008	NB03CRB-MUS-N001	NB03CRB-MUS-N002
			Sample Date	09/08/15	08/26/15	08/26/15	09/01/15	08/30/15	08/25/15	08/30/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	4.19e-06 J	3.45e-06	8.41e-07 J	1.61e-06	3.33e-06	4.65e-06	2.44e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	6.03e-08 U	1.52e-07 J	2.97e-08 U	1.08e-07 J	1.01e-07 J	1.91e-07 J	9.95e-08 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.39e-08 U	3.21e-08 U	2.49e-08 J	1.51e-08 J	3.56e-08 J	3.07e-08 J	1.4e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	4.05e-08 J	5.92e-08 J	2.56e-08 J	3.95e-08 J	6.8e-08 J	1.01e-07 J	4.7e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.46e-08 U	3.12e-08 U	2.51e-08 J	3.91e-08 J	3.49e-08 J	5.17e-08 J	1.56e-08 U
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.3e-07 J	1.08e-07 J	9.22e-08 J	7.12e-08 J	8.19e-08 J	1.85e-07 J	6.96e-08 J
E1613B	OCDD	3268-87-9	mg/kg	4.26e-07 J	3.81e-07 J	2.11e-07 J	2.58e-07 J	3.91e-07 J	6.13e-07 J	2.86e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.19e-06 J	1.03e-06 J	3.12e-07 J	7.81e-07 J	9.89e-07 J	1.28e-06 J	7.51e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.65e-07 J	2.83e-07 J	1e-07 J	1.85e-07 J	2.05e-07 J	3.47e-07 J	2.42e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.68e-07 J	3.24e-07 J	8.65e-08 J	2.59e-07 J	4.33e-07 J	6.68e-07 J	4.6e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.05e-07 J	3.44e-07 J	1.29e-07 J	2.54e-07 J	4.86e-07 J	1.04e-06 J	4.56e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	8.19e-08 J	7.3e-08 J	3e-08 J	4.84e-08 J	1.2e-07 J	2.5e-07 J	1.07e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	3.05e-08 J	4.75e-08 J	8.05e-08 J	8.46e-08 J	6.66e-08 J	7.54e-08 J	8.09e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.66e-08 J	2.83e-08 J	2.79e-08 J	3.63e-08 J	4.24e-08 J	7.6e-08 J	2.91e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	2.78e-07 J	2.7e-07 J	1.11e-07 J	2.04e-07 J	3.24e-07 J	8.3e-07 J	3.06e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.07e-08 U	4.21e-08 J	5.17e-08 J	1.67e-08 J	2.67e-08 J	5.19e-08 J	2.65e-08 J
E1613B	OCDF	39001-02-0	mg/kg	6.06e-08 J	9.53e-08 J	8.63e-08 J	1.01e-07 J	5.26e-08 J	1.48e-07 J	1.09e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	4.49e-06 J	3.87e-06	9.43e-07 J	1.93e-06	3.76e-06	5.35e-06	2.84e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03CRB-MUS-N003	NB03CRB-MUS-N004	NB03CRB-MUS-N005	NB03CRB-MUS-N006	NB03CRB-MUS-N007	NB03CRB-MUS-N008	NB03CRB-MUS-S001
			Sample Date	08/25/15	09/01/15	08/26/15	08/24/15	08/24/15	09/08/15	08/26/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.61e-06	7.25e-06	2.64e-06	7.51e-06	7.43e-06	3.63e-06 J	2.04e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.62e-08 J	2.81e-08 U	5.12e-08 J	4.69e-07 J	3.39e-07 J	1.2e-07 J	8.28e-08 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	4.39e-08 J	4.44e-08 J	3.22e-08 J	4.64e-08 J	2.09e-08 J	2.49e-08 U	2.08e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	6.02e-08 J	1.12e-07 J	7.13e-08 J	1.2e-07 J	9.44e-08 J	8.96e-08 J	8.51e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	4.31e-08 J	5.28e-08 J	1.99e-08 J	3.53e-08 J	2.92e-08 J	6.5e-08 J	3.11e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.19e-07 J	1.62e-07 J	1.08e-07 J	1.81e-07 J	1.93e-07 J	1.5e-07 J	1.66e-07 J
E1613B	OCDD	3268-87-9	mg/kg	3.91e-07 J	4.59e-07 J	3.31e-07 J	4.18e-07 J	4.46e-07 J	8.69e-07 J	3.21e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.64e-07 J	1.38e-06 J	6.09e-07 J	1.76e-06 J	1.4e-06 J	1.11e-06 J	1.1e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.96e-07 J	3.73e-07 J	1.46e-07 J	3.67e-07 J	3.67e-07 J	3.43e-07 J	1.88e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	6.11e-07 J	8.21e-07 J	3.22e-07 J	8.63e-07 J	8.73e-07 J	5.12e-07 J	2.38e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	7.14e-07 J	9.64e-07 J	3.74e-07 J	1.07e-06 J	1.21e-06 J	5.08e-07 J	2.57e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.92e-07 J	2.54e-07 J	9.76e-08 J	2.67e-07 J	2.78e-07 J	1.18e-07 J	6.59e-08 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	8.26e-08 J	7.83e-08 J	7.85e-08 J	8.61e-08 J	5.5e-08 J	6.38e-08 J	7.42e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	5.54e-08 J	6.66e-08 J	4.02e-08 J	6.19e-08 J	7.57e-08 J	3.54e-08 J	4.83e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	5.11e-07 J	7.15e-07 J	3.88e-07 J	5.16e-07 J	7.65e-07 J	4.24e-07 J	1.69e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4.28e-08 J	5.36e-08 J	6.08e-08 J	2.41e-08 J	1.12e-08 U	5.71e-08 J	2.18e-08 U
E1613B	OCDF	39001-02-0	mg/kg	6.9e-08 J	1.42e-07 J	1.24e-07 J	7.28e-08 J	7.96e-08 J	1.4e-07 J	5.06e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	3.11e-06	7.82e-06	2.93e-06	8.6e-06	8.37e-06	4.12e-06 J	2.37e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle	Blue Crab-Muscle
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03CRB-MUS-S002	NB03CRB-MUS-S003	NB03CRB-MUS-S004	NB03CRB-MUS-S005	NB03CRB-MUS-S006	NB03CRB-MUS-S007	NB03CRB-MUS-S008
			Sample Date	09/01/15	09/01/15	08/30/15	09/01/15	09/08/15	10/06/15	10/06/15
			Sample Type	N	N	N	N	N	N	N
Method	Analyte	CAS	Unit							
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.53e-06	2.1e-06	1.53e-06	1.58e-06	9.88e-07 J	1.3e-06	1.08e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	7.52e-08 J	6.67e-08 J	5.3e-08 J	7.41e-08 J	6.74e-08 U	7.05e-08 U	9.13e-08 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.48e-08 J	1.78e-08 J	2.69e-08 J	3.59e-09 U	4.19e-08 J	2.56e-08 U	1.95e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.73e-08 J	3.51e-08 J	4.81e-08 J	2.81e-08 J	5.74e-08 J	2.59e-08 U	2.08e-08 U
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.32e-08 J	3.61e-08 J	2.82e-08 J	3.22e-09 U	5.56e-08 J	4.79e-08 J	1.92e-08 U
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	8.62e-08 J	1.2e-07 J	8.06e-08 J	6.02e-08 J	3.26e-08 J	5e-08 J	1.21e-07 J
E1613B	OCDD	3268-87-9	mg/kg	2.06e-07 J	2.91e-07 J	3.88e-07 J	2.03e-07 J	3.7e-07 J	2.72e-07 J	3.45e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	6.22e-07 J	9.91e-07 J	6.76e-07 J	6.17e-07 J	4.92e-07 J	9.67e-07 J	7.33e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.66e-07 J	2.11e-07 J	1.34e-07 J	1.12e-07 J	1.06e-07 J	1.5e-07 J	1.52e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.71e-07 J	3.07e-07 J	1.94e-07 J	2.27e-07 J	8.97e-08 J	2.34e-07 J	1.41e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.12e-07 J	2.29e-07 J	1.66e-07 J	2.29e-07 J	1.35e-07 J	1.71e-07 J	1.23e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	5.58e-08 J	7.75e-08 J	5.07e-08 J	3.62e-08 J	4.17e-08 J	3.38e-08 J	3.02e-08 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	8.99e-08 J	6.89e-08 J	6.51e-08 J	5.39e-08 J	6.2e-08 J	4.27e-08 J	5.54e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.27e-08 J	2.82e-08 J	1.95e-08 J	5.05e-09 J	2.33e-08 J	4.05e-08 J	2.18e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.25e-07 J	1.54e-07 J	1.4e-07 J	1.36e-07 J	6.64e-08 J	1.16e-07 J	1.16e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.83e-08 J	4.94e-08 J	3.34e-08 J	6.17e-09 U	4.52e-08 J	2.44e-08 U	1.8e-08 U
E1613B	OCDF	39001-02-0	mg/kg	8.66e-08 J	7.38e-08 J	6.37e-08 J	2.34e-08 J	2.36e-08 J	5.92e-08 J	2.93e-08 U
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.76e-06	2.42e-06	1.76e-06	1.82e-06	1.12e-06 J	1.52e-06	1.32e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRB122	NB03CRB123
			Sample ID	NB03CRB-MUS-S009	NB03-CRB-COMBHEPMUS-122	NB03-CRB-COMBHEPMUS-123
			Sample Date	10/06/15		
			Sample Type	N	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.45e-06	3.2071e-05	2.71122e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	7.15e-08 J	9.0194e-07 J	9.4238e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.68e-08 U	2.22758e-07 J	1.5323e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.92e-08 J	7.1906e-07 J	3.85804e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	3.23e-08 J	2.2977e-07 J	1.58944e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	9.79e-08 J	7.297e-07 J	4.103e-07 J
E1613B	OCDD	3268-87-9	mg/kg	2.84e-07 J	2.23994e-06 J	9.2232e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.61e-07 J	1.10602e-05 J	7.916e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.18e-07 J	2.77578e-06 J	1.79216e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.3e-07 J	6.93506e-06 J	4.33624e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.56e-07 J	8.855e-06 J	4.4424e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	4.75e-08 J	1.77054e-06 J	1.13376e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	2.97e-08 J	1.17602e-07 J	8.6756e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.86e-08 J	6.05264e-07 J	2.65142e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.18e-07 J	7.90264e-06 J	4.43946e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.78e-08 J	9.7226e-08 J	4.832e-08 J
E1613B	OCDF	39001-02-0	mg/kg	3.42e-08 J	5.7782e-07 J	1.27188e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.7e-06	3.76e-05	3.09e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB124	NB03CRB125	NB03CRB126
			Sample ID	NB03-CRB-COMBHEPMUS-124	NB03-CRB-COMBHEPMUS-125	NB03-CRB-COMBHEPMUS-126
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.68256e-05 J	1.42598e-05	1.70542e-05 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.5623e-07 J	4.1264e-07 J	4.84456e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.5106e-07 J	9.9002e-08 J	1.56222e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	4.77358e-07 J	3.2382e-07 J	3.83536e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.54728e-07 J	1.354e-07 J	1.47776e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	5.58484e-07 J	4.4386e-07 J	4.25904e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.85792e-06 J	1.3006e-06 J	1.52026e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	7.36124e-06 J	6.0766e-06 J	7.31594e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.67628e-06 J	1.31188e-06 J	1.55162e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.9284e-06 J	2.42806e-06 J	3.688718e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	2.91002e-06 J	1.797e-06 J	1.93616e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.302666e-06 J	7.6108e-07 J	8.074e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	3.0596e-08 J	7.4838e-08 J	5.4734e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.29508e-07 J	1.90422e-07 J	1.93088e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.250244e-06 J	1.88464e-06 J	2.46154e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	6.1498e-08 J	5.8792e-08 J	5.4326e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.80852e-07 J	1.53808e-07 J	1.29816e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.02e-05 J	1.64e-05	1.98e-05 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB127	NB03CRB129	NB03CRB130
			Sample ID	NB03-CRB-COMBHEPMUS-127	NB03-CRB-COMBHEPMUS-129	NB03-CRB-COMBHEPMUS-130
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.55436e-05	1.2964e-05	2.15812e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	9.4202e-08 J	6.9242e-07 J	8.5346e-08 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.25958e-07 J	1.50112e-07 J	1.90636e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.55472e-07 J	4.27286e-07 J	5.66048e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.2354e-07 J	1.59772e-07 J	1.79912e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	3.9896e-07 J	5.056e-07 J	6.0766e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.68436e-06 J	1.62672e-06 J	1.57466e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	7.7654e-06 J	8.0972e-06 J	9.20954e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.48406e-06 J	1.60116e-06 J	1.70952e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.74396e-06 J	3.12132e-06 J	3.76752e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.29856e-06 J	1.44636e-06 J	1.93018e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	5.7132e-07 J	9.35716e-07 J	9.71884e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.4198e-08 J	8.3324e-08 J	8.5954e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.8545e-07 J	2.31066e-07 J	2.73416e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.41666e-06 J	2.22888e-06 J	2.46536e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.6164e-08 J	4.0038e-08 U	7.5532e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.8102e-07 J	1.49218e-07 J	1.61868e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.76e-05	1.58e-05	2.42e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB131	NB03CRB132	NB03CRB133
			Sample ID	NB03-CRB-COMBHEPMUS-131	NB03-CRB-COMBHEPMUS-132	NB03-CRB-COMBHEPMUS-133
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.05598e-05	3.19626e-05	4.1394e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.969e-07 J	1.26064e-06 J	1.07864e-06 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.46184e-07 J	2.47668e-07 J	2.57566e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	4.2746e-07 J	7.4675e-07 J	7.54312e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.6531e-07 J	2.45776e-07 J	2.60792e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	6.5672e-07 J	8.0714e-07 J	8.7202e-07 J
E1613B	OCDD	3268-87-9	mg/kg	2.15858e-06 J	1.56366e-06 J	1.8885e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.47206e-06 J	1.08912e-05 J	1.01796e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.50986e-06 J	2.39546e-06 J	2.69056e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.112e-06 J	5.79764e-06 J	5.88386e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.57416e-06 J	6.9289e-06 J	7.6036e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	8.01058e-07 J	1.47412e-06 J	1.97148e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	4.2108e-08 J	7.0926e-08 J	9.7978e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.2525e-07 J	5.31158e-07 J	5.44492e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	2.37754e-06 J	5.45426e-06 J	9.54394e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4.5152e-08 U	5.4336e-08 J	5.262e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.89256e-07 J	2.3614e-07 J	3.2262e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.35e-05	3.72e-05	4.66e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRB134	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-134	NB03-CRB-COMBHEPMUS-C001	NB03-CRB-COMBHEPMUS-C002
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	5.0514e-06	2.32202e-05	2.8593e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.6428e-07 J	6.4688e-07 J	8.2874e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.66566e-07 J	1.54598e-07 J	2.43068e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	4.7726e-07 J	6.27668e-07 J	6.64326e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.68286e-07 J	2.28452e-07 J	2.5792e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	6.3706e-07 J	7.078e-07 J	7.2658e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.39842e-06 J	1.4797e-06 J	1.41342e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	5.8172e-06 J	9.1898e-06 J	1.164328e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.13062e-06 J	1.8214e-06 J	2.43478e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.74112e-06 J	5.06732e-06 J	5.87002e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	6.759e-07 J	3.69652e-06 J	5.0618e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	4.90464e-07 J	1.2952e-06 J	1.8636e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.0616e-08 J	7.9656e-08 J	7.0602e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.0011e-07 J	3.70136e-07 J	3.88726e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.01164e-06 J	3.0523e-06 J	5.8976e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4.7554e-08 J	8.9694e-08 J	5.561e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.0538e-07 J	1.90906e-07 J	1.48018e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	7.3e-06	2.7e-05	3.33e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C003	NB03-CRB-COMBHEPMUS-C004	NB03-CRB-COMBHEPMUS-C005
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.33776e-05	3.19606e-05 J	2.7331e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.0986e-07 J	7.05022e-07 J	7.0268e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.13198e-07 J	1.77326e-07 J	2.04714e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.93242e-07 J	5.7077e-07 J	5.17008e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.24942e-07 J	1.70824e-07 J	2.03788e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	7.0836e-07 J	5.226e-07 J	6.2072e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.52272e-06 J	1.39164e-06 J	1.60014e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.30086e-06 J	8.2386e-06 J	8.1722e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.30074e-06 J	1.9953e-06 J	1.79282e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	5.39866e-06 J	4.92632e-06 J	3.38576e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.63494e-06 J	3.3197e-06 J	3.27056e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.43266e-06 J	1.324206e-06 J	1.13302e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.05438e-07 J	3.9288e-08 J	6.817e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.94606e-07 J	2.28204e-07 J	2.50002e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.98386e-06 J	4.15772e-06 J	3.7358e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.4758e-08 J	4.9898e-08 U	6.9114e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.94294e-07 J	1.26224e-07 J	1.81802e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.76e-05	3.57e-05 J	3.05e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBCEN	NB03CRBCEN	NB03CRBCEN
			Sample ID	NB03-CRB-COMBHEPMUS-C006	NB03-CRB-COMBHEPMUS-C007	NB03-CRB-COMBHEPMUS-C008
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.568634e-05 J	2.38634e-05	3.67842e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.07178e-07 J	1.04282e-07 J	8.9374e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.17846e-07 J	2.39714e-07 J	2.67104e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.83144e-07 J	6.3503e-07 J	7.0032e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.35154e-07 J	2.38494e-07 J	2.88426e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	6.66228e-07 J	6.81888e-07 J	7.65206e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.23514e-06 J	1.49352e-06 J	1.83114e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.039688e-05 J	1.240794e-05 J	1.102786e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.3022e-06 J	2.4691e-06 J	2.7387e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	5.16001e-06 J	5.26166e-06 J	5.91042e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	5.26946e-06 J	4.42596e-06 J	5.61164e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.6472e-06 J	1.372216e-06 J	1.8204e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.259e-08 J	8.7252e-08 J	9.9204e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.66446e-07 J	3.49262e-07 J	4.13576e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	4.86614e-06 J	4.10296e-06 J	5.62176e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	7.1798e-08 J	3.776e-08 J	5.1478e-08 J
E1613B	OCDF	39001-02-0	mg/kg	2.01142e-07 J	2.1202e-07 J	1.62944e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	3e-05 J	2.76e-05	4.16e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N001	NB03-CRB-COMBHEPMUS-N002	NB03-CRB-COMBHEPMUS-N003
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.2577e-05	1.99016e-05	2.46034e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	6.7174e-07 J	6.4303e-07 J	7.81388e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.27598e-07 J	1.778e-07 J	2.31386e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	7.2474e-07 J	5.4438e-07 J	6.52948e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.69918e-07 J	1.82884e-07 J	2.50034e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	9.013e-07 J	6.33904e-07 J	8.4466e-07 J
E1613B	OCDD	3268-87-9	mg/kg	2.72342e-06 J	1.96144e-06 J	2.50454e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	7.5512e-06 J	7.80974e-06 J	1.015136e-05 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.04818e-06 J	2.00428e-06 J	2.89704e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	6.18832e-06 J	5.0464e-06 J	6.71814e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	7.3736e-06 J	5.95344e-06 J	8.09436e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.7814e-06 J	1.64958e-06 J	2.15968e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	9.8436e-08 J	9.2886e-08 J	1.31584e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	5.5024e-07 J	4.19334e-07 J	5.14196e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	7.1662e-06 J	5.84244e-06 J	6.17614e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.26026e-07 J	6.485e-08 J	8.8612e-08 J
E1613B	OCDF	39001-02-0	mg/kg	5.6972e-07 J	3.4326e-07 J	3.9686e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.71e-05	2.39e-05	2.98e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBNOR
			Sample ID	NB03-CRB-COMBHEPMUS-N004	NB03-CRB-COMBHEPMUS-N005	NB03-CRB-COMBHEPMUS-N006
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.1365e-05	4.48536e-05	3.14534e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	3.9774e-08 U	8.20488e-07 J	9.6066e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.98476e-07 J	2.94228e-07 J	2.15556e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	6.0028e-07 J	8.84762e-07 J	5.776e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.84932e-07 J	2.63546e-07 J	2.02142e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	6.2688e-07 J	9.2492e-07 J	6.7734e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.71766e-06 J	1.87514e-06 J	1.84592e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	8.4312e-06 J	9.78466e-06 J	8.0104e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.02582e-06 J	2.86404e-06 J	1.80818e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.97554e-06 J	6.06228e-06 J	4.79862e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	5.70536e-06 J	7.45276e-06 J	5.4978e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.74016e-06 J	2.235424e-06 J	1.21678e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	8.181e-08 J	8.2452e-08 J	8.6984e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.79484e-07 J	5.52348e-07 J	3.83806e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	5.9111e-06 J	9.43912e-06 J	3.76184e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.8124e-08 J	1.40672e-07 J	5.4494e-08 J
E1613B	OCDF	39001-02-0	mg/kg	3.1984e-07 J	3.1536e-07 J	2.23392e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	3.47e-05	4.98e-05	3.56e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBNOR	NB03CRBNOR	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-N007	NB03-CRB-COMBHEPMUS-N008	NB03-CRB-COMBHEPMUS-S001
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.87782e-05	3.36262e-05 J	1.46916e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	9.6846e-07 J	1.09132e-07 J	5.13672e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.21646e-07 J	1.77026e-07 J	1.52412e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	7.30256e-07 J	5.83704e-07 J	4.63374e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.29088e-07 J	1.9552e-07 J	1.97214e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	8.1102e-07 J	9.378e-07 J	6.7144e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.88744e-06 J	5.94706e-06 J	1.74554e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.0656e-05 J	8.1274e-06 J	8.978e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.25018e-06 J	1.98022e-06 J	1.69652e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	6.34002e-06 J	5.21488e-06 J	3.24412e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	7.7594e-06 J	4.50992e-06 J	2.04658e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.80732e-06 J	1.40552e-06 J	8.46966e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	6.696e-08 J	7.0664e-08 J	7.1262e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	5.39618e-07 J	3.06996e-07 J	2.65322e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	6.7541e-06 J	4.39576e-06 J	2.26226e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.1392e-08 J	6.4536e-08 J	4.9152e-08 U
E1613B	OCDF	39001-02-0	mg/kg	2.09184e-07 J	3.103e-07 J	1.34164e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	4.4e-05	3.7e-05 J	1.76e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S002	NB03-CRB-COMBHEPMUS-S003	NB03-CRB-COMBHEPMUS-S004
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.59622e-05	1.7492e-05	2.32582e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	6.987e-08 J	7.0418e-08 J	6.8662e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.82032e-07 J	1.41352e-07 J	1.86306e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.47602e-07 J	3.89974e-07 J	6.20594e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.80708e-07 J	1.44234e-07 J	2.04428e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	5.65588e-07 J	4.866e-07 J	6.31644e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.33804e-06 J	1.04214e-06 J	1.56632e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.61228e-06 J	8.48134e-06 J	9.49624e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.90124e-06 J	1.58874e-06 J	1.83856e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.15654e-06 J	3.13918e-06 J	4.22556e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.02088e-06 J	2.26246e-06 J	2.68904e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.206092e-06 J	7.2035e-07 J	1.090518e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.06826e-07 J	8.6086e-08 J	7.4694e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.71198e-07 J	1.83368e-07 J	2.9263e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.7325e-06 J	1.81696e-06 J	2.5996e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4.221e-08 J	5.6186e-08 J	5.8516e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.57164e-07 J	1.20912e-07 J	1.49838e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.89e-05	1.98e-05	2.68e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03CRBSOU
			Sample ID	NB03-CRB-COMBHEPMUS-S005	NB03-CRB-COMBHEPMUS-S006	NB03-CRB-COMBHEPMUS-S007
			Sample Date			
			Sample Type	Calc	Calc	Calc
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.10592e-05	1.191112e-05 J	1.2532e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	7.4022e-08 J	4.73676e-07 J	5.6957e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.903766e-07 J	1.52166e-07 J	1.50244e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	6.00594e-07 J	4.68876e-07 J	3.90966e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.724228e-07 J	1.82584e-07 J	1.84426e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	6.21748e-07 J	4.21924e-07 J	4.478e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.61662e-06 J	1.6232e-06 J	1.65988e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	8.95858e-06 J	8.68408e-06 J	9.16558e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.94968e-06 J	1.48504e-06 J	1.5566e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.45798e-06 J	3.264378e-06 J	3.13716e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.14746e-06 J	1.8185e-06 J	1.49414e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.118788e-06 J	7.95258e-07 J	8.57012e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7.2906e-08 J	7.552e-08 J	6.3318e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.81937e-07 J	1.96902e-07 J	2.5669e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.63664e-06 J	1.889936e-06 J	1.47944e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	2.50538e-08 U	8.0508e-08 J	4.5616e-08 U
E1613B	OCDF	39001-02-0	mg/kg	1.14816e-07 J	1.13404e-07 J	1.81348e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.41e-05	1.47e-05 J	1.54e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Blue Crab-Muscle and Hepatopancreas combined	Blue Crab-Muscle and Hepatopancreas combined	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03CRBSOU	NB03CRBSOU	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03-CRB-COMBHEPMUS-S008	NB03-CRB-COMBHEPMUS-S009	NB03FBL-COMP01	NB03FBL-COMP02
			Sample Date			12/10/15	12/10/15
			Sample Type	Calc	Calc	N	N
Method	Analyte	CAS	Unit				
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.03152e-05	1.7999e-05	1.99e-06	8.04e-07 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.14762e-07 J	7.7051e-07 J	3.27e-07 J	8.91e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.3065e-07 J	1.43992e-07 J	3.91e-08 J	2.08e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.53392e-07 J	4.19408e-07 J	1.52e-07 J	8.5e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.37188e-07 J	1.73922e-07 J	2.73e-08 U	4.75e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	4.0674e-07 J	5.32646e-07 J	7.27e-08 J	1.22e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.1497e-06 J	1.58556e-06 J	1.76e-07 J	1.7e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	6.86042e-06 J	1.597314e-05 J	3.59e-07 J	1.98e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.39168e-06 J	2.13092e-06 J	5.91e-07 J	4.01e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.54834e-06 J	3.6322e-06 J	6.23e-07 J	3.22e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.47942e-06 J	1.80804e-06 J	1.06e-07 J	3.16e-08 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	6.67148e-07 J	7.5275e-07 J	1.85e-07 J	7.16e-08 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	8.3636e-08 J	4.7718e-08 J	8.49e-08 J	7.75e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.73172e-07 J	2.32024e-07 J	2.41e-08 J	2.94e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.80444e-06 J	1.80072e-06 J	3.22e-07 J	1.04e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	6.688e-08 U	3.1138e-08 J	4.57e-08 U	4.5e-08 U
E1613B	OCDF	39001-02-0	mg/kg	1.09302e-07 J	1.09028e-07 J	4.68e-08 J	7.16e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.26e-05	2.19e-05	2.62e-06	9.74e-07 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FBL-COMP03	NB03FBL-COMP04	NB03FBL-COMP05	NB03FBLC468	NB03FBLC469	NB03FBLC471
			Sample Date	12/10/15	12/01/15	12/01/15	01/12/16	01/12/16	01/12/16
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.31e-06	1.92e-07 J	2.53e-06	6.16e-07 J	5.42e-07 J	6.29e-07 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.13e-07 U	1.08e-07 J	1.31e-07 U	2.74e-07 J	2.22e-07 J	1.78e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.59e-08 J	4.27e-08 U	1.68e-07 J	6.12e-08 J	6.96e-08 J	4.8e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.28e-07 J	1.13e-07 J	2.8e-07 J	1.17e-07 J	1.14e-07 J	2.3e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.5e-08 U	4.31e-08 U	9.23e-08 J	9.09e-08 J	5.17e-08 J	4.02e-08 U
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.37e-07 J	7.89e-08 J	1.35e-07 J	1.08e-07 J	1.79e-07 J	7.21e-08 J
E1613B	OCDD	3268-87-9	mg/kg	2.54e-07 J	2.1e-07 J	3.18e-07 J	1.45e-07 J	2.39e-07 J	1.5e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.91e-07 J	9.88e-08 U	5.9e-07 J	2.89e-07 J	4.31e-07 J	2.39e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	6.12e-07 J	1.62e-07 J	1.72e-06 J	6.17e-07 J	7.69e-07 J	2.79e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	6.26e-07 J	1.25e-07 J	1.03e-06 J	4.95e-07 J	6.82e-07 J	4.58e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	8.87e-08 J	4.7e-08 U	2.08e-07 J	6.21e-08 J	4.63e-08 U	7.99e-08 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.33e-07 J	9.15e-08 J	5e-07 J	6.47e-08 J	1.58e-07 J	2.18e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	6.18e-08 J	9.84e-08 J	9.86e-08 J	7.26e-08 J	7.46e-08 J	7.36e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.68e-08 J	4.57e-08 U	1.25e-07 J	4.75e-08 J	4.09e-08 U	3.43e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.35e-07 J	2.66e-07 J	1.07e-06 J	4.38e-07 J	5.52e-07 J	2.96e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.69e-08 U	4.9e-08 U	1.02e-07 J	7e-08 U	1.1e-07 J	7.63e-08 J
E1613B	OCDF	39001-02-0	mg/kg	7.37e-08 J	2.14e-07 J	1.53e-07 J	7.14e-08 J	7.16e-08 J	6.66e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.62e-06	3.82e-07 J	3.13e-06	1.14e-06 J	1.09e-06 J	1.05e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR
			Sample ID	NB03FBLC475	NB03FBLC476	NB03FBLC478	NB03FBLC479	NB03FBLC481	NB03FBLN404
			Sample Date	01/12/16	01/12/16	01/12/16	01/12/16	01/12/16	12/01/15
			Sample Type	N	N	N	N	N	N
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	7.65e-08 J	1.58e-06	3.96e-07 J	1.96e-07 J	4.55e-07 J	4.48e-07 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	9.45e-08 U	4.7e-07 J	1.52e-07 J	5.36e-07 J	2.63e-07 J	9.27e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	3.23e-08 U	8.12e-08 J	3.78e-08 U	1.06e-07 J	2.56e-08 U	5.45e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	9.31e-08 J	3.92e-07 J	4.83e-08 J	2.23e-07 J	1.18e-07 J	3.52e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	4.17e-08 J	8.52e-08 J	4.05e-08 U	1.53e-07 J	4.19e-08 J	3.4e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.51e-07 J	1.9e-07 J	5.77e-08 J	2.84e-07 J	8.18e-08 J	8.86e-08 J
E1613B	OCDD	3268-87-9	mg/kg	2.78e-07 J	3.13e-07 J	2.27e-07 J	3.42e-07 J	1.04e-07 J	4.28e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.04e-07 U	3.18e-07 J	1.93e-07 J	9.03e-07 J	7.4e-08 U	1.42e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	3.47e-07 J	7.69e-07 J	2.21e-07 J	7.59e-07 J	2.27e-07 J	1.46e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	6.16e-07 J	1.18e-06 J	4.56e-07 J	1.17e-06 J	2.87e-07 J	7.2e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.77e-08 U	8.41e-08 J	4.46e-08 J	7.97e-08 J	3.06e-08 J	7.74e-08 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	4.1e-08 J	2.92e-07 J	9.04e-08 J	2.66e-07 J	6.53e-08 J	2.64e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	4.38e-08 U	8.99e-08 J	7.21e-08 J	7.86e-08 J	8.95e-08 J	9.03e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.72e-08 U	5.51e-08 J	3.56e-08 U	5.8e-08 J	3.11e-08 J	7.82e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.31e-07 J	7.77e-07 J	6.94e-07 J	7.33e-07 J	2.66e-07 J	1.13e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	6.5e-08 U	6.53e-08 U	1.21e-07 J	1.01e-07 U	4.44e-08 U	6.1e-08 J
E1613B	OCDF	39001-02-0	mg/kg	6.41e-08 J	8.65e-08 J	1.07e-07 J	1.38e-07 J	8.96e-08 J	2.22e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	3.08e-07 J	2.58e-06	7.47e-07 J	1.3e-06 J	8.55e-07 J	7.66e-07 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Bluefish-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FBLN405	NB03FBLN406	NB03FBLS339	NB03FBLS349	NB03FSBDUP-10	NB03FSBDUP-11
			Sample Date	12/01/15	01/12/16	01/12/16	01/12/16	01/12/16	01/13/16
			Sample Type	N	N	N	N	FD	FD
Method	Analyte	CAS	Unit						
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.19e-06	1.4e-06	3.28e-07 J	6.52e-07 J	2.12e-05 J	1.97e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	6.12e-08 U	5.75e-07 J	1.17e-07 J	4.26e-07 J	6.53e-07 J	4.27e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	9.42e-08 J	4.88e-08 J	4.64e-08 J	4.74e-08 J	7.23e-08 J	1.69e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.03e-07 J	1.87e-07 J	7.38e-08 J	1.25e-07 J	3.77e-07 J	1.12e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	4.35e-08 J	7.56e-08 J	3.05e-08 U	7.21e-08 J	9.38e-08 J	6.36e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	7.66e-08 J	5.91e-08 J	8.04e-08 J	7.56e-08 J	2.34e-07 J	1.65e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.72e-07 J	1.16e-07 J	1.78e-07 J	1.74e-07 J	4.03e-07 J	1.76e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	6.53e-08 J	5.77e-07 J	1.2e-07 U	3.55e-07 J	6.43e-06 J	1.49e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	4.7e-07 J	5.02e-07 J	2.19e-07 J	4.32e-07 J	3.03e-06 J	2.24e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	5.4e-07 J	9.96e-07 J	5.06e-07 J	5.13e-07 J	6.41e-06 J	1.73e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.27e-07 J	1.01e-07 J	4.53e-08 U	9.87e-08 J	7.83e-07 J	8.23e-08 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	3.21e-07 J	2.49e-07 J	6.75e-08 J	1.5e-07 J	2.33e-06 J	2.59e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1e-07 J	9.93e-08 J	4.23e-08 U	4.92e-08 J	1.27e-07 J	8.69e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	7.45e-08 J	4.35e-08 U	4.03e-08 U	4.41e-08 J	1.25e-07 J	5.54e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	9.54e-07 J	4.28e-07 J	5.84e-07 J	3.94e-07 J	6.6e-06 J	1.33e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.02e-08 U	8.45e-08 U	7.47e-08 J	9.5e-08 J	9.82e-08 J	1.58e-07 J
E1613B	OCDF	39001-02-0	mg/kg	2.49e-07 J	3.4e-08 U	6.17e-08 J	3.57e-08 U	1.51e-07 J	5.71e-08 U
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	3.48e-06	2.43e-06	6.34e-07 J	1.34e-06 J	2.5e-05 J	3.23e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBDUP-12	NB03FSBS320	NB03FSBS321	NB03FSBS322	NB03FSBS323
			Sample Date	01/20/16	12/01/15	12/10/15	12/10/15	12/10/15
			Sample Type	FD	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.85e-06 J	2.21e-06	2.69e-07 J	6.08e-07 J	2.52e-07 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	7.7e-07 J	1.14e-07 U	7.64e-08 U	9.78e-07 J	1.74e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.45e-07 J	4.48e-07 J	2.17e-07 J	2.85e-07 J	1.46e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	8.94e-08 J	3.26e-07 J	1.05e-07 J	6.5e-08 J	6.33e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.03e-07 J	1.6e-07 J	4.7e-08 J	4.05e-08 U	4.86e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.12e-07 J	1.55e-07 J	6.01e-08 J	7.45e-08 J	4.72e-08 J
E1613B	OCDD	3268-87-9	mg/kg	2.97e-07 J	3.5e-07 J	1.7e-07 J	1.79e-07 J	1.48e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	9.34e-07 J	2.7e-06 J	5.89e-07 J	8.91e-07 J	8.62e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.26e-06 J	3.78e-06 J	1.6e-06 J	1.99e-06 J	1.16e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.1e-06 J	1.41e-06 J	5.08e-07 J	5.65e-07 J	3.55e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.53e-07 J	2.78e-07 J	1.13e-07 J	1.48e-07 J	2.94e-08 U
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.66e-07 J	1e-06 J	3.82e-07 J	3.92e-07 J	7.11e-08 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.32e-07 J	2.38e-07 J	6.47e-08 J	7.33e-08 J	3.75e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.17e-07 J	1.02e-07 J	5.62e-08 J	3.65e-08 U	2.7e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	8.14e-07 J	2.67e-06 J	6.32e-07 J	1.18e-06 J	5.71e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.62e-07 J	1.28e-07 J	1.01e-07 J	8.44e-08 J	6.86e-08 U
E1613B	OCDF	39001-02-0	mg/kg	7.85e-08 J	2.25e-07 J	7.37e-08 J	4.99e-08 J	1.14e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	5.19e-06 J	3.33e-06	6.5e-07 J	2.01e-06 J	6.97e-07 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS324	NB03FSBS325	NB03FSBS327	NB03FSBS328	NB03FSBS329
			Sample Date	01/13/16	01/13/16	12/10/15	12/10/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.97e-06	3.79e-07 J	5.95e-07 J	4.64e-07 J	2.64e-07 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.57e-07 U	2.81e-07 J	1.2e-07 U	9.12e-08 U	7.57e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	6.77e-08 J	1.79e-07 J	2.52e-07 J	2.03e-07 J	2.59e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.63e-07 J	1.5e-07 J	1.01e-07 J	1.65e-07 J	3.36e-08 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	8.45e-08 J	6.26e-08 U	4.43e-08 U	4.08e-08 J	2.67e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.59e-07 J	4.54e-06 J	7.69e-08 J	5.53e-08 J	9.06e-08 J
E1613B	OCDD	3268-87-9	mg/kg	2.05e-07 J	5.34e-05 J	2.17e-07 J	1.53e-07 J	1.1e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.62e-06 J	1.68e-06 J	1.54e-06 J	1.39e-06 J	8.63e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.57e-06 J	1.59e-06 J	1.83e-06 J	1.11e-06 J	1.17e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.06e-06 J	1.54e-06 J	6.34e-07 J	6.2e-07 J	7.6e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.64e-08 J	1.04e-07 J	8.99e-08 J	8.15e-08 J	3.19e-08 U
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	7.59e-07 J	3.87e-07 J	3.83e-07 J	1.1e-07 J	1.31e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	5.89e-08 J	9.45e-08 J	9.6e-08 J	9.37e-08 J	9.19e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	4.18e-08 J	1.55e-07 J	3.26e-08 U	2.63e-08 U	2.99e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.6e-06 J	9e-07 J	1.09e-06 J	4.63e-07 J	2.76e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.46e-07 U	1.24e-07 U	1.07e-07 U	9.71e-08 J	7.06e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.45e-07 J	4.87e-07 J	1.22e-07 J	6.1e-08 J	7.78e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.99e-06	1.52e-06 J	1.11e-06 J	9.07e-07 J	1.41e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSBS330	NB03FSBS331	NB03FSBS332	NB03FSBS333	NB03FSBS334
			Sample Date	12/10/15	01/12/16	12/10/15	01/12/16	01/13/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.51e-06	2.77e-05 J	1.02e-06	6.78e-07 J	2.26e-07 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	4.19e-07 J	1.15e-06 J	1.24e-07 U	3.29e-07 J	3.82e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.91e-08 J	3.16e-07 J	2.84e-08 J	3.57e-08 J	4.71e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.25e-08 J	4.78e-07 J	6.45e-08 J	9.98e-08 J	1.02e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	2.45e-08 J	1.92e-07 J	2.71e-08 U	3.53e-08 U	5.38e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	3.94e-08 J	2.6e-07 J	7.62e-08 J	7.44e-08 J	7.07e-08 J
E1613B	OCDD	3268-87-9	mg/kg	1.04e-07 J	4.36e-07 J	1.86e-07 J	2.83e-07 J	1.96e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.66e-07 J	8.51e-06 J	2.03e-06 J	1.83e-06 J	1.66e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	3.18e-07 J	4.65e-06 J	2.15e-06 J	1.12e-06 J	1.51e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.09e-07 J	8.12e-06 J	8.71e-07 J	1.22e-06 J	1.47e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	2.55e-08 J	1.16e-06 J	4.7e-08 J	3.02e-08 U	3.95e-08 U
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	4.21e-08 J	3.5e-06 J	2.64e-07 J	2.11e-07 J	3.71e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	3.58e-08 J	2.02e-07 J	5.3e-08 J	5.09e-08 J	6.83e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.55e-08 J	2.48e-07 J	2.9e-08 U	3.47e-08 J	3.97e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.92e-07 J	1.06e-05 J	5.43e-07 J	8.58e-07 J	9.1e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4e-08 U	1.71e-07 J	4.55e-08 U	9.68e-08 J	1.1e-07 U
E1613B	OCDF	39001-02-0	mg/kg	8.69e-08 J	2.28e-07 J	6.92e-08 J	5.61e-08 J	1.05e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.08e-06	3.3e-05 J	1.61e-06	1.64e-06 J	1.33e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Striped Bass-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHCEN
			Sample ID	NB03FSBS335	NB03FSBS336	NB03FSBS337	NB03FSBS338	NB03FSFC486
			Sample Date	01/13/16	01/20/16	01/20/16	12/01/15	12/10/15
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.56e-07 J	1.37e-05 J	3.78e-06 J	1.26e-06 J	4.53e-06
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	1.1e-07 U	1.15e-06 J	1.6e-07 U	1.13e-07 U	2.89e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	7.67e-08 J	2.17e-07 J	1.47e-07 J	2.07e-07 J	2.85e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	9.56e-08 J	3.94e-07 J	1.1e-07 J	1.48e-07 J	1.02e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	3.45e-08 U	1.08e-07 U	1.14e-07 J	4.95e-08 J	3.58e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.26e-07 J	3.33e-07 J	1.11e-07 J	1.28e-07 J	1.99e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.73e-07 J	1.43e-07 J	1.72e-07 J	2.41e-07 J	2.94e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.43e-06 J	5.59e-06 J	1.03e-06 J	1.95e-06 J	1.77e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.27e-06 J	3.15e-06 J	1.36e-06 J	1.38e-06 J	2.54e-08 U
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	8.62e-07 J	4.55e-06 J	1.08e-06 J	8.04e-07 J	5.13e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.46e-08 J	5.86e-07 J	1.65e-07 J	9.26e-08 J	2.06e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.01e-07 J	1.44e-06 J	2.76e-07 J	2.13e-07 J	1.18e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	4.07e-08 J	1.64e-07 J	1.63e-07 J	9.9e-08 J	3.48e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.7e-08 J	2.7e-07 J	8.29e-08 J	5.48e-08 J	4.15e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	6.16e-07 J	1.84e-06 J	8.2e-07 J	7.79e-07 J	1.79e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	1.02e-07 J	2.15e-07 U	1.17e-07 U	6.1e-08 J	2.41e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.02e-07 J	2.71e-07 J	2.54e-07 J	1.26e-07 J	4.15e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	7.51e-07 J	1.72e-05 J	4.38e-06 J	1.84e-06 J	5.05e-06

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFC487	NB03FSFC488	NB03FSFC489	NB03FSFC490
			Sample Date	12/10/15	12/10/15	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.78e-06 J	3.75e-06	1.26e-06 J	3.41e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.71e-08 U	8.18e-08 U	3.26e-07 J	3.79e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.6e-08 J	3.51e-08 J	1.64e-07 J	1.02e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	7.09e-08 J	2.58e-07 J	1.86e-07 J	2.07e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	3.08e-08 J	2.53e-08 U	1.48e-07 J	1.16e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.49e-07 J	2.44e-07 J	2.09e-07 J	4.37e-07 J
E1613B	OCDD	3268-87-9	mg/kg	3.72e-07 J	3.32e-07 J	4.42e-07 J	3.07e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	8.99e-08 J	7.87e-08 U	8.12e-08 J	1.78e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	6.27e-08 J	4.65e-07 J	2.81e-07 J	4.05e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.73e-07 J	9.11e-07 J	3.87e-07 J	8.81e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	2.02e-07 J	3.07e-07 J	2.51e-07 J	2.78e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.1e-07 J	3.01e-07 J	1.89e-07 J	2.34e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	5.03e-08 J	6.72e-08 J	2.71e-07 J	2.47e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.29e-08 J	6.74e-08 J	9.3e-08 J	1.11e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.74e-07 J	5.13e-07 J	1.6e-07 J	3.18e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	3.41e-08 J	7.78e-08 J	2.16e-07 J	1.27e-07 J
E1613B	OCDF	39001-02-0	mg/kg	5.03e-08 J	6.39e-08 J	3.24e-07 J	1.92e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.93e-06 J	4.16e-06	1.85e-06 J	4.22e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FSFC491	NB03FSFN407	NB03FSFN408	NB03FSFN409
			Sample Date	12/01/15	01/13/16	01/13/16	12/10/15
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	5.35e-06	4.63e-06	3.01e-06	1.04e-05
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	6.15e-08 U	8.78e-08 U	2.41e-07 J	1.26e-07 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	4.71e-08 J	5.53e-08 J	3.98e-08 J	3.41e-08 U
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.95e-07 J	1.88e-07 J	8.66e-08 J	2.43e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	5.96e-08 J	8.06e-08 J	5.77e-08 J	9.14e-08 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.6e-07 J	2.17e-07 J	1.36e-07 J	3.3e-07 J
E1613B	OCDD	3268-87-9	mg/kg	3.12e-07 J	4.07e-07 J	1.19e-07 J	3.66e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.24e-07 J	1.04e-07 J	7.07e-08 J	2.49e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.37e-07 J	2.01e-07 J	1.05e-07 J	1.45e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	8.77e-07 J	6.59e-07 J	4.1e-07 J	1.29e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.38e-07 J	8.92e-07 J	3.09e-07 J	1e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	3.37e-07 J	3.14e-07 J	1.18e-07 J	3.82e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.04e-07 J	1.03e-07 J	8.56e-08 J	5.89e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.49e-07 J	1.05e-07 J	8.57e-08 J	1.3e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	6.66e-07 J	8.2e-07 J	1.01e-07 J	7.76e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	5.74e-08 J	5.68e-08 J	4.97e-08 J	5.38e-08 U
E1613B	OCDF	39001-02-0	mg/kg	1.25e-07 J	2.01e-07 J	1.56e-07 J	1.07e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	5.8e-06	5.04e-06	3.47e-06	1.1e-05

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHSOU
			Sample ID	NB03FSFN410	NB03FSFN411	NB03FSFN412	NB03FSFS351
			Sample Date	12/01/15	12/10/15	12/10/15	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	3.77e-06	1.56e-06 J	5.02e-06	4.67e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.51e-08 U	7.76e-08 U	2.65e-07 J	4.72e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.1e-08 J	4.6e-08 J	2.17e-08 U	8.66e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.04e-07 J	1.55e-07 J	1.08e-07 J	4.02e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	7.58e-08 J	2.23e-08 U	7.61e-08 J	1.09e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	1.88e-07 J	3.19e-07 J	1.56e-07 J	3.37e-07 J
E1613B	OCDD	3268-87-9	mg/kg	6.33e-07 J	5.55e-07 J	3.54e-07 J	5.5e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	2.22e-07 J	6.2e-08 J	1.18e-07 J	3.83e-07 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.51e-07 J	3.01e-07 J	1.66e-07 J	8.01e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	7.1e-07 J	3.02e-07 J	4.3e-07 J	8.9e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.67e-07 J	1.66e-07 J	2.55e-07 J	2.81e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.73e-07 J	1.14e-07 J	9.3e-08 J	3.31e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7.6e-08 J	1.09e-07 J	4.86e-08 J	1.82e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	8.18e-08 J	2.41e-08 J	4.01e-08 J	5.45e-08 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	3.57e-07 J	1.5e-07 J	2.31e-07 J	4.18e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4.08e-08 J	2.82e-08 J	3.77e-08 J	1.77e-07 J
E1613B	OCDF	39001-02-0	mg/kg	1.61e-07 J	7.3e-08 J	4.88e-08 J	2.14e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	4.12e-06	1.74e-06 J	5.5e-06	5.63e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin	Summer Flounder-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FSFS354	NB03FSFS355	NB03FSFS356	NB03FSFS357
			Sample Date	01/20/16	01/20/16	01/20/16	01/20/16
			Sample Type	N	N	N	N
Method	Analyte	CAS	Unit				
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.01e-06 J	7.95e-06 J	7.47e-06 J	1.23e-07 U
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	9.95e-08 U	4e-07 J	1.64e-07 U	2.85e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.72e-08 J	5.22e-08 J	1.12e-07 J	8.1e-08 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	1.01e-07 J	4.35e-07 J	3.72e-07 J	1.93e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	6.88e-08 J	1.25e-07 J	1.43e-07 J	1.78e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	8.14e-08 J	5.97e-07 J	3.25e-07 J	2.33e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.66e-07 J	4.82e-07 J	4.33e-07 J	4.02e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	7.35e-08 J	3.82e-07 J	4.82e-07 J	1.22e-07 U
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.59e-07 J	3.99e-07 J	2.39e-07 J	2.32e-07 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.94e-07 J	1.55e-06 J	1.17e-06 J	3.92e-07 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	9.74e-08 J	8.47e-07 J	2.74e-07 J	1.49e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	8.13e-08 J	2.04e-07 J	3.09e-07 J	1.08e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7.94e-08 J	1.23e-07 J	7.75e-08 J	1.53e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	3.87e-08 J	1.86e-07 J	1.35e-07 J	4.31e-08 U
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.32e-07 J	7.97e-07 J	2.84e-07 J	2.23e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	8.86e-08 J	1.15e-07 J	1.04e-07 J	6.05e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.36e-07 J	2.75e-07 J	3.14e-07 J	2.31e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.23e-06 J	9.08e-06 J	8.04e-06 J	5.2e-07 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	Summer Flounder-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN
			Sample ID	NB03FSFS359	NB03FWPC-COMP07	NB03FWPC-COMP08	NB03FWPC-COMP09	NB03FWPC-COMP10
			Sample Date	12/01/15	04/27/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	7.73e-06	3.18e-05 J	8.36e-06 J	1.41e-05 J	1.02e-05 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	7.67e-08 U	1.97e-07 U	6.35e-07 J	5.44e-07 J	1.07e-07 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	5.76e-08 J	1.95e-07 J	2.24e-07 J	3.24e-07 J	2.5e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	3.37e-07 J	5.95e-07 J	3.53e-07 J	3.94e-07 J	5.02e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.47e-07 J	8.14e-08 J	5.9e-08 U	1.03e-07 J	2.24e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	3.42e-07 J	4.81e-07 J	2.18e-07 J	3.08e-07 J	3.12e-07 J
E1613B	OCDD	3268-87-9	mg/kg	5.79e-07 J	6.06e-07 J	4.82e-07 J	5.68e-07 J	6.5e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	5.91e-07 J	3.72e-06 J	2.28e-06 J	3.39e-06 J	4.33e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	4.59e-07 J	2.38e-06 J	1.73e-06 J	3.96e-06 J	3.31e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	1.18e-06 J	3.45e-06 J	2.56e-06 J	3.62e-06 J	3.42e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	4.89e-07 J	1.55e-06 J	1.5e-06 J	1.75e-06 J	1.32e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	4.25e-07 J	1.14e-06 J	7.39e-07 J	1.66e-06 J	1.64e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.04e-07 J	6.34e-08 U	5.37e-08 J	8.97e-08 J	2.08e-07 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	1.78e-07 J	2.01e-07 J	1.76e-07 J	2.05e-07 J	3.3e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	7.12e-07 J	1.85e-06 J	1.54e-06 J	4.12e-06 J	3.91e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	4.15e-08 J	1.02e-07 J	6.16e-08 U	7.86e-08 U	1.81e-07 J
E1613B	OCDF	39001-02-0	mg/kg	2.02e-07 J	9.77e-08 J	1.62e-07 J	2.9e-07 J	4.08e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	8.36e-06	3.37e-05 J	1.04e-05 J	1.67e-05 J	1.23e-05 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHCEN	NB03FSHCEN	NB03FSHCEN	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPC-COMP11	NB03FWPC-COMP12	NB03FWPDUP-15	NB03FWPDUP-13	NB03FWPDUP-14
			Sample Date	04/26/16	04/27/16	04/27/16	04/26/16	04/27/16
			Sample Type	N	N	FD	FD	FD
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.58e-05 J	1.31e-05 J	1.02e-05 J	1.97e-05 J	
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.82e-08 U	7.27e-07 J	1.21e-07 U	7.06e-08 U	
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	2.06e-07 J	1.43e-07 J	1.43e-07 J	1.14e-07 J	
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.42e-07 J	3.51e-07 J	4.29e-07 J	4.65e-07 J	
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.23e-07 J	1.14e-07 J	5.23e-08 U	1.37e-07 J	
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	3.23e-07 J	2.63e-07 J	2.81e-07 J	3.25e-07 J	
E1613B	OCDD	3268-87-9	mg/kg	5.96e-07 J	4.55e-07 J	4.8e-07 J	4.58e-07 J	
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	3.09e-06 J	3.04e-06 J	2.62e-06 J	4.02e-06 J	
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	3.3e-06 J	2.1e-06 J	1.83e-06 J	1.81e-06 J	
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.97e-06 J	3.31e-06 J	2.7e-06 J	2.93e-06 J	
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	1.69e-06 J	1.74e-06 J	1.55e-06 J	1.79e-06 J	
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.29e-06 J	1.03e-06 J	8.37e-07 J	7.3e-07 J	
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	6.26e-08 J	1.07e-07 J	8.46e-08 J	7.99e-08 J	
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.23e-07 J	1.93e-07 J	1.82e-07 J	1.69e-07 J	
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	2.93e-06 J	1.53e-06 J	1.65e-06 J	1.15e-06 J	
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	8.08e-08 U	7.14e-08 U	8e-08 U	7.2e-08 U	
E1613B	OCDF	39001-02-0	mg/kg	2.98e-07 J	1.39e-07 J	2.23e-07 J	1.25e-07 J	
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.79e-05 J	1.56e-05 J	1.17e-05 J	2.14e-05 J	

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR	NB03FSHNOR
			Sample ID	NB03FWPN-COMP07	NB03FWPN-COMP08	NB03FWPN-COMP09	NB03FWPN-COMP10	NB03FWPN-COMP11
			Sample Date	04/27/16	04/26/16	04/27/16	04/26/16	04/26/16
			Sample Type	N	N	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	2.18e-05 J	1.37e-05 J	2.18e-05 J	7.69e-06 J	8e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	5.18e-07 J	8.42e-08 U	7.19e-07 J	7.61e-08 U	9.52e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.14e-07 J	2.34e-07 J	2.47e-07 J	1.63e-07 J	1.82e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	2.21e-07 J	6.89e-07 J	5.78e-07 J	4.11e-07 J	5.99e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	7.19e-08 J	1.42e-07 J	1.29e-07 J	4.66e-08 J	1.5e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	2.25e-07 J	4.16e-07 J	3.09e-07 J	2.53e-07 J	2.64e-07 J
E1613B	OCDD	3268-87-9	mg/kg	5.88e-07 J	7.3e-07 J	5.5e-07 J	4.57e-07 J	7.72e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	1.28e-06 J	4.4e-06 J	1.9e-06 J	2.18e-06 J	2.93e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	1.55e-06 J	3.03e-06 J	1.69e-06 J	2.1e-06 J	2.8e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	2.11e-06 J	3.27e-06 J	4.59e-06 J	2.78e-06 J	3.65e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	9.13e-07 J	1.28e-06 J	2.87e-06 J	1.1e-06 J	1.27e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	7.95e-07 J	1.2e-06 J	1.29e-06 J	8.19e-07 J	1.19e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7.26e-08 J	9.19e-08 J	9.6e-08 J	8.96e-08 J	7.69e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	7.52e-08 J	2.33e-07 J	2.44e-07 J	1.61e-07 J	1.49e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.55e-06 J	1.74e-06 J	1.13e-06 J	1.54e-06 J	3e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	7.33e-08 U	6.07e-08 J	7.48e-08 U	6.65e-08 U	6.26e-08 U
E1613B	OCDF	39001-02-0	mg/kg	2.23e-07 J	1.12e-07 J	2.63e-07 J	1.62e-07 J	1.16e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.34e-05 J	1.56e-05 J	2.47e-05 J	9.12e-06 J	9.89e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHNOR	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPN-COMP12	NB03FWPDUP-16	NB03FWPS-COMP07	NB03FWPS-COMP08	NB03FWPS-COMP09
			Sample Date	04/26/16	04/27/16	04/27/16	04/27/16	04/27/16
			Sample Type	N	FD	N	N	N
Method	Analyte	CAS	Unit					
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.76e-05 J		1.36e-05 J	5.77e-06 J	1.09e-05 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	8.36e-08 U		6.96e-07 J	1.27e-07 U	7.36e-07 J
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	1.98e-07 J		1.57e-07 J	1.12e-07 J	1.74e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	5.5e-07 J		4.46e-07 J	5.16e-07 J	4.63e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.14e-07 J		5.74e-08 U	1.02e-07 J	1.06e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	3.57e-07 J		2.04e-07 J	2.1e-07 J	2.85e-07 J
E1613B	OCDD	3268-87-9	mg/kg	7.07e-07 J		7.07e-07 J	7.83e-07 J	5.77e-07 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	4.27e-06 J		2.88e-06 J	2.74e-06 J	2.1e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	2.28e-06 J		2.19e-06 J	1.91e-06 J	1.7e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	4.8e-06 J		3.3e-06 J	2.52e-06 J	1.61e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	3.76e-06 J		1.31e-06 J	5.21e-07 J	4.26e-07 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.27e-06 J		7.97e-07 J	5.61e-07 J	1.11e-06 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	7e-08 J		5.54e-08 J	7.45e-08 J	9.83e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.69e-07 J		1.63e-07 J	1.17e-07 J	1.03e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	1.95e-06 J		1.18e-06 J	9.28e-07 J	8.95e-07 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	7.43e-08 J		8.93e-08 J	7.29e-08 U	6.08e-08 U
E1613B	OCDF	39001-02-0	mg/kg	1.34e-07 J		1.93e-07 J	1.43e-07 J	6.06e-08 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	2.02e-05 J		1.59e-05 J	7.09e-06 J	1.26e-05 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Table A-27
Analytical Data for Dioxins and Furans
NBSA Tissue
Baseline Human Health Risk Assessment
Newark Bay Study Area

			Tissue Type	White Perch-Fillet-with skin	White Perch-Fillet-with skin	White Perch-Fillet-with skin
			Location ID	NB03FSHSOU	NB03FSHSOU	NB03FSHSOU
			Sample ID	NB03FWPS-COMP10	NB03FWPS-COMP11	NB03FWPS-COMP12
			Sample Date	04/26/16	04/27/16	04/26/16
			Sample Type	N	N	N
Method	Analyte	CAS	Unit			
E1613B	2,3,7,8-TCDD	1746-01-6	mg/kg	1.47e-05 J	1.44e-06 J	7.18e-06 J
E1613B	1,2,3,7,8-PeCDD	40321-76-4	mg/kg	9.55e-08 U	1.37e-07 U	6.45e-08 U
E1613B	1,2,3,4,7,8-HxCDD	39227-28-6	mg/kg	3.89e-07 J	6.94e-08 J	3.77e-07 J
E1613B	1,2,3,6,7,8-HxCDD	57653-85-7	mg/kg	9.15e-07 J	4.82e-07 J	9.26e-07 J
E1613B	1,2,3,7,8,9-HxCDD	19408-74-3	mg/kg	1.98e-07 J	1.3e-07 J	1.97e-07 J
E1613B	1,2,3,4,6,7,8-HpCDD	35822-46-9	mg/kg	5.55e-07 J	3.67e-07 J	5.31e-07 J
E1613B	OCDD	3268-87-9	mg/kg	1.51e-06 J	9.71e-07 J	1.32e-06 J
E1613B	2,3,7,8-TCDF	51207-31-9	mg/kg	6.39e-06 J	3.93e-06 J	5.46e-06 J
E1613B	1,2,3,7,8-PeCDF	57117-41-6	mg/kg	4.93e-06 J	2.13e-06 J	3.69e-06 J
E1613B	2,3,4,7,8-PeCDF	57117-31-4	mg/kg	3.08e-06 J	1.67e-06 J	2.98e-06 J
E1613B	1,2,3,4,7,8-HxCDF	70648-26-9	mg/kg	6.86e-07 J	3.22e-07 J	1.18e-06 J
E1613B	1,2,3,6,7,8-HxCDF	57117-44-9	mg/kg	1.34e-06 J	4.55e-07 J	9.8e-07 J
E1613B	1,2,3,7,8,9-HxCDF	72918-21-9	mg/kg	1.43e-07 J	8.4e-08 J	9.28e-08 J
E1613B	2,3,4,6,7,8-HxCDF	60851-34-5	mg/kg	2.28e-07 J	1.89e-07 J	2.1e-07 J
E1613B	1,2,3,4,6,7,8-HpCDF	67562-39-4	mg/kg	2.14e-06 J	5.68e-07 J	1.71e-06 J
E1613B	1,2,3,4,7,8,9-HpCDF	55673-89-7	mg/kg	7.79e-08 U	6.75e-08 U	9.86e-08 J
E1613B	OCDF	39001-02-0	mg/kg	1.78e-07 J	6.71e-08 J	1.86e-07 J
E1613B	Dioxin-Furan TEQ (a)	KMTEQDF	mg/kg	1.69e-05 J	2.6e-06 J	9.16e-06 J

Notes:
J - Estimated Concentration
U - The analyte was analyzed for, but was not detected above the reported sample detection limit.
(a) - Kaplan-Meier Total Equivalent Concentration calculated using EPA's KM TEQ Calculator.

Attachment A-1

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Sediment, Blue Crab and Softshell Clam Tissue Chemistry

Activity	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data usability.	Sediment, clam tissue and crab tissue were collected during the 2014 Clam and Crab Sampling Program as described in the approved QAPP (Tierra 2014), the field collection report (Normandeau 2017), and the data usability report (GSH 2017). Sampling problems and field conditions did not significantly affect data usability for the Crab/Clam program.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were representative of receptor exposure for each medium in accordance with the EPA approved QAPP (Tierra 2014). Composite crab samples were selected to be representative of each geographic zone identified and approved by EPA. Tissue compositing was conducted in accordance with the EPA-approved Crab Composite Plan and SOP No. 13 – Laboratory Tissue Homogenization of the Crab and Clam QAPP (Tierra 2014). Crab samples were also collected from 12 Intertidal Areas. Softshell clams were collected from 18 Intertidal Areas throughout the NBSA. Sediment was collected from each Intertidal Area location for chemical analysis.
Assess the effect of field QC results on data usability.	During data validation activities, analytical data were evaluated in accordance with requirements of the QAPP (Tierra 2014). In addition, data validation qualifiers were consistently applied to the analytical data generated during the crab and clam program.
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues did not affect usability for risk assessment.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Definitive analytical methods were selected in the EPA approved QAPP based on DUOs and DQOs, including risk assessment. See Worksheets #11 of the QAPP (Tierra 2014).

Were detection limits adequate?	Detection limits generally achieved the risk-based screening levels or Project Action Levels or were the best available using EPA approved analytical methods. See Worksheet #15-1 through #15-3 of the QAPP (Tierra 2014).
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	All methods provided usable results for risk assessment.
Data Quality Objectives	
Precision - How were duplicates handled?	Field duplicates were only applicable to sediment samples. Due to limited clam and crab tissue mass, only laboratory replicates were collected for these tissue matrices. Acceptance criteria for field and laboratory duplicates are provided in Worksheets #12-2 and #12-3 of the QAPP (Tierra 2014). Conformance to laboratory duplicate frequency requirements, as well as acceptability of the resulting RPD values, were evaluated and considered during data validation. There are no limitations on data usage based on precision quality acceptance criteria (GSH 2017).

Activity	**Comment**
Data Quality Objectives (continued)	
Accuracy - How were split samples handled?	Measurement performance criteria for accuracy/bias contamination are outlined in Worksheets #12-1 through #12-3 of the QAPP (Tierra 2014). Acceptability of quality control (QC) results for accuracy/bias contamination and conformance to field and laboratory QC sample frequency requirements were evaluated and considered during the data verification/validation. There are no limitations on the data usage based on accuracy/bias contamination acceptance criteria (GSH 2017).
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Representativeness is the degree to which a dataset accurately represents the characteristics of a population, parameter conditions at a sample point, or an environmental condition. Data are representative when all sampling and analyses are performed in compliance with appropriate procedures. Performing sample analyses within the specified holding times and adhering to sample handling and storage requirements are also critical elements in obtaining representative sample data. These elements were evaluated and considered during data verification/validation. Acceptance criteria for sample handling, storage and holding times are provided in Worksheets #19-3 through #19-7 of the QAPP (Tierra 2014). There are no limitations on the data usage based on representativeness acceptance criteria (GSH 2017).

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Sediment, Blue Crab and Softshell Clam Tissue Chemistry

Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	The targeted field and analytical completeness goals were 90% for the crab and clam program; these goals were met or exceeded. The analytical completeness achieved for total crab tissue was 97.5%. The analytical completeness achieved for total clam tissue was 99.1%. The analytical completeness for total sediment was. 99.8%. The total analytical completeness for all matrices analyzed is 98%.
Comparability - Indicate any problems associated with data comparability.	Comparability was achieved by using the same EPA approved methods and same laboratories. With respect to the results of the crab and clam program data, there were no limitations on the data usage based on comparability acceptance criteria. Comparability expresses the confidence with which one set of data can be compared to another to measure the same property. Data can be compared to the degree that their accuracy, precision, and representativeness are known and documented. Data are comparable if QC measures such as collection techniques, measurement procedures, analytical methods, and reporting units are equivalent for the samples within a sample set. Data subject to established quality assurance/quality control (QA/QC) measures are deemed more reliable and, therefore, more comparable, than data generated without such measures. Consistent application of prescribed procedures was monitored throughout the crab and clam program. Likewise, specific data verification/validation protocols were consistently applied to all data generated under this program to understand and document accuracy/bias, accuracy/bias contamination, precision, sensitivity and representativeness, thereby establishing comparability. During data validation activities, analytical data were evaluated using a defined set of guidelines and acceptance criteria. In addition, data validation qualifiers were consistently applied to the analytical data generated during the crab and clam program. The data validation process serves to increase the degree of data comparability achieved. There are no limitations on the data usage based on comparability acceptance criteria (GSH 2017).
Were the DQOs specified in the QAPP satisfied?	Yes
Summarize the effect of DQO issues on the risk assessment, if applicable.	None
Data Validation and Interpretation	
What are the data validation requirements?	Data validation requirements were defined in Appendix N of the QAPP (Tierra 2014).

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Sediment, Blue Crab and Softshell Clam Tissue Chemistry

What method or guidance was used to validate the data?	Data validation guidance and processes were included in Appendix N and Worksheets #34 and #35 of the QAPP (Tierra 2014).

Activity	Comment
Data Validation and Interpretation (continued)	
Was the data validation method consistent with guidance? Discuss any discrepancies.	Yes
Were all data qualifiers defined? Discuss those which were not.	Yes, all validation based data qualifiers were defined in the data validation reports provided in the appendices in the associated data report.
Which qualifiers represent useable data?	All qualifiers except 'R' represent usable data.
Which qualifiers represent unusable data?	The rejected (R flagged) results were not considered usable per cited validation guidance and EPA directives.
How are tentatively identified compounds (TICs) handled?	TICs were not quantitatively evaluated in the risk assessment.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	There is no impact to risk assessment due to data usability.
Additional notes:	Split sample analysis conducted by EPA resulted in a finding of comparability for all media except sediment (Berger 2017a). It was concluded that there was analytical bias for PAHs and PCBs in sediment samples when compared to results from the EPA laboratory (Louis Berger 2017b). All Crab/Clam sediment samples were reanalyzed for PAHs and PCBs. With the exception of holding times, all procedures were conducted according to the approved QAPP. There are no limitations on usability of the reanalyzed data.

Note: The purpose of this Worksheet is to succinctly summarize the data usability analysis and conclusions. Reference specific pages in the Remedial Investigation and/or the Risk Assessment text to further expand on the information presented here.

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Sediment, Blue Crab and Softshell Clam Tissue Chemistry

Sources:

Tierra 2014. Crab and Clam Sampling and Analysis Quality Assurance Project Plan, Revision 3a, August.

GSH 2017. Newark Bay Study Area Crab and Clam Data Report, Appendix E: Data Quality Usability Assessment Report, Revision 1, March.

Normandeau 2017. Newark Bay Study Area Environmental Sample Collection Report, June.

Louis Berger. 2017a. Final Oversight Report: 2014-2016 Softshell Clam, Blue Crab, and Fish Oversight; 2015 Sediment Quality Triad Oversight; Newark Bay Study Area RI/FS Oversight. June.

Louis Berger. 2017b. Final Oversight Report: 2016 Phase III Sediment Investigation Oversight; Newark Bay Study Area RI/FS Oversight. December.

Attachment A-2

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Fish Tissue

Activity	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data usability.	Fish sampling was conducted in accordance with the approved QAPP (Tierra 2014a) the field collection report (Normandeau 2017), and the data usability report (GSH 2017). Sampling problems and field conditions did not affect data usability for fish sampling program.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were representative of receptor exposure for each medium in accordance with the EPA approved QAPP (Tierra 2014a). Fish were collected from various locations along the subtidal flats, transitional slopes, and navigational channel throughout each of the three geographic zones (north, central, south) in the NBSA. Fish were collected from each of the different geographic areas to provide spatial coverage across the entire NBSA. Additionally, 12 intertidal areas were targeted for up to 19 forage fish samples (mummichog, striped killifish, Atlantic menhaden, or bay anchovy). These areas are consistent with those selected for clam and sediment sampling (Tierra 2014b). Forage fish were targeted at 16 sampling locations and three supplemental sampling locations (Intertidal Areas 124, 125, and 126).
Assess the effect of field QC results on data usability.	During data validation activities, analytical data were evaluated in accordance with the verification/validation protocols specified in Worksheet #34 and Worksheet #35 of the QAPP (Tierra 2014a). In addition, data validation qualifiers were consistently applied to the analytical data generated during the fish program.
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues did not affect usability for risk assessment.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Definitive analytical methods were selected in the EPA approved QAPP based on DUOs and DQOs, including risk assessment. See Worksheets #11 of the QAPP (Tierra, 2014a).

Were detection limits adequate?	Detection limits generally achieved the risk-based screening levels or Project Action Levels or were the best available using EPA approved analytical methods. See Worksheet #15-1 through #15-2 of the QAPP (Tierra, 2014a).
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	All methods provided usable results for risk assessment.
Data Quality Objectives	
Precision - How were duplicates handled?	Acceptance criteria for field and laboratory duplicates are provided in Worksheets #12-2 of the QAPP (Tierra 2014a). Conformance to laboratory duplicate frequency requirements, as well as acceptability of the resulting RPD values, were evaluated and considered during data validation. There are no limitations on data usage based on precision quality acceptance criteria (Tierra 2017)

Activity	**Comment**
Data Quality Objectives (continued)	
Accuracy - How were split samples handled?	Measurement performance criteria for accuracy/bias contamination are outlined in Worksheet #12-2 of the QAPP (Tierra 2014a). Acceptability of quality control (QC) results for accuracy/bias contamination and conformance to field and laboratory QC sample frequency requirements were evaluated and considered during the data verification/validation. There are no limitations on the data usage based on accuracy/bias contamination acceptance criteria (Tierra 2017).
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Representativeness is the degree to which a dataset accurately represents the characteristics of a population, parameter conditions at a sample point, or an environmental condition. Data are representative when all sampling and analyses are performed in compliance with appropriate procedures. Performing sample analyses within the specified holding times and adhering to sample handling and storage requirements are also critical elements in obtaining representative sample data. These elements were evaluated and considered during data verification/validation. Acceptance criteria for sample handling, storage and holding times are provided in Worksheets #19-2 and #19-3 of the QAPP (Tierra 2014a). There are no limitations on the data usage based on representativeness acceptance criteria (Tierra 2017).

Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	The targeted field and analytical completeness goals were 90% for the Fish Program; these goals were met or exceeded. Field completeness was 99.1% for the fish sampling program.
Comparability - Indicate any problems associated with data comparability.	Comparability was achieved by using the same EPA approved methods and same laboratories. With respect to the results of the fish data, there were no limitations on the data usage based on comparability acceptance criteria. Comparability expresses the confidence with which one set of data can be compared to another to measure the same property. Data can be compared to the degree that their accuracy, precision, and representativeness are known and documented. Data are comparable if QC measures such as collection techniques, measurement procedures, analytical methods, and reporting units are equivalent for the samples within a sample set. Data subject to established quality assurance/quality control (QA/QC) measures are deemed more reliable and, therefore, more comparable, than data generated without such measures. Consistent application of prescribed procedures was monitored throughout the crab and clam program. Likewise, specific data verification/validation protocols were consistently applied to all data generated under this program to understand and document accuracy/bias, accuracy/bias contamination, precision, sensitivity and representativeness, thereby establishing comparability. During data validation activities, analytical data were evaluated using a defined set of guidelines and acceptance criteria. In addition, data validation qualifiers were consistently applied to the analytical data generated during the crab and clam program. The data validation process serves to increase the degree of data comparability achieved. There are no limitations on the fish data usage based on comparability acceptance criteria (Tierra 2017).
Were the DQOs specified in the QAPP satisfied?	Yes
Summarize the effect of DQO issues on the risk assessment, if applicable.	None
Data Validation and Interpretation	
What are the data validation requirements?	Data validation requirements were defined in Appendix C of the QAPP (Tierra 2014a).
What method or guidance was used to validate the data?	Data validation guidance and processes were included in Appendix C and Worksheets #34, #35, and #36 of the QAPP (Tierra 2014a).

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Fish Tissue

Activity	Comment
Data Validation and Interpretation (continued)	
Was the data validation method consistent with guidance? Discuss any discrepancies.	Yes
Were all data qualifiers defined? Discuss those which were not.	Yes, all validation based data qualifiers were defined in the data validation reports provided in the appendices in the associated data report.
Which qualifiers represent usable data?	All qualifiers except 'R' represent usable data.
Which qualifiers represent unusable data?	The rejected (R flagged) results were not considered usable per cited validation guidance and EPA directives.
How are tentatively identified compounds (TICs) handled?	TICs were not quantitatively evaluated in the risk assessment.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	There is no impact to risk assessment due to data usability.
Additional notes:	Split sample analysis conducted by EPA resulted in a finding that the analytical results for fish tissue samples were comparable when compared to results from the EPA laboratory (Louis Berger 2017).

Note: The purpose of this Worksheet is to succinctly summarize the data usability analysis and conclusions. Reference specific pages in the Remedial Investigation and/or the Risk Assessment text to further expand on the information presented here.

Sources:

Tierra 2014a. Newark Bay Study Area Fish Sampling and Analysis Quality Assurance Project Plan, Revision 2, October.
Tierra 2014b. Crab and Clam Sampling and Analysis Quality Assurance Project Plan, Revision 3a, August.

Tierra 2017. Newark Bay Study Area Fish Data Report, Appendix F: Data Quality Usability Assessment Report, Revision 1, February.

Normandeau 2017. Newark Bay Study Area Environmental Sample Collection Report, June.

Louis Berger. 2017. Final Oversight Report: 2014-2016 Softshell Clam, Blue Crab, and Fish Oversight; 2015 Sediment Quality Triad Oversight; Newark Bay Study Area RI/FS Oversight. June.

Attachment A-3

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Sediment and Porewater Chemistry, Toxicity Testing, And Benthic Invertebrate Community Analysis

Activity	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	Sediment, porewater, and benthic invertebrate community data were collected during the 2015 Sediment Quality Triad (SQT) program as described in the approved QAPP (Tierra 2015), the field report (GSH 2017a) and the data usability report (GSH 2017b). Sampling problems and field conditions did not affect data usability for the SQT program.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were representative of receptor exposure for each medium in accordance with the EPA approved QAPP (Tierra 2015). Sediment grab samples were collected from 43 stations over 13 days. SQT analyses (sediment chemistry, toxicity testing, and benthic invertebrate community analysis) and porewater chemistry analyses were conducted at 30 of these stations. Bioaccumulation tests were conducted at a subset of eight stations. In addition to the sediment grab samples, surface water was collected from one location in northern Newark Bay for use in the ex-situ porewater passive sampling study.
Assess the effect of field QC results on data useability.	During data validation activities, analytical data were evaluated in accordance with the verification/validation protocols specified in Worksheet #34, Worksheet #35, and Worksheet #36 of the QAPP (Tierra 2015). In addition, data validation qualifiers were consistently applied to the analytical data generated during the SQT program.
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues did not affect usability for risk assessment.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Definitive analytical methods were selected in the EPA approved QAPP based on DUOs and DQOs, including risk assessment. See Worksheets #11 of the QAPP (Tierra 2015).

Were detection limits adequate?	Detection limits generally achieved the risk-based screening levels or Project Action Levels or were the best available using EPA approved analytical methods. See Worksheet #15-1 through #15-4 of the QAPP (Tierra 2015).
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	All methods provided usable results for risk assessment.
Data Quality Objectives	
Precision - How were duplicates handled?	Acceptance criteria for field and laboratory duplicates are provided in Worksheet #12-2 through #12-4 of the QAPP (Tierra 2015). There are no limitations on data usage based on precision quality acceptance criteria (GSH 2017b).

Activity	Comment
Data Quality Objectives (continued)	
Accuracy - How were split samples handled?	Measurement performance criteria for accuracy/bias contamination are outlined in Worksheets #12-1 through #12-4 of the QAPP (Tierra 2015). Acceptability of quality control (QC) results for accuracy/bias contamination and conformance to field and laboratory QC sample frequency requirements were evaluated and considered during the data verification/validation. There are no limitations on the data usage based on accuracy/bias contamination acceptance criteria (GSH 2017b).
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Representativeness is the degree to which a dataset accurately represents the characteristics of a population, parameter conditions at a sample point, or an environmental condition. Data are representative when all sampling and analyses are performed in compliance with appropriate procedures. Performing sample analyses within the specified holding times and adhering to sample handling and storage requirements are also critical elements in obtaining representative sample data. These elements were evaluated and considered during data verification/validation. Acceptance criteria for sample handling, storage and holding times are provided in Worksheets #19-1 through #19-4 of the QAPP (Tierra 2015). There are no limitations on the data usage based on representativeness acceptance criteria (GSH 2017b).
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	The targeted field and analytical completeness goals were 90% for the SQT Program; these goals were met or exceeded. The total analytical completeness was obtained using the total sample results for porewater, sediment, and tissue minus the total amount of rejected results. The

	laboratory completed all analyses, but some data were rejected, causing the overall analytical completeness to be 96.4%. The analytical completeness achieved for porewater samples was 99.0%. The analytical completeness achieved for sediment samples was 95.1%. The analytical completeness for tissue samples was 97.5%. The total analytical completeness for all matrices analyzed is 96.4% (GSH 2017b).
Comparability - Indicate any problems associated with data comparability.	. Comparability expresses the confidence with which one set of data can be compared to another to measure the same property. Data can be compared to the degree that their accuracy, precision, and representativeness are known and documented. Data are comparable if QC measures such as collection techniques, measurement procedures, analytical methods, and reporting units are equivalent for the samples within a sample set. Data subject to established quality assurance/quality control (QA/QC) measures are deemed more reliable and, therefore, more comparable, than data generated without such measures. Consistent application of prescribed procedures was monitored throughout the SQT program. Likewise, specific data verification/validation protocols were consistently applied to all data generated under this program to understand and document accuracy/bias, accuracy/bias contamination, precision, sensitivity and representativeness, thereby establishing comparability. During data validation activities, analytical data were evaluated using a defined set of guidelines and acceptance criteria. In addition, data validation qualifiers were consistently applied to the analytical data generated during the SQT program. The data validation process serves to increase the degree of data comparability achieved. There are no limitations on the data usage based on comparability acceptance criteria (GSH 2017b).
Were the DQOs specified in the QAPP satisfied?	Yes
Summarize the effect of DQO issues on the risk assessment, if applicable.	None
Data Validation and Interpretation	
What are the data validation requirements?	Data validation requirements were defined in Appendix E of the QAPP (Tierra 2015).
What method or guidance was used to validate the data?	Data validation guidance and processes were included in Appendix E and Worksheets #34, #35, and #36 of the QAPP (Tierra 2015).

DATA USABILITY WORKSHEET
Site: Newark Bay Study Area
Medium: Sediment and Porewater Chemistry, Toxicity Testing, And Benthic Invertebrate Community Analysis

Activity	Comment
Data Validation and Interpretation (continued)	
Was the data validation method consistent with guidance? Discuss any discrepancies.	Yes
Were all data qualifiers defined? Discuss those which were not.	Yes, all validation based data qualifiers were defined in the data validation reports provided in the appendices in the associated data report.
Which qualifiers represent useable data?	All qualifiers except 'R' represent usable data.
Which qualifiers represent unusable data?	The rejected (R flagged) results were not considered usable per cited validation guidance and EPA directives.
How are tentatively identified compounds (TICs) handled?	TICs were not quantitatively evaluated in the risk assessment.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	There is no impact to risk assessment due to data usability.
Additional notes:	Split sample analysis conducted by EPA resulted in a finding of comparability for all media except sediment (Berger 2017a). It was concluded that there was analytical bias for PAHs and PCBs in SQT sediment samples when compared to results from the EPA laboratory (Louis Berger 2017b). All SQT sediment samples were reanalyzed for PAHs and PCBs. With the exception of holding times, all procedures were conducted according to the approved QAPP. There are no limitations on usability of the reanalyzed data.

Note: The purpose of this Worksheet is to succinctly summarize the data usability analysis and conclusions. Reference specific pages in the Remedial Investigation and/or the Risk Assessment text to further expand on the information presented here.

Sources:

Tierra 2015. Newark Bay Study Area Sediment Quality Triad and Porewater Sampling and Analysis, Quality Assurance Project Plan, Revision 2, August.

GSH 2017a. Newark Bay Study Area Sediment Quality Triad and Porewater Field Report. Revision 1, September.

GSH 2017b. Newark Bay Study Area Sediment Quality Triad and Porewater Data Report, Appendix H: Data Quality Usability Assessment Report, Revision 2, September.

Louis Berger. 2017a. Final Oversight Report: 2014-2016 Softshell Clam, Blue Crab, and Fish Oversight; 2015 Sediment Quality Triad Oversight; Newark Bay Study Area RI/FS Oversight. June.

Louis Berger. 2017b. Final Oversight Report: 2016 Phase III Sediment Investigation Oversight; Newark Bay Study Area RI/FS Oversight. December.

Attachment A-4

Data Usability Worksheet

Study: Baseline Human Health Risk Assessment for the Lower Passaic River Study Area
Media: Sediment and Surface Water Data Collected by
Sources: See last page of worksheet

Activity	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data usability.	Sampling problems and field conditions did not significantly affect data usability for LPR RI/FS program.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were selected to be representative of each medium for contaminant nature and extent characterization in each EPA approved QAPP.
Assess the effect of field QC results on data usability.	Field QC sample results were evaluated during data validation and appropriate data qualifications were made per the governing EPA approved QAPPs.
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues did not affect the risk assessment.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Definitive analytical methods were selected in each EPA approved QAPP based on DUOs and DQOs, including risk assessment. See Worksheets #11, 15, and 23 in the Section 9 referenced QAPPs.
Were detection limits adequate?	Detection limits generally achieved the risk based screening levels or Project Action Levels for each program, or were the best available using EPA approved analytical methods. See Worksheet #15 in the Section 9 referenced QAPPs. See sensitivity discussion in Section 4 of each Section 9 referenced Program Characterization Summary or RI report.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	LRC task analytical techniques that were insufficiently sensitive or selective, such as Aroclors by EPA Method 8082 and pesticides by EPA Method 8081 were not used in the BHHRA, in favor of the HRGC/HRMS methods for these analyte groups. All other methods provided usable results for risk assessment.
Data Quality Objectives	
Precision - How were duplicates handled?	Field duplicate results which exceeded precision criteria per the approved QAPPs were qualified per EPA validation guidance. See Worksheets #28 in the Section 9 referenced QAPPs and precision subsection in Section 4 of each Section 9 referenced Program Characterization Summary or RI report. See Section 3.2.1 of the draft BHHRA for the risk assessment treatment of duplicates.
Accuracy - How were split samples handled?	Split samples were evaluated by EPA and complete split sample results were not provided to the CPG. Limited split sample result problems

DATA USEABILITY WORKSHEET (continued)
Site: Lower Passaic River Study Area
Medium: Sediment and Surface Water

Activity	Comment
	presented by EPA resulted in data modifications. See comparability section below.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Sediment sample representativeness was impacted by aliquot size reduction (to the project minimum of 1g) required by high analyte concentrations for many organic analytes. High moisture content of many samples resulted in data qualification and may have impacted subsample representativeness. Seven percent of the SV CWCM program SVOC results were rejected due to holding time exceedance. See Section 4 of each referenced Program Characterization Summary or RI report.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	Completeness for each program was excellent and less than 1% of results were rejected as unusable. See Section 4 of each referenced Program Characterization Summary or RI report.
Comparability - Indicate any problems associated with data comparability.	Comparability was achieved by using the same EPA approved methods and same laboratories when possible throughout all the LPR programs. Data comparability for the 2008 LRC PCDD/PCDF analyses from the CAS-Houston laboratory was questioned by EPA based on split sample results. Adjustments to results were made in 2011 per EPA directive as explained in Section 2.11.4.3 of the LRC Characterization Summary. Original results were flagged F to indicate they were unusable per the EPA directive. The laboratory used for PCDD/PCDF analysis during the LRC was not used in subsequent programs and no further significant problems with split sample results were noted by EPA.
Were the DQOs specified in the QAPP satisfied?	Yes
Summarize the effect of DQO issues on the risk assessment, if applicable.	None
Data Validation and Interpretation	
What are the data validation requirements?	Data validation requirements were defined in Worksheets #34, 35, 36, and 37 of each program approved QAPP.
What method or guidance was used to validate the data?	Current EPA Region II data validation guidance, as detailed per Worksheet#36 in each program QAPP, was used to validate the data.
Was the data validation method consistent with guidance? Discuss any discrepancies.	Yes. If a Region II SOP was not available for a specific method, and SOP for a similar method was adopted for guidance. Validation criteria include professional judgment where appropriate and necessary.
Were all data qualifiers defined? Discuss those which were not.	Yes, all validation based data qualifiers were defined in the data validation memoranda, provided in the appendices to each program report.
Which qualifiers represent useable data?	All qualifiers except ‘R’ and ‘F’ represent usable

DATA USEABILITY WORKSHEET (continued)
Site: Lower Passaic River Study Area
Medium: Sediment and Surface Water

Activity	Comment
	data.
Which qualifiers represent unusable data?	The rejected (R flagged) and F flagged (see discussion under Comparability above) results were not considered usable per cited validation guidance and EPA directives.
How are tentatively identified compounds handled?	The accuracy of mass spectral identification for TICs was not verified during full or limited data validation. TICs were not quantitatively evaluated in the risk assessment.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	An insignificant portion of data (<<1%) was excluded from risk assessment because it was unusable, therefore the impact was minimal. The impact of the increased concentration adjustments to PCDD/PCDF results from the 2008 LRC required by EPA's interpretation of the data may be significant.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data usability analysis and conclusions.

Sources:

[in prep]-a. Lower Passaic River Study Area RI/FS. Low Resolution Coring, Second Supplemental Sampling Program Characterization Summary, Draft. Prepared for Lower Passaic River Cooperating Parties Group. Chelmsford, MA. Submitted to USEPA October 22, 2014.

[in prep]-b. Lower Passaic River Study Area RI/FS. Small Volume Chemical Water Column Monitoring Sampling Program Characterization Summary, Draft. Prepared for Lower Passaic River Cooperating Parties Group. Chelmsford, MA. Submitted to USEPA February 18, 2014.

[in prep]-c. High Volume Chemical Water Column Monitoring Sampling Program Characterization Summary, Draft. Prepared for Lower Passaic River Cooperating Parties Group. Chelmsford, MA. Submitted to USEPA February 27, 2014.

2011d. Lower Passaic River Study Area RI/FS. Low Resolution Coring Characterization Summary. Lower Passaic River Study Area RI/FS. Prepared for Lower Passaic River Cooperating Parties Group. Final. Chelmsford, MA. July 26, 2011.

2014b. Lower Passaic River Study Area RI/FS. Low Resolution Coring, Supplemental Sediment Program Characterization Summary. Lower Passaic River Study Area RI/FS. Prepared for Lower Passaic River Cooperating Parties Group. Final. Chelmsford, MA. April 23, 2014.

Attachment A-5

Table 2
Newark Bay Shoreline Segments with Access and Corresponding Sediment Sample Numbers from the Crab/Clam QAPP and SQT QAPP

NBSA Segment Number		City/State	Description	Length[a] (miles)	Shoreline Access Characterization and Zoning Category	Exposure Route	Crab/Clam Sample Number[b]	SQT QAPP Sample Number[c]	Total Sediment Samples for Accessible Segments
Problem Formulation	Recon-naissance Survey Report								
1	20	Kearny, NJ	Kearny Point	0.4	Industrial/Manufacturing/ Commercial Zoning – With Access (I)	Incidental ingestion and dermal contact	**122A*; 122B*; 122C***	**164**	**4**
3	19	Jersey City, NJ	Droyers Point	0.1	Residential Zoning – With Recreational Access (RA)	Incidental ingestion and dermal contact	NA	**166**	**1**
5	17	Jersey City, NJ	The Thomas M. Gerrity Athletic	0.2	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	**123A*; 123B**	**136[d]**	**3**
7	16	Bayonne, NJ	Route 440, south of railroad bridge	0.1	Residential Zoning – With Recreational Access (CC)	Incidental ingestion and dermal contact	NA	**167**	**1**
9	15	Bayonne, NJ	Rutkowski Park	0.6	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	NA	**168[e]; 169[f]**	**2**
11	12/13	Bayonne, NJ	Park Drive to Benmore Terrace	0.1	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	NA	**140**	**1**
13		Bayonne, NJ	W 31st Street to W 30th Street	0.1	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	**125**	NA	**1**
15	10/11	Bayonne, NJ	Bayonne High School to W 24th Street	0.4	Residential Zoning – With Recreational Access (rocky shoreline; elevation differences between land and water) (R)	Incidental ingestion and dermal contact	NA	**142[g]; 170[h]**	**2**
17	9	Bayonne, NJ	W 22nd Street	0.1	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	NA	**171**	**1**
19	8	Bayonne, NJ	W 21st Street to Marina	0.8	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	**127A**	**143**	**2**
21	6	Bayonne, NJ	W 8th Street to Marina 2	0.2	Residential Zoning – With Recreational Access (R)	Incidental ingestion and dermal contact	**127B**	**145; 172**	**3**
23	5	Bayonne, NJ	Community Commercial Area	0.3	Residential Zoning – With Recreational Access (CC)	Incidental ingestion and dermal contact	NA	**173**	**1**
25	4	Bayonne, NJ	Waterfront Development District	0.8	Industrial/Manufacturing/ Commercial Zoning – With Access (WDD)	Incidental ingestion and dermal contact	NA	**174; 178[i]**	**2**
26	2b	Staten Island, NY	Staten Island (small section by bridge)	0.1	Industrial/Manufacturing/ Commercial Zoning – With Access (M)	Incidental ingestion and dermal contact	NA	**175**	**1**
28	1	Staten Island, NY	Staten Island West	1.6	Industrial/Manufacturing/ Commercial Zoning – With Access (M)	Incidental ingestion and dermal contact	**129; 134***	**149**	**3**
29	32	Staten Island, NY	Shooters Island	0.8	Industrial/Manufacturing/ Commercial Zoning – With Access (M)	Incidental ingestion and dermal contact	NA	**176**	**1**

Table 2
Newark Bay Shoreline Segments with Access and Corresponding Sediment Sample Numbers from the Crab/Clam QAPP and SQT QAPP

NBSA Segment Number									
Problem Formulation	Recon-naissance Survey Report	City/State	Description	Length[a] (miles)	Shoreline Access Characterization and Zoning Category	Exposure Route	Crab/Clam Sample Number[b]	SQT QAPP Sample Number[c]	Total Sediment Samples for Accessible Segments
30	29/30	Elizabeth, NJ	MRC	0.4	Residential Zoning – With Recreational Access (MRC)	Incidental ingestion and dermal contact	**135**	NA	**1**
32	25/26	Elizabeth, NJ	Kapkowski	1.1	Industrial/ Manufacturing/ Commercial Zoning – With Access (KA)	Incidental ingestion and dermal contact	**130; 131A; 131B**	**155**	**4**
34	22	Newark, NJ	Area near highway and railroad bridges	0.9	Industrial/Manufacturing/ Commercial Zoning – With Access (I)	Incidental ingestion and dermal contact	**132A; 133**	**160; 161**	**4**
36	21	Newark, NJ	North of Hess Plant	0.2	Industrial/Manufacturing/ Commercial Zoning – With Access (I)	Incidental ingestion and dermal contact	NA	NA	**0**
NA	31	Elizabeth, NJ	Elizabeth Marina Park area	0.12	Industrial/Commercial (I)	Incidental ingestion and dermal contact	NA	**177**	**1**
Total				**9.42**			**16**	**23**	**39**

Notes:
1. Crab/Clam sampling stations 124 and 132B have not been included as they are not within the boundaries of shoreline segments identified as having human access in the NBSA shoreline access characterization map (Figure B6) of the NBSA Problem Formulation (June 2013).

[a] Identified in Table B1 of the NBSA Problem Formulation (June 2013).

[b] Identified in Figure 2-1 of the NJDEP Permit Submittal document dated February 26, 2015.

[c] Identified in Figure 1 of the NBSA Sediment Quality Triad and Porewater Sampling and Analysis (August 2015).

[d] Crab/Clam samples 123A and 123B, and SQT QAPP sample 136 provide data for the accessible shoreline areas near The Thomas M. Gerrity Athletic Complex.

[e] SQT QAPP sample 168 provides data for the recreational area near the NE corner of the Bay (just north of the parks in Bayonne).

[f] SQT QAPP sample 169 provides data for accessible shoreline areas near Richard A. Rutkowski Park.

[g] SQT QAPP sample 142 provides data for the beach-like area near Bayonne High School.

[h] SQT QAPP sample 170 is proposed to be collected near the northern shoreline area of the trailer park. As seen in Appendix B-7 of the NBSA Reconnaissance Survey Report (April 2015) and in Google Earth images of the trailer park shoreline it is dominated by riprap. SQT QAPP sample 170 is proposed to be collected in an area that is most accessible by humans.

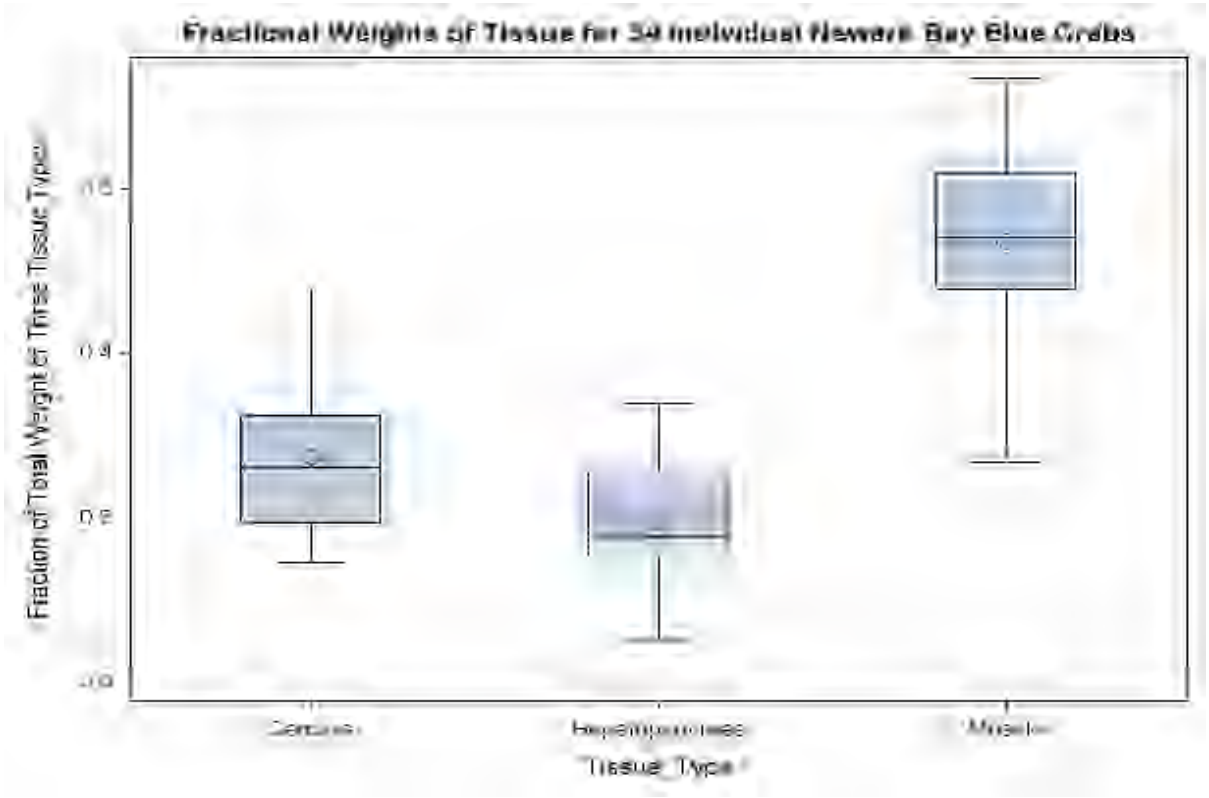
[i] SQT QAPP sample 146 will not be used for the BHHRA due to its location on a transitional slope; a new sample closer to the shoreline will be added.

* = The sample location may not be within the exact segment boundary, however it is within a reasonable distance to be considered relevant and useful
(CC) = Community Commercial
(I) = Industrial
(KA) = Kapkowski Road Redevelopment Area
(M) = Manufacturing
(MRC) = Manufacturing, Research, Commercial
(R) = Residential
(RA) = Redevelopment Area
(WDD) = Waterfront Development District

Attachment A-6

These data are the sample weights of the tissue types from individual crabs collected September 10 and 11, 2014 from Newark Bay. Per Bryan at Normandeau, after this date the crab processing was modified, therefore tissue weights measured after that cannot be used to estimate fractional weights of each tissue type.

Final Fractional Averages computed from all data, no apparent outliers in the data set.



Page number (of pdf'd field	Station	Unique ID	Tissue Type	Tissue Mass (g)	Total Mass of Crab (g)	Fractional Mass
1	129	1	Hepatopancreas	7.0	31.5	0.222
1	129	1	Carcass	6.1	31.5	0.194
1	129	1	Muscle	18.4	31.5	0.584
1	129	2	Hepatopancreas	8.4	42.9	0.196
1	129	2	Carcass	6.2	42.9	0.145
1	129	2	Muscle	28.3	42.9	0.660
1	129	3	Hepatopancreas	20.3	64.8	0.313
1	129	3	Carcass	11.1	64.8	0.171
1	129	3	Muscle	33.4	64.8	0.515
1	129	4	Hepatopancreas	10.3	35.8	0.288
1	129	4	Carcass	6.0	35.8	0.168
1	129	4	Muscle	19.5	35.8	0.545
1	129	5	Hepatopancreas	12.5	76.9	0.163
1	129	5	Carcass	22.5	76.9	0.293
1	129	5	Muscle	41.9	76.9	0.545
1	129	6	Hepatopancreas	7.6	36.1	0.211
1	129	6	Carcass	8.9	36.1	0.247
1	129	6	Muscle	19.6	36.1	0.543
2	129	7	Hepatopancreas	6.0	35.8	0.168
2	129	7	Carcass	11.6	35.8	0.324
2	129	7	Muscle	18.2	35.8	0.508
2	129	8	Hepatopancreas	6.4	35.5	0.180
2	129	8	Carcass	10.2	35.5	0.287
2	129	8	Muscle	18.9	35.5	0.532
2	129	9	Hepatopancreas	6.7	38.3	0.175
2	129	9	Carcass	12.2	38.3	0.319
2	129	9	Muscle	19.4	38.3	0.507
2	129	10	Hepatopancreas	7.3	48.1	0.152
2	129	10	Carcass	20.6	48.1	0.428
2	129	10	Muscle	20.2	48.1	0.420
2	129	11	Hepatopancreas	4.9	42.7	0.115
2	129	11	Carcass	10.3	42.7	0.241
2	129	11	Muscle	27.5	42.7	0.644
2	129	12	Hepatopancreas	5.2	31.3	0.166
2	129	12	Carcass	7.1	31.3	0.227
2	129	12	Muscle	19.0	31.3	0.607
3	129a	13	Hepatopancreas	1.5	29.9	0.050
3	129a	13	Carcass	11.1	29.9	0.371
3	129a	13	Muscle	17.3	29.9	0.579
3	129a	14	Hepatopancreas	8.5	46.4	0.183
3	129a	14	Carcass	7.7	46.4	0.166
3	129a	14	Muscle	30.2	46.4	0.651
3	129a	15	Hepatopancreas	4.2	37.4	0.112
3	129a	15	Carcass	7.4	37.4	0.198
3	129a	15	Muscle	25.8	37.4	0.690
3	129a	16	Hepatopancreas	9.1	35.7	0.255
3	129a	16	Carcass	11.1	35.7	0.311
3	129a	16	Muscle	15.5	35.7	0.434
3	129a	17	Hepatopancreas	5.6	64.1	0.087
3	129a	17	Carcass	11.4	64.1	0.178
3	129a	17	Muscle	47.1	64.1	0.735
3	129a	18	Hepatopancreas	12.7	62.7	0.203
3	129a	18	Carcass	11.6	62.7	0.185
3	129a	18	Muscle	38.4	62.7	0.612
4	129a	19	Hepatopancreas	13	45.4	0.286
4	129a	19	Carcass	8	45.4	0.176
4	129a	19	Muscle	24.4	45.4	0.537
4	129a	20	Hepatopancreas	14.1	78.8	0.179

Page number (of pdf'd field	Station	Unique ID	Tissue Type	Tissue Mass (g)	Total Mass of Crab (g)	Fractional Mass
4	129a	20	Carcass	14.7	78.8	0.187
4	129a	20	Muscle	50	78.8	0.635
4	129a	21	Hepatopancreas	6.3	39.8	0.158
4	129a	21	Carcass	14.5	39.8	0.364
4	129a	21	Muscle	19	39.8	0.477
4	129a	22	Hepatopancreas	5	64.2	0.078
4	129a	22	Carcass	14.1	64.2	0.220
4	129a	22	Muscle	45.1	64.2	0.702
4	129a	23	Hepatopancreas	13.1	88.1	0.149
4	129a	23	Carcass	23.5	88.1	0.267
4	129a	23	Muscle	51.5	88.1	0.585
4	129a	24	Hepatopancreas	10.3	37.7	0.273
4	129a	24	Carcass	8.9	37.7	0.236
4	129a	24	Muscle	18.5	37.7	0.491
5	129a	25	Hepatopancreas	6.3	37.6	0.168
5	129a	25	Carcass	12.3	37.6	0.327
5	129a	25	Muscle	19.0	37.6	0.505
5	129a	26	Hepatopancreas	15.2	45	0.338
5	129a	26	Carcass	13.8	45	0.307
5	129a	26	Muscle	16.0	45	0.356
5	129a	27	Hepatopancreas	4.4	29.9	0.147
5	129a	27	Carcass	14.3	29.9	0.478
5	129a	27	Muscle	11.2	29.9	0.375
5	129a	28	Hepatopancreas	7.4	35.6	0.208
5	129a	28	Carcass	9.1	35.6	0.256
5	129a	28	Muscle	19.1	35.6	0.537
5	129a	29	Hepatopancreas	4.7	40.4	0.116
5	129a	29	Carcass	10.7	40.4	0.265
5	129a	29	Muscle	25.0	40.4	0.619
6	131	30	Hepatopancreas	5.4	18.7	0.289
6	131	30	Carcass	8.3	18.7	0.444
6	131	30	Muscle	5.0	18.7	0.267
6	131	31	Hepatopancreas	4.5	29.5	0.153
6	131	31	Carcass	13.7	29.5	0.464
6	131	31	Muscle	11.3	29.5	0.383
6	131	32	Hepatopancreas	8.0	48.3	0.166
6	131	32	Carcass	10.2	48.3	0.211
6	131	32	Muscle	30.1	48.3	0.623
6	131	33	Hepatopancreas	12.0	44.1	0.272
6	131	33	Carcass	12.8	44.1	0.290
6	131	33	Muscle	19.3	44.1	0.438
6	131	34	Hepatopancreas	8.7	26.7	0.326
6	131	34	Carcass	9.1	26.7	0.341
6	131	34	Muscle	8.9	26.7	0.333

Station	Tissue Type	Mean Fractional Weights
129	Carcass	0.254
129	Hepatopancreas	0.196
129	Muscle	0.551
129a	Carcass	0.264
129a	Hepatopancreas	0.176
129a	Muscle	0.560
131	Carcass	0.350
131	Hepatopancreas	0.241
131	Muscle	0.409
All Data	**Carcass**	**0.273**
	Hepatopancreas	**0.192**
	Muscle	**0.535**

These values, rounded to 2 decimal places, are used as the fractional weights for whole body crab calculations.

0.27	**Exclude Carcass**
0.19	0.26
0.54	0.74

Page	Station	Crab ID (Unique)	Tissue	Weight (g)
1	129	1	Hepatopancreas	7.0
1	129	1	Carcass	6.1
1	129	1	Muscle	18.4
1	129	2	Hepatopancreas	8.4
1	129	2	Carcass	6.2
1	129	2	Muscle	28.3
1	129	3	Hepatopancreas	20.3
1	129	3	Carcass	11.1
1	129	3	Muscle	33.4
1	129	4	Hepatopancreas	10.3
1	129	4	Carcass	6.0
1	129	4	Muscle	19.5
1	129	5	Hepatopancreas	12.5
1	129	5	Carcass	22.5
1	129	5	Muscle	41.9
1	129	6	Hepatopancreas	7.6
1	129	6	Carcass	8.9
1	129	6	Muscle	19.6
2	129	7	Hepatopancreas	6.0
2	129	7	Carcass	11.6
2	129	7	Muscle	18.2
2	129	8	Hepatopancreas	6.4
2	129	8	Carcass	10.2
2	129	8	Muscle	18.9
2	129	9	Hepatopancreas	6.7
2	129	9	Carcass	12.2
2	129	9	Muscle	19.4
2	129	10	Hepatopancreas	7.3
2	129	10	Carcass	20.6
2	129	10	Muscle	20.2
2	129	11	Hepatopancreas	4.9
2	129	11	Carcass	10.3
2	129	11	Muscle	27.5
2	129	12	Hepatopancreas	5.2
2	129	12	Carcass	7.1
2	129	12	Muscle	19.0
3	129a	13	Hepatopancreas	1.5
3	129a	13	Carcass	11.1
3	129a	13	Muscle	17.3
3	129a	14	Hepatopancreas	8.5
3	129a	14	Carcass	7.7
3	129a	14	Muscle	30.2
3	129a	15	Hepatopancreas	4.2
3	129a	15	Carcass	7.4
3	129a	15	Muscle	25.8
3	129a	16	Hepatopancreas	9.1
3	129a	16	Carcass	11.1
3	129a	16	Muscle	15.5
3	129a	17	Hepatopancreas	5.6
3	129a	17	Carcass	11.4
3	129a	17	Muscle	47.1
3	129a	18	Hepatopancreas	12.7
3	129a	18	Carcass	11.6
3	129a	18	Muscle	38.4
4	129a	19	Hepatopancreas	13
4	129a	19	Carcass	8

Page	Station	Crab ID (Unique)	Tissue	Weight (g)
4	129a	19	Muscle	24.4
4	129a	20	Hepatopancreas	14.1
4	129a	20	Carcass	14.7
4	129a	20	Muscle	50
4	129a	21	Hepatopancreas	6.3
4	129a	21	Carcass	14.5
4	129a	21	Muscle	19
4	129a	22	Hepatopancreas	5
4	129a	22	Carcass	14.1
4	129a	22	Muscle	45.1
4	129a	23	Hepatopancreas	13.1
4	129a	23	Carcass	23.5
4	129a	23	Muscle	51.5
4	129a	24	Hepatopancreas	10.3
4	129a	24	Carcass	8.9
4	129a	24	Muscle	18.5
5	129a	25	Hepatopancreas	6.3
5	129a	25	Carcass	12.3
5	129a	25	Muscle	19.0
5	129a	26	Hepatopancreas	15.2
5	129a	26	Carcass	13.8
5	129a	26	Muscle	16.0
5	129a	27	Hepatopancreas	4.4
5	129a	27	Carcass	14.3
5	129a	27	Muscle	11.2
5	129a	28	Hepatopancreas	7.4
5	129a	28	Carcass	9.1
5	129a	28	Muscle	19.1
5	129a	29	Hepatopancreas	4.7
5	129a	29	Carcass	10.7
5	129a	29	Muscle	25.0
6	131	30	Hepatopancreas	5.4
6	131	30	Carcass	8.3
6	131	30	Muscle	5.0
6	131	31	Hepatopancreas	4.5
6	131	31	Carcass	13.7
6	131	31	Muscle	11.3
6	131	32	Hepatopancreas	8.0
6	131	32	Carcass	10.2
6	131	32	Muscle	30.1
6	131	33	Hepatopancreas	12.0
6	131	33	Carcass	12.8
6	131	33	Muscle	19.3
6	131	34	Hepatopancreas	8.7
6	131	34	Carcass	9.1
6	131	34	Muscle	8.9

Appendix B

APPENDIX B-1
SCREENING LEVELS AND SURROGATES USED IN SELECTION OF COPCS

Table B-1.1 Screening Levels and Surrogates used in Selection of COPCs
Table B-1.2 Detailed Table on Chemicals Flagged for Uncertainty Review
Table B-1.3 Chemicals Flagged for Uncertainty Review

TABLE B-1.1
SCREENING LEVELS AND SURROGATES USED IN SELECTION OF COPCS
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
Inorganics											
Aluminum	7429-90-5	7700	nc	2000	nc	86.9	nc	--	--	--	--
Antimony	7440-36-0	3.1	nc	0.78	nc	0.0348	nc	--	--	--	--
Arsenic, organic	7440-38-2	0.68	ca	0.052	ca	0.00277	ca	--	Arsenic, inorganic	7440-38-2	Inorganic As chosen as surrogate; more toxic than organic As
Arsenic, inorganic	7440-38-2	0.68	ca	0.052	ca	0.00277	ca	Carc	--	--	--
Barium	7440-39-3	1500	nc	380	nc	17.4	nc	--	--	--	--
Beryllium	7440-41-7	16	nc	2.5	nc	0.174	nc	--	--	--	--
Cadmium	7440-43-9	7.1	nc	0.92	nc	0.0869	nc	--	--	--	--
Calcium	7440-70-2	Essential nutrient	--	Essential nutrient	--	Essential nutrient	--	--	--	--	--
Chloride	16887-00-6	Essential nutrient	--	Essential nutrient	--	Essential nutrient	--	--	--	--	--
Chromium [as Cr(III)]	7440-47-3	0.3	ca	0.035	ca	0.00832	ca	--	Chromium (VI)	18540-29-9	Surrogate based on structural and/or toxicological similarities
Chromium (VI)	18540-29-9	0.3	ca	0.035	ca	0.00832	ca	Carc	--	--	--
Cobalt	7440-48-4	2.3	nc	0.6	nc	0.0261	nc	--	--	--	--
Copper	7440-50-8	310	nc	80	nc	3.48	nc	--	--	--	--
Cyanide	57-12-5	2.3	nc	0.15	nc	0.0521	nc	--	--	--	--
Iron	7439-89-6	5500	nc	1400	nc	60.8	nc	--	--	--	--
Lead	7439-92-1	200	nc	15	nc	1.5	nc	--	--	--	--
Magnesium	7439-95-4	Essential nutrient	--	Essential nutrient	--	Essential nutrient	--	--	--	--	--
Manganese	7439-96-5	180	nc	43	nc	12.2	nc	--	--	--	--
Mercury	7439-97-6	1.1	nc	0.063	nc	0.0261	nc	--	--	--	--
Methyl Mercury	22967-92-6	0.78	nc	0.2	nc	0.00869	nc	--	--	--	--
Nickel	7440-02-0	150	nc	39	nc	1.74	nc	--	--	--	--
Phosphorus	7723-14-0	Essential nutrient	--	Essential nutrient	--	Essential nutrient	--	--	--	--	--
Potassium	7440-09-7	Essential nutrient	--	Essential nutrient	--	Essential nutrient	--	--	--	--	--
Selenium	7782-49-2	39	nc	10	nc	0.435	nc	--	--	--	--
Silver	7440-22-4	39	nc	9.4	nc	0.435	nc	--	--	--	--
Sodium	7440-23-5	Essential nutrient	--	Essential nutrient	--	Essential nutrient	--	--	--	--	--
Sulfide	18496-25-8	No screening level	--	No screening level	--	No screening level	--	--	--	--	No screening level; no surrogate identified
Thallium	7440-28-0	0.078	nc	0.02	nc	0.000869	nc	--	--	--	--
Titanium	7440-32-6	14000	nc	0.021	nc	No screening level	--	--	Titanium tetrachloride	7550-45-0	Surrogate based on structural and/or toxicological similarities
Vanadium	7440-62-2	39	nc	8.6	nc	0.438	nc	--	--	--	--
Zinc	7440-66-6	2300	nc	600	nc	26.1	nc	--	--	--	--
Pesticides											
2,4-D	94-75-7	70	nc	17	nc	0.869	nc	--	--	--	--
2,4-DB	94-82-6	190	nc	45	nc	2.61	nc	--	--	--	--
2,4,5-T	93-76-5	63	nc	16	nc	0.869	nc	--	--	--	--
2,4,5-TP (Silvex)	93-72-1	51	nc	11	nc	0.695	nc	--	--	--	--
2,4'-DDD	53-19-0	0.19	nc	0.0063	nc	0.00261	nc	--	4,4'-DDD	72-54-8	USEPA 2015c
2,4'-DDE	3424-82-6	2	ca	0.046	ca	0.0122	ca	--	4,4'-DDE	72-55-9	USEPA 2015c
2,4'-DDT	789-02-6	1.9	ca	0.23	ca	0.0122	ca	--	4,4'-DDT	50-29-3	USEPA 2015c
4-Nitrophenol	100-02-7	1900	nc	580	nc	26.1	nc	--	Phenol	108-95-2	Surrogate based on structural and/or toxicological similarities
4,4'-DDD	72-54-8	0.19	nc	0.0063	nc	0.00261	nc	--	--	--	--
4,4'-DDE	72-55-9	2	ca	0.046	ca	0.0122	ca	--	--	--	--
4,4'-DDT	50-29-3	1.9	ca	0.23	ca	0.0122	ca	--	--	--	--
Aldrin	309-00-2	0.039	ca	0.00092	ca	0.000245	ca	--	--	--	--
alpha-BHC	319-84-6	0.086	ca	0.0072	ca	0.00066	ca	--	--	--	--
Atrazine	1912-24-9	2.4	ca	0.3	ca	0.0181	ca	--	--	--	--
beta-BHC	319-85-7	0.3	ca	0.025	ca	0.00231	ca	--	--	--	--
Chlordane, alpha (cis)	5103-71-9	1.7	ca	0.02	ca	0.0119	ca	--	Chlordane	12789-03-6	Surrogate based on structural and/or toxicological similarities
Chlordane, gamma (trans)	5103-74-2	1.7	ca	0.02	ca	0.0119	ca	--	Chlordane	12789-03-6	Surrogate based on structural and/or toxicological similarities
Delta-BHC	319-86-8	0.086	ca	0.0072	ca	0.00066	ca	--	alpha-BHC	319-84-6	Surrogate based on structural and/or toxicological similarities
Dieldrin	60-57-1	0.034	ca	0.0018	ca	0.00026	ca	--	--	--	--

TABLE B-1.1
SCREENING LEVELS AND SURROGATES USED IN SELECTION OF COPCS
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
Endosulfan I	959-98-8	47	nc	10	nc	0.521	nc	--	Endosulfan	115-29-7	Surrogate based on structural and/or toxicological similarities
Endosulfan II	33213-65-9	47	nc	10	nc	0.521	nc	--	Endosulfan	115-29-7	Surrogate based on structural and/or toxicological similarities
Endosulfan sulfate	1031-07-8	47	nc	10	nc	0.521	nc	--	--	--	--
Endrin	72-20-8	1.9	nc	0.23	nc	0.0261	nc	--	--	--	--
Endrin aldehyde	7421-93-4	1.9	nc	0.23	nc	0.0261	nc	--	Endrin	72-20-8	Surrogate based on structural and/or toxicological similarities
Endrin ketone	53494-70-5	1.9	nc	0.23	nc	0.0261	nc	--	Endrin	72-20-8	Surrogate based on structural and/or toxicological similarities
Gamma-BHC (Lindane)	58-89-9	0.57	ca	0.042	ca	0.00378	ca	--	--	--	--
Heptachlor	76-44-8	0.13	ca	0.0014	ca	0.000924	ca	--	--	--	--
Heptachlor epoxide, cis-	1024-57-3	0.07	ca	0.0014	ca	0.000457	ca	--	Heptachlor epoxide	1024-57-3	Surrogate based on structural and/or toxicological similarities
Heptachlor epoxide, trans-	28044-83-9	0.07	ca	0.0014	ca	0.000457	ca	--	Heptachlor epoxide	1024-57-3	Surrogate based on structural and/or toxicological similarities
Hexachlorobenzene	118-74-1	0.21	ca	0.0098	ca	0.0026	ca	--	--	--	--
Methoxychlor	72-43-5	32	nc	3.7	nc	0.435	nc	--	--	--	--
Mirex	2385-85-5	0.036	ca	0.00088	ca	0.000231	ca	--	--	--	--
Nonachlor, cis-	5103-73-1	1.7	ca	0.02	ca	0.0119	ca	--	Chlordane	12789-03-6	USEPA 2015a
Nonachlor, trans-	39765-80-5	1.7	ca	0.02	ca	0.0119	ca	--	Chlordane	12789-03-6	USEPA 2015a
Oxychlordane	27304-13-8	1.7	ca	0.02	ca	0.0119	ca	--	Chlordane	12789-03-6	USEPA 2015a
PAHs											
1-Methylnaphthalene	90-12-0	18	ca	1.1	ca	0.143	ca	--	--	--	--
1-Methylphenanthrene	832-69-9	1800	nc	180	nc	26.1	nc	--	Anthracene	120-12-7	Surrogate based on structural and/or toxicological similarities
2-Methylnaphthalene	91-57-6	24	nc	3.6	nc	0.348	nc	--	--	--	--
2,3,5-Trimethylnaphthalene	2245-38-7	24	nc	3.6	nc	0.348	nc	--	2-Methylnaphthalene	91-57-6	Surrogate based on structural and/or toxicological similarities
2,6-Dimethylnaphthalene	581-42-0	24	nc	3.6	nc	0.348	nc	--	2-Methylnaphthalene	91-57-6	Surrogate based on structural and/or toxicological similarities
Acenaphthene	83-32-9	360	nc	53	nc	5.21	nc	--	--	--	--
Acenaphthylene	208-96-8	360	nc	53	nc	5.21	nc	--	Acenaphthene	83-32-9	Surrogate based on structural and/or toxicological similarities
Anthracene	120-12-7	1800	nc	180	nc	26.1	nc	--	--	--	--
Benz(a)anthracene	56-55-3	1.1	ca	0.03	ca	0.0416	ca	--	--	--	--
Benzo(a)pyrene	50-32-8	0.11	ca	0.025	ca	0.00416	ca	Carc	--	--	--
Benzo(b)fluoranthene	205-99-2	1.1	ca	0.25	ca	0.0416	ca	--	--	--	--
Benzo(j,k)fluoranthene	--	0.42	ca	0.065	ca	0.00347	ca	--	Benzo(j)fluoranthene	205-82-3	Surrogate based on structural and/or toxicological similarities
Benzo(e)pyrene	192-97-2	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
Benzo(g,h,i)perylene	191-24-2	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
Benzo(k)fluoranthene	207-08-9	11	ca	2.5	ca	0.416	ca	--	--	--	--
C1-Benzanthracenes/Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	USEPA 2015b
C1-Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	Surrogate based on structural and/or toxicological similarities
C1-Dibenzothiophenes	--	78	nc	6.5	nc	0.869	nc	--	Dibenzothiophene	132-65-0	Surrogate based on structural and/or toxicological similarities
C1-Fluoranthenes/Pyrenes	--	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
C1-Fluorenes	--	240	nc	29	nc	3.48	nc	--	Fluorene	86-73-7	Surrogate based on structural and/or toxicological similarities
C1-Naphthalenes	--	24	nc	3.6	nc	0.348	nc	--	2-Methylnaphthalene	91-57-6	Surrogate based on structural and/or toxicological similarities
C1-Phenanthrenes/Anthracenes	--	1800	nc	180	nc	26.1	nc	--	Anthracene	120-12-7	Surrogate based on structural and/or toxicological similarities
C1-Pyrene/Fluoranthenes	--	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
C2-Benzanthracenes/Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	USEPA 2015b
C2-Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	Surrogate based on structural and/or toxicological similarities

TABLE B-1.1
SCREENING LEVELS AND SURROGATES USED IN SELECTION OF COPCS
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
C2-Dibenzothiophenes	--	78	nc	6.5	nc	0.869	nc	--	Dibenzothiophene	132-65-0	Surrogate based on structural and/or toxicological similarities
C2-Fluoranthenes/Pyrenes	--	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
C2-Fluorenes	--	240	nc	29	nc	3.48	nc	--	Fluorene	86-73-7	Surrogate based on structural and/or toxicological similarities
C2-Naphthalenes	--	24	nc	3.6	nc	0.348	nc	--	2-Methylnaphthalene	91-57-6	USEPA 2015b
C2-Phenanthrenes/Anthracenes	--	1800	nc	180	nc	26.1	nc	--	Anthracene	120-12-7	Surrogate based on structural and/or toxicological similarities
C3-Benzanthracenes/Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	USEPA 2015b
C3-Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	Surrogate based on structural and/or toxicological similarities
C3-Dibenzothiophenes	--	78	nc	6.5	nc	0.869	nc	--	Dibenzothiophene	132-65-0	Surrogate based on structural and/or toxicological similarities
C3-Fluoranthenes/Pyrenes	--	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
C3-Fluorenes	--	240	nc	29	nc	3.48	nc	--	Fluorene	86-73-7	Surrogate based on structural and/or toxicological similarities
C3-Naphthalenes	--	24	nc	3.6	nc	0.348	nc	--	2-Methylnaphthalene	91-57-6	USEPA 2015b
C3-Phenanthrenes/Anthracenes	--	1800	nc	180	nc	26.1	nc	--	Anthracene	120-12-7	Surrogate based on structural and/or toxicological similarities
C4-Benzanthracenes/Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	Surrogate based on structural and/or toxicological similarities
C4-Chrysenes	--	110	ca	25	ca	4.16	ca	--	Chrysene	218-01-9	Surrogate based on structural and/or toxicological similarities
C4-Dibenzothiophenes	--	78	nc	6.5	nc	0.869	nc	--	Dibenzothiophene	132-65-0	Surrogate based on structural and/or toxicological similarities
C4-Naphthalenes	--	24	nc	3.6	nc	0.348	nc	--	2-Methylnaphthalene	91-57-6	USEPA 2015b
C4-Phenanthrenes/Anthracenes	--	1800	nc	180	nc	26.1	nc	--	Anthracene	120-12-7	Surrogate based on structural and/or toxicological similarities
Chrysene	218-01-9	110	ca	25	ca	4.16	ca	--	--	--	--
Dibenz(a,h)anthracene	53-70-3	0.11	ca	0.025	ca	0.00416	ca	--	--	--	--
Fluoranthene	206-44-0	240	nc	80	nc	3.48	nc	--	--	--	--
Fluorene	86-73-7	240	nc	29	nc	3.48	nc	--	--	--	--
Indeno(1,2,3-c,d)-pyrene	193-39-5	1.1	ca	0.25	ca	0.0416	ca	--	--	--	--
Naphthalene	91-20-3	3.8	ca	0.17	ca	1.74	nc	--	--	--	--
Perylene	198-55-0	180	nc	12	nc	2.61	nc	--	Pyrene	129-00-0	Surrogate based on structural and/or toxicological similarities
Phenanthrene	85-01-8	1800	nc	180	nc	26.1	nc	--	Anthracene	120-12-7	Surrogate based on structural and/or toxicological similarities
Pyrene	129-00-0	180	nc	12	nc	2.61	nc	--	--	--	--
Other Organics											
4-Chlorophenyl phenyl ether	7005-72-3	No screening level	--	No screening level	--	No screening level	--	--	--	--	No screening level; no surrogate identified
1,1-Dichloroethane	75-34-3	3.6	ca	2.8	ca	0.73	ca	--	--	--	--
1,1-Dichloroethene	75-35-4	23	nc	28	nc	4.35	nc	--	--	--	--
1,1,1-Trichloroethane	71-55-6	810	nc	800	nc	174	nc	--	--	--	--
1,1,2-Trichloroethane	79-00-5	0.15	nc	0.041	nc	0.073	ca	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	0.6	ca	0.076	ca	0.0208	ca	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	0.0053	ca	0.00033	ca	0.0052	ca	--	--	--	--
1,2-Dibromoethane	106-93-4	0.036	ca	0.0075	ca	0.00208	ca	--	--	--	--
1,2-Dichlorobenzene	95-50-1	180	nc	30	nc	7.82	nc	--	--	--	--
1,2-Dichloroethane	107-06-2	0.46	ca	0.17	ca	0.0457	ca	--	--	--	--
1,2-Dichloropropane	78-87-5	1.6	nc	0.82	nc	0.112	ca	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	0.68	ca	0.078	ca	0.0052	ca	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	6.3	nc	0.7	nc	0.0695	nc	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	5.8	nc	0.4	nc	0.143	ca	--	--	--	--
1,2,4,5-Tetrachlorobenzene	95-94-3	2.3	nc	0.17	nc	0.0261	nc	--	--	--	--
1,3-Dichlorobenzene	541-73-1	180	nc	30	nc	7.82	nc	--	1,2-Dichlorobenzene	95-50-1	Surrogate based on structural and/or toxicological similarities
1,4-Dichlorobenzene	106-46-7	2.6	ca	0.48	ca	0.77	ca	--	--	--	--
1,4-Dioxane	123-91-1	5.3	ca	0.46	ca	0.0416	ca	--	--	--	--

TABLE B-1.1
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
2-Chloronaphthalene	91-58-7	480	nc	75	nc	6.95	nc	--	--	--	--
2-Chlorophenol	95-57-8	39	nc	9.1	nc	0.435	nc	--	--	--	--
2-Hexanone	591-78-6	20	nc	3.8	nc	0.435	nc	--	--	--	--
2-Nitroaniline	88-74-4	63	nc	19	nc	0.869	nc	--	--	--	--
2-Nitrophenol	88-75-5	1900	nc	580	nc	26.1	nc	--	Phenol	108-95-2	Surrogate based on structural and/or toxicological similarities
2,3,4,6-Tetrachlorophenol	58-90-2	190	nc	24	nc	2.61	nc	--	--	--	--
2,4-Dichlorophenol	120-83-2	19	nc	4.6	nc	0.261	nc	--	--	--	--
2,4-Dimethylphenol	105-67-9	130	nc	36	nc	1.74	nc	--	--	--	--
2,4-Dinitrophenol	51-28-5	13	nc	3.9	nc	0.174	nc	--	--	--	--
2,4-Dinitrotoluene	121-14-2	1.7	ca	0.24	ca	0.0134	ca	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	630	nc	120	nc	8.69	nc	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	6.3	nc	1.2	nc	0.0869	nc	--	--	--	--
2,6-Dinitrotoluene	606-20-2	0.36	ca	0.049	ca	0.00277	ca	--	--	--	--
2,6,10,14-Tetramethylpentadecane	1921-70-6	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
2,6,10,14-Tetramethylhexadecane	638-36-8	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
3-Nitroaniline	99-09-2	63	nc	19	nc	0.869	nc	--	2-Nitroaniline	88-74-4	Surrogate based on structural and/or toxicological similarities
3,3'-Dichlorobenzidine	91-94-1	1.2	ca	0.13	ca	0.00924	ca	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	No screening level	--	No screening level	--	No screening level	--	--	--	--	No screening level; no surrogate identified
4-Chloro-3-methylphenol	59-50-7	630	nc	140	nc	8.69	nc	--	--	--	--
4-Chloroaniline	106-47-8	2.7	ca	0.37	ca	0.0208	ca	--	--	--	--
4-Methyl-2-pentanone	108-10-1	3300	nc	630	nc	No screening level	--	--	--	--	--
4-Methylphenol	106-44-5	630	nc	190	nc	8.69	nc	--	--	--	--
4-Nitroaniline	100-01-6	25	nc	3.8	ca	0.208	ca	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	0.51	nc	0.15	nc	0.00695	nc	--	--	--	--
Acetone	67-64-1	6100	nc	1400	nc	78.2	nc	--	--	--	--
Acetophenone	98-86-2	780	nc	190	nc	8.69	nc	--	--	--	--
Benzaldehyde	100-52-7	170	ca	19	ca	1.04	ca	--	--	--	--
Benzene	71-43-2	1.2	ca	0.46	ca	0.0756	ca	Carc	--	--	--
Benzidine	92-87-5	0.00053	ca	0.00011	ca	0.0000181	ca	Carc	--	--	--
Benzoic Acid	65-85-0	25000	nc	7500	nc	348	nc	--	--	--	--
Biphenyl	92-52-4	4.7	nc	0.083	nc	0.52	ca	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	310	nc	71	nc	3.48	nc	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	19	nc	5.9	nc	0.261	nc	--	--	--	--
Bis(2-chloroethyl)ether	111-44-4	0.23	ca	0.014	ca	0.00378	ca	--	--	--	--
Bis(2-ethylhexyl)phthalate	117-81-7	39	ca	5.6	ca	0.297	ca	--	--	--	--
Bromochloromethane	74-97-5	15	nc	8.3	nc	No screening level	--	--	--	--	--
Bromoform	75-25-2	19	ca	3.3	ca	0.527	ca	--	--	--	--
Butyl benzyl phthalate	85-68-7	290	ca	16	ca	2.19	ca	--	--	--	--
Caprolactam	105-60-2	3100	nc	990	nc	43.5	nc	--	--	--	--
Carbazole	86-74-8	240	nc	29	nc	3.48	nc	--	Fluorene	86-73-7	Surrogate based on structural and/or toxicological similarities
Carbon disulfide	75-15-0	77	nc	81	nc	8.69	nc	--	--	--	--
Carbon tetrachloride	56-23-5	0.65	ca	0.46	ca	0.0594	ca	--	--	--	--
Chlorobenzene	108-90-7	28	nc	7.8	nc	1.74	nc	--	--	--	--
Chlorodibromomethane	124-48-1	8.3	ca	0.87	ca	0.0495	ca	--	--	--	--
Chloroethane	75-00-3	1400	nc	2100	nc	No screening level	--	--	--	--	--
Chloroform	67-66-3	0.32	ca	0.22	ca	0.134	ca	--	--	--	--
cis-1,2-Dichloroethylene	156-59-2	16	nc	3.6	nc	0.174	nc	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	1.8	ca	0.47	ca	0.0416	ca	--	Dichloropropene, 1,3-	542-75-6	Surrogate based on structural and/or toxicological similarities
Cyclohexane	110-82-7	650	nc	1300	nc	No screening level	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	630	nc	90	nc	8.69	nc	--	--	--	--
Di-n-octyl phthalate	117-84-0	63	nc	20	nc	0.869	nc	--	--	--	--
Dibenzofuran	132-64-9	7.3	nc	0.79	nc	0.0869	nc	--	--	--	--

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Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
Dibenzothiophene	132-65-0	78	nc	6.5	nc	0.869	nc	--	--	--	--
Dibutyltin	1002-53-5	1.9	nc	0.6	nc	0.0261	nc	--	Dibutyltin Compounds	E1790660	Surrogate based on structural and/or toxicological similarities
Dibutyltin Ion	14488-53-0	1.9	nc	0.6	nc	0.0261	nc	--	Dibutyltin Compounds	E1790660	Surrogate based on structural and/or toxicological similarities
Dichlorobromomethane	75-27-4	0.29	ca	0.13	ca	0.0671	ca	--	--	--	--
Dichlorodifluoromethane	75-71-8	8.7	nc	20	nc	17.4	nc	--	--	--	--
Diethyl phthalate	84-66-2	5100	nc	1500	nc	69.5	nc	--	--	--	--
Dimethyl phthalate	131-11-3	5100	nc	1500	nc	69.5	nc	--	Diethyl Phthalate	84-66-2	Surrogate based on structural and/or toxicological similarities
Dotriacontane	544-85-4	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Ethylbenzene	100-41-4	5.8	ca	1.5	ca	0.378	ca	--	--	--	--
Heneicosane	629-94-7	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Hentriacontane	630-04-6	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Heptacosane	593-49-7	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Heptadecane	629-78-7	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
Heptatriacontane, -n	7194-84-5	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Hexachlorobutadiene	87-68-3	1.2	ca	0.14	ca	0.0533	ca	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	0.18	nc	0.041	nc	0.521	nc	--	--	--	--
Hexachloroethane	67-72-1	1.8	ca	0.33	ca	0.0608	nc	--	--	--	--
Hexatriacontane	630-06-8	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Isophorone	78-59-1	570	ca	78	ca	4.38	ca	--	--	--	--
Isopropylbenzene	98-82-8	190	nc	45	nc	8.69	nc	--	--	--	--
Methyl acetate	79-20-9	7800	nc	2000	nc	86.9	nc	--	--	--	--
Methyl bromide	74-83-9	0.68	nc	0.75	nc	0.122	nc	--	--	--	--
Methyl chloride	74-87-3	11	nc	19	nc	No screening level	--	--	--	--	--
Methyl ethyl ketone	78-93-3	2700	nc	560	nc	52.1	nc	--	--	--	--
Methyl-t-butyl ether	1634-04-4	47	ca	14	ca	2.31	ca	--	--	--	--
Methylcyclohexane	108-87-2	650	nc	1300	nc	No screening level	--	--	Cyclohexane	110-82-7	Surrogate based on structural and/or toxicological similarities
Methylene chloride	75-09-2	35	nc	11	ca	0.521	nc	--	--	--	--
Monobutyltin	78763-54-9	1.9	nc	0.6	nc	0.0261	nc	--	Dibutyltin Compounds	E1790660	Surrogate based on structural and/or toxicological similarities
Monobutyltin hydride	2406-65-7	1.9	nc	0.6	nc	0.0261	nc	--	Dibutyltin Compounds	E1790660	Surrogate based on structural and/or toxicological similarities
m,p-Xylenes	179601-23-1	58	nc	19	nc	17.4	nc	--	Xylenes	1330-20-7	Surrogate based on structural and/or toxicological similarities
n-Decane	124-18-5	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
n-Docosane	629-97-0	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
n-Dodecane	112-40-3	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
n-Eicosane	112-95-8	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
n-Hexacosane	630-01-3	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
n-Hexadecane	544-76-3	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
N-nitroso-di-n-propylamine	621-64-7	0.078	ca	0.011	ca	0.000594	ca	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	110	ca	12	ca	0.849	ca	--	--	--	--
n-Nonane	111-84-2	1.1	nc	0.53	nc	NA/TPH	--	--	--	--	--
n-Octacosane	630-02-4	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
n-Octadecane	593-45-3	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities

TABLE B-1.1
SCREENING LEVELS AND SURROGATES USED IN SELECTION OF COPCS
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
n-Tetracosane	646-31-1	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
n-Tetradecane	629-59-4	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
n-Triacontane	638-68-6	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
n-Tridecane	629-50-5	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
n-Undecane	1120-21-4	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
Nitrobenzene	98-95-3	5.1	ca	0.14	ca	0.174	nc	--	--	--	--
Nonacosane	630-03-5	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Nonadecane	629-92-5	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Nonatriacontane	7194-86-7	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
o-Cresol	95-48-7	320	nc	93	nc	4.35	nc	--	--	--	--
o-Xylene	95-47-6	65	nc	19	nc	17.4	nc	--	--	--	--
Octatriacontane	7194-85-6	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Pentachlorophenol	87-86-5	1	ca	0.041	ca	0.0104	ca	--	--	--	--
Pentacosane	629-99-2	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Pentadecane	629-62-9	9.6	nc	10	nc	NA/TPH	--	--	TPH (Aliphatic Medium)	E1790668	Surrogate based on structural and/or toxicological similarities
Pentatriacontane	630-07-9	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
PHC as gasoline	--	8.2	nc	3.3	nc	NA/TPH	--	--	TPH (Aromatic Low)	E1790672	Typical hydrocarbon chain lengths in gasoline are C4-C12 (ATSDR 1999), which is within the low carbon range for TPH (USEPA 2009). The TPH aromatic low fraction was selected as the surrogate, as it has more conservative toxicity factors than the TPH aliphatic low fraction (USEPA 2009)
Phenol	108-95-2	1900	nc	580	nc	26.1	nc	--	--	--	--
Pyridine	110-86-1	7.8	nc	2	nc	0.0869	nc	--	--	--	--
Styrene	100-42-5	600	nc	120	nc	17.4	nc	--	--	--	--
Tetrabutyltin	1461-25-2	1.9	nc	0.6	nc	0.0261	nc	--	Dibutyltin Compounds	E1790660	Surrogate based on structural and/or toxicological similarities
Tetrachloroethylene	127-18-4	8.1	nc	4.1	nc	0.521	nc	--	--	--	--
Tetracontane	4181-95-7	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Tetratriacontane	14167-59-0	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Toluene	108-88-3	490	nc	110	nc	6.95	nc	--	--	--	--
TPH (C9-C40)	--	11	nc	0.55	nc	NA/TPH	--	--	TPH (Aromatic Medium)	E1790674	C9-C40 encompasses medium and high carbon range TPH fractions (USEPA 2009). The TPH aromatic medium fraction was selected as the surrogate, as it has the most conservative toxicity factors of the medium and high aromatic and aliphatic fractions (USEPA 2009)
Trans-1,2,-dichloroethene	156-60-5	160	nc	36	nc	1.74	nc	--	--	--	--
Trans-1,3-dichloropropene	10061-02-6	1.8	ca	0.47	ca	0.0416	ca	--	1,3-Dichloropropene	542-75-6	Surrogate based on structural and/or toxicological similarities
Tributyltin	36643-28-4	1.9	nc	0.6	nc	0.0261	nc	--	Dibutyltin Compounds	E1790660	Surrogate based on structural and/or toxicological similarities
Tri-n-butyltin hydride	688-73-3	2.3	nc	0.37	nc	0.0261	nc	--	--	--	--
Trichloroethylene	79-01-6	0.41	nc	0.28	nc	0.0435	nc	Carc	--	--	--
Trichlorofluoromethane	75-69-4	2300	nc	520	nc	26.1	nc	--	--	--	--
Trichlorotrifluoroethane	26523-64-8	2300	nc	520	nc	26.1	nc	--	Trichlorofluoromethane	75-69-4	Surrogate based on structural and/or toxicological similarities

TABLE B-1.1
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate
Tricosane	638-67-5	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Tritriacontane	630-05-7	23000	nc	6000	nc	NA/TPH	--	--	TPH (Aliphatic High)	E1790670	Surrogate based on structural and/or toxicological similarities
Vinyl chloride	75-01-4	0.059	ca	0.019	ca	0.00578	ca	Carc	--	--	--
Non DL-PCBs											
Total Non-DL PCBs	--	0.23	ca	0.044	ca	0.00208	ca	--	PCBs (high risk [low risk for surface water])	1336-36-3	Surrogate based on structural and/or toxicological similarities
DL-PCBs											
PCB-105	32598-14-4	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-114	74472-37-0	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-118	31508-00-6	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-123	65510-44-3	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-126	57465-28-8	0.000036	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-156	38380-08-4	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-157	69782-90-7	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-156/157	--	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-167	52663-72-6	0.12	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-169	32774-16-6	0.00012	ca	0.000004	ca	0.00000107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-189	39635-31-9	0.13	ca	0.004	ca	0.00107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-77	32598-13-3	0.038	ca	0.006	ca	0.00032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
PCB-81	70362-50-4	0.012	ca	0.0004	ca	0.000107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
KM TEQ PCB	--	0.0000048	ca	0.0000001200	ca	0.000000032	ca	--	2,3,7,8-TCDD	1746-01-6	Van den Berg et al. 2006, USEPA 2010
Dioxins/Furans											
1,2,3,4,6,7,8-HpCDD	35822-46-9	0.00048	ca	0.000012	ca	0.0000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,4,6,7,8-HpCDF	67562-39-4	0.00048	ca	0.000012	ca	0.0000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,4,7,8-HxCDD	39227-28-6	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,4,7,8-HxCDF	70648-26-9	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,4,7,8,9-HpCDF	55673-89-7	0.00048	ca	0.000012	ca	0.0000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,6,7,8-HxCDD	57653-85-7	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,6,7,8-HxCDF	57117-44-9	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,7,8-PeCDD	40321-76-4	0.0000048	ca	0.00000012	ca	0.000000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,7,8-PeCDF	57117-41-6	0.00016	ca	0.000004	ca	0.00000107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,7,8,9-HxCDD	19408-74-3	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
1,2,3,7,8,9-HxCDF	72918-21-9	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
2,3,4,6,7,8-HxCDF	60851-34-5	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
2,3,4,7,8-PeCDF	57117-31-4	0.000016	ca	0.0000004	ca	0.000000107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
2,3,7,8-TCDD	1746-01-6	0.0000048	ca	0.0000001200	ca	0.000000032	ca	--	--	--	--
2,3,7,8-TCDF	51207-31-9	0.000048	ca	0.0000012	ca	0.00000032	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
OCDD	3268-87-9	0.016	ca	0.0004	ca	0.000107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
OCDF	39001-02-0	0.016	ca	0.0004	ca	0.000107	ca	--	Value for 2,3,7,8-TCDD divided by TEF	1746-01-6	Van den Berg et al. 2006, USEPA 2010
KM TEQ DF	--	0.0000048	ca	0.0000001200	ca	0.000000032	ca	--	2,3,7,8-TCDD	1746-01-6	Van den Berg et al. 2006, USEPA 2010

Abbreviations
ATSDR - Agency for Toxic Substances and Disease Registry, ca - based on carcinogenic effects, Carc - known human carcinogen, CAS - Chemical Abstracts Service number, DL - dioxin-like, FDA - Food and Drug Administration, HHRA - human health risk assessment, mg/kg - milligram per kilogram, NA - not applicable, nc - based on noncarcinogenic effects, NDL - non dioxin-like, PAH - polycyclic aromatic hydrocarbon, PCB - polychlorinated biphenyl, Ref - reference, RSL - regional screening level, SL - screening level, TEF - toxic equivalency factor, TPH - total petroleum hydrocarbon, µg/L - microgram per liter, USEPA - US Environmental Protection Agency

Notes
Fish tissue screening levels were calculated using the EPA RSL online calculator. Screening levels for carcinogens were calculated for adult exposure, assuming an ingestion rate of 54 g/d. Screening values for noncarcinogens were calculating for a child exposure, assuming an ingestion rate of 18 g/d.
The following EPA RSLs were used for cadmium: sediment (diet), surface water (water), tissue (diet).
The following EPA RSLs were used for manganese: sediment (non-diet), surface water (non-diet), tissue (diet).
Because of TPH metabolism, it is unlikely that a pattern match would be found in tissue. Therefore, tissue screening levels are considered not applicable for the TPH fractions.
Several chemicals have sediment and surface water screening levels, but no tissue screening level. These chemicals lack an oral toxicity factor, which is necessary for calculation of the tissue RSL. These chemicals include titanium, 4-methyl-2-pentanone, bromochloromethane, chloroethane, cyclohexane, methyl chloride, and methylcyclohexane.
The FDA action level for lead in crustacea (1.5 ppm) was used for the tissue screening level (FDA 2007).
USEPA's current residential RSL (USEPA 2019c) for lead in soil is 400 mg/kg, based on the regulatory target of no more than 5% of young children in a population having a blood-lead level exceeding 10 µg/dL. USEPA now recommends targeting blood lead levels below 10 µg/dL; in fact, USEPA (2017)

TABLE B-1.1
SCREENING LEVELS AND SURROGATES USED IN SELECTION OF COPCS
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	CAS	Sediment USEPA RSL - Soil (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Surface Water USEPA RSL - Tap Water (Risk of 10^{-6} or Hazard of 0.1) (µg/L)	ca/nc	Tissue Screening Levels (Risk of 10^{-6} or Hazard of 0.1) (mg/kg)	ca/nc	Known Human Carcinogen	Surrogate	CAS for Surrogate	Rationale/Ref for Surrogate

recommends updates to lead methodologies and includes examples targeting a blood level of 5 µg/dL. Therefore, as recommended by USEPA and NJDEP (2019), 200 mg/kg is used as the screening level for lead in sediment.
Known Human Carcinogen designations are based on USEPA's weight of evidence classifications provided in USEPA (2019a, 2019b) and USEPA (2005).
USEPA RSLs are the May 2019 values (USEPA 2019c).

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TABLE B-1.2
DETAILED TABLE ON CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Media	Species	Chemical	CAS	% Detect	Units	MinDL	MaxDL	Screening Level (SL)	MinDL < SL?	Ratio MinDL/SL	Uncertainty Type
Sediment	--	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	2.10E-02	4.30E-02	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Sediment	--	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	2.10E-02	4.30E-02	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Sediment	--	Sulfide	18496-25-8	100	mg/kg	--	--	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Sediment	--	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	2.10E-01	4.30E-01	1.80E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Sediment	--	Benzidine	92-87-5	0	mg/kg	8.60E-01	1.80E+00	5.30E-04	No	1623	ND KHC; max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,1,2-Trichloroethane	79-00-5	0	µg/L	5.00E-01	5.00E-01	4.10E-02	No	12	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,1,2,2-Tetrachloroethane	79-34-5	0	µg/L	5.00E-01	5.00E-01	7.60E-02	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,2-Dibromo-3-chloropropane	96-12-8	0	µg/L	2.00E+00	2.00E+00	3.30E-04	No	6061	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,2-Dibromoethane	106-93-4	0	µg/L	2.00E+00	2.00E+00	7.50E-03	No	267	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,2-Dichloroethane	107-06-2	0	µg/L	5.00E-01	5.00E-01	1.70E-01	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,2,3-Trichlorobenzene	87-61-6	0	µg/L	2.00E+00	2.00E+00	7.00E-01	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,2,4-Trichlorobenzene	120-82-1	1	µg/L	2.00E+00	2.00E+00	4.00E-01	No	5	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,2,4,5-Tetrachlorobenzene	95-94-3	0	µg/L	9.40E-01	1.10E+00	1.70E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,4-Dichlorobenzene	106-46-7	1	µg/L	5.00E-01	5.00E-01	4.80E-01	No	1	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Surface Water	--	1,4-Dioxane	123-91-1	0	µg/L	1.90E+00	2.20E+00	4.60E-01	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	2-Hexanone	591-78-6	0	µg/L	2.00E+01	2.00E+01	3.80E+00	No	5	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	2,4-Dinitrophenol	51-28-5	0	µg/L	4.70E+00	5.40E+00	3.90E+00	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	2,4-Dinitrotoluene	121-14-2	1	µg/L	9.40E-01	1.10E+00	2.40E-01	No	4	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Surface Water	--	2,6-Dinitrotoluene	606-20-2	0	µg/L	9.40E-01	1.10E+00	4.90E-02	No	19	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	3,3'-Dichlorobenzidine	91-94-1	0	µg/L	9.40E-01	1.10E+00	2.80E-02	No	34	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	4-Bromophenyl phenyl ether	101-55-3	0	µg/L	9.40E-01	1.10E+00	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Surface Water	--	4-Chloroaniline	106-47-8	0	µg/L	9.40E-01	1.10E+00	3.70E-01	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	4-Chlorophenyl phenyl ether	7005-72-3	0	µg/L	9.40E-01	1.10E+00	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Surface Water	--	4-Nitroaniline	100-01-6	0	µg/L	4.70E+00	5.40E+00	3.80E+00	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	4,6-Dinitro-2-methylphenol	534-52-1	0	µg/L	4.70E+00	5.40E+00	1.50E-01	No	31	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Atrazine	1912-24-9	0	µg/L	9.40E-01	1.10E+00	3.00E-01	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Benzene	71-43-2	0	µg/L	5.00E-01	5.00E-01	4.60E-01	No	1	ND KHC; max DL > screening level (ASL); eval uncertainty
Surface Water	--	Biphenyl	92-52-4	0	µg/L	9.40E-01	1.10E+00	8.30E-02	No	11	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Bis(2-chloroethyl)ether	111-44-4	0	µg/L	1.90E-01	2.20E-01	1.40E-02	No	14	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Carbon tetrachloride	56-23-5	0	µg/L	5.00E-01	5.00E-01	4.60E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	cis-1,3-Dichloropropene	10061-01-5	0	µg/L	5.00E-01	5.00E-01	4.70E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Dibenzofuran	132-64-9	0	µg/L	9.40E-01	1.10E+00	7.90E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Dichlorobromomethane	75-27-4	0	µg/L	5.00E-01	5.00E-01	1.30E-01	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Hexachlorobutadiene	87-68-3	0	µg/L	1.90E-01	2.20E-01	1.40E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Hexachlorocyclopentadiene	77-47-4	0	µg/L	9.40E-01	1.10E+00	4.10E-02	No	23	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Hexachloroethane	67-72-1	0	µg/L	9.40E-01	1.10E+00	3.30E-01	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	N-nitroso-di-n-propylamine	621-64-7	0	µg/L	1.90E-01	2.20E-01	1.10E-02	No	17	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Nitrobenzene	98-95-3	0	µg/L	1.90E+00	2.20E+00	1.40E-01	No	14	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Pentachlorophenol	87-86-5	0	µg/L	9.40E-01	1.10E+00	4.10E-02	No	23	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Trans-1,3-dichloropropene	10061-02-6	0	µg/L	5.00E-01	5.00E-01	4.70E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Surface Water	--	Vinyl chloride	75-01-4	0	µg/L	5.00E-01	5.00E-01	1.90E-02	No	26	ND KHC; max DL > screening level (ASL); eval uncertainty
Surface Water	--	Cyanide	57-12-5	1	µg/L	1.00E+01	1.00E+01	1.50E-01	No	67	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Surface Water	--	Sulfide	18496-25-8	2	µg/L	2.00E+03	2.00E+03	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	American Eel	Benzo(a)pyrene	50-32-8	0	mg/kg	2.70E-03	1.30E-02	4.16E-03	Yes	1	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Benzo(j,k)Fluoranthene	--	0	mg/kg	2.70E-03	1.30E-02	3.47E-03	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Dibenz(a,h)anthracene	53-70-3	0	mg/kg	2.70E-03	1.30E-02	4.16E-03	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	1,2-Diphenylhydrazine	122-66-7	0	mg/kg	3.20E-01	3.30E-01	5.20E-03	No	62	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	3.20E-01	3.30E-01	2.61E-02	No	12	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	2,4-Dichlorophenol	120-83-2	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty

TABLE B-1.2
DETAILED TABLE ON CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Media	Species	Chemical	CAS	% Detect	Units	MinDL	MaxDL	Screening Level (SL)	MinDL < SL?	Ratio MinDL/SL	Uncertainty Type
Fish	American Eel	2,4-Dinitrophenol	51-28-5	0	mg/kg	5.80E+00	6.00E+00	1.74E-01	No	33	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	2,4-Dinitrotoluene	121-14-2	0	mg/kg	1.30E+00	1.30E+00	1.34E-02	No	97	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	2,6-Dinitrotoluene	606-20-2	0	mg/kg	3.20E-01	3.30E-01	2.77E-03	No	116	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	3-Nitroaniline	99-09-2	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	3,3'-Dichlorobenzidine	91-94-1	0	mg/kg	1.90E+00	2.00E+00	9.24E-03	No	206	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	American Eel	4-Chloroaniline	106-47-8	0	mg/kg	6.50E-01	6.70E-01	2.08E-02	No	31	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	American Eel	4-Nitroaniline	100-01-6	0	mg/kg	1.30E+00	1.30E+00	2.08E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	3.20E+00	3.30E+00	6.95E-03	No	460	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Atrazine	1912-24-9	0	mg/kg	6.50E-01	6.70E-01	1.81E-02	No	36	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Benzaldehyde	100-52-7	0	mg/kg	1.30E+00	1.30E+00	1.04E+00	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Benzidine	92-87-5	0	mg/kg	1.40E+01	1.40E+01	1.81E-05	No	773481	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	American Eel	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	3.20E-01	3.30E-01	3.78E-03	No	85	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	1.30E+00	1.30E+00	2.97E-01	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Di-n-octyl phthalate	117-84-0	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Dibenzofuran	132-64-9	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Hexachlorobutadiene	87-68-3	0	mg/kg	3.20E-01	3.30E-01	5.33E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	3.20E+00	3.30E+00	5.21E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Hexachloroethane	67-72-1	0	mg/kg	6.50E-01	6.70E-01	6.08E-02	No	11	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	3.20E-01	3.30E-01	5.94E-04	No	539	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Nitrobenzene	98-95-3	0	mg/kg	3.20E-01	3.30E-01	1.74E-01	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Pentachlorophenol	87-86-5	0	mg/kg	6.50E-01	6.70E-01	1.04E-02	No	63	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Pyridine	110-86-1	0	mg/kg	1.30E+00	1.30E+00	8.69E-02	No	15	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Antimony	7440-36-0	0	mg/kg	4.49E-02	6.53E-02	3.48E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Thallium	7440-28-0	0	mg/kg	2.04E-02	2.97E-02	8.69E-04	No	23	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	American Eel	Titanium	7440-32-6	0	mg/kg	1.62E-01	3.66E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Bluefish	Benzo(a)pyrene	50-32-8	0	mg/kg	5.20E-03	5.30E-03	4.16E-03	No	1	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Benzo(j,k)Fluoranthene	--	0	mg/kg	5.20E-03	5.30E-03	3.47E-03	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Dibenz(a,h)anthracene	53-70-3	0	mg/kg	5.20E-03	5.30E-03	4.16E-03	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	1,2-Diphenylhydrazine	122-66-7	0	mg/kg	3.20E-01	3.30E-01	5.20E-03	No	62	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	3.20E-01	3.30E-01	2.61E-02	No	12	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	2,4-Dichlorophenol	120-83-2	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	2,4-Dinitrophenol	51-28-5	0	mg/kg	5.80E+00	6.00E+00	1.74E-01	No	33	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	2,4-Dinitrotoluene	121-14-2	0	mg/kg	1.30E+00	1.30E+00	1.34E-02	No	97	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	2,6-Dinitrotoluene	606-20-2	0	mg/kg	3.20E-01	3.30E-01	2.77E-03	No	116	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	3-Nitroaniline	99-09-2	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	3,3'-Dichlorobenzidine	91-94-1	0	mg/kg	1.90E+00	2.00E+00	9.24E-03	No	206	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Bluefish	4-Chloroaniline	106-47-8	0	mg/kg	6.50E-01	6.70E-01	2.08E-02	No	31	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Bluefish	4-Nitroaniline	100-01-6	0	mg/kg	1.30E+00	1.30E+00	2.08E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	3.20E+00	3.30E+00	6.95E-03	No	460	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Atrazine	1912-24-9	0	mg/kg	6.50E-01	6.70E-01	1.81E-02	No	36	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Benzaldehyde	100-52-7	0	mg/kg	1.30E+00	1.30E+00	1.04E+00	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Benzidine	92-87-5	0	mg/kg	1.40E+01	1.40E+01	1.81E-05	No	773481	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty

TABLE B-1.2
DETAILED TABLE ON CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Media	Species	Chemical	CAS	% Detect	Units	MinDL	MaxDL	Screening Level (SL)	MinDL < SL?	Ratio MinDL/SL	Uncertainty Type
Fish	Bluefish	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	3.20E-01	3.30E-01	3.78E-03	No	85	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	1.30E+00	1.30E+00	2.97E-01	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Di-n-octyl phthalate	117-84-0	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Dibenzofuran	132-64-9	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Hexachlorobutadiene	87-68-3	0	mg/kg	3.20E-01	3.30E-01	5.33E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	3.20E+00	3.30E+00	5.21E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Hexachloroethane	67-72-1	0	mg/kg	6.50E-01	6.70E-01	6.08E-02	No	11	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	3.20E-01	3.30E-01	5.94E-04	No	539	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Nitrobenzene	98-95-3	0	mg/kg	3.20E-01	3.30E-01	1.74E-01	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Pentachlorophenol	87-86-5	0	mg/kg	6.50E-01	6.70E-01	1.04E-02	No	63	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Pyridine	110-86-1	0	mg/kg	1.30E+00	1.30E+00	8.69E-02	No	15	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Antimony	7440-36-0	0	mg/kg	4.40E-02	6.60E-02	3.48E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Thallium	7440-28-0	0	mg/kg	2.00E-02	3.00E-02	8.69E-04	No	23	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Bluefish	Titanium	7440-32-6	0	mg/kg	1.63E-01	3.56E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Striped Bass	Benzo(a)pyrene	50-32-8	0	mg/kg	5.20E-03	5.30E-03	4.16E-03	No	1	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Benzo(j,k)Fluoranthene	--	0	mg/kg	5.20E-03	5.30E-03	3.47E-03	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Dibenz(a,h)anthracene	53-70-3	0	mg/kg	5.20E-03	5.30E-03	4.16E-03	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	1,2-Diphenylhydrazine	122-66-7	0	mg/kg	3.20E-01	3.30E-01	5.20E-03	No	62	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	3.20E-01	3.30E-01	2.61E-02	No	12	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	2,4-Dichlorophenol	120-83-2	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	2,4-Dinitrophenol	51-28-5	0	mg/kg	5.80E+00	6.00E+00	1.74E-01	No	33	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	2,4-Dinitrotoluene	121-14-2	0	mg/kg	1.30E+00	1.30E+00	1.34E-02	No	97	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	2,6-Dinitrotoluene	606-20-2	0	mg/kg	3.20E-01	3.30E-01	2.77E-03	No	116	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	3-Nitroaniline	99-09-2	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	3,3'-Dichlorobenzidine	91-94-1	0	mg/kg	1.90E+00	2.00E+00	9.24E-03	No	206	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Striped Bass	4-Chloroaniline	106-47-8	0	mg/kg	6.50E-01	6.70E-01	2.08E-02	No	31	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Striped Bass	4-Nitroaniline	100-01-6	0	mg/kg	1.30E+00	1.30E+00	2.08E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	3.20E+00	3.30E+00	6.95E-03	No	460	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Atrazine	1912-24-9	0	mg/kg	6.50E-01	6.70E-01	1.81E-02	No	36	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Benzaldehyde	100-52-7	0	mg/kg	1.30E+00	1.30E+00	1.04E+00	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Benzidine	92-87-5	0	mg/kg	1.40E+01	1.40E+01	1.81E-05	No	773481	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	3.20E-01	3.30E-01	3.78E-03	No	85	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	1.30E+00	1.30E+00	2.97E-01	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Di-n-octyl phthalate	117-84-0	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Dibenzofuran	132-64-9	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Hexachlorobutadiene	87-68-3	0	mg/kg	3.20E-01	3.30E-01	5.33E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	3.20E+00	3.30E+00	5.21E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Hexachloroethane	67-72-1	0	mg/kg	6.50E-01	6.70E-01	6.08E-02	No	11	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	3.20E-01	3.30E-01	5.94E-04	No	539	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Nitrobenzene	98-95-3	0	mg/kg	3.20E-01	3.30E-01	1.74E-01	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Pentachlorophenol	87-86-5	0	mg/kg	6.50E-01	6.70E-01	1.04E-02	No	63	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Pyridine	110-86-1	0	mg/kg	1.30E+00	1.30E+00	8.69E-02	No	15	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Antimony	7440-36-0	5	mg/kg	4.52E-02	6.60E-02	3.48E-02	No	1	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Thallium	7440-28-0	0	mg/kg	2.05E-02	3.00E-02	8.69E-04	No	24	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Striped Bass	Titanium	7440-32-6	10	mg/kg	1.62E-01	3.66E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Summer Flounder	Benzo(a)pyrene	50-32-8	0	mg/kg	5.20E-03	5.30E-03	4.16E-03	No	1	ND KHC; max DL > screening level (ASL); eval uncertainty

TABLE B-1.2
DETAILED TABLE ON CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Media	Species	Chemical	CAS	% Detect	Units	MinDL	MaxDL	Screening Level (SL)	MinDL < SL?	Ratio MinDL/SL	Uncertainty Type
Fish	Summer Flounder	Benzo(j,k)Fluoranthene	--	0	mg/kg	5.20E-03	5.30E-03	3.47E-03	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Dibenz(a,h)anthracene	53-70-3	0	mg/kg	5.20E-03	5.30E-03	4.16E-03	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	1,2-Diphenylhydrazine	122-66-7	0	mg/kg	3.20E-01	3.30E-01	5.20E-03	No	62	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	3.20E-01	3.30E-01	2.61E-02	No	12	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	2,4-Dichlorophenol	120-83-2	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	2,4-Dinitrophenol	51-28-5	0	mg/kg	5.80E+00	6.00E+00	1.74E-01	No	33	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	2,4-Dinitrotoluene	121-14-2	0	mg/kg	1.30E+00	1.30E+00	1.34E-02	No	97	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	2,6-Dinitrotoluene	606-20-2	0	mg/kg	3.20E-01	3.30E-01	2.77E-03	No	116	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	3-Nitroaniline	99-09-2	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	3,3'-Dichlorobenzidine	91-94-1	0	mg/kg	1.90E+00	2.00E+00	9.24E-03	No	206	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Summer Flounder	4-Chloroaniline	106-47-8	0	mg/kg	6.50E-01	6.70E-01	2.08E-02	No	31	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	3.20E-01	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	Summer Flounder	4-Nitroaniline	100-01-6	0	mg/kg	1.30E+00	1.30E+00	2.08E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	3.20E+00	3.30E+00	6.95E-03	No	460	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Atrazine	1912-24-9	0	mg/kg	6.50E-01	6.70E-01	1.81E-02	No	36	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Benzaldehyde	100-52-7	0	mg/kg	1.30E+00	1.30E+00	1.04E+00	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Benzidine	92-87-5	0	mg/kg	1.40E+01	1.40E+01	1.81E-05	No	773481	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	3.20E-01	3.30E-01	2.61E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	3.20E-01	3.30E-01	3.78E-03	No	85	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	1.30E+00	1.30E+00	2.97E-01	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Di-n-octyl phthalate	117-84-0	0	mg/kg	1.30E+00	1.30E+00	8.69E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Dibenzofuran	132-64-9	0	mg/kg	3.20E-01	3.30E-01	8.69E-02	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Hexachlorobutadiene	87-68-3	0	mg/kg	3.20E-01	3.30E-01	5.33E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	3.20E+00	3.30E+00	5.21E-01	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Hexachloroethane	67-72-1	0	mg/kg	6.50E-01	6.70E-01	6.08E-02	No	11	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	3.20E-01	3.30E-01	5.94E-04	No	539	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Nitrobenzene	98-95-3	0	mg/kg	3.20E-01	3.30E-01	1.74E-01	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Pentachlorophenol	87-86-5	0	mg/kg	6.50E-01	6.70E-01	1.04E-02	No	63	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Pyridine	110-86-1	0	mg/kg	1.30E+00	1.30E+00	8.69E-02	No	15	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Antimony	7440-36-0	0	mg/kg	4.78E-02	6.60E-02	3.48E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Thallium	7440-28-0	0	mg/kg	2.17E-02	3.00E-02	8.69E-04	No	25	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	Summer Flounder	Titanium	7440-32-6	0	mg/kg	1.63E-01	3.70E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	White Perch	Benzo(a)pyrene	50-32-8	0	mg/kg	1.30E-02	1.30E-02	4.16E-03	No	3	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Benzo(j,k)Fluoranthene	--	0	mg/kg	1.30E-02	1.30E-02	3.47E-03	No	4	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Dibenz(a,h)anthracene	53-70-3	0	mg/kg	1.30E-02	1.30E-02	4.16E-03	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	1,2-Diphenylhydrazine	122-66-7	0	mg/kg	6.50E-02	3.30E-01	5.20E-03	No	13	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	6.50E-02	3.30E-01	2.61E-02	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	2,4-Dichlorophenol	120-83-2	0	mg/kg	6.50E-02	3.30E-01	2.61E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	2,4-Dinitrophenol	51-28-5	0	mg/kg	1.20E+00	6.00E+00	1.74E-01	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	2,4-Dinitrotoluene	121-14-2	0	mg/kg	2.60E-01	1.30E+00	1.34E-02	No	19	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	6.50E-02	3.30E-01	8.69E-02	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	2,6-Dinitrotoluene	606-20-2	0	mg/kg	6.50E-02	3.30E-01	2.77E-03	No	23	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	3-Nitroaniline	99-09-2	0	mg/kg	2.60E-01	1.30E+00	8.69E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	3,3'-Dichlorobenzidine	91-94-1	0	mg/kg	3.90E-01	2.00E+00	9.24E-03	No	42	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	6.50E-02	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	White Perch	4-Chloroaniline	106-47-8	0	mg/kg	1.30E-01	6.70E-01	2.08E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	6.50E-02	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Fish	White Perch	4-Nitroaniline	100-01-6	0	mg/kg	2.60E-01	1.30E+00	2.08E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty

TABLE B-1.2
DETAILED TABLE ON CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Media	Species	Chemical	CAS	% Detect	Units	MinDL	MaxDL	Screening Level (SL)	MinDL < SL?	Ratio MinDL/SL	Uncertainty Type
Fish	White Perch	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	6.50E-01	3.30E+00	6.95E-03	No	94	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Atrazine	1912-24-9	0	mg/kg	1.30E-01	6.70E-01	1.81E-02	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Benzaldehyde	100-52-7	0	mg/kg	2.60E-01	1.30E+00	1.04E+00	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Benzidine	92-87-5	0	mg/kg	9.70E-01	5.00E+00	1.81E-05	No	53591	ND KHC; max DL > screening level (ASL); eval uncertainty
Fish	White Perch	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	6.50E-02	3.30E-01	2.61E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	6.50E-02	3.30E-01	3.78E-03	No	17	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	2.60E-01	1.30E+00	2.97E-01	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Di-n-octyl phthalate	117-84-0	0	mg/kg	2.60E-01	1.30E+00	8.69E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Dibenzofuran	132-64-9	0	mg/kg	6.50E-02	3.30E-01	8.69E-02	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Hexachlorobutadiene	87-68-3	0	mg/kg	6.50E-02	3.30E-01	5.33E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	6.50E-01	3.30E+00	5.21E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Hexachloroethane	67-72-1	0	mg/kg	1.30E-01	6.70E-01	6.08E-02	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	6.50E-02	3.30E-01	5.94E-04	No	109	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Nitrobenzene	98-95-3	0	mg/kg	6.50E-02	3.30E-01	1.74E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Pentachlorophenol	87-86-5	0	mg/kg	1.30E-01	6.70E-01	1.04E-02	No	13	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Pyridine	110-86-1	0	mg/kg	2.60E-01	1.30E+00	8.69E-02	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Antimony	7440-36-0	0	mg/kg	5.08E-02	6.60E-02	3.48E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Thallium	7440-28-0	0	mg/kg	2.31E-02	3.00E-02	8.69E-04	No	27	Not detected, max DL > screening level (ASL); eval uncertainty
Fish	White Perch	Titanium	7440-32-6	0	mg/kg	2.85E-01	3.70E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Crab	H	Benzo(j,k)Fluoranthene	--	3	mg/kg	2.60E-03	1.30E-02	3.47E-03	Yes	1	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Crab	H	1,2-Diphenylhydrazine	122-66-7	3	mg/kg	6.60E-02	6.50E-01	5.20E-03	No	13	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Crab	H	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	6.60E-02	6.50E-01	2.61E-02	No	3	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	2-Chlorophenol	95-57-8	0	mg/kg	6.60E-02	6.50E-01	4.35E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	2,4-Dichlorophenol	120-83-2	0	mg/kg	6.60E-02	6.50E-01	2.61E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	2,4-Dinitrophenol	51-28-5	0	mg/kg	1.20E+00	1.20E+01	1.74E-01	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	2,4-Dinitrotoluene	121-14-2	0	mg/kg	2.60E-01	2.60E+00	1.34E-02	No	19	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	6.60E-02	6.50E-01	8.69E-02	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	2,6-Dinitrotoluene	606-20-2	0	mg/kg	6.60E-02	6.50E-01	2.77E-03	No	24	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	3-Nitroaniline	99-09-2	0	mg/kg	2.60E-01	2.60E+00	8.69E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	3,3'-Dichlorobenzidine	91-94-1	0	mg/kg	3.90E-01	3.90E+00	9.24E-03	No	42	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	6.60E-02	6.50E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Crab	H	4-Chloroaniline	106-47-8	0	mg/kg	1.30E-01	1.30E+00	2.08E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	6.60E-02	6.50E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Crab	H	4-Nitroaniline	100-01-6	0	mg/kg	2.60E-01	2.60E+00	2.08E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	6.60E-01	6.50E+00	6.95E-03	No	95	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Atrazine	1912-24-9	0	mg/kg	1.30E-01	1.30E+00	1.81E-02	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Benzidine	92-87-5	0	mg/kg	2.80E+00	2.70E+01	1.81E-05	No	154696	ND KHC; max DL > screening level (ASL); eval uncertainty
Crab	H	Biphenyl	92-52-4	0	mg/kg	6.60E-02	6.50E-01	5.20E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	6.60E-02	6.50E-01	2.61E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	6.60E-02	6.50E-01	3.78E-03	No	17	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	2.60E-01	2.60E+00	2.97E-01	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Butyl benzyl phthalate	85-68-7	0	mg/kg	2.60E-01	2.60E+00	2.19E+00	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Di-n-octyl phthalate	117-84-0	0	mg/kg	2.60E-01	2.60E+00	8.69E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Dibenzofuran	132-64-9	0	mg/kg	6.60E-02	6.50E-01	8.69E-02	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Hexachlorobutadiene	87-68-3	0	mg/kg	6.60E-02	6.50E-01	5.33E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	6.60E-01	6.50E+00	5.21E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Hexachloroethane	67-72-1	0	mg/kg	1.30E-01	1.30E+00	6.08E-02	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	6.60E-02	6.50E-01	5.94E-04	No	111	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Nitrobenzene	98-95-3	0	mg/kg	6.60E-02	6.50E-01	1.74E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Pentachlorophenol	87-86-5	0	mg/kg	1.30E-01	1.30E+00	1.04E-02	No	13	Not detected, max DL > screening level (ASL); eval uncertainty

TABLE B-1.2
DETAILED TABLE ON CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Media	Species	Chemical	CAS	% Detect	Units	MinDL	MaxDL	Screening Level (SL)	MinDL < SL?	Ratio MinDL/SL	Uncertainty Type
Crab	H	Antimony	7440-36-0	0	mg/kg	6.29E-02	6.60E-02	3.48E-02	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Thallium	7440-28-0	0	mg/kg	2.86E-02	3.00E-02	8.69E-04	No	33	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	H	Titanium	7440-32-6	73	mg/kg	1.62E-01	1.70E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Crab	M	Benzo(j,k)Fluoranthene	--	0	mg/kg	2.60E-03	1.30E-02	3.47E-03	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	1,2-Diphenylhydrazine	122-66-7	0	mg/kg	6.50E-02	3.30E-01	5.20E-03	No	13	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	1,2,4,5-Tetrachlorobenzene	95-94-3	0	mg/kg	6.50E-02	3.30E-01	2.61E-02	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	2,4-Dichlorophenol	120-83-2	0	mg/kg	6.50E-02	3.30E-01	2.61E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	2,4-Dinitrophenol	51-28-5	0	mg/kg	1.20E+00	6.00E+00	1.74E-01	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	2,4-Dinitrotoluene	121-14-2	0	mg/kg	2.60E-01	1.30E+00	1.34E-02	No	19	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	2,4,6-Trichlorophenol	88-06-2	0	mg/kg	6.50E-02	3.30E-01	8.69E-02	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	2,6-Dinitrotoluene	606-20-2	0	mg/kg	6.50E-02	3.30E-01	2.77E-03	No	23	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	3-Nitroaniline	99-09-2	0	mg/kg	2.60E-01	1.30E+00	8.69E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	3,3'-Dichlorobenzidine	91-94-1	3	mg/kg	3.90E-01	2.00E+00	9.24E-03	No	42	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Crab	M	4-Bromophenyl phenyl ether	101-55-3	0	mg/kg	6.50E-02	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Crab	M	4-Chloroaniline	106-47-8	0	mg/kg	1.30E-01	6.70E-01	2.08E-02	No	6	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	4-Chlorophenyl phenyl ether	7005-72-3	0	mg/kg	6.50E-02	3.30E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty
Crab	M	4-Nitroaniline	100-01-6	0	mg/kg	2.60E-01	1.30E+00	2.08E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	4,6-Dinitro-2-methylphenol	534-52-1	0	mg/kg	6.50E-01	3.30E+00	6.95E-03	No	94	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Atrazine	1912-24-9	0	mg/kg	1.30E-01	6.70E-01	1.81E-02	No	7	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Benzaldehyde	100-52-7	3	mg/kg	2.60E-01	1.30E+00	1.04E+00	Yes	0	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Crab	M	Benzidine	92-87-5	0	mg/kg	2.70E+00	1.40E+01	1.81E-05	No	149171	ND KHC; max DL > screening level (ASL); eval uncertainty
Crab	M	bis(2-Chloroethoxy)methane	111-91-1	0	mg/kg	6.50E-02	3.30E-01	2.61E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	bis(2-Chloroethyl)ether	111-44-4	0	mg/kg	6.50E-02	3.30E-01	3.78E-03	No	17	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	bis(2-Ethylhexyl)phthalate	117-81-7	0	mg/kg	2.60E-01	1.30E+00	2.97E-01	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Di-n-octyl phthalate	117-84-0	0	mg/kg	2.60E-01	1.30E+00	8.69E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Dibenzofuran	132-64-9	0	mg/kg	6.50E-02	3.30E-01	8.69E-02	Yes	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Hexachlorobutadiene	87-68-3	0	mg/kg	6.50E-02	3.30E-01	5.33E-02	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Hexachlorocyclopentadiene	77-47-4	0	mg/kg	6.50E-01	3.30E+00	5.21E-01	No	1	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Hexachloroethane	67-72-1	0	mg/kg	1.30E-01	6.70E-01	6.08E-02	No	2	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	N-Nitroso-di-n-propylamine	621-64-7	0	mg/kg	6.50E-02	3.30E-01	5.94E-04	No	109	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Nitrobenzene	98-95-3	0	mg/kg	6.50E-02	3.30E-01	1.74E-01	Yes	0	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Pentachlorophenol	87-86-5	0	mg/kg	1.30E-01	6.70E-01	1.04E-02	No	13	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Antimony	7440-36-0	3	mg/kg	6.29E-02	6.60E-02	3.48E-02	No	2	Detected in ≤5% of samples, max detect or max DL > screening level (ASL); eval uncertainty
Crab	M	Thallium	7440-28-0	0	mg/kg	2.86E-02	3.00E-02	8.69E-04	No	33	Not detected, max DL > screening level (ASL); eval uncertainty
Crab	M	Titanium	7440-32-6	22	mg/kg	1.62E-01	1.70E-01	No screening level	n/a	--	Chem lacks screening val; eval uncertainty

Definitions
ASL - above screening level, chem - chemical; DL - detection limit, eval - evaluate, H - hepatopancreas, m - muscle, max - maximum, mg/kg - milligram per kilogram, n/a - not applicable, ND KHC - known human carcinogen that is completely non-detect, SL - screening level, ug/L - microgram per liter, UNC - evaluate in Uncertainty Section, val - value

TABLE B-1.3
CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	Uncertainties in various Media; MinDL/SL Ratio				Uncertainty Type	Detected in at least 1 media flagged for uncertainty?
	Crab	Fish	Sediment	Surface Water		
1,1,2-Trichloroethane				* 1E+01	DL review	
1,1,2,2-Tetrachloroethane				* 7E+00	DL review	
1,2-Dibromo-3-chloropropane				* 6E+03	DL review	
1,2-Dibromoethane				* 3E+02	DL review	
1,2-Dichloroethane				* 3E+00	DL review	
1,2-Diphenylhydrazine	* 1E+01	* 1E+01			DL review	Yes - Crab (H)
1,2,3-Trichlorobenzene				* 3E+00	DL review	
1,2,4-Trichlorobenzene				* 5E+00	DL review	Yes - SW
1,2,4,5-Tetrachlorobenzene	* 2E+00	* 2E+00		* 6E+00	DL review	
1,4-Dichlorobenzene				* 1E+00	DL review	Yes - SW
1,4-Dioxane				* 4E+00	DL review	
2-Chlorophenol	* 2E-01				DL review	
2-Hexanone				* 5E+00	DL review	
2,4-Dichlorophenol	* 2E-01	* 2E-01			DL review	
2,4-Dinitrophenol	* 7E+00	* 7E+00		* 1E+00	DL review	
2,4-Dinitrotoluene	* 2E+01	* 2E+01		* 4E+00	DL review	Yes - SW
2,4,6-Trichlorophenol	* 7E-01	* 7E-01			DL review	
2,6-Dinitrotoluene	* 2E+01	* 2E+01		* 2E+01	DL review	
3-Nitroaniline	* 3E-01	* 3E-01			DL review	
3,3'-Dichlorobenzidine	* 4E+01	* 4E+01		* 3E+01	DL review	Yes - Crab (m)
4-Bromophenyl phenyl ether	*	*	*	*	No Screening Value	
4-Chloroaniline	* 6E+00	* 6E+00		* 3E+00	DL review	

TABLE B-1.3
CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	Uncertainties in various Media; MinDL/SL Ratio				Uncertainty Type	Detected in at least 1 media flagged for uncertainty?
	Crab	Fish	Sediment	Surface Water		
4-Chlorophenyl phenyl ether	*	*	*	*	No Screening Value	
4-Nitroaniline	* 1E+00	* 1E+00		* 1E+00	DL review	
4,6-Dinitro-2-methylphenol	* 9E+01	* 9E+01		* 3E+01	DL review	
Antimony	* 2E+00	* 1E+00			DL review	Yes - Crab (m), Fish (SB)
Atrazine	* 7E+00	* 7E+00		* 3E+00	DL review	
Benzaldehyde	* 3E-01	* 3E-01			DL review	Yes - Crab (m)
Benzene				* 1E+00	ND KHC	
Benzidine	* 1E+05	* 5E+04	* 2E+03		ND KHC	
Benzo(a)pyrene		* 6E-01			DL review	
Benzo(j,k)Fluoranthene	* 7E-01	* 8E-01			DL review	Yes - Crab (H)
Biphenyl	* 1E-01			* 1E+01	DL review	
bis(2-Chloroethoxy)methane	* 2E-01	* 2E-01			DL review	
Bis(2-chloroethyl)ether	* 2E+01	* 2E+01		* 1E+01	DL review	
Bis(2-ethylhexyl)phthalate	* 9E-01	* 9E-01			DL review	
Butyl benzyl phthalate	* 1E-01				DL review	
Carbon tetrachloride				* 1E+00	DL review	
cis-1,3-Dichloropropene				* 1E+00	DL review	
Cyanide				* 7E+01	DL review	Yes - SW
Di-n-octyl phthalate	* 3E-01	* 3E-01			DL review	
Dibenz(a,h)anthracene		* 6E-01			DL review	
Dibenzofuran	* 7E-01	* 7E-01		* 1E+00	DL review	
Dichlorobromomethane				* 4E+00	DL review	

TABLE B-1.3
CHEMICALS FLAGGED FOR UNCERTAINTY REVIEW
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical	Uncertainties in various Media; MinDL/SL Ratio				Uncertainty Type	Detected in at least 1 media flagged for uncertainty?
	Crab	Fish	Sediment	Surface Water		
Hexachlorobutadiene	* 1E+00	* 1E+00		* 1E+00	DL review	
Hexachlorocyclopentadiene	* 1E+00	* 1E+00	* 1E+00	* 2E+01	DL review	
Hexachloroethane	* 2E+00	* 2E+00		* 3E+00	DL review	
N-nitroso-di-n-propylamine	* 1E+02	* 1E+02		* 2E+01	DL review	
Nitrobenzene	* 4E-01	* 4E-01		* 1E+01	DL review	
Pentachlorophenol	* 1E+01	* 1E+01		* 2E+01	DL review	
Pyridine		* 3E+00			DL review	
Sulfide			*	*	No Screening Value	Yes - Sed, SW
Thallium	* 3E+01	* 2E+01			DL review	
Titanium	*	*			No Screening Value	Yes - Crab (H,m), Fish (SB)
Trans-1,3-dichloropropene				* 1E+00	DL review	
Vinyl chloride				* 3E+01	ND KHC	

* Flagged for uncertainty review.
MinDL/SL ratios greater than 100 are highlighted in blue.

Definitions

DL - detection limit, H - hepatopancreas, M- muscle, min - minimum, ND KHC - known human carcinogen that is completely non-detect, SB - striped bass, Sed - sediment, SL - screening level, SW - surface water

Appendix B-2

APPENDIX B-2
AGE DEPENDENT ADJUSTMENT FACTOR EVALUATION FOR TRICHLOROETHYLENE

B-2.1 Background

For carcinogens for which sufficient evidence exists to determine that a cancer occurs via a mutagenic mode of action, USEPA's Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA 2005) recommends application of age-dependent adjustment factors (ADAFs) to account for potential early-life susceptibility to mutagens. In the absence of chemical-specific information regarding age-specific sensitivity, USEPA (2005) recommends use of default ADAFs (Age <2: ADAF = 10, Age 2<16: ADAF = 3, Age ≥16: ADAF = 1). Trichloroethylene (TCE) is classified by EPA as being carcinogenic to humans, potentially causing kidney and liver tumors, as well as non-Hodgkin lymphoma (NHL). Evidence indicates a mutagenic mode of action for kidney tumors, but not for liver tumors or NHL. Therefore, USEPA's Toxicological Review of TCE - Support of Summary Information on the Integrated Risk Information System (IRIS) (USEPA 2011) recommends that kidney risk be assessed using the mutagenic approach (ADAF applied), but liver and NHL be addressed using standard cancer equations.

USEPA generally recommends use of ADAFs when determining cancer risks for mutagenic carcinogens. However, since the ADAF adjustment applies only to the kidney cancer contribution to the total CSF for TCE, it is likely to have a very low influence on total cancer risk, except when exposures primarily occur during early life. USEPA states that, in the case of full lifetime calculations, excluding the ADAF adjustment altogether "will not seriously impact the resulting risk estimate" (USEPA 2011).

Per USEPA (2011), the TCE oral cancer slope factor (CSF) for kidney tumors, liver tumors and NHL (i.e., "total" CSF) is 0.046 $(mg/kg\text{-}day)^{-1}$ whereas the CSF for kidney tumors alone is 0.0093 $(mg/kg\text{-}day)^{-1}$. Subtracting the kidney CSF from the total CSF gives a CSF for NHL + liver tumors of 0.0367 $(mg/kg\text{-}day)^{-1}$. Therefore, if the approach recommended by USEPA (2011) is followed, the age-specific ADAF is applied to the kidney CSF, but not to the NHL + liver CSF.

Consistent with the Baseline Human Health Risk Assessment (BHHRA) for the Lower Passaic River Study Area (LPRSA) (AECOM 2017), the NBSA BHHRA uses default ADAFs for TCE. Specifically, the age-specific ADAFs are applied to the total lifetime oral CSF of 0.046 $(mg/kg\text{-}day)^{-1}$, instead of using the TCE-specific approach that applies the ADAF to the kidney CSF but not the NHL + liver CSF. The default approach is more stringent (yields higher cancer risks) than the TCE-specific approach discussed in USEPA (2011). Despite this additional conservatism, TCE is not a risk driver for the NBSA BHHRA.

B-2.2 Example Calculations

To illustrate this concept, Attachment B-2A depicts surface water ingestion and dermal calculations for an adult and child wader showing the difference in cancer risk resulting from application of the default ADAF approach vs. the TCE-specific approach outlined in USEPA (2011). Surface water was chosen for the example calculations, because TCE is a COPC in surface water only for the NBSA. As shown in Attachment B-2A, surface water ingestion risks are 2.3-fold higher using the default ADAF approach vs. the TCE-specific approach; surface water dermal risks are 1.7-fold higher using the default ADAF approach instead of the TCE-specific approach (the difference is due to relative differences in the exposure assumptions between children and adults for the surface water ingestion and dermal contact pathways). These example

calculations demonstrate that use of the default ADAF methodology for TCE is more stringent for assessing the carcinogenicity and mutagenicity for this chemical in the NBSA BHHRA.

B-2.3 References

AECOM. 2017. Baseline Human Health Risk Assessment for the Lower Passaic River Study Area, Final. Prepared for Lower Passaic River Cooperating Parties Group. AECOM, Chelmsford, MA. July.

USEPA. 2005. Supplemental guidance for assessing susceptibility from early-life exposure to carcinogens. (EPA/630/R-03/003F). US Environmental Protection Agency Risk Assessment Forum, Washington, DC.

USEPA. 2011. Toxicological Review of Trichloroethylene (CAS No. 79-01-6) In Support of Summary Information on the Integrated Risk Information System (IRIS). EPA/635/R-09/011F. US Environmental Protection Agency, Washington, DC. September.

ATTACHMENT B-2A

TCE ADAF Calculations

TABLE B-2A
TCE ADAF CALCULATIONS
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Cancer Slope Factors (CSF)

CSF Type	Value	Units
Total for all cancers	4.6E-02	(mg/kg-day)-1
Kidney	9.3E-03	(mg/kg-day)-1
NHL+Liver	3.7E-02	(mg/kg-day)-1

Default Application of ADAFs

Surface Water Ingestion

	Intake	CSF	Cancer Site	ADAF*	Risk
Child - Wader	5.9E-10	4.6E-02	All cancers	4.2E+00	1.1E-10
Adult - Wader	1.8E-10	4.6E-02	All cancers	1.0E+00	8.4E-12
Total	**7.7E-10**	--	--	--	**1.2E-10**

Surface Water Dermal Contact

	Intake	CSF	Cancer Site	ADAF*	Risk
Child - Wader	1.3E-09	4.6E-02	All cancers	4.2E+00	2.5E-10
Adult - Wader	2.6E-09	4.6E-02	All cancers	1.0E+00	1.2E-10
Total	**3.9E-09**	--	--	--	**3.7E-10**

TCE-Specific Special Application of ADAFs (USEPA 2011)

Surface Water Ingestion

	Intake	CSF	Cancer Site	ADAF*	Risk
Child - Wader	5.9E-10	9.3E-03	Kidney	4.2E+00	2.3E-11
		3.7E-02	NHL+Liver	1.0E+00	2.2E-11
Adult - Wader	1.8E-10	9.3E-03	Kidney	1.0E+00	1.7E-12
		3.7E-02	NHL+Liver	1.0E+00	6.7E-12
Total	**7.7E-10**	--	--	--	**5.3E-11**

Surface Water Dermal Contact

	Intake	CSF	Cancer Site	ADAF*	Risk
Child - Wader	1.3E-09	9.3E-03	Kidney	4.2E+00	5.1E-11
		3.7E-02	NHL+Liver	1.0E+00	4.8E-11
Adult - Wader	2.6E-09	9.3E-03	Kidney	1.0E+00	2.4E-11
		3.7E-02	NHL+Liver	1.0E+00	9.6E-11
Total	**3.9E-09**	--	--	--	**2.2E-10**

Comparison of Total Cancer Risks

	SW Ingestion	SW Dermal
Default ADAF	1.2E-10	3.7E-10
TCE-specific ADAF	5.3E-11	2.2E-10
Ratio of Risk: Defaut ADAF Approach / TCE-Specific ADAF Approach	**2.3**	**1.7**

*Note: ADAF values for the child and adult age ranges in the NBSA HHRA are described in Table 5-3 of the main report.

Appendix C-1

APPENDIX C-1
SEDIMENT VOLATILIZATION SCREENING ASSESSMENT

C-1.1 Introduction

A screening assessment for the inhalation of volatile or semivolatile chemicals of potential concern (COPCs) from exposed Newark Bay Study Area (NBSA) sediments was conducted to determine whether this route of exposure should be included in the baseline human health risk assessment (BHHRA). Consistent with the BHHRA for the Lower Passaic River Study Area (LPRSA) (AECOM, 2017), inhalation screening levels for Newark Bay were developed using USEPA's *Soil Screening Guidance: User's Guide* (USEPA, 1996). These screening levels were then compared to upper-bound Newark Bay sediment concentrations to determine whether potentially elevated carcinogenic risk and noncarcinogenic hazards are present. The sediment volatilization screening assessment methods and results are described in the following sections.

C-1.2 Methods

The initial sediment screening assessment, detailed in Sections 3.3 and 3.4 of the main text of this BHHRA, identified 56 COPCs. Of these chemicals, 34 were classified as volatile according to the USEPA Regional Screening Levels (RSLs) (2018) and were evaluated further for volatilization as described in this Appendix.

C-1.2.1 Derivation of the Volatilization Factor

Screening levels were developed for these COPCs using a volatilization factor (VF) that characterizes volatile emissions from sediment and dispersion in ambient air. Specifically, VF was calculated using Equations 1a–c (USEPA, 1996):

$$VF = \frac{Q/C \times (3.14 \times D_A \times T)^{0.5} \times 10^{-4}}{2 \times \rho_b \times D_A} \quad (1a)$$

$$D_A = \frac{[(\theta_a^{\frac{10}{3}} \times D_i \times H' + \theta_w^{\frac{10}{3}} \times D_w)/ n^2]}{[(\rho_b \times K_d + \theta_w + \theta_a H')]} \quad (1b)$$

And for organics:

$$K_d = K_{oc} \times f_{oc} \quad (1c)$$

where:

VF	=	soil-to-air volatilization factor (m^3/kg)
Q/C	=	inverse of the mean concentration at the center of a source (g/m^2-s per kg/m^3)
D_A	=	apparent diffusivity (cm^2/s)
T	=	exposure interval (s)
ρ_b	=	dry soil bulk density (g/cm^3)
n	=	total soil porosity (L_{pore}/L_{soil})
θ_a	=	air-filled soil porosity (L_{air}/L_{soil})
θ_w	=	water-filled soil porosity (L_{water}/L_{soil})
D_i	=	diffusivity in air (cm^2/s) (chemical-specific)

D_w = diffusivity in water (cm^2/s) (chemical-specific)
H' = dimensionless Henry's law constant (chemical-specific)
K_d = soil-water partition coefficient (cm^3/g) (chemical-specific)
K_{oc} = soil organic carbon partition coefficient (cm^3/g) (chemical-specific)
f_{oc} = fraction organic carbon in soil (g/g).

The dispersion model term in the VF equation, Q/C, was defined as 54.5 g/m^2-s per kg/m^3. This value, obtained from Exhibit 11 of the *User's Guide* (USEPA, 1996), was based on the closest climate zone to Newark Bay (i.e., Philadelphia, PA) and an exposure area of 10 acres. To establish the largest individual sediment exposure area, polygons were created using Google Earth for each of the intertidal areas specified in the *Phase I and Phase II Sediment Deposition Report* (Tierra Solutions, 2011; Fig 2-2). These intertidal areas ranged from approximately 2.5 acres to 9.2 acres; therefore, a source exposure area of 10 acres was conservatively assumed in the calculation of the VF.

Parameters describing Newark Bay sediment were defined as shown in Table C-1.1. Many of these assumptions about NBSA sediment were consistent with the values employed in the LPRSA BHHRA Tier 2 evaluation of the sediment volatilization pathway (AECOM, 2017)—namely, particle density and all definitions of porosity (i.e., total, air, and water). Bulk density (ρ_b) was calculated using the total porosity and particle density specified in Table C-1.1. This value, 0.66 g/cm^3, was also found to be consistent with reported bulk density for the Passaic River and Navigation Channels of Newark Bay of 0.7 g/cm^3 (Tierra Solutions, 2011). The fraction of organic carbon in soil, f_{oc}, was assumed to be 0.0391, based on the mean detected total organic carbon (TOC) reported in Table 3-3 of *The SQT and Porewater Report for NBSA* (GSH, 2017).

Table C-1.1. Assumptions characterizing Newark Bay sediment

Parameter	Definition	Value	Reference
ρ_s	particle density (g/cm^3)	2.65	AECOM (2017); USEPA (1996) default
ρ_b	bulk density (g/cm^3)	0.66	Calculated from total porosity and particle density, given $n = 1-(\rho_b / \rho_s)$
n	total porosity (unitless)	0.75	AECOM (2017) — Tier 2 assumption
θ_a	air-filled porosity (unitless)	0.0850	AECOM (2017) — Tier 2 assumption
θ_w	water-filled porosity (unitless)	0.67	AECOM (2017) — Tier 2 assumption
f_{oc}	fraction organic carbon content (unitless)	0.0391	Glenn Springs Holdings (2017)

Chemical-specific parameters (i.e., diffusivities in air and water [D_i, D_w], organic carbon partition coefficients (K_{oc}), and dimensionless Henry's law constants (H')) were obtained from the following sources:

- EPA's site-specific regional screening levels (RSL) calculator (output generated December 2017)
- EPA's Water 9 (v3.0) database.

These physicochemical properties were generated at the site-specific temperature of 285 deg. K (11.85 deg. C) (AECOM, 2017). Otherwise, default parameters calculated at 298 deg. K (25 deg. C) were used. The

values for these chemical-specific parameters are included in Attachment C1-A. Finally, the default exposure interval, T, of 9.5×10^8 seconds was assumed to calculate VF (AECOM, 2017; USEPA, 1996).

C-1.2.2 Calculation of Screening Levels

Carcinogenic and noncarcinogenic screening levels (SLs) were then calculated using the VF, along with assumptions about exposure factors and toxicity reference values. Equation 2 shows the sediment screening level that is protective of the inhalation of carcinogenic volatile chemicals (USEPA, 1996).

$$SL_{carc} = \frac{TR \times AT \times 365}{EF \times ED \times URF \times 1000 \times \frac{1}{VF}} \quad (2)$$

where:

SL_{carc} = screening level for inhalation of carcinogenic volatile chemicals (mg/kg)
TR = target cancer risk (unitless)
AT = averaging time (yr)
EF = exposure frequency (d/yr)
ED = exposure duration (yr)
URF = inhalation unit risk factor ($m^3/\mu g$) (chemical-specific)
VF = soil-to-air volatilization factor (calculated using Equation 1) (m^3/kg).

Equation 3 shows the sediment screening level that is protective of the inhalation of noncarcinogenic volatile chemicals (USEPA, 1996).

$$SL_{noncarc} = \frac{THQ \times AT \times 365}{EF \times ED \times \left[\frac{1}{RfC} \times \frac{1}{VF}\right]} \quad (3)$$

where:

$SL_{noncarc}$= screening level for inhalation of noncarcinogenic volatile chemicals (mg/kg)
THQ = target hazard quotient (unitless)
AT = averaging time (yr)
EF = exposure frequency (d/yr)
ED = exposure duration (yr)
RfC = inhalation reference concentration (mg/m^3) (chemical-specific)
VF = soil-to-air volatilization factor (Equation 1).

The targets of excess cancer risk of 1×10^{-6} and hazard quotient of 1 were used to develop the inhalation screening levels. Table C-1.2 shows additional exposure assumptions used for SLs.

Table C-1.2. Exposure assumptions used in developing SLs

Parameter	Definition	Value	Reference
AT_c	averaging time, carcinogenic	70	AECOM (2017); USEPA (1996) default
AT_{nc}	averaging time, non-carcinogenic	26	AECOM (2017); USEPA (1996) default
EF	exposure frequency	350	AECOM (2017); USEPA (1996) default
ED	exposure duration	26	AECOM (2017); USEPA (1996) default

Chemical-specific toxicity factors (i.e., inhalation unit risk factors [IURs] and reference concentrations [RfCs]) were obtained from USEPA RSLs (2019). Toxicity factors for the individual dioxin-like congeners were calculated using the value for 2,3,7,8-TCDD and applying a toxic equivalency factor (TEF). Additionally, surrogates were specified for the following COPCs:

- Total non-DL PCBs: Aroclor 1254
- PHC as gasoline: Total petroleum hydrocarbons (aromatic low)
- TPH (C9-C40): Total petroleum hydrocarbons (aromatic medium).

SLs were then compared to the sediment exposure-point concentrations (EPCs) presented in Table 3-8 of the main report. Excess carcinogenic risk was calculated by taking the ratio of the EPC and SL_{carc} and multiplying by 1×10^{6}. The noncarcinogenic hazard quotient was calculated by taking the ratio of the EPC and the $SL_{noncarc}$.

C-1.3 Results

The results for the sediment screening evaluation are summarized in Table C-1.3. For each COPC in this table, sediment EPCs, VFs, toxicity reference values (i.e., RfC and URF), inhalation screening levels (i.e., $SL_{noncarc}$ and SL_{carc}), hazard quotient, and excess cancer risk are shown. The calculated maximum hazard quotient observed was 0.16 for TPH (C9-C40). The maximum excess cancer risk was calculated as 1.4×10^{-7} for KM TEQ DF. Overall, none of the COPCs were found to exceed the target risk of 1×10^{-6} or noncarcinogenic target hazard level of 1.0. Based on these results, the sediment volatilization pathway was excluded from the BHHRA.

Table C-1.3. Sediment volatilization screening assessment results

COPCs	EPC (mg/kg)	VF (m^3/kg)	RfC (mg/m^3)	URF (m^3/µg)	$SL_{noncarc}$ (mg/kg)	SL_{carc} (mg/kg)	Hazard Quotient	Excess Cancer Risk
Dioxin-like Compounds								
2,3,7,8-TCDD	7.65E-05	1.03E+07	4.00E-08	3.80E+01	4.28E-01	7.59E-04	1.78E-04	1.01E-07
1,2,3,7,8-PeCDD	4.02E-06	1.39E+07	4.00E-08	3.80E+01	5.80E-01	1.03E-03	6.93E-06	3.91E-09
1,2,3,4,7,8-HxCDD	3.60E-06	1.83E+07	4.00E-07	3.80E+00	7.61E+00	1.35E-02	4.73E-07	2.67E-10
1,2,3,6,7,8-HxCDD	1.46E-05	1.83E+07	4.00E-07	3.80E+00	7.62E+00	1.35E-02	1.91E-06	1.08E-09
1,2,3,7,8,9-HxCDD	8.59E-06	1.83E+07	4.00E-07	3.80E+00	7.63E+00	1.35E-02	1.13E-06	6.36E-10
1,2,3,4,6,7,8-HpCDD	2.57E-04	2.34E+07	4.00E-06	3.80E-01	9.75E+01	1.73E-01	2.63E-06	1.49E-09
OCDD	2.61E-03	3.14E+07	1.33E-04	1.14E-02	4.37E+03	7.74E+00	5.97E-07	3.37E-10
2,3,7,8-TCDF	1.38E-05	7.77E+06	4.00E-07	3.80E+00	3.24E+00	5.74E-03	4.25E-06	2.40E-09
1,2,3,7,8-PeCDF	9.44E-06	1.03E+07	1.33E-06	1.14E+00	1.43E+01	2.53E-02	6.60E-07	3.73E-10
2,3,4,7,8-PeCDF	1.58E-05	1.03E+07	1.33E-07	1.14E+01	1.43E+00	2.53E-03	1.10E-05	6.23E-09
1,2,3,4,7,8-HxCDF	7.22E-05	1.34E+07	4.00E-07	3.80E+00	5.60E+00	9.93E-03	1.29E-05	7.27E-09
1,2,3,6,7,8-HxCDF	1.88E-05	1.34E+07	4.00E-07	3.80E+00	5.60E+00	9.93E-03	3.36E-06	1.89E-09
1,2,3,7,8,9-HxCDF	1.41E-06	1.35E+07	4.00E-07	3.80E+00	5.63E+00	9.97E-03	2.50E-07	1.41E-10
2,3,4,6,7,8-HxCDF	1.05E-05	1.35E+07	4.00E-07	3.80E+00	5.63E+00	9.98E-03	1.86E-06	1.05E-09

COPCs	EPC (mg/kg)	VF (m^3/kg)	RfC (mg/m^3)	URF (m^3/µg)	$SL_{noncarc}$ (mg/kg)	SL_{carc} (mg/kg)	Hazard Quotient	Excess Cancer Risk
1,2,3,4,6,7,8-HpCDF	3.20E-04	1.77E+07	4.00E-06	3.80E-01	7.40E+01	1.31E-01	4.33E-06	2.44E-09
1,2,3,4,7,8,9-HpCDF	1.09E-05	1.77E+07	4.00E-06	3.80E-01	7.40E+01	1.31E-01	1.47E-07	8.30E-11
OCDF	4.47E-04	2.34E+07	1.33E-04	1.14E-02	3.25E+03	5.75E+00	1.38E-07	7.77E-11
PCB-77	7.72E-03	6.64E+06	4.00E-04	3.80E-03	2.77E+03	4.91E+00	2.79E-06	1.57E-09
PCB-81	2.97E-04	5.76E+06	1.33E-04	1.14E-02	8.01E+02	1.42E+00	3.71E-07	2.09E-10
PCB-105	1.24E-02	7.52E+06	1.33E-03	1.14E-03	1.05E+04	1.85E+01	1.19E-06	6.69E-10
PCB-114	8.51E-04	7.75E+06	1.33E-03	1.14E-03	1.08E+04	1.91E+01	7.89E-08	4.46E-11
PCB-118	3.62E-02	7.43E+06	1.33E-03	1.14E-03	1.03E+04	1.83E+01	3.50E-06	1.98E-09
PCB-123	1.05E-03	7.63E+06	1.33E-03	1.14E-03	1.06E+04	1.88E+01	9.89E-08	5.58E-11
PCB-126	2.45E-04	7.55E+06	4.00E-07	3.80E+00	3.15E+00	5.58E-03	7.78E-05	4.39E-08
PCB-156/157	3.24E-03	1.00E+07	1.33E-03	1.14E-03	1.39E+04	2.46E+01	2.33E-07	1.32E-10
PCB-167	1.16E-03	1.00E+07	1.33E-03	1.14E-03	1.39E+04	2.46E+01	8.34E-08	4.71E-11
PCB-169	2.52E-04	1.00E+07	1.33E-06	1.14E+00	1.39E+01	2.46E-02	1.81E-05	1.02E-08
PCB-189	8.11E-04	1.32E+07	1.33E-03	1.14E-03	1.83E+04	3.24E+01	4.43E-08	2.50E-11
KM TEQ DF	1.04E-04	1.03E+07	4.00E-08	3.80E+01	4.28E-01	7.59E-04	2.43E-04	1.37E-07
KM TEQ PCB	3.05E-05	1.03E+07	4.00E-08	3.80E+01	4.28E-01	7.59E-04	7.12E-05	4.02E-08
Non DL-PCBs								
Total Non-DL PCBs	6.60E-01	7.97E+06	--	5.71E-04	--	3.92E+01	--	1.68E-08
PAHs								
Benz(a)anthracene	2.09E+00	8.87E+06	--	6.00E-05	--	4.15E+02	--	5.03E-09
Pesticides & Organics								
PHC as gasoline	5.66E+00	1.54E+05	3.00E-02	--	4.81E+03	--	1.18E-03	--
TPH (C9-C40)	4.11E+02	8.46E+05	3.00E-03	--	2.65E+03	--	1.55E-01	--

Abbreviations: COPCs – concentration of potential concern
EPC – exposure point concentration
VF – volatilization factor
RfC – inhalation reference concentration
URF – inhalation unit risk factor
$SL_{noncarc}$ – inhalation noncarcinogenic screening level
SL_{carc} – inhalation carcinogenic screening level

While there is uncertainty associated with any model of volatilization from soil or sediment and subsequent air dispersion, the models used in this assessment are recommended by USEPA to derive screening levels for purposes of assessing the need for further evaluation. Accordingly, these models are intended to be protective of human health under most site conditions, and concentrations below the screening levels generally do not require further evaluation (USEPA, 1996). Further, the majority of the input parameters are consistent with USEPA (1996) generic default values and values employed in the LPRSA BHHRA Tier 2 evaluation of the sediment volatilization pathway (AECOM, 2017). One of the few site-specific input parameters is the size of the exposure area used to calculate VF. For purposes of this assessment, a source exposure area of 10 acres was assumed. This value is slightly larger (more health-protective) than the largest intertidal area identified from the *Phase I and Phase II Sediment Deposition Report*, which ranged

from approximately 2.5 acres to 9.2 acres (Tierra Solutions, 2011; Fig 2-2). Even considering these primarily default or otherwise health-protective assumptions, the highest estimated excess cancer risk and non-cancer hazard quotient are nearly an order of magnitude below the corresponding screening levels. Therefore, any uncertainty in the volatilization and air dispersion modeling is not expected to affect the conclusions of this evaluation.

C-1.4 References

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Attachment C-1A

Tier 1 Calculation Spreadsheet

Table C-1A-1
SEDIMENT INHALATION - TIER 1 INITIAL SCREEN (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

COPCs	Sitewide EPC (mg/kg)	H (dimensionless @ 11.85 ℃)	H (dimensionless @ 25 ℃)	D_i (cm^2/sec)	D_w (cm^2/sec)	K_{oc} (cm^3/g)	K_d (cm^3/g)	DA (cm^2/s)	VF (m^3/kg)	RfC (mg/m^3)	URF (m^3/ug)	SSLnoncarc (mg/kg)	SSLcarc (mg/kg)	Chronic Hazard Quotient	Potential Cancer Risk
Dioxin-like Compounds															
2,3,7,8-TCDD	7.65E-05	4.22E-05	2.04E-03	4.70E-02	6.76E-06	2.49E+05	9.74E+03	4.78E-10	1.03E+07	4.00E-08	3.80E+01	4.28E-01	7.59E-04	1.78E-04	1.01E-07
1,2,3,7,8-PeCDD	4.02E-06	--	1.07E-04	4.47E-02	6.16E-06	4.16E+05	1.63E+04	2.61E-10	1.39E+07	4.00E-08	3.80E+01	5.80E-01	1.03E-03	6.93E-06	3.91E-09
1,2,3,4,7,8-HxCDD	3.60E-06	--	1.61E-04	4.27E-02	5.97E-06	6.95E+05	2.72E+04	1.52E-10	1.83E+07	4.00E-07	3.80E+00	7.61E+00	1.35E-02	4.73E-07	2.67E-10
1,2,3,6,7,8-HxCDD	1.46E-05	--	7.93E-05	4.27E-02	5.97E-06	6.95E+05	2.72E+04	1.51E-10	1.83E+07	4.00E-07	3.80E+00	7.62E+00	1.35E-02	1.91E-06	1.08E-09
1,2,3,7,8,9-HxCDD	8.59E-06	--	7.93E-05	4.27E-02	5.95E-06	6.95E+05	2.72E+04	1.51E-10	1.83E+07	4.00E-07	3.80E+00	7.63E+00	1.35E-02	1.13E-06	6.36E-10
1,2,3,4,6,7,8-HpCDD	2.57E-04	--	7.15E-03	4.09E-02	5.78E-06	1.16E+06	4.54E+04	9.24E-11	2.34E+07	4.00E-06	3.80E-01	9.75E+01	1.73E-01	2.63E-06	1.49E-09
OCDD	2.61E-03	--	2.76E-04	3.94E-02	5.61E-06	1.94E+06	7.59E+04	5.10E-11	3.14E+07	1.33E-04	1.14E-02	4.37E+03	7.74E+00	5.97E-07	3.37E-10
2,3,7,8-TCDF	1.38E-05	2.01E-03	6.83E-04	4.82E-02	6.55E-06	1.40E+05	5.47E+03	8.37E-10	7.77E+06	4.00E-07	3.80E+00	3.24E+00	5.74E-03	4.25E-06	2.40E-09
1,2,3,7,8-PeCDF	9.44E-06	--	2.05E-04	4.57E-02	6.31E-06	2.33E+05	9.11E+03	4.78E-10	1.03E+07	1.33E-06	1.14E+00	1.43E+01	2.53E-02	6.60E-07	3.73E-10
2,3,4,7,8-PeCDF	1.58E-05	--	2.05E-04	4.57E-02	6.31E-06	2.33E+05	9.11E+03	4.78E-10	1.03E+07	1.33E-07	1.14E+01	1.43E+00	2.53E-03	1.10E-05	6.23E-09
1,2,3,4,7,8-HxCDF	7.22E-05	--	1.59E-03	4.36E-02	6.10E-06	3.89E+05	1.52E+04	2.80E-10	1.34E+07	4.00E-07	3.80E+00	5.60E+00	9.93E-03	1.29E-05	7.27E-09
1,2,3,6,7,8-HxCDF	1.88E-05	--	1.59E-03	4.36E-02	6.10E-06	3.89E+05	1.52E+04	2.80E-10	1.34E+07	4.00E-07	3.80E+00	5.60E+00	9.93E-03	3.36E-06	1.89E-09
1,2,3,7,8,9-HxCDF	1.41E-06	--	3.47E-04	4.36E-02	6.10E-06	3.89E+05	1.52E+04	2.77E-10	1.35E+07	4.00E-07	3.80E+00	5.63E+00	9.97E-03	2.50E-07	1.41E-10
2,3,4,6,7,8-HxCDF	1.05E-05	--	2.78E-04	4.36E-02	6.10E-06	3.89E+05	1.52E+04	2.77E-10	1.35E+07	4.00E-07	3.80E+00	5.63E+00	9.98E-03	1.86E-06	1.05E-09
1,2,3,4,6,7,8-HpCDF	3.20E-04	--	5.76E-04	4.17E-02	5.90E-06	6.50E+05	2.54E+04	1.61E-10	1.77E+07	4.00E-06	3.80E-01	7.40E+01	1.31E-01	4.33E-06	2.44E-09
1,2,3,4,7,8,9-HpCDF	1.09E-05	--	5.76E-04	4.17E-02	5.90E-06	6.50E+05	2.54E+04	1.61E-10	1.77E+07	4.00E-06	3.80E-01	7.40E+01	1.31E-01	1.47E-07	8.30E-11
OCDF	4.47E-04	--	7.73E-05	4.01E-02	5.72E-06	1.09E+06	4.26E+04	9.25E-11	2.34E+07	1.33E-04	1.14E-02	3.25E+03	5.75E+00	1.38E-07	7.77E-11
PCB-77	7.72E-03	6.69E-04	3.84E-04	4.94E-02	5.04E-06	7.81E+04	3.05E+03	1.14E-09	6.64E+06	4.00E-04	3.80E-03	2.77E+03	4.91E+00	2.79E-06	1.57E-09
PCB-81	2.97E-04	--	9.12E-03	4.94E-02	6.27E-06	7.81E+04	3.05E+03	1.52E-09	5.76E+06	1.33E-04	1.14E-02	8.01E+02	1.42E+00	3.71E-07	2.09E-10
PCB-105	1.24E-02	--	1.16E-02	4.67E-02	6.06E-06	1.31E+05	5.12E+03	8.91E-10	7.52E+06	1.33E-03	1.14E-03	1.05E+04	1.85E+01	1.19E-06	6.69E-10
PCB-114	8.51E-04	--	3.78E-03	4.67E-02	6.06E-06	1.31E+05	5.12E+03	8.40E-10	7.75E+06	1.33E-03	1.14E-03	1.08E+04	1.91E+01	7.89E-08	4.46E-11
PCB-118	3.62E-02	--	1.18E-02	4.67E-02	6.06E-06	1.28E+05	5.00E+03	9.14E-10	7.43E+06	1.33E-03	1.14E-03	1.03E+04	1.83E+01	3.50E-06	1.98E-09
PCB-123	1.05E-03	--	7.77E-03	4.67E-02	6.06E-06	1.31E+05	5.12E+03	8.66E-10	7.63E+06	1.33E-03	1.14E-03	1.06E+04	1.88E+01	9.89E-08	5.58E-11
PCB-126	2.45E-04	--	7.77E-03	4.67E-02	6.06E-06	1.28E+05	5.00E+03	8.86E-10	7.55E+06	4.00E-07	3.80E+00	3.15E+00	5.58E-03	7.78E-05	4.39E-08
PCB-156/157	3.24E-03	--	5.85E-03	4.44E-02	5.86E-06	2.14E+05	8.37E+03	5.05E-10	1.00E+07	1.33E-03	1.14E-03	1.39E+04	2.46E+01	2.33E-07	1.32E-10
PCB-167	1.16E-03	--	2.80E-03	4.44E-02	5.86E-06	2.09E+05	8.17E+03	5.05E-10	1.00E+07	1.33E-03	1.14E-03	1.39E+04	2.46E+01	8.34E-08	4.71E-11
PCB-169	2.52E-04	--	2.80E-03	4.44E-02	5.86E-06	2.09E+05	8.17E+03	5.05E-10	1.00E+07	1.33E-06	1.14E+00	1.39E+01	2.46E-02	1.81E-05	1.02E-08
PCB-189	8.11E-04	--	2.07E-03	4.24E-02	5.69E-06	3.50E+05	1.37E+04	2.91E-10	1.32E+07	1.33E-03	1.14E-03	1.83E+04	3.24E+01	4.43E-08	2.50E-11
KM TEQ DF	1.04E-04	4.22E-05	2.04E-03	4.70E-02	6.76E-06	2.49E+05	9.74E+03	4.78E-10	1.03E+07	4.00E-08	3.80E+01	4.28E-01	7.59E-04	2.43E-04	1.37E-07
KM TEQ PCB	3.05E-05	4.22E-05	2.04E-03	4.70E-02	6.76E-06	2.49E+05	9.74E+03	4.78E-10	1.03E+07	4.00E-08	3.80E+01	4.28E-01	7.59E-04	7.12E-05	4.02E-08
Non DL-PCBs															
Total Non-DL PCBs	6.60E-01	3.55E-03	1.16E-02	2.22E-02	5.83E-06	1.31E+05	5.12E+03	7.95E-10	7.97E+06	--	5.71E-04	--	3.92E+01	--	1.68E-08
PAHs															
Benz(a)anthracene	2.09E+00	4.67E-05	4.91E-04	2.44E-02	6.45E-06	1.77E+05	6.92E+03	6.42E-10	8.87E+06	--	6.00E-05	--	4.15E+02	--	5.03E-09
Pesticides & Organics															
PHC as gasoline	5.66E+00	1.25E-01	2.27E-01	8.37E-02	9.81E-06	1.46E+02	5.71E+00	2.13E-06	1.54E+05	3.00E-02	--	4.81E+03	--	1.18E-03	--
TPH (C9-C40)	4.11E+02	7.78E-03	1.96E-02	5.27E-02	7.71E-06	2.01E+03	7.86E+01	7.05E-08	8.46E+05	3.00E-03	--	2.65E+03	--	1.55E-01	--

Calculation of Risk and Hazard based on the following:
Dimensionless Henry's Constants are from the following sources: 1) @ 11.85 deg. C - Water 9 and 2) @ 25 deg. C - US EPA RSL calculator
The following chemical names were used in Water9: "DIOXIN" - 2,3,7,8-TCDD; "TETRACHLORODIBENZOFURAN(2,3,7,8)" - 2,3,7,8-TCDF; "'3,3',4,4' PCB" - PCB-77; "PCB AROCLOR 1254 (pentachlorobiphenyl)" - Total Non-DL PCBs; "BENZO(A)ANTHRACENE" - Benz(a)anthracene; "BENZENE" - PHC as gasoline; "2-METHYLNAPHTHALENE" - TPH (C9-C40)
Diffusivity in air and water based on EPA RSL calculator that adjusts to 11.85 deg C if calculable, else default to 25 deg C

Appendix C-2

APPENDIX C-2: SURFACE WATER VOLATILIZATION SCREENING ASSESSMENT

C-2.1 Introduction

The potential for exposure to volatile or semivolatile organic chemicals of potential concern (COPCs) in surface water via inhalation of vapors in ambient air was evaluated in a manner consistent with the baseline human health risk assessment for the Lower Passaic River Study Area (LPRSA) (AECOM, 2013, 2015). Specifically, volatilization of COPCs from surface water was evaluated using a tiered approach. The first tier was based on a very conservative model for estimating evaporation from surface water and dispersion into a simple box model. The resulting ambient air concentrations were compared to U.S. Environmental Protection Agency (EPA) regional screening levels (RSLs) for air, assuming a residential scenario. For those chemicals for which the Tier 1 air concentration exceeded the residential air RSL, the second tier was based on a more realistic model for estimating evaporation from surface water and screening-level air dispersion modeling. The methods and results for each tier are described in the following sections.

C-2.2 Tier 1 — Initial Screening

The initial screening assessment of the surface water volatilization pathway was based on a simple box model, which is based on the idea of a theoretically enclosed space over the area of interest. The model assumes that vapors enter the box because of evaporation from the surface water and are removed by the wind. Importantly, this model is very conservative for an area as large as Newark Bay, because it assumes that evaporating chemicals are uniformly mixed within the box, the box height is very small, the wind direction is continuously aligned with the long axis of the Bay, and the receptor is always located downwind of the source (i.e., the concentration in the box is estimated at the downwind edge of Newark Bay). COPCs included in this evaluation are chemicals detected in surface water samples that are considered volatile or semivolatile by EPA for the purpose of deriving RSLs.[1] The equations used to estimate the evaporation rate and resulting ambient air concentrations are provided below, including all input parameters. These equations are the same as those used in the LPRSA risk assessment (AECOM, 2013, 2015).

C-2.2.1 Evaporation Rate

The evaporation rate from surface water was estimated according to EPA's Risk Management Program Guidance for Offsite Consequence Analysis for estimating worst-case evaporation from a pool (EPA, 2009).

$$QR = 0.285 \times U^{0.78} \times MW^{2/3} \times L_b \times W_b \times VP \times T^{-1}$$ **Equation 1**[2]

Where:

QR	=	evaporation rate of COPC into the box (g/sec)
U	=	annual average surface wind speed (m/sec).
MW	=	molecular weight of COPC
L_b	=	along-wind dimension (length) of the box (m)
W_b	=	cross-wind dimension (width) of the box (m)

[1] https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables. Accessed June 2019.

[2] The precise form of this equation is taken from AECOM (2015), which is slightly different from the equation presented in EPA (2009) because of units.

VP = COPC partial pressure in water (mm Hg) = saturation vapor pressure of COPC (mm Hg) × COPC mole fraction × COPC activity coefficient.
T = annual average temperature (K).

The values for U and T were set at 4.5 m/sec and 285 K, respectively, based on long-term observations by the National Weather Service at Liberty International Airport in Newark, New Jersey (AECOM, 2015). The values for L_b and W_b were set at 10,000 and 1,500 m, respectively, based on the approximate dimensions of Newark Bay. Chemical-specific parameters (where relevant, at 285 K) were obtained from EPA's Water9 (v3.0) database.[3] Finally, the mole fraction for each COPC was based on the 95% upper confidence limit (UCL) on the mean concentration in surface water (otherwise referred to as the exposure-point concentration [EPC]).

C-2.2.2 Ambient Air Concentration

The concentration of each COPC in ambient air was then estimated according to the following equation:

$$C_{air} = QR \times 1000 \times [(U \times W_b \times H_b)]^{-1} \quad \textbf{Equation 2}$$

Where:

C_{air} = air concentration of COPC (mg/m^3)
QR = evaporation rate of COPC into the box (g/sec) [from Equation 1]
1000 = conversion factor (mg/g)
U = annual average surface wind speed (m/sec)
W_b = cross-wind dimension (width) of the box (m)
H_b = height of the box (m).

The values for U and W_b are as described above. The value for H_b was set at 2 m to approximate the height of the breathing zone. This latter assumption is extremely conservative for an area as large as Newark Bay, because vapors will disperse upward as they are carried by the wind across the 10,000-ft length of the Bay.

The estimated air concentrations were compared to EPA's residential air RSLs, which assume exposure 350 days per year for 30 years. COPCs with estimated air concentrations below their respective RSLs were not considered further; COPCs with estimated concentrations above their respective RSLs were evaluated further in Tier 2.

The results of the Tier 1 initial screening are presented in Table C-2.1, and the complete calculations are included in Attachment C-2A. As shown in the table, the estimated air concentrations for four COPCs exceeded their respective residential air RSLs (i.e., chloroform, naphthalene, dioxin-like polychlorinated biphenyls (PCBs), and trichloroethylene).

[3] https://www3.epa.gov/ttnchie1/software/water/water9_3/index.html. Accessed September 2017.

Table C-2.1. Results of Tier 1 — Initial Screening

Chemical	EPC (µg/L)	QR (g/sec)	Cair (mg/m^3)	Residential air RSL (mg/m^3)	Ratio of Cair to RSL
Benzanthracene	1.18E-02	1.70E-05	1.3E-06	1.7E-05	7.4E-02
Chloroform	1.20E-01	2.45E+00	1.8E-01	1.2E-04	1.5E+03
Naphthalene	3.55E-02	8.65E-02	6.4E-03	8.3E-05	7.7E+01
KM TEQ PCB[a]	1.09E-07	1.91E-07	1.4E-08	7.4E-11	1.9E+02
2,3,7,8-TCDD[b]	1.22E-06	4.96E-10	3.7E-11	7.4E-11	5.0E-01
2,3,7,8-TCDF[b]	4.76E-07	1.42E-13	1.0E-14	7.4E-10	1.4E-05
KM TEQ DF[b]	2.44E-06	6.59E-10	4.9E-11	7.4E-11	6.6E-01
Trichloroethylene	1.31E-01	5.94E+00	4.4E-01	4.8E-04	9.2E+02

EPC = exposure-point concentration; QR = evaporation rate; Cair = ambient air concentration; DF = dioxins and furans; DL = dioxin-like; KM = Kaplan Meier; RSL = regional screening level; PCB = polychlorinated biphenyl; TEQ = toxicity equivalent concentration; TCDD = tetrachlorodibenzo-p-dioxin; TCDF = tetrachlorodibenzo-p-furan

[a] Physical constants based on PCB-77 (the only dioxin-like PCB in Water9 database.

[b] Physical constants based on values from AECOM Table D-2 (2015)

C-2.3 Tier 2 — Screening-Level Air Modeling

This second assessment of the surface water modeling pathway was based on a more realistic model for estimating evaporation from surface water and a screening-level air dispersion model, rather than the simple box model used in the initial screening assessment. The resulting ambient air concentrations were again compared to residential air RSLs. The equations used to estimate the evaporation rate are provided below, including all input parameters. These equations are the same as those used in the LPRSA risk assessment (AECOM, 2013, 2015). EPA's screening-level air dispersion model AERSCREEN was used to estimate the resulting ambient air concentration. AERSCREEN is the successor model to EPA's previous screening-level model SCREEN3, which was used in the LPRSA risk assessment. AERSCREEN has been EPA's recommended screening-level air dispersion model since its release in 2011 (EPA, 2011).

C-2.3.1 Evaporation Rate

In this tier, the evaporation rate from surface water was estimated according to EPA's model for estimating evaporation from lagoons and surface impoundments (EPA, 1993). Chemical-specific parameters (at 285 K, when relevant) were again obtained from EPA's Water9 (v3.0) database. These parameters were used to estimate evaporation rates for each COPC (termed emission rate by EPA [1993]) using the following equations.

Evaporation rate

$$ER = K \times C \times SA \times 0.01 \qquad \textbf{Equation 3}$$

Where:

ER	=	evaporation rate (g/s)
K	=	overall mass transfer coefficient [MTC] (cm/s)
C	=	COPC liquid phase concentration (mg/L)
SA	=	surface area of source (m^2)
0.01	=	conversion factor ($g/mg \times L/cm^3 \times cm^2/m^2$).

For purposes of this analysis, the area of Newark Bay was assumed to be the same as assumed above for the box model (i.e., 10,000 m × 1,500 m or 15,000,000 m^2). The remaining parameters are calculated as described in the following equations.

Overall MTC

$$1/K = 1/k_L + (R \times T)/(H \times k_G) \quad \textbf{Equation 4}$$

Where:

K	=	Overall MTC (cm/s)
k_L	=	COPC liquid phase MTC (cm/s)
R	=	Ideal gas constant (8.2×10^{-5} atm-m^3/mol-K)
T	=	absolute temperature (K)
H	=	COPC Henry's Law Constant (atm-m^3/mol)
k_G	=	COPC gas phase MTC (cm/s).

The value for T was again set at 285 K. Chemical-specific Henry's Law constants at 285 K (and other chemical-specific parameters, unless otherwise specified) were obtained from EPA's Water9 database.[4]

Liquid-Phase MTC

EPA (1993) provides two equations for calculating the liquid-phase MTC, depending on wind speed.

For wind speeds > 3.25 m/s (7 mph):

$$k_L = (32/MW)^{0.5} \times (T/298) \times (k_{L\text{-}O2}) \quad \textbf{Equation 5}$$

Where:

k_L	=	liquid phase MTC (cm/s)
32	=	MW of O_2 (g/mol)
T	=	temperature (K)
MW	=	COPC molecular weight (g/mol)
$k_{L\text{-}O2}$	=	liquid-phase MTC of O_2 (0.00013 cm/s; Mölder et al., 2005).

For wind speeds < 3.25 m/s (7 mph):

$$k_L = 2.78\times10^{-4} \times (Dw / 8.5\times10^{-6})^{0.667} \quad \textbf{Equation 6}$$

Where:

k_L	=	liquid-phase MTC (cm/s)
Dw	=	COPC diffusivity in water (cm^2/s)
8.5×10^{-6}	=	empirical factor (cm^2/s).

In Tier 1, the wind speed was set at 4.5 m/sec based on long-term measurements collected at Newark Liberty International Airport. Under this assumption, Equation 5 would be used to calculate the liquid-phase MTC. However, Equation 6 was used because it provided a more conservative (larger) value for the MTC. Furthermore, the fundamental relationship of MTC to wind speed is not linear, and using a linearly averaged

[4] The chemical-specific parameters for dioxin-like PCBs and non-dioxin-like PCBs were taken from EPA's physical parameter table used for deriving RSLs.

wind speed to calculate MTC is not necessarily appropriate. Therefore, the more conservative approach (Equation 6) was used.

Gas Phase MTC

$$k_G = 0.482 \times U^{0.78} \times Sc_G^{-0.67} \times d_e^{-0.11}$$ **Equation 7**

Where:

k_G	=	gas-phase MTC (cm/s)
0.482	=	empirical constant (cm/s × (m/s)$^{-0.78}$ × m$^{0.11}$)
U	=	wind speed (m/s)
Sc_G	=	gas side Schmidt number (unitless)
d_e	=	effective diameter of source (m).

Consistent with Tier 1, the value for U was set at 4.5 m/sec. The value for d_e was set at the assumed length of Newark Bay (i.e., 10,000 m).

Schmidt Number

$$Sc_G = \mu_G / (\rho_G \times D_a)$$ **Equation 8**

Where:

Sc_G	=	Schmidt No. (unitless)
μ_G	=	viscosity of air (0.00017734 g/cm-sec)
ρ_G	=	density of air (0.0012 g/cm^3)
D_a	=	COPC diffusivity in air (cm^2/s).

C-2.3.2 Ambient Air Concentration

Ambient air concentrations were estimated using EPA's current screening-level air dispersion model AERSCREEN (version 16216) (EPA, 2016). For this assessment, Newark Bay was modeled as a 1,500- by 9,999-m area source, which is essentially the same dimensions as used in Tier 1.[5] For area sources, AERSCREEN evaluates winds blowing along the long axis of the source to determine maximum ambient air concentrations. AERSCREEN also located the area source, so that the origin of the modeling grid (x-y coordinates 0, 0) is at the center of the source. This source was also assumed to have an initial vertical dimension of 0.5 m to account for fluctuations along the water surface due to wind, shipping, etc. The model was conducted over simple terrain, which assumes that the source and receptors had elevations of zero (i.e., at ground level).

The AERSCREEN model was run in URBAN mode for estimating vertical and lateral dispersion. A default emission rate of 1 gram per second (g/s) was used for the entire area of Newark Bay. Because the emissions accumulate as the wind flows along the long axis, maximum impacts occurred at the downwind edge of the area source. Therefore, a line of receptors along the wind vector and parallel to the long axis of the source began at 5,000 m (approximate edge of the area source measured from the origin at its center) and extended to 20,000 m. A flagpole height of 2 m was used for all receptors, consistent with Tier 1.

[5] The upper-bound limit for source length in AERSCREEN is 9,999 m, which is approximately equal to the assumed length of Newark Bay of 10,000 m used in Tier 1.

Screening meteorological data were generated by the MAKEMET program (version 16216). Inputs for generating these data included:

- Minimum / maximum temperatures: 257.0 / 310.0 K (based on historical data for Newark Bay; NRCC, 2017)
- Minimum wind speed: 0.5 meters per second (m/s)[6]
- Anemometer height: 10 m
- Surface profile: Urban
- Climate: Average moisture for temperate climate.[7]

From these data, MAKEMET generated 498 hourly meteorological conditions that included variable wind speeds (between 0.5 and 18 m/s), temperatures, mixing heights, and dispersion parameters. These were then used to determine the maximum 1-hour ambient concentration. Finally, an averaging period factor for annual conditions (0.1; EPA 2016) was multiplied by the maximum 1-hour concentration to estimate annual average ambient concentrations for a 1-g/s source.

The annual average concentrations predicted by the air dispersion modeling were multiplied by the chemical-specific evaporation rates (Equation 3) to estimate chemical-specific ambient air concentrations related to evaporation from Newark Bay.

The results of the Tier 2 assessment are presented in Table C-2.2, and the complete calculations and AERSCREEN output are included in Attachment C-2B. As shown in the table, the estimated annual average air concentrations for all four COPCs were below their respective residential air RSLs, by at least an order of magnitude. Accordingly, the surface water volatilization pathway was not included in the quantitative risk assessment.

Table C-2.2. Results of Tier 2 – Screening-level air modeling

Chemical	EPC (µg/L)	ER (g/sec)	Cair (mg/m^3)	Residential air RSL (mg/m^3)	Ratio of Cair to RSL
Chloroform	1.20E-01	5.36E-03	5.5E-06	1.2E-04	4.6E-02
Naphthalene	3.55E-02	1.26E-03	1.3E-06	8.3E-05	1.6E-02
KM TEQ PCB	1.09E-07	1.04E-09	1.1E-12	7.4E-11	1.5E-02
Trichloroethylene	1.31E-01	5.53E-03	5.7E-06	4.8E-04	1.2E-02

DL = dioxin-like; Cair = ambient air concentration; EPC = exposure point concentration; ER = evaporation rate; KM = Kaplan Meier; PCB = polychlorinated biphenyl; RSL = regional screening level; TEQ = toxicity equivalent

[a] Physical constants based on PCB-77 (the only dioxin-like PCB in Water9 database.

[b] Physical constants based on values from AECOM Table D-2 (2015); RSL based on PCBs-low risk, consistent with AECOM, 2015.

It is important to note that there is uncertainty associated with any model of volatilization from surface water and subsequent air dispersion. The model used to estimate volatilization in the initial Tier 1 assessment is recommended by EPA to assess worst-case evaporation from a pool (EPA, 2009), and the chemicals were assumed to volatilize into a theoretically enclosed space above the entire area of Newark Bay. Even based on these conservative assumptions, the estimated air concentrations of only four COPCs were above their

[6] Although the evaporation rate was calculated based on a higher assumed wind speed, AERSCREEN was run with the default minimum wind speed, which results in higher (more conservative) estimated ambient air concentrations.

[7] Choices are moist (rain forest), average (temperate), and dry (desert).

respective EPA residential air RSLs. In Tier 2, a more realistic volatilization model recommended by EPA for evaluating evaporation from lagoons and surface impoundments was used (EPA, 1993). This model estimated emission rates that were approximately two to three orders of magnitude lower than the worst-case model used in Tier 1. Air concentrations were then estimated using EPA's currently recommend screening-level air dispersion model. Despite the screening-level nature of the model, the estimate air concentrations were more than an order of magnitude lower than the EPA air residential RSLs. Therefore, any uncertainty in the volatilization and air dispersion modeling is not expected to affect the conclusions of this evaluation.

C-2.4 References

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ATTACHMENT C-2A

Tier 1 Calculation Spreadsheet

TABLE C-2A-1
SURFACE WATER INHALATION - TIER 1 INITIAL SCREEN (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical of Potential Concern	EPC		Chemical-specific parameters							Equation 1	Equation 2	Comparison of Cair to RSL	
				MW	Molarity	MF	VPsat from Water9 (285 K)	AC from Water9 (285 K)	VP	QR	Cair	RSL (a)	Ratio of Cair to RSL
	Value	Units	Volatile?	g/mol	mol/L	unitless	mm Hg	unitless	mm Hg	g/s	mg/m3	mg/m3	unitless
Dioxin-like Compounds													
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.22E-06	µg/L	V	3.22E+02	8.50E-15	1.53E-16	1.51E-10	9.39E+09	2.18E-16	4.96E-10	3.7E-11	7.4E-11	5.0E-01
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	4.23E-07	µg/L	V	3.22E+02	2.83E-16	5.09E-18	--	--	--	--	--	7.4E-11	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	3.07E-06	µg/L	V	3.22E+02	3.22E-16	5.80E-18	--	--	--	--	--	7.4E-10	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	4.92E-07	µg/L	V	3.22E+02	1.16E-15	2.09E-17	--	--	--	--	--	7.4E-10	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	8.67E-07	µg/L	V	3.22E+02	5.99E-16	1.08E-17	--	--	--	--	--	7.4E-10	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	6.20E-06	µg/L	V	3.22E+02	1.83E-14	3.29E-16	--	--	--	--	--	7.4E-09	--
Octachlorodibenzo-p-dioxin	6.48E-05	µg/L	V	3.22E+02	1.94E-13	3.49E-15	--	--	--	--	--	2.5E-07	--
2,3,7,8-Tetrachlorodibenzofuran	4.76E-07	µg/L	V	3.22E+02	1.31E-15	2.36E-17	2.33E-04	1.13E+01	6.22E-20	1.42E-13	1.0E-14	7.4E-10	1.4E-05
1,2,3,7,8-Pentachlorodibenzofuran	3.80E-07	µg/L	V	3.22E+02	6.84E-16	1.23E-17	--	--	--	--	--	2.5E-09	--
2,3,4,7,8-Pentachlorodibenzofuran	6.59E-07	µg/L	V	3.22E+02	1.77E-15	3.19E-17	--	--	--	--	--	2.5E-10	--
1,2,3,4,7,8-Hexachlorodibenzofuran	1.83E-06	µg/L	V	3.22E+02	7.41E-15	1.33E-16	--	--	--	--	--	7.4E-10	--
1,2,3,6,7,8-Hexachlorodibenzofuran	4.43E-07	µg/L	V	3.22E+02	1.70E-15	3.06E-17	--	--	--	--	--	7.4E-10	--
1,2,3,7,8,9-Hexachlorodibenzofuran	2.64E-06	µg/L	V	3.22E+02	4.63E-17	8.34E-19	--	--	--	--	--	7.4E-10	--
2,3,4,6,7,8-Hexachlorodibenzofuran	2.81E-07	µg/L	V	3.22E+02	1.04E-15	1.88E-17	--	--	--	--	--	7.4E-10	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	7.75E-06	µg/L	V	3.22E+02	2.77E-14	4.98E-16	--	--	--	--	--	7.4E-09	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran	4.88E-07	µg/L	V	3.22E+02	1.10E-15	1.98E-17	--	--	--	--	--	7.4E-09	--
Octachlorodibenzofuran	1.45E-05	µg/L	V	3.22E+02	4.26E-14	7.67E-16	--	--	--	--	--	2.5E-07	--
KM TEQ DF	2.44E-06	µg/L	V	3.22E+02	1.13E-14	2.03E-16	1.51E-10	9.39E+09	2.89E-16	6.59E-10	4.9E-11	7.4E-11	6.6E-01
Tetrachlorobiphenyl; 3,3',4,4'- (PCB 77)	2.06E-05	µg/L	--	--	--	--	--	--	--	--	--	--	--
Tetrachlorobiphenyl; 3,4,4',5- (PCB 81)	6.84E-07	µg/L	V	2.92E+02	7.06E-15	1.27E-16	--	--	--	--	--	2.5E-07	--
Pentachlorobiphenyl; 2,3,3',4,4'- (PCB 105)	7.33E-05	µg/L	V	3.26E+02	5.73E-13	1.03E-14	--	--	--	--	--	2.5E-06	--
Pentachlorobiphenyl; 2,3,4,4',5- (PCB 114)	3.81E-06	µg/L	V	3.26E+02	2.94E-14	5.29E-16	--	--	--	--	--	2.5E-06	--
Pentachlorobiphenyl; 2,3',4,4',5- (PCB 118)	1.64E-04	µg/L	V	3.26E+02	1.34E-12	2.42E-14	--	--	--	--	--	2.5E-06	--
Pentachlorobiphenyl; 2',3,4,4',5- (PCB 123)	3.17E-06	µg/L	V	3.26E+02	2.50E-14	4.51E-16	--	--	--	--	--	2.5E-06	--
Pentachlorobiphenyl; 3,3',4,4',5- (PCB 126)	6.74E-07	µg/L	V	3.26E+02	6.70E-15	1.21E-16	--	--	--	--	--	7.4E-10	--
Hexachlorobiphenyl; 2,3,3',4,4',5- (PCB 156)	1.94E-05	µg/L	V	3.61E+02	1.29E-13	2.32E-15	--	--	--	--	--	2.5E-06	--
Hexachlorobiphenyl; 2,3',4,4',5,5'- (PCB 167)	6.55E-06	µg/L	V	3.61E+02	4.38E-14	7.88E-16	--	--	--	--	--	2.5E-06	--
Hexachlorobiphenyl; 3,3',4,4',5,5'- (PCB 169)	4.03E-07	µg/L	V	3.61E+02	1.08E-15	1.94E-17	--	--	--	--	--	2.5E-09	--
Heptachlorobiphenyl; 2,3,3',4,4',5,5'- (PCB 189	8.57E-07	µg/L	V	3.95E+02	9.67E-15	1.74E-16	--	--	--	--	--	2.5E-06	--
KM TEQ PCB	1.09E-07	µg/L	V	2.92E+02	8.63E-16	1.55E-17	7.83E-07	7.36E+09	8.96E-14	1.91E-07	1.4E-08	7.4E-11	1.9E+02
PAHs													
Benzanthracene	1.18E-02	µg/L	V	2.28E+02	7.24E-11	1.30E-12	1.36E-08	5.29E+08	9.37E-12	1.70E-05	1.3E-06	1.7E-05	7.4E-02
Benzo(a)pyrene	1.52E-02	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	2.06E-02	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	9.21E-03	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chrysene	2.02E-02	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	3.90E-03	µg/L	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	8.65E-03	µg/L	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	3.55E-02	µg/L	V	1.28E+02	2.76E-10	4.97E-12	8.24E-02	1.72E+05	7.02E-08	8.65E-02	6.4E-03	8.3E-05	7.7E+01

TABLE C-2A-1
SURFACE WATER INHALATION - TIER 1 INITIAL SCREEN (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Chemical of Potential Concern	EPC		Chemical-specific parameters							Equation 1	Equation 2	Comparison of Cair to RSL	
				MW	Molarity	MF	VPsat from Water9 (285 K)	AC from Water9 (285 K)	VP	QR	Cair	RSL (a)	Ratio of Cair to RSL
	Value	Units	Volatile?	g/mol	mol/L	unitless	mm Hg	unitless	mm Hg	g/s	mg/m3	mg/m3	unitless
Pesticides & Organics													
Chloroform	1.20E-01	µg/L	V	1.19E+02	1.03E-09	1.85E-11	1.13E+02	1.00E+03	2.09E-06	2.45E+00	1.8E-01	1.2E-04	1.5E+03
Trichloroethylene (TCE)	1.31E-01	µg/L	V	1.31E+02	1.05E-09	1.89E-11	3.75E+01	6.70E+03	4.74E-06	5.94E+00	4.4E-01	4.8E-04	9.2E+02
Inorganics													
Antimony	6.98E-01	µg/L	--	--	--	--	--	--	--	--	--	--	--
Arsenic, Inorganic	1.27E+00	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chromium [as Cr(III)]	1.29E+00	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chromium (VI)	2.23E-01	µg/L	--	--	--	--	--	--	--	--	--	--	--
Iron	5.33E+02	µg/L	--	--	--	--	--	--	--	--	--	--	--
Manganese	6.91E+01	µg/L	--	--	--	--	--	--	--	--	--	--	--
Mercury	2.64E-02	µg/L	--	--	--	--	--	--	--	--	--	--	--
Thallium	1.24E-02	µg/L	--	--	--	--	--	--	--	--	--	--	--
Titanium	7.92E+00	µg/L	--	--	--	--	--	--	--	--	--	--	--

(a) For individual dioxin and furan congeners, EPA RSL table did not list individual RSL values for each congener. In this table, RSL values are the RSL for 2,3,7,8-TCDD divided by the WHO 2005 TEF for each congener. For individual dioxin-like PCBs, the EPA RSL table listed individual RSL values, which are used in this table.

ATTACHMENT C-2B

Tier 2 Calculation Spreadsheet and AERSCREEN Output

TABLE C-2B-1
SURFACE WATER INHALATION - TIER 2 SCREENING LEVEL DISPERSION MODELING (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

		Physical-chemical properties				Equation 8	Equation 7	Equation 6	Equation 4	Equation 3		Inhalation risk screening calculations		
		molecular weight	diffusivity in water (at 285 K)	diffusivity in air (at 285 K)	Henry's Law constant of compound (at 285 K)	gas side Schmidt number (unitless)	gas phase MTC	liquid phase MTC for wind speed < 3.25 m/s	Overall MTC (cm/s) for wind speed < 3.25 m/s	Evap. rate for wind speed < 3.25 m/s	Air conc from AERSCREEN (a)	Carcinogenic SL for Residental Air	Ratio of Cair to RSL	
Chemical of Potential Concern	EPC	MW	DW	Da	H	SCG	kG	kL, U<3.25	K, U<3.25	ER, U<3.25	Cair	RSL	Cair/RSL	Notes
	mg/L	g/mol	cm^2/s	cm^2/s	atm-m3/mole	unitless	cm/s	cm/s	cm/s	g/s	mg/m3	mg/m3		
Chloroform	1.20E-04	1.19E+02	9.56E-06	9.61E-02	2.61E-03	1.54E+00	4.24E-01	3.01E-04	2.99E-04	5.36E-03	5.53E-06	1.20E-04	4.61E-02	
Naphthalene	3.55E-05	1.28E+02	7.17E-06	5.45E-02	4.30E-04	2.71E+00	2.90E-01	2.48E-04	2.37E-04	1.26E-03	1.30E-06	8.30E-05	1.57E-02	
KM TEQ PCB	1.09E-10	2.92E+02	4.81E-06	1.89E-02	1.56E-05	7.84E+00	1.42E-01	1.90E-04	6.35E-05	1.04E-09	1.07E-12	7.40E-11	1.45E-02	(b)
Trichloroethylene (TCE)	1.31E-04	1.31E+02	8.70E-06	7.30E-02	5.06E-03	2.02E+00	3.53E-01	2.82E-04	2.81E-04	5.53E-03	5.70E-06	4.80E-04	1.19E-02	

(a) Dispersion factor from AERSCREEN based on a unit emission rate is 1.031 ug/m3 per g/sec (see Table C-2B-2).
(b) For KM TEQ PCB, values were used from the Water9 entry for "3,3',4,4' PCB" (i.e., PCB 77). The RSL is for 2,3,7,8-TCDD.

TABLE C-2B-2
SURFACE WATER INHALATION - TIER 2 AERSCREEN OUTPUT (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Emission rate = 1.0 g/s
Minimum wind speed = 0.5 m/s
Area source dimensions 9999 m by 1500 m

		averaging factors			
	1-hour	3-hour	8-hour	24-hour	annual
	model results	1.00	0.90	0.60	0.10
distance (m)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)
5000	10.310	10.310	9.279	6.186	1.031
5150	8.199	8.199	7.379	4.919	0.820
5300	7.492	7.492	6.743	4.495	0.749
5450	7.038	7.038	6.334	4.223	0.704
5600	6.645	6.645	5.981	3.987	0.665
5750	6.382	6.382	5.744	3.829	0.638
5900	6.151	6.151	5.536	3.691	0.615
6050	5.945	5.945	5.351	3.567	0.595
6200	5.760	5.760	5.184	3.456	0.576
6350	5.591	5.591	5.032	3.355	0.559
6500	5.436	5.436	4.892	3.262	0.544
6650	5.293	5.293	4.764	3.176	0.529
6800	5.160	5.160	4.644	3.096	0.516
6950	5.036	5.036	4.532	3.022	0.504
7100	4.921	4.921	4.429	2.953	0.492
7250	4.811	4.811	4.330	2.887	0.481
7400	4.708	4.708	4.237	2.825	0.471
7550	4.610	4.610	4.149	2.766	0.461
7700	4.517	4.517	4.065	2.710	0.452
7850	4.428	4.428	3.985	2.657	0.443
8000	4.343	4.343	3.909	2.606	0.434
8150	4.262	4.262	3.836	2.557	0.426
8300	4.187	4.187	3.768	2.512	0.419
8450	4.117	4.117	3.705	2.470	0.412
8600	4.049	4.049	3.644	2.429	0.405
8750	3.983	3.983	3.585	2.390	0.398
8900	3.920	3.920	3.528	2.352	0.392
9050	3.858	3.858	3.472	2.315	0.386
9200	3.798	3.798	3.418	2.279	0.380
9350	3.740	3.740	3.366	2.244	0.374

TABLE C-2B-2
SURFACE WATER INHALATION - TIER 2 AERSCREEN OUTPUT (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Emission rate = 1.0 g/s
Minimum wind speed = 0.5 m/s
Area source dimensions 9999 m by 1500 m

		averaging factors			
	1-hour	3-hour	8-hour	24-hour	annual
	model results	1.00	0.90	0.60	0.10
distance (m)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)
9500	3.683	3.683	3.315	2.210	0.368
9650	3.629	3.629	3.266	2.177	0.363
9800	3.575	3.575	3.218	2.145	0.358
9950	3.522	3.522	3.170	2.113	0.352
10100	3.472	3.472	3.125	2.083	0.347
10250	3.422	3.422	3.080	2.053	0.342
10400	3.374	3.374	3.037	2.024	0.337
10550	3.327	3.327	2.994	1.996	0.333
10700	3.281	3.281	2.953	1.969	0.328
10850	3.236	3.236	2.912	1.942	0.324
11000	3.193	3.193	2.874	1.916	0.319
11150	3.150	3.150	2.835	1.890	0.315
11300	3.108	3.108	2.797	1.865	0.311
11450	3.067	3.067	2.760	1.840	0.307
11600	3.027	3.027	2.724	1.816	0.303
11750	2.988	2.988	2.689	1.793	0.299
11900	2.950	2.950	2.655	1.770	0.295
12050	2.912	2.912	2.621	1.747	0.291
12200	2.876	2.876	2.588	1.726	0.288
12350	2.840	2.840	2.556	1.704	0.284
12500	2.806	2.806	2.525	1.684	0.281
12650	2.771	2.771	2.494	1.663	0.277
12800	2.737	2.737	2.463	1.642	0.274
12950	2.704	2.704	2.434	1.622	0.270
13100	2.671	2.671	2.404	1.603	0.267
13250	2.656	2.656	2.390	1.594	0.266
13400	2.645	2.645	2.381	1.587	0.265
13550	2.634	2.634	2.371	1.580	0.263
13700	2.624	2.624	2.362	1.574	0.262
13850	2.613	2.613	2.352	1.568	0.261

TABLE C-2B-2
SURFACE WATER INHALATION - TIER 2 AERSCREEN OUTPUT (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Emission rate = 1.0 g/s
Minimum wind speed = 0.5 m/s
Area source dimensions 9999 m by 1500 m

		averaging factors			
	1-hour	3-hour	8-hour	24-hour	annual
	model results	1.00	0.90	0.60	0.10
distance (m)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)
14000	2.603	2.603	2.343	1.562	0.260
14150	2.592	2.592	2.333	1.555	0.259
14300	2.581	2.581	2.323	1.549	0.258
14450	2.571	2.571	2.314	1.543	0.257
14600	2.56	2.560	2.304	1.536	0.256
14750	2.549	2.549	2.294	1.529	0.255
14900	2.539	2.539	2.285	1.523	0.254
15050	2.529	2.529	2.276	1.517	0.253
15200	2.518	2.518	2.266	1.511	0.252
15350	2.508	2.508	2.257	1.505	0.251
15500	2.497	2.497	2.247	1.498	0.250
15650	2.487	2.487	2.238	1.492	0.249
15800	2.477	2.477	2.229	1.486	0.248
15950	2.467	2.467	2.220	1.480	0.247
16100	2.457	2.457	2.211	1.474	0.246
16250	2.447	2.447	2.202	1.468	0.245
16400	2.438	2.438	2.194	1.463	0.244
16550	2.428	2.428	2.185	1.457	0.243
16700	2.419	2.419	2.177	1.451	0.242
16850	2.409	2.409	2.168	1.445	0.241
17000	2.399	2.399	2.159	1.439	0.240
17150	2.389	2.389	2.150	1.433	0.239
17300	2.38	2.380	2.142	1.428	0.238
17450	2.37	2.370	2.133	1.422	0.237
17600	2.361	2.361	2.125	1.417	0.236
17750	2.351	2.351	2.116	1.411	0.235
17900	2.342	2.342	2.108	1.405	0.234
18050	2.333	2.333	2.100	1.400	0.233
18200	2.324	2.324	2.092	1.394	0.232
18350	2.315	2.315	2.084	1.389	0.232

TABLE C-2B-2
SURFACE WATER INHALATION - TIER 2 AERSCREEN OUTPUT (REASONABLE MAXIMUM EXPOSURE)
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Emission rate = 1.0 g/s
Minimum wind speed = 0.5 m/s
Area source dimensions 9999 m by 1500 m

		averaging factors			
	1-hour	3-hour	8-hour	24-hour	annual
	model results	1.00	0.90	0.60	0.10
distance (m)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)	conc (µg/m³)
18500	2.306	2.306	2.075	1.384	0.231
18650	2.297	2.297	2.067	1.378	0.230
18800	2.288	2.288	2.059	1.373	0.229
18950	2.279	2.279	2.051	1.367	0.228
19100	2.27	2.270	2.043	1.362	0.227
19250	2.262	2.262	2.036	1.357	0.226
19400	2.253	2.253	2.028	1.352	0.225
19550	2.245	2.245	2.021	1.347	0.225
19700	2.236	2.236	2.012	1.342	0.224
19850	2.228	2.228	2.005	1.337	0.223
20000	2.22	2.220	1.998	1.332	0.222

Note: Distance measured from center of area source. This is the approximate edge of the area source along the long axis.

Appendix D-1

APPENDIX D-1
PROUCL OUTPUT

Appendix D-1A	Accessible Surface Sediment
Appendix D-1B	Surface Water
Appendix D-1C	Tissue

Appendix D-1A

Sitewide Accessible Surface Sediment

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.18/15/18 3:15:55 PM
From File	sed1_dlc_wide2_flag_sep1_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	1.7600E-6	Mean	5.4588E-5
Maximum	2.7100E-4	Median	3.8800E-5
SD	6.2628E-5	Std. Error of Mean	1.0029E-5
Coefficient of Variation	N/A	Skewness	2.084

Normal GOF Test

Shapiro Wilk Test Statistic	0.759	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.1495E-5	95% Adjusted-CLT UCL (Chen-1995)	7.4659E-5
		95% Modified-t UCL (Johnson-1978)	7.2053E-5

Gamma GOF Test

A-D Test Statistic	0.531	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.785	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.114	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.837	k star (bias corrected MLE)	0.79
Theta hat (MLE)	6.5192E-5	Theta star (bias corrected MLE)	6.9097E-5
nu hat (MLE)	65.31	nu star (bias corrected)	61.62
MLE Mean (bias corrected)	5.4588E-5	MLE Sd (bias corrected)	6.1415E-5
		Approximate Chi Square Value (0.05)	44.57
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	43.99

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	7.5477E-5	95% Adjusted Gamma UCL (use when n<50)	7.6459E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.155	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.25	Mean of logged Data	-10.52
Maximum of Logged Data	-8.213	SD of logged Data	1.341

Assuming Lognormal Distribution

95% H-UCL	1.2250E-4	90% Chebyshev (MVUE) UCL	1.1508E-4
95% Chebyshev (MVUE) UCL	1.3839E-4	97.5% Chebyshev (MVUE) UCL	1.7075E-4
99% Chebyshev (MVUE) UCL	2.3432E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.1083E-5	95% Jackknife UCL	7.1495E-5
95% Standard Bootstrap UCL	7.0826E-5	95% Bootstrap-t UCL	7.7671E-5
95% Hall's Bootstrap UCL	8.1642E-5	95% Percentile Bootstrap UCL	7.2484E-5
95% BCA Bootstrap UCL	7.6348E-5		
90% Chebyshev(Mean, Sd) UCL	8.4673E-5	95% Chebyshev(Mean, Sd) UCL	9.8301E-5
97.5% Chebyshev(Mean, Sd) UCL	1.1722E-4	99% Chebyshev(Mean, Sd) UCL	1.5437E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 7.6459E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	2.2200E-7	Mean	3.0800E-6
Maximum	1.3800E-5	Median	2.6200E-6
SD	2.7389E-6	Std. Error of Mean	4.3857E-7
Coefficient of Variation	N/A	Skewness	1.765

Normal GOF Test

Shapiro Wilk Test Statistic	0.849	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.148	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.8194E-6	95% Adjusted-CLT UCL (Chen-1995)	3.9338E-6
		95% Modified-t UCL (Johnson-1978)	3.8401E-6

Gamma GOF Test

A-D Test Statistic	0.333	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.771	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.084	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.303	k star (bias corrected MLE)	1.22
Theta hat (MLE)	2.3641E-6	Theta star (bias corrected MLE)	2.5252E-6
nu hat (MLE)	101.6	nu star (bias corrected)	95.14
MLE Mean (bias corrected)	3.0800E-6	MLE Sd (bias corrected)	2.7888E-6
		Approximate Chi Square Value (0.05)	73.64
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	72.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.9791E-6	95% Adjusted Gamma UCL (use when n<50)	4.0198E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.32	Mean of logged Data	-13.12
Maximum of Logged Data	-11.19	SD of logged Data	1.032

Assuming Lognormal Distribution

95% H-UCL	5.1266E-6	90% Chebyshev (MVUE) UCL	5.2827E-6
95% Chebyshev (MVUE) UCL	6.1621E-6	97.5% Chebyshev (MVUE) UCL	7.3828E-6
99% Chebyshev (MVUE) UCL	9.7806E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.8014E-6	95% Jackknife UCL	3.8194E-6
95% Standard Bootstrap UCL	3.7849E-6	95% Bootstrap-t UCL	3.9680E-6

95% Hall's Bootstrap UCL	4.0857E-6	95% Percentile Bootstrap UCL	3.8036E-6
95% BCA Bootstrap UCL	3.9063E-6		
90% Chebyshev(Mean, Sd) UCL	4.3957E-6	95% Chebyshev(Mean, Sd) UCL	4.9917E-6
97.5% Chebyshev(Mean, Sd) UCL	5.8189E-6	99% Chebyshev(Mean, Sd) UCL	7.4438E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 4.0198E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	2.9900E-7	Mean	2.8017E-6
Maximum	1.2400E-5	Median	2.0900E-6
SD	2.4378E-6	Std. Error of Mean	3.9036E-7
Coefficient of Variation	N/A	Skewness	1.833

Normal GOF Test

Shapiro Wilk Test Statistic	0.839	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.152	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.4598E-6	95% Adjusted-CLT UCL (Chen-1995)	3.5662E-6
		95% Modified-t UCL (Johnson-1978)	3.4789E-6

Gamma GOF Test

A-D Test Statistic	0.359	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.767	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0848	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.144	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.447	k star (bias corrected MLE)	1.352
Theta hat (MLE)	1.9367E-6	Theta star (bias corrected MLE)	2.0716E-6
nu hat (MLE)	112.8	nu star (bias corrected)	105.5
MLE Mean (bias corrected)	2.8017E-6	MLE Sd (bias corrected)	2.4091E-6
		Approximate Chi Square Value (0.05)	82.79
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	82

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.5699E-6	95% Adjusted Gamma UCL (use when n<50)	3.6045E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.02	Mean of logged Data	-13.17
Maximum of Logged Data	-11.3	SD of logged Data	0.951

Assuming Lognormal Distribution

95% H-UCL	4.3094E-6	90% Chebyshev (MVUE) UCL	4.5051E-6
95% Chebyshev (MVUE) UCL	5.2086E-6	97.5% Chebyshev (MVUE) UCL	6.1850E-6
99% Chebyshev (MVUE) UCL	8.1030E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.4438E-6	95% Jackknife UCL	3.4598E-6
95% Standard Bootstrap UCL	3.4378E-6	95% Bootstrap-t UCL	3.6033E-6

95% Hall's Bootstrap UCL	3.7522E-6	95% Percentile Bootstrap UCL	3.4351E-6
95% BCA Bootstrap UCL	3.5637E-6		
90% Chebyshev(Mean, Sd) UCL	3.9728E-6	95% Chebyshev(Mean, Sd) UCL	4.5032E-6
97.5% Chebyshev(Mean, Sd) UCL	5.2395E-6	99% Chebyshev(Mean, Sd) UCL	6.6857E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 3.6045E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	1.1500E-6	Mean	1.1118E-5
Maximum	4.9800E-5	Median	9.0800E-6
SD	1.0170E-5	Std. Error of Mean	1.6284E-6
Coefficient of Variation	N/A	Skewness	1.678

Normal GOF Test

Shapiro Wilk Test Statistic	0.843	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.164	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3863E-5	95% Adjusted-CLT UCL (Chen-1995)	1.4264E-5
		95% Modified-t UCL (Johnson-1978)	1.3936E-5

Gamma GOF Test

A-D Test Statistic	0.553	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.772	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.262	k star (bias corrected MLE)	1.182
Theta hat (MLE)	8.8104E-6	Theta star (bias corrected MLE)	9.4065E-6
nu hat (MLE)	98.43	nu star (bias corrected)	92.19
MLE Mean (bias corrected)	1.1118E-5	MLE Sd (bias corrected)	1.0226E-5
		Approximate Chi Square Value (0.05)	71.05
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	70.32

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.4426E-5	95% Adjusted Gamma UCL (use when n<50)	1.4576E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.68	Mean of logged Data	-11.85
Maximum of Logged Data	-9.907	SD of logged Data	1.026

Assuming Lognormal Distribution

95% H-UCL	1.8063E-5	90% Chebyshev (MVUE) UCL	1.8633E-5
95% Chebyshev (MVUE) UCL	2.1722E-5	97.5% Chebyshev (MVUE) UCL	2.6009E-5
99% Chebyshev (MVUE) UCL	3.4432E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3796E-5	95% Jackknife UCL	1.3863E-5
95% Standard Bootstrap UCL	1.3737E-5	95% Bootstrap-t UCL	1.4544E-5

95% Hall's Bootstrap UCL	1.4773E-5	95% Percentile Bootstrap UCL	1.3932E-5
95% BCA Bootstrap UCL	1.4121E-5		
90% Chebyshev(Mean, Sd) UCL	1.6003E-5	95% Chebyshev(Mean, Sd) UCL	1.8216E-5
97.5% Chebyshev(Mean, Sd) UCL	2.1287E-5	99% Chebyshev(Mean, Sd) UCL	2.7320E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 1.4576E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	6.8500E-7	Mean	6.5842E-6
Maximum	2.7400E-5	Median	5.0600E-6
SD	5.9505E-6	Std. Error of Mean	9.5285E-7
Coefficient of Variation	N/A	Skewness	1.612

Normal GOF Test

Shapiro Wilk Test Statistic	0.843	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.161	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.1907E-6	95% Adjusted-CLT UCL (Chen-1995)	8.4143E-6
		95% Modified-t UCL (Johnson-1978)	8.2317E-6

Gamma GOF Test

A-D Test Statistic	0.46	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.771	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0998	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.306	k star (bias corrected MLE)	1.223
Theta hat (MLE)	5.0420E-6	Theta star (bias corrected MLE)	5.3858E-6
nu hat (MLE)	101.9	nu star (bias corrected)	95.36
MLE Mean (bias corrected)	6.5842E-6	MLE Sd (bias corrected)	5.9549E-6
		Approximate Chi Square Value (0.05)	73.83
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	73.09

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	8.5035E-6	95% Adjusted Gamma UCL (use when n<50)	8.5904E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.19	Mean of logged Data	-12.36
Maximum of Logged Data	-10.5	SD of logged Data	1.006

Assuming Lognormal Distribution

95% H-UCL	1.0529E-5	90% Chebyshev (MVUE) UCL	1.0904E-5
95% Chebyshev (MVUE) UCL	1.2684E-5	97.5% Chebyshev (MVUE) UCL	1.5154E-5
99% Chebyshev (MVUE) UCL	2.0007E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.1515E-6	95% Jackknife UCL	8.1907E-6
95% Standard Bootstrap UCL	8.1534E-6	95% Bootstrap-t UCL	8.6056E-6

95% Hall's Bootstrap UCL	8.6999E-6	95% Percentile Bootstrap UCL	8.1894E-6
95% BCA Bootstrap UCL	8.4706E-6		
90% Chebyshev(Mean, Sd) UCL	9.4428E-6	95% Chebyshev(Mean, Sd) UCL	1.0738E-5
97.5% Chebyshev(Mean, Sd) UCL	1.2535E-5	99% Chebyshev(Mean, Sd) UCL	1.6065E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 8.5904E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	2.0000E-5	Mean	1.9318E-4
Maximum	0.00117	Median	1.3200E-4
SD	2.0986E-4	Std. Error of Mean	3.3605E-5
Coefficient of Variation	1.086	Skewness	2.858

Normal GOF Test

Shapiro Wilk Test Statistic	0.73	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.4983E-4	95% Adjusted-CLT UCL (Chen-1995)	2.6488E-4
		95% Modified-t UCL (Johnson-1978)	2.5240E-4

Gamma GOF Test

A-D Test Statistic	0.566	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.774	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.109	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.156	k star (bias corrected MLE)	1.084
Theta hat (MLE)	1.6717E-4	Theta star (bias corrected MLE)	1.7824E-4
nu hat (MLE)	90.14	nu star (bias corrected)	84.54
MLE Mean (bias corrected)	1.9318E-4	MLE Sd (bias corrected)	1.8556E-4
		Approximate Chi Square Value (0.05)	64.34
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	63.65

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2.5380E-4	95% Adjusted Gamma UCL (use when n<50)	2.5657E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.82	Mean of logged Data	-9.043
Maximum of Logged Data	-6.751	SD of logged Data	1.049

Assuming Lognormal Distribution

95% H-UCL	3.1132E-4	90% Chebyshev (MVUE) UCL	3.1964E-4
95% Chebyshev (MVUE) UCL	3.7356E-4	97.5% Chebyshev (MVUE) UCL	4.4839E-4
99% Chebyshev (MVUE) UCL	5.9539E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.4845E-4	95% Jackknife UCL	2.4983E-4
95% Standard Bootstrap UCL	2.4653E-4	95% Bootstrap-t UCL	2.7720E-4

95% Hall's Bootstrap UCL	4.6926E-4	95% Percentile Bootstrap UCL	2.5071E-4
95% BCA Bootstrap UCL	2.6848E-4		
90% Chebyshev(Mean, Sd) UCL	2.9399E-4	95% Chebyshev(Mean, Sd) UCL	3.3966E-4
97.5% Chebyshev(Mean, Sd) UCL	4.0304E-4	99% Chebyshev(Mean, Sd) UCL	5.2754E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 2.5657E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	2.1200E-4	Mean	0.002
Maximum	0.0117	Median	0.00152
SD	0.0021	Std. Error of Mean	3.3548E-4
Coefficient of Variation	1.049	Skewness	2.876

Normal GOF Test

Shapiro Wilk Test Statistic	0.732	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00256	95% Adjusted-CLT UCL (Chen-1995)	0.00271
		95% Modified-t UCL (Johnson-1978)	0.00259

Gamma GOF Test

A-D Test Statistic	0.384	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.771	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.105	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.296	k star (bias corrected MLE)	1.213
Theta hat (MLE)	0.00154	Theta star (bias corrected MLE)	0.00165
nu hat (MLE)	101.1	nu star (bias corrected)	94.63
MLE Mean (bias corrected)	0.002	MLE Sd (bias corrected)	0.00181
		Approximate Chi Square Value (0.05)	73.2
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	72.45

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00258	95% Adjusted Gamma UCL (use when n<50)	0.00261

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.459	Mean of logged Data	-6.649
Maximum of Logged Data	-4.448	SD of logged Data	0.972

Assuming Lognormal Distribution

95% H-UCL	0.00302	90% Chebyshev (MVUE) UCL	0.00314
95% Chebyshev (MVUE) UCL	0.00364	97.5% Chebyshev (MVUE) UCL	0.00434
99% Chebyshev (MVUE) UCL	0.0057		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00255	95% Jackknife UCL	0.00256
95% Standard Bootstrap UCL	0.00254	95% Bootstrap-t UCL	0.00287

95% Hall's Bootstrap UCL	0.00491	95% Percentile Bootstrap UCL	0.00258
95% BCA Bootstrap UCL	0.00274		
90% Chebyshev(Mean, Sd) UCL	0.003	95% Chebyshev(Mean, Sd) UCL	0.00346
97.5% Chebyshev(Mean, Sd) UCL	0.00409	99% Chebyshev(Mean, Sd) UCL	0.00534

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00261

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	9.1600E-7	Mean	1.0588E-5
Maximum	5.0300E-5	Median	9.7500E-6
SD	9.6287E-6	Std. Error of Mean	1.5418E-6
Coefficient of Variation	N/A	Skewness	2.081

Normal GOF Test

Shapiro Wilk Test Statistic	0.82	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3188E-5	95% Adjusted-CLT UCL (Chen-1995)	1.3674E-5
		95% Modified-t UCL (Johnson-1978)	1.3274E-5

Gamma GOF Test

A-D Test Statistic	0.427	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.77	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0998	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.144	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.343	k star (bias corrected MLE)	1.257
Theta hat (MLE)	7.8820E-6	Theta star (bias corrected MLE)	8.4227E-6
nu hat (MLE)	104.8	nu star (bias corrected)	98.06
MLE Mean (bias corrected)	1.0588E-5	MLE Sd (bias corrected)	9.4437E-6
		Approximate Chi Square Value (0.05)	76.21
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	75.45

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.3623E-5	95% Adjusted Gamma UCL (use when n<50)	1.3760E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.143	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.9	Mean of logged Data	-11.87
Maximum of Logged Data	-9.898	SD of logged Data	1.001

Assuming Lognormal Distribution

95% H-UCL	1.7036E-5	90% Chebyshev (MVUE) UCL	1.7657E-5
95% Chebyshev (MVUE) UCL	2.0529E-5	97.5% Chebyshev (MVUE) UCL	2.4516E-5
99% Chebyshev (MVUE) UCL	3.2346E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3125E-5	95% Jackknife UCL	1.3188E-5
95% Standard Bootstrap UCL	1.3046E-5	95% Bootstrap-t UCL	1.3925E-5

95% Hall's Bootstrap UCL	1.4727E-5	95% Percentile Bootstrap UCL	1.3128E-5
95% BCA Bootstrap UCL	1.3956E-5		
90% Chebyshev(Mean, Sd) UCL	1.5214E-5	95% Chebyshev(Mean, Sd) UCL	1.7309E-5
97.5% Chebyshev(Mean, Sd) UCL	2.0217E-5	99% Chebyshev(Mean, Sd) UCL	2.5929E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 1.3760E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	4.8100E-7	Mean	7.1428E-6
Maximum	3.6500E-5	Median	5.8200E-6
SD	7.8296E-6	Std. Error of Mean	1.2537E-6
Coefficient of Variation	N/A	Skewness	2.635

Normal GOF Test

Shapiro Wilk Test Statistic	0.694	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.236	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.2566E-6	95% Adjusted-CLT UCL (Chen-1995)	9.7702E-6
		95% Modified-t UCL (Johnson-1978)	9.3447E-6

Gamma GOF Test

A-D Test Statistic	0.604	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.773	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.128	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.195	k star (bias corrected MLE)	1.12
Theta hat (MLE)	5.9764E-6	Theta star (bias corrected MLE)	6.3757E-6
nu hat (MLE)	93.22	nu star (bias corrected)	87.39
MLE Mean (bias corrected)	7.1428E-6	MLE Sd (bias corrected)	6.7483E-6
		Approximate Chi Square Value (0.05)	66.83
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	66.13

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	9.3391E-6	95% Adjusted Gamma UCL (use when n<50)	9.4391E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.134	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.55	Mean of logged Data	-12.32
Maximum of Logged Data	-10.22	SD of logged Data	1.039

Assuming Lognormal Distribution

95% H-UCL	1.1533E-5	90% Chebyshev (MVUE) UCL	1.1865E-5
95% Chebyshev (MVUE) UCL	1.3852E-5	97.5% Chebyshev (MVUE) UCL	1.6610E-5
99% Chebyshev (MVUE) UCL	2.2027E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.2050E-6	95% Jackknife UCL	9.2566E-6
95% Standard Bootstrap UCL	9.1724E-6	95% Bootstrap-t UCL	1.0400E-5

95% Hall's Bootstrap UCL	1.4600E-5	95% Percentile Bootstrap UCL	9.3686E-6
95% BCA Bootstrap UCL	9.8620E-6		
90% Chebyshev(Mean, Sd) UCL	1.0904E-5	95% Chebyshev(Mean, Sd) UCL	1.2608E-5
97.5% Chebyshev(Mean, Sd) UCL	1.4972E-5	99% Chebyshev(Mean, Sd) UCL	1.9617E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 9.4391E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	7.9000E-7	Mean	1.2112E-5
Maximum	4.9000E-5	Median	9.6500E-6
SD	1.1090E-5	Std. Error of Mean	1.7758E-6
Coefficient of Variation	N/A	Skewness	1.797

Normal GOF Test

Shapiro Wilk Test Statistic	0.819	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.2	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.5106E-5	95% Adjusted-CLT UCL (Chen-1995)	1.5579E-5
		95% Modified-t UCL (Johnson-1978)	1.5191E-5

Gamma GOF Test

A-D Test Statistic	0.242	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.77	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0849	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.144	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.328	k star (bias corrected MLE)	1.243
Theta hat (MLE)	9.1216E-6	Theta star (bias corrected MLE)	9.7458E-6
nu hat (MLE)	103.6	nu star (bias corrected)	96.94
MLE Mean (bias corrected)	1.2112E-5	MLE Sd (bias corrected)	1.0865E-5
		Approximate Chi Square Value (0.05)	75.23
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	74.47

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.5608E-5	95% Adjusted Gamma UCL (use when n<50)	1.5766E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.05	Mean of logged Data	-11.74
Maximum of Logged Data	-9.924	SD of logged Data	1.012

Assuming Lognormal Distribution

95% H-UCL	1.9716E-5	90% Chebyshev (MVUE) UCL	2.0393E-5
95% Chebyshev (MVUE) UCL	2.3738E-5	97.5% Chebyshev (MVUE) UCL	2.8381E-5
99% Chebyshev (MVUE) UCL	3.7501E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.5033E-5	95% Jackknife UCL	1.5106E-5
95% Standard Bootstrap UCL	1.4980E-5	95% Bootstrap-t UCL	1.5879E-5

95% Hall's Bootstrap UCL	1.6014E-5	95% Percentile Bootstrap UCL	1.5226E-5
95% BCA Bootstrap UCL	1.5710E-5		
90% Chebyshev(Mean, Sd) UCL	1.7440E-5	95% Chebyshev(Mean, Sd) UCL	1.9853E-5
97.5% Chebyshev(Mean, Sd) UCL	2.3202E-5	99% Chebyshev(Mean, Sd) UCL	2.9781E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 1.5766E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	3
Minimum	1.8400E-6	Mean	5.0546E-5
Maximum	4.3300E-4	Median	3.4950E-5
SD	7.4350E-5	Std. Error of Mean	1.2392E-5
Coefficient of Variation	N/A	Skewness	4.138

Normal GOF Test

Shapiro Wilk Test Statistic	0.57	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.268	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.1483E-5	95% Adjusted-CLT UCL (Chen-1995)	8.0060E-5
		95% Modified-t UCL (Johnson-1978)	7.2907E-5

Gamma GOF Test

A-D Test Statistic	0.514	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.784	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.118	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.152	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.83	k star (bias corrected MLE)	0.779
Theta hat (MLE)	6.0931E-5	Theta star (bias corrected MLE)	6.4890E-5
nu hat (MLE)	59.73	nu star (bias corrected)	56.08
MLE Mean (bias corrected)	5.0546E-5	MLE Sd (bias corrected)	5.7271E-5
		Approximate Chi Square Value (0.05)	39.87
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	39.25

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	7.1098E-5	95% Adjusted Gamma UCL (use when n<50)	7.2223E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.21	Mean of logged Data	-10.6
Maximum of Logged Data	-7.745	SD of logged Data	1.314

Assuming Lognormal Distribution

95% H-UCL	1.0867E-4	90% Chebyshev (MVUE) UCL	1.0241E-4
95% Chebyshev (MVUE) UCL	1.2325E-4	97.5% Chebyshev (MVUE) UCL	1.5218E-4
99% Chebyshev (MVUE) UCL	2.0900E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.0929E-5	95% Jackknife UCL	7.1483E-5
95% Standard Bootstrap UCL	7.1047E-5	95% Bootstrap-t UCL	9.5948E-5

95% Hall's Bootstrap UCL	1.5638E-4	95% Percentile Bootstrap UCL	7.0969E-5
95% BCA Bootstrap UCL	8.1784E-5		
90% Chebyshev(Mean, Sd) UCL	8.7721E-5	95% Chebyshev(Mean, Sd) UCL	1.0456E-4
97.5% Chebyshev(Mean, Sd) UCL	1.2793E-4	99% Chebyshev(Mean, Sd) UCL	1.7384E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 7.2223E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	8.3000E-7	Mean	1.3985E-5
Maximum	9.5200E-5	Median	9.3200E-6
SD	1.6799E-5	Std. Error of Mean	2.6900E-6
Coefficient of Variation	N/A	Skewness	3.342

Normal GOF Test

Shapiro Wilk Test Statistic	0.668	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.218	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.8520E-5	95% Adjusted-CLT UCL (Chen-1995)	1.9948E-5
		95% Modified-t UCL (Johnson-1978)	1.8760E-5

Gamma GOF Test

A-D Test Statistic	0.42	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.777	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0864	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.066	k star (bias corrected MLE)	1.001
Theta hat (MLE)	1.3123E-5	Theta star (bias corrected MLE)	1.3974E-5
nu hat (MLE)	83.12	nu star (bias corrected)	78.06
MLE Mean (bias corrected)	1.3985E-5	MLE Sd (bias corrected)	1.3979E-5
		Approximate Chi Square Value (0.05)	58.71
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	58.05

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.8595E-5	95% Adjusted Gamma UCL (use when n<50)	1.8807E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.129	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14	Mean of logged Data	-11.72
Maximum of Logged Data	-9.26	SD of logged Data	1.118

Assuming Lognormal Distribution

95% H-UCL	2.4189E-5	90% Chebyshev (MVUE) UCL	2.4440E-5
95% Chebyshev (MVUE) UCL	2.8770E-5	97.5% Chebyshev (MVUE) UCL	3.4780E-5
99% Chebyshev (MVUE) UCL	4.6585E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.8409E-5	95% Jackknife UCL	1.8520E-5
95% Standard Bootstrap UCL	1.8213E-5	95% Bootstrap-t UCL	2.1714E-5

95% Hall's Bootstrap UCL	3.9418E-5	95% Percentile Bootstrap UCL	1.8799E-5
95% BCA Bootstrap UCL	1.9966E-5		
90% Chebyshev(Mean, Sd) UCL	2.2055E-5	95% Chebyshev(Mean, Sd) UCL	2.5710E-5
97.5% Chebyshev(Mean, Sd) UCL	3.0784E-5	99% Chebyshev(Mean, Sd) UCL	4.0750E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 1.8807E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
Number of Detects	22	Number of Non-Detects	17
Number of Distinct Detects	21	Number of Distinct Non-Detects	17
Minimum Detect	1.7100E-7	Minimum Non-Detect	4.3800E-8
Maximum Detect	4.8600E-6	Maximum Non-Detect	1.0900E-6
Variance Detects	1.570E-12	Percent Non-Detects	43.59%
Mean Detects	1.8150E-6	SD Detects	1.2531E-6
Median Detects	1.9200E-6	CV Detects	N/A
Skewness Detects	0.707	Kurtosis Detects	0.102
Mean of Logged Detects	-13.52	SD of Logged Detects	0.882

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.911	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.184	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.0556E-6	KM Standard Error of Mean	2.0737E-7
KM SD	1.2635E-6	95% KM (BCA) UCL	1.4372E-6
95% KM (t) UCL	1.4053E-6	95% KM (Percentile Bootstrap) UCL	1.3840E-6
95% KM (z) UCL	1.3967E-6	95% KM Bootstrap t UCL	1.4696E-6
90% KM Chebyshev UCL	1.6777E-6	95% KM Chebyshev UCL	1.9595E-6
97.5% KM Chebyshev UCL	2.3506E-6	99% KM Chebyshev UCL	3.1189E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.439	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.757	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.159	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.188	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.813	k star (bias corrected MLE)	1.596
Theta hat (MLE)	1.0010E-6	Theta star (bias corrected MLE)	1.1370E-6
nu hat (MLE)	79.78	nu star (bias corrected)	70.23
Mean (detects)	1.8150E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.7100E-7	Mean	0.00436
Maximum	0.01	Median	3.4300E-6
SD	0.00502	CV	1.152
k hat (MLE)	0.178	k star (bias corrected MLE)	0.182
Theta hat (MLE)	0.0244	Theta star (bias corrected MLE)	0.024
nu hat (MLE)	13.91	nu star (bias corrected)	14.18
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (14.18, α)	6.693	Adjusted Chi Square Value (14.18, β)	6.49
95% Gamma Approximate UCL (use when n>=50)	0.00924	95% Gamma Adjusted UCL (use when n<50)	0.00952

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.0556E-6	SD (KM)	1.2635E-6
Variance (KM)	1.596E-12	SE of Mean (KM)	2.0737E-7
k hat (KM)	0.698	k star (KM)	0.661

nu hat (KM)	54.45	nu star (KM)	51.6
theta hat (KM)	1.5122E-6	theta star (KM)	1.5959E-6
80% gamma percentile (KM)	1.7379E-6	90% gamma percentile (KM)	2.6851E-6
95% gamma percentile (KM)	3.6673E-6	99% gamma percentile (KM)	6.0230E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (51.60, α)	36.1	Adjusted Chi Square Value (51.60, β)	35.59
95% Gamma Approximate KM-UCL (use when n>=50)	1.5088E-6	95% Gamma Adjusted KM-UCL (use when n<50)	1.5305E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.911	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.184	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.1070E-6	Mean in Log Scale	-14.38
SD in Original Scale	1.2385E-6	SD in Log Scale	1.191
95% t UCL (assumes normality of ROS data)	1.4414E-6	95% Percentile Bootstrap UCL	1.4376E-6
95% BCA Bootstrap UCL	1.4772E-6	95% Bootstrap t UCL	1.5263E-6
95% H-UCL (Log ROS)	1.9271E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-14.93	KM Geo Mean	3.2776E-7
KM SD (logged)	1.775	95% Critical H Value (KM-Log)	3.429
KM Standard Error of Mean (logged)	0.298	95% H-UCL (KM -Log)	4.2491E-6
KM SD (logged)	1.775	95% Critical H Value (KM-Log)	3.429
KM Standard Error of Mean (logged)	0.298		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0817E-6	Mean in Log Scale	-14.72
SD in Original Scale	1.2610E-6	SD in Log Scale	1.653
95% t UCL (Assumes normality)	1.4222E-6	95% H-Stat UCL	3.7938E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.4053E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	38	Number of Distinct Observations	38
		Number of Missing Observations	1
Minimum	7.8300E-7	Mean	7.9917E-6
Maximum	3.8300E-5	Median	5.2650E-6
SD	8.1101E-6	Std. Error of Mean	1.3156E-6
Coefficient of Variation	N/A	Skewness	2.173

Normal GOF Test

Shapiro Wilk Test Statistic	0.761	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.213	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.0211E-5	95% Adjusted-CLT UCL (Chen-1995)	1.0651E-5
		95% Modified-t UCL (Johnson-1978)	1.0289E-5

Gamma GOF Test

A-D Test Statistic	0.497	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.77	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.122	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.314	k star (bias corrected MLE)	1.228
Theta hat (MLE)	6.0815E-6	Theta star (bias corrected MLE)	6.5084E-6
nu hat (MLE)	99.87	nu star (bias corrected)	93.32
MLE Mean (bias corrected)	7.9917E-6	MLE Sd (bias corrected)	7.2120E-6
		Approximate Chi Square Value (0.05)	72.04
Adjusted Level of Significance	0.0434	Adjusted Chi Square Value	71.27

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.0352E-5	95% Adjusted Gamma UCL (use when n<50)	1.0465E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0899	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.142	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.06	Mean of logged Data	-12.16
Maximum of Logged Data	-10.17	SD of logged Data	0.964

Assuming Lognormal Distribution

95% H-UCL	1.2050E-5	90% Chebyshev (MVUE) UCL	1.2569E-5
95% Chebyshev (MVUE) UCL	1.4567E-5	97.5% Chebyshev (MVUE) UCL	1.7340E-5
99% Chebyshev (MVUE) UCL	2.2789E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.0156E-5	95% Jackknife UCL	1.0211E-5
95% Standard Bootstrap UCL	1.0076E-5	95% Bootstrap-t UCL	1.1039E-5

95% Hall's Bootstrap UCL	1.1319E-5	95% Percentile Bootstrap UCL	1.0284E-5
95% BCA Bootstrap UCL	1.0875E-5		
90% Chebyshev(Mean, Sd) UCL	1.1939E-5	95% Chebyshev(Mean, Sd) UCL	1.3726E-5
97.5% Chebyshev(Mean, Sd) UCL	1.6208E-5	99% Chebyshev(Mean, Sd) UCL	2.1082E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 1.0465E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	1.0300E-5	Mean	2.2983E-4
Maximum	0.00188	Median	1.4000E-4
SD	3.2330E-4	Std. Error of Mean	5.1769E-5
Coefficient of Variation	1.407	Skewness	3.818

Normal GOF Test

Shapiro Wilk Test Statistic	0.61	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.249	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.1711E-4	95% Adjusted-CLT UCL (Chen-1995)	3.4880E-4
		95% Modified-t UCL (Johnson-1978)	3.2239E-4

Gamma GOF Test

A-D Test Statistic	0.431	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.784	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0796	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.865	k star (bias corrected MLE)	0.815
Theta hat (MLE)	2.6575E-4	Theta star (bias corrected MLE)	2.8186E-4
nu hat (MLE)	67.46	nu star (bias corrected)	63.6
MLE Mean (bias corrected)	2.2983E-4	MLE Sd (bias corrected)	2.5452E-4
		Approximate Chi Square Value (0.05)	46.26
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	45.67

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.1603E-4	95% Adjusted Gamma UCL (use when n<50)	3.2007E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.133	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.48	Mean of logged Data	-9.058
Maximum of Logged Data	-6.276	SD of logged Data	1.26

Assuming Lognormal Distribution

95% H-UCL	4.4934E-4	90% Chebyshev (MVUE) UCL	4.3503E-4
95% Chebyshev (MVUE) UCL	5.1932E-4	97.5% Chebyshev (MVUE) UCL	6.3631E-4
99% Chebyshev (MVUE) UCL	8.6611E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.1498E-4	95% Jackknife UCL	3.1711E-4
95% Standard Bootstrap UCL	3.1448E-4	95% Bootstrap-t UCL	3.9741E-4

95% Hall's Bootstrap UCL	7.0683E-4	95% Percentile Bootstrap UCL	3.2435E-4
95% BCA Bootstrap UCL	3.6356E-4		
90% Chebyshev(Mean, Sd) UCL	3.8514E-4	95% Chebyshev(Mean, Sd) UCL	4.5549E-4
97.5% Chebyshev(Mean, Sd) UCL	5.5313E-4	99% Chebyshev(Mean, Sd) UCL	7.4492E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 3.2007E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	6.1800E-7	Mean	8.2274E-6
Maximum	3.7100E-5	Median	5.5900E-6
SD	8.2262E-6	Std. Error of Mean	1.3172E-6
Coefficient of Variation	N/A	Skewness	1.874

Normal GOF Test

Shapiro Wilk Test Statistic	0.801	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.182	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.0448E-5	95% Adjusted-CLT UCL (Chen-1995)	1.0816E-5
		95% Modified-t UCL (Johnson-1978)	1.0514E-5

Gamma GOF Test

A-D Test Statistic	0.319	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.773	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0843	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.193	k star (bias corrected MLE)	1.119
Theta hat (MLE)	6.8941E-6	Theta star (bias corrected MLE)	7.3544E-6
nu hat (MLE)	93.09	nu star (bias corrected)	87.26
MLE Mean (bias corrected)	8.2274E-6	MLE Sd (bias corrected)	7.7787E-6
		Approximate Chi Square Value (0.05)	66.72
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	66.02

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.0759E-5	95% Adjusted Gamma UCL (use when n<50)	1.0875E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.3	Mean of logged Data	-12.18
Maximum of Logged Data	-10.2	SD of logged Data	1.047

Assuming Lognormal Distribution

95% H-UCL	1.3449E-5	90% Chebyshev (MVUE) UCL	1.3814E-5
95% Chebyshev (MVUE) UCL	1.6141E-5	97.5% Chebyshev (MVUE) UCL	1.9370E-5
99% Chebyshev (MVUE) UCL	2.5715E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.0394E-5	95% Jackknife UCL	1.0448E-5
95% Standard Bootstrap UCL	1.0369E-5	95% Bootstrap-t UCL	1.1007E-5

95% Hall's Bootstrap UCL	1.1061E-5	95% Percentile Bootstrap UCL	1.0527E-5
95% BCA Bootstrap UCL	1.0878E-5		
90% Chebyshev(Mean, Sd) UCL	1.2179E-5	95% Chebyshev(Mean, Sd) UCL	1.3969E-5
97.5% Chebyshev(Mean, Sd) UCL	1.6454E-5	99% Chebyshev(Mean, Sd) UCL	2.1334E-5

Suggested UCL to Use

95% Adjusted Gamma UCL 1.0875E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.6400E-5	Mean	3.2573E-4
Maximum	0.00266	Median	2.1500E-4
SD	4.4493E-4	Std. Error of Mean	7.1246E-5
Coefficient of Variation	1.366	Skewness	4.034

Normal GOF Test

Shapiro Wilk Test Statistic	0.6	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.243	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.4585E-4	95% Adjusted-CLT UCL (Chen-1995)	4.9210E-4
		95% Modified-t UCL (Johnson-1978)	4.5352E-4

Gamma GOF Test

A-D Test Statistic	0.426	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.781	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0761	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.94	k star (bias corrected MLE)	0.885
Theta hat (MLE)	3.4651E-4	Theta star (bias corrected MLE)	3.6814E-4
nu hat (MLE)	73.32	nu star (bias corrected)	69.01
MLE Mean (bias corrected)	3.2573E-4	MLE Sd (bias corrected)	3.4628E-4
		Approximate Chi Square Value (0.05)	50.89
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	50.28

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	4.4172E-4	95% Adjusted Gamma UCL (use when n<50)	4.4712E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.129	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.02	Mean of logged Data	-8.648
Maximum of Logged Data	-5.929	SD of logged Data	1.198

Assuming Lognormal Distribution

95% H-UCL	6.0078E-4	90% Chebyshev (MVUE) UCL	5.9357E-4
95% Chebyshev (MVUE) UCL	7.0437E-4	97.5% Chebyshev (MVUE) UCL	8.5815E-4
99% Chebyshev (MVUE) UCL	0.00116		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.4292E-4	95% Jackknife UCL	4.4585E-4
95% Standard Bootstrap UCL	4.4573E-4	95% Bootstrap-t UCL	5.4456E-4

95% Hall's Bootstrap UCL	9.4573E-4	95% Percentile Bootstrap UCL	4.5486E-4
95% BCA Bootstrap UCL	5.2773E-4		
90% Chebyshev(Mean, Sd) UCL	5.3947E-4	95% Chebyshev(Mean, Sd) UCL	6.3628E-4
97.5% Chebyshev(Mean, Sd) UCL	7.7066E-4	99% Chebyshev(Mean, Sd) UCL	0.00103

Suggested UCL to Use

95% Adjusted Gamma UCL 4.4712E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	1.1400E-4	Mean	0.00287
Maximum	0.0434	Median	0.00121
SD	0.00695	Std. Error of Mean	0.00111
Coefficient of Variation	2.419	Skewness	5.519

Normal GOF Test

Shapiro Wilk Test Statistic	0.363	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.346	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00475	95% Adjusted-CLT UCL (Chen-1995)	0.00575
		95% Modified-t UCL (Johnson-1978)	0.00491

Gamma GOF Test

A-D Test Statistic	1.531	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.8	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.159	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.148	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.639	k star (bias corrected MLE)	0.607
Theta hat (MLE)	0.0045	Theta star (bias corrected MLE)	0.00473
nu hat (MLE)	49.84	nu star (bias corrected)	47.34
MLE Mean (bias corrected)	0.00287	MLE Sd (bias corrected)	0.00369
		Approximate Chi Square Value (0.05)	32.55
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	32.06

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00418	95% Adjusted Gamma UCL (use when n<50)	0.00424

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0974	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.079	Mean of logged Data	-6.811
Maximum of Logged Data	-3.137	SD of logged Data	1.314

Assuming Lognormal Distribution

95% H-UCL	0.00473	90% Chebyshev (MVUE) UCL	0.00449
95% Chebyshev (MVUE) UCL	0.00539	97.5% Chebyshev (MVUE) UCL	0.00664
99% Chebyshev (MVUE) UCL	0.00908		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0047	95% Jackknife UCL	0.00475
95% Standard Bootstrap UCL	0.00467	95% Bootstrap-t UCL	0.0098

95% Hall's Bootstrap UCL	0.012	95% Percentile Bootstrap UCL	0.00501
95% BCA Bootstrap UCL	0.00619		
90% Chebyshev(Mean, Sd) UCL	0.00621	95% Chebyshev(Mean, Sd) UCL	0.00772
97.5% Chebyshev(Mean, Sd) UCL	0.00982	99% Chebyshev(Mean, Sd) UCL	0.0139

Suggested UCL to Use

95% H-UCL 0.00473

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

PCB-81

General Statistics

Total Number of Observations	39	Number of Distinct Observations	36
Number of Detects	13	Number of Non-Detects	26
Number of Distinct Detects	12	Number of Distinct Non-Detects	24
Minimum Detect	3.6100E-5	Minimum Non-Detect	8.3100E-5
Maximum Detect	0.00154	Maximum Non-Detect	2.5200E-4
Variance Detects	1.6377E-7	Percent Non-Detects	66.67%
Mean Detects	2.2830E-4	SD Detects	4.0469E-4
Median Detects	9.3000E-5	CV Detects	1.773
Skewness Detects	3.313	Kurtosis Detects	11.32
Mean of Logged Detects	-9.02	SD of Logged Detects	0.96

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.47	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.414	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.2354E-4	KM Standard Error of Mean	3.9798E-5
KM SD	2.3703E-4	95% KM (BCA) UCL	1.9724E-4
95% KM (t) UCL	1.9064E-4	95% KM (Percentile Bootstrap) UCL	1.9583E-4
95% KM (z) UCL	1.8900E-4	95% KM Bootstrap t UCL	4.2637E-4
90% KM Chebyshev UCL	2.4294E-4	95% KM Chebyshev UCL	2.9702E-4
97.5% KM Chebyshev UCL	3.7208E-4	99% KM Chebyshev UCL	5.1953E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.684	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.762	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.333	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.244	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.919	k star (bias corrected MLE)	0.758
Theta hat (MLE)	2.4854E-4	Theta star (bias corrected MLE)	3.0124E-4
nu hat (MLE)	23.88	nu star (bias corrected)	19.7
Mean (detects)	2.2830E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.6100E-5	Mean	0.00674
Maximum	0.01	Median	0.01
SD	0.00467	CV	0.693
k hat (MLE)	0.577	k star (bias corrected MLE)	0.55
Theta hat (MLE)	0.0117	Theta star (bias corrected MLE)	0.0123
nu hat (MLE)	44.99	nu star (bias corrected)	42.87
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (42.87, α)	28.86	Adjusted Chi Square Value (42.87, β)	28.4
95% Gamma Approximate UCL (use when n>=50)	0.01	95% Gamma Adjusted UCL (use when n<50)	0.0102

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.2354E-4	SD (KM)	2.3703E-4
Variance (KM)	5.6182E-8	SE of Mean (KM)	3.9798E-5
k hat (KM)	0.272	k star (KM)	0.268

nu hat (KM)	21.19	nu star (KM)	20.89
theta hat (KM)	4.5476E-4	theta star (KM)	4.6122E-4
80% gamma percentile (KM)	1.8359E-4	90% gamma percentile (KM)	3.6876E-4
95% gamma percentile (KM)	5.8564E-4	99% gamma percentile (KM)	0.00116

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (20.89, α)	11.51	Adjusted Chi Square Value (20.89, β)	11.24
95% Gamma Approximate KM-UCL (use when n>=50)	2.2421E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.2971E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.234	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.2205E-4	Mean in Log Scale	-9.401
SD in Original Scale	2.3993E-4	SD in Log Scale	0.614
95% t UCL (assumes normality of ROS data)	1.8682E-4	95% Percentile Bootstrap UCL	1.9350E-4
95% BCA Bootstrap UCL	2.4431E-4	95% Bootstrap t UCL	6.3933E-4
95% H-UCL (Log ROS)	1.2198E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.404	KM Geo Mean	8.2395E-5
KM SD (logged)	0.649	95% Critical H Value (KM-Log)	2.04
KM Standard Error of Mean (logged)	0.134	95% H-UCL (KM -Log)	1.2606E-4
KM SD (logged)	0.649	95% Critical H Value (KM-Log)	2.04
KM Standard Error of Mean (logged)	0.134		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.2176E-4	Mean in Log Scale	-9.429
SD in Original Scale	2.4056E-4	SD in Log Scale	0.659
95% t UCL (Assumes normality)	1.8671E-4	95% H-Stat UCL	1.2436E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 2.9702E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
Number of Detects	38	Number of Non-Detects	1
Number of Distinct Detects	38	Number of Distinct Non-Detects	1
Minimum Detect	2.3600E-4	Minimum Non-Detect	1.4400E-4
Maximum Detect	0.0677	Maximum Non-Detect	1.4400E-4
Variance Detects	1.5634E-4	Percent Non-Detects	2.564%
Mean Detects	0.00744	SD Detects	0.0125
Median Detects	0.00366	CV Detects	1.681
Skewness Detects	3.581	Kurtosis Detects	14.94
Mean of Logged Detects	-5.766	SD of Logged Detects	1.343

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.567	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.306	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00725	KM Standard Error of Mean	0.00199
KM SD	0.0122	95% KM (BCA) UCL	0.0111
95% KM (t) UCL	0.0106	95% KM (Percentile Bootstrap) UCL	0.0106
95% KM (z) UCL	0.0105	95% KM Bootstrap t UCL	0.0138
90% KM Chebyshev UCL	0.0132	95% KM Chebyshev UCL	0.0159
97.5% KM Chebyshev UCL	0.0196	99% KM Chebyshev UCL	0.027

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.049	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.794	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.144	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.149	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.699	k star (bias corrected MLE)	0.661
Theta hat (MLE)	0.0106	Theta star (bias corrected MLE)	0.0113
nu hat (MLE)	53.1	nu star (bias corrected)	50.24
Mean (detects)	0.00744		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.3600E-4	Mean	0.0075
Maximum	0.0677	Median	0.00371
SD	0.0123	CV	1.645
k hat (MLE)	0.714	k star (bias corrected MLE)	0.676
Theta hat (MLE)	0.0105	Theta star (bias corrected MLE)	0.0111
nu hat (MLE)	55.68	nu star (bias corrected)	52.73
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (52.73, α)	37.05	Adjusted Chi Square Value (52.73, β)	36.53
95% Gamma Approximate UCL (use when n>=50)	0.0107	95% Gamma Adjusted UCL (use when n<50)	0.0108

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00725	SD (KM)	0.0122
Variance (KM)	1.4965E-4	SE of Mean (KM)	0.00199
k hat (KM)	0.351	k star (KM)	0.341

nu hat (KM)	27.41	nu star (KM)	26.63
theta hat (KM)	0.0206	theta star (KM)	0.0212
80% gamma percentile (KM)	0.0114	90% gamma percentile (KM)	0.021
95% gamma percentile (KM)	0.0318	99% gamma percentile (KM)	0.0594

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (26.63, α)	15.87	Adjusted Chi Square Value (26.63, β)	15.54
95% Gamma Approximate KM-UCL (use when n>=50)	0.0122	95% Gamma Adjusted KM-UCL (use when n<50)	0.0124

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.938	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.142	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00725	Mean in Log Scale	-5.854
SD in Original Scale	0.0124	SD in Log Scale	1.435
95% t UCL (assumes normality of ROS data)	0.0106	95% Percentile Bootstrap UCL	0.0109
95% BCA Bootstrap UCL	0.0122	95% Bootstrap t UCL	0.0135
95% H-UCL (Log ROS)	0.0159		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.845	KM Geo Mean	0.00289
KM SD (logged)	1.395	95% Critical H Value (KM-Log)	2.897
KM Standard Error of Mean (logged)	0.226	95% H-UCL (KM -Log)	0.0148
KM SD (logged)	1.395	95% Critical H Value (KM-Log)	2.897
KM Standard Error of Mean (logged)	0.226		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00725	Mean in Log Scale	-5.863
SD in Original Scale	0.0124	SD in Log Scale	1.456
95% t UCL (Assumes normality)	0.0106	95% H-Stat UCL	0.0166

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ımma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.0124

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
Number of Detects	32	Number of Non-Detects	7
Number of Distinct Detects	32	Number of Distinct Non-Detects	7
Minimum Detect	3.6700E-5	Minimum Non-Detect	9.1500E-5
Maximum Detect	0.00338	Maximum Non-Detect	1.6400E-4
Variance Detects	4.8692E-7	Percent Non-Detects	17.95%
Mean Detects	4.6901E-4	SD Detects	6.9779E-4
Median Detects	2.3965E-4	CV Detects	1.488
Skewness Detects	3.001	Kurtosis Detects	9.996
Mean of Logged Detects	-8.365	SD of Logged Detects	1.177

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.612	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.93	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.302	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.154	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.9600E-4	KM Standard Error of Mean	1.0438E-4
KM SD	6.4149E-4	95% KM (BCA) UCL	5.9528E-4
95% KM (t) UCL	5.7198E-4	95% KM (Percentile Bootstrap) UCL	5.7406E-4
95% KM (z) UCL	5.6769E-4	95% KM Bootstrap t UCL	7.1441E-4
90% KM Chebyshev UCL	7.0914E-4	95% KM Chebyshev UCL	8.5098E-4
97.5% KM Chebyshev UCL	0.00105	99% KM Chebyshev UCL	0.00143

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.979	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.783	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.165	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.161	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.842	k star (bias corrected MLE)	0.784
Theta hat (MLE)	5.5707E-4	Theta star (bias corrected MLE)	5.9835E-4
nu hat (MLE)	53.88	nu star (bias corrected)	50.17
Mean (detects)	4.6901E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.6700E-5	Mean	0.00218
Maximum	0.01	Median	3.2500E-4
SD	0.00376	CV	1.724
k hat (MLE)	0.418	k star (bias corrected MLE)	0.403
Theta hat (MLE)	0.00521	Theta star (bias corrected MLE)	0.00541
nu hat (MLE)	32.63	nu star (bias corrected)	31.45
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (31.45, α)	19.64	Adjusted Chi Square Value (31.45, β)	19.27
95% Gamma Approximate UCL (use when n>=50)	0.00349	95% Gamma Adjusted UCL (use when n<50)	0.00356

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.9600E-4	SD (KM)	6.4149E-4
Variance (KM)	4.1150E-7	SE of Mean (KM)	1.0438E-4
k hat (KM)	0.381	k star (KM)	0.369

nu hat (KM)	29.72	nu star (KM)	28.77
theta hat (KM)	0.00104	theta star (KM)	0.00107
80% gamma percentile (KM)	6.3229E-4	90% gamma percentile (KM)	0.00113
95% gamma percentile (KM)	0.00169	99% gamma percentile (KM)	0.00311

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (28.77, α)	17.53	Adjusted Chi Square Value (28.77, β)	17.18
95% Gamma Approximate KM-UCL (use when n>=50)	6.4995E-4	95% Gamma Adjusted KM-UCL (use when n<50)	6.6307E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.93	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0945	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.154	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.9634E-4	Mean in Log Scale	-8.597
SD in Original Scale	6.4962E-4	SD in Log Scale	1.176
95% t UCL (assumes normality of ROS data)	5.7172E-4	95% Percentile Bootstrap UCL	5.7664E-4
95% BCA Bootstrap UCL	6.4974E-4	95% Bootstrap t UCL	7.3209E-4
95% H-UCL (Log ROS)	6.0686E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.613	KM Geo Mean	1.8166E-4
KM SD (logged)	1.185	95% Critical H Value (KM-Log)	2.624
KM Standard Error of Mean (logged)	0.195	95% H-UCL (KM -Log)	6.0731E-4
KM SD (logged)	1.185	95% Critical H Value (KM-Log)	2.624
KM Standard Error of Mean (logged)	0.195		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.9550E-4	Mean in Log Scale	-8.613
SD in Original Scale	6.5007E-4	SD in Log Scale	1.194
95% t UCL (Assumes normality)	5.7100E-4	95% H-Stat UCL	6.1703E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 6.0731E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	6.6700E-4	Mean	0.0177
Maximum	0.128	Median	0.00872
SD	0.0265	Std. Error of Mean	0.00425
Coefficient of Variation	1.496	Skewness	2.769

Normal GOF Test

Shapiro Wilk Test Statistic	0.629	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.315	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0249	95% Adjusted-CLT UCL (Chen-1995)	0.0267
		95% Modified-t UCL (Johnson-1978)	0.0252

Gamma GOF Test

A-D Test Statistic	1.111	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.79	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.16	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.147	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.74	k star (bias corrected MLE)	0.7
Theta hat (MLE)	0.024	Theta star (bias corrected MLE)	0.0253
nu hat (MLE)	57.71	nu star (bias corrected)	54.6
MLE Mean (bias corrected)	0.0177	MLE Sd (bias corrected)	0.0212
		Approximate Chi Square Value (0.05)	38.62
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	38.09

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0251	95% Adjusted Gamma UCL (use when n<50)	0.0254

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.119	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.313	Mean of logged Data	-4.843
Maximum of Logged Data	-2.056	SD of logged Data	1.312

Assuming Lognormal Distribution

95% H-UCL	0.0337	90% Chebyshev (MVUE) UCL	0.0321
95% Chebyshev (MVUE) UCL	0.0384	97.5% Chebyshev (MVUE) UCL	0.0473
99% Chebyshev (MVUE) UCL	0.0648		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0247	95% Jackknife UCL	0.0249
95% Standard Bootstrap UCL	0.0247	95% Bootstrap-t UCL	0.0291

95% Hall's Bootstrap UCL	0.0276	95% Percentile Bootstrap UCL	0.0248
95% BCA Bootstrap UCL	0.0268		
90% Chebyshev(Mean, Sd) UCL	0.0305	95% Chebyshev(Mean, Sd) UCL	0.0362
97.5% Chebyshev(Mean, Sd) UCL	0.0443	99% Chebyshev(Mean, Sd) UCL	0.06

Suggested UCL to Use

95% H-UCL 0.0337

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

PCB-123

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
Number of Detects	34	Number of Non-Detects	5
Number of Distinct Detects	34	Number of Distinct Non-Detects	5
Minimum Detect	3.6900E-5	Minimum Non-Detect	9.1500E-5
Maximum Detect	0.00475	Maximum Non-Detect	2.5200E-4
Variance Detects	7.7484E-7	Percent Non-Detects	12.82%
Mean Detects	5.2405E-4	SD Detects	8.8025E-4
Median Detects	2.8750E-4	CV Detects	1.68
Skewness Detects	3.803	Kurtosis Detects	16.64
Mean of Logged Detects	-8.296	SD of Logged Detects	1.186

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.542	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.933	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.294	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.15	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.6639E-4	KM Standard Error of Mean	1.3389E-4
KM SD	8.2365E-4	95% KM (BCA) UCL	7.0845E-4
95% KM (t) UCL	6.9212E-4	95% KM (Percentile Bootstrap) UCL	6.9750E-4
95% KM (z) UCL	6.8662E-4	95% KM Bootstrap t UCL	9.9124E-4
90% KM Chebyshev UCL	8.6806E-4	95% KM Chebyshev UCL	0.00105
97.5% KM Chebyshev UCL	0.0013	99% KM Chebyshev UCL	0.0018

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.108	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.785	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.16	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.157	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.8	k star (bias corrected MLE)	0.749
Theta hat (MLE)	6.5502E-4	Theta star (bias corrected MLE)	6.9960E-4
nu hat (MLE)	54.4	nu star (bias corrected)	50.94
Mean (detects)	5.2405E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.6900E-5	Mean	0.00174
Maximum	0.01	Median	3.3800E-4
SD	0.00331	CV	1.905
k hat (MLE)	0.441	k star (bias corrected MLE)	0.424
Theta hat (MLE)	0.00394	Theta star (bias corrected MLE)	0.0041
nu hat (MLE)	34.42	nu star (bias corrected)	33.1
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (33.10, α)	20.95	Adjusted Chi Square Value (33.10, β)	20.57
95% Gamma Approximate UCL (use when n>=50)	0.00275	95% Gamma Adjusted UCL (use when n<50)	0.0028

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.6639E-4	SD (KM)	8.2365E-4
Variance (KM)	6.7840E-7	SE of Mean (KM)	1.3389E-4
k hat (KM)	0.321	k star (KM)	0.313

nu hat (KM)	25.01	nu star (KM)	24.42
theta hat (KM)	0.00145	theta star (KM)	0.00149
80% gamma percentile (KM)	7.2245E-4	90% gamma percentile (KM)	0.00137
95% gamma percentile (KM)	0.0021	99% gamma percentile (KM)	0.00401

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (24.42, α)	14.17	Adjusted Chi Square Value (24.42, β)	13.86
95% Gamma Approximate KM-UCL (use when n>=50)	8.0385E-4	95% Gamma Adjusted KM-UCL (use when n<50)	8.2176E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.933	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.103	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.15	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.6665E-4	Mean in Log Scale	-8.449
SD in Original Scale	8.3421E-4	SD in Log Scale	1.178
95% t UCL (assumes normality of ROS data)	6.9186E-4	95% Percentile Bootstrap UCL	7.1189E-4
95% BCA Bootstrap UCL	8.3751E-4	95% Bootstrap t UCL	9.6639E-4
95% H-UCL (Log ROS)	7.0636E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.463	KM Geo Mean	2.1124E-4
KM SD (logged)	1.183	95% Critical H Value (KM-Log)	2.622
KM Standard Error of Mean (logged)	0.194	95% H-UCL (KM -Log)	7.0366E-4
KM SD (logged)	1.183	95% Critical H Value (KM-Log)	2.622
KM Standard Error of Mean (logged)	0.194		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.6640E-4	Mean in Log Scale	-8.459
SD in Original Scale	8.3438E-4	SD in Log Scale	1.193
95% t UCL (Assumes normality)	6.9166E-4	95% H-Stat UCL	7.1911E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 7.0366E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	39	Number of Distinct Observations	35
Number of Detects	13	Number of Non-Detects	26
Number of Distinct Detects	12	Number of Distinct Non-Detects	25
Minimum Detect	4.4600E-5	Minimum Non-Detect	8.3100E-5
Maximum Detect	0.0011	Maximum Non-Detect	2.5200E-4
Variance Detects	7.6899E-8	Percent Non-Detects	66.67%
Mean Detects	2.1945E-4	SD Detects	2.7731E-4
Median Detects	1.5200E-4	CV Detects	1.264
Skewness Detects	3.082	Kurtosis Detects	10.16
Mean of Logged Detects	-8.825	SD of Logged Detects	0.838

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.572	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.377	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.1830E-4	KM Standard Error of Mean	2.9012E-5
KM SD	1.7090E-4	95% KM (BCA) UCL	1.7703E-4
95% KM (t) UCL	1.6721E-4	95% KM (Percentile Bootstrap) UCL	1.7076E-4
95% KM (z) UCL	1.6602E-4	95% KM Bootstrap t UCL	2.2770E-4
90% KM Chebyshev UCL	2.0534E-4	95% KM Chebyshev UCL	2.4476E-4
97.5% KM Chebyshev UCL	2.9948E-4	99% KM Chebyshev UCL	4.0697E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.831	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.752	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.279	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.241	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.392	k star (bias corrected MLE)	1.122
Theta hat (MLE)	1.5765E-4	Theta star (bias corrected MLE)	1.9557E-4
nu hat (MLE)	36.19	nu star (bias corrected)	29.17
Mean (detects)	2.1945E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.4600E-5	Mean	0.00674
Maximum	0.01	Median	0.01
SD	0.00467	CV	0.693
k hat (MLE)	0.609	k star (bias corrected MLE)	0.579
Theta hat (MLE)	0.0111	Theta star (bias corrected MLE)	0.0116
nu hat (MLE)	47.52	nu star (bias corrected)	45.2
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (45.20, α)	30.77	Adjusted Chi Square Value (45.20, β)	30.3
95% Gamma Approximate UCL (use when n>=50)	0.0099	95% Gamma Adjusted UCL (use when n<50)	0.0101

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.1830E-4	SD (KM)	1.7090E-4
Variance (KM)	2.9207E-8	SE of Mean (KM)	2.9012E-5
k hat (KM)	0.479	k star (KM)	0.459

nu hat (KM)	37.37	nu star (KM)	35.83
theta hat (KM)	2.4689E-4	theta star (KM)	2.5751E-4
80% gamma percentile (KM)	1.9337E-4	90% gamma percentile (KM)	3.2560E-4
95% gamma percentile (KM)	4.6831E-4	99% gamma percentile (KM)	8.2214E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (35.83, α)	23.13	Adjusted Chi Square Value (35.83, β)	22.73
95% Gamma Approximate KM-UCL (use when n>=50)	1.8324E-4	95% Gamma Adjusted KM-UCL (use when n<50)	1.8649E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.1403E-4	Mean in Log Scale	-9.413
SD in Original Scale	1.7328E-4	SD in Log Scale	0.641
95% t UCL (assumes normality of ROS data)	1.6081E-4	95% Percentile Bootstrap UCL	1.6686E-4
95% BCA Bootstrap UCL	2.0737E-4	95% Bootstrap t UCL	2.6625E-4
95% H-UCL (Log ROS)	1.2386E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.378	KM Geo Mean	8.4577E-5
KM SD (logged)	0.659	95% Critical H Value (KM-Log)	2.05
KM Standard Error of Mean (logged)	0.136	95% H-UCL (KM -Log)	1.3086E-4
KM SD (logged)	0.659	95% Critical H Value (KM-Log)	2.05
KM Standard Error of Mean (logged)	0.136		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.1861E-4	Mean in Log Scale	-9.366
SD in Original Scale	1.7266E-4	SD in Log Scale	0.656
95% t UCL (Assumes normality)	1.6522E-4	95% H-Stat UCL	1.3194E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.3086E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	7.9900E-5	Mean	0.00227
Maximum	0.0125	Median	0.00109
SD	0.00314	Std. Error of Mean	5.0348E-4
Coefficient of Variation	1.384	Skewness	2.236

Normal GOF Test

Shapiro Wilk Test Statistic	0.663	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.255	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00312	95% Adjusted-CLT UCL (Chen-1995)	0.00329
		95% Modified-t UCL (Johnson-1978)	0.00315

Gamma GOF Test

A-D Test Statistic	0.946	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.788	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.121	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.764	k star (bias corrected MLE)	0.722
Theta hat (MLE)	0.00297	Theta star (bias corrected MLE)	0.00315
nu hat (MLE)	59.59	nu star (bias corrected)	56.34
MLE Mean (bias corrected)	0.00227	MLE Sd (bias corrected)	0.00267
		Approximate Chi Square Value (0.05)	40.09
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	39.54

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00319	95% Adjusted Gamma UCL (use when n<50)	0.00324

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0897	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.435	Mean of logged Data	-6.869
Maximum of Logged Data	-4.382	SD of logged Data	1.307

Assuming Lognormal Distribution

95% H-UCL	0.0044	90% Chebyshev (MVUE) UCL	0.00419
95% Chebyshev (MVUE) UCL	0.00502	97.5% Chebyshev (MVUE) UCL	0.00618
99% Chebyshev (MVUE) UCL	0.00845		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0031	95% Jackknife UCL	0.00312
95% Standard Bootstrap UCL	0.00308	95% Bootstrap-t UCL	0.00353

95% Hall's Bootstrap UCL	0.00315	95% Percentile Bootstrap UCL	0.00311
95% BCA Bootstrap UCL	0.00334		
90% Chebyshev(Mean, Sd) UCL	0.00378	95% Chebyshev(Mean, Sd) UCL	0.00447
97.5% Chebyshev(Mean, Sd) UCL	0.00542	99% Chebyshev(Mean, Sd) UCL	0.00728

Suggested UCL to Use

95% Adjusted Gamma UCL 0.00324

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
Number of Detects	37	Number of Non-Detects	2
Number of Distinct Detects	37	Number of Distinct Non-Detects	2
Minimum Detect	5.6000E-5	Minimum Non-Detect	1.2100E-4
Maximum Detect	0.00416	Maximum Non-Detect	1.6400E-4
Variance Detects	1.0697E-6	Percent Non-Detects	5.128%
Mean Detects	8.1071E-4	SD Detects	0.00103
Median Detects	4.0600E-4	CV Detects	1.276
Skewness Detects	2.168	Kurtosis Detects	4.17
Mean of Logged Detects	-7.762	SD of Logged Detects	1.159

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.686	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.28	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.7419E-4	KM Standard Error of Mean	1.6332E-4
KM SD	0.00101	95% KM (BCA) UCL	0.00105
95% KM (t) UCL	0.00105	95% KM (Percentile Bootstrap) UCL	0.00105
95% KM (z) UCL	0.00104	95% KM Bootstrap t UCL	0.00118
90% KM Chebyshev UCL	0.00126	95% KM Chebyshev UCL	0.00149
97.5% KM Chebyshev UCL	0.00179	99% KM Chebyshev UCL	0.0024

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.981	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.781	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.14	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.15	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.906	k star (bias corrected MLE)	0.851
Theta hat (MLE)	8.9444E-4	Theta star (bias corrected MLE)	9.5275E-4
nu hat (MLE)	67.07	nu star (bias corrected)	62.97
Mean (detects)	8.1071E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.6000E-5	Mean	0.00128
Maximum	0.01	Median	4.2300E-4
SD	0.00229	CV	1.784
k hat (MLE)	0.649	k star (bias corrected MLE)	0.616
Theta hat (MLE)	0.00197	Theta star (bias corrected MLE)	0.00208
nu hat (MLE)	50.64	nu star (bias corrected)	48.08
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (48.08, α)	33.17	Adjusted Chi Square Value (48.08, β)	32.68
95% Gamma Approximate UCL (use when n>=50)	0.00186	95% Gamma Adjusted UCL (use when n<50)	0.00189

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.7419E-4	SD (KM)	0.00101
Variance (KM)	1.0121E-6	SE of Mean (KM)	1.6332E-4
k hat (KM)	0.592	k star (KM)	0.564

nu hat (KM)	46.19	nu star (KM)	43.97
theta hat (KM)	0.00131	theta star (KM)	0.00137
80% gamma percentile (KM)	0.00128	90% gamma percentile (KM)	0.00204
95% gamma percentile (KM)	0.00285	99% gamma percentile (KM)	0.00481

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (43.97, α)	29.76	Adjusted Chi Square Value (43.97, β)	29.3
95% Gamma Approximate KM-UCL (use when n>=50)	0.00114	95% Gamma Adjusted KM-UCL (use when n<50)	0.00116

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0953	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.7425E-4	Mean in Log Scale	-7.836
SD in Original Scale	0.00102	SD in Log Scale	1.174
95% t UCL (assumes normality of ROS data)	0.00105	95% Percentile Bootstrap UCL	0.00106
95% BCA Bootstrap UCL	0.0011	95% Bootstrap t UCL	0.00115
95% H-UCL (Log ROS)	0.00129		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.838	KM Geo Mean	3.9427E-4
KM SD (logged)	1.163	95% Critical H Value (KM-Log)	2.596
KM Standard Error of Mean (logged)	0.189	95% H-UCL (KM -Log)	0.00126
KM SD (logged)	1.163	95% Critical H Value (KM-Log)	2.596
KM Standard Error of Mean (logged)	0.189		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.7279E-4	Mean in Log Scale	-7.854
SD in Original Scale	0.00102	SD in Log Scale	1.198
95% t UCL (Assumes normality)	0.00105	95% H-Stat UCL	0.00133

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ımma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.00116

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	39	Number of Distinct Observations	36
Number of Detects	0	Number of Non-Detects	39
Number of Distinct Detects	0	Number of Distinct Non-Detects	36

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable PCB-169 was not processed!

PCB-189

General Statistics

Total Number of Observations	39	Number of Distinct Observations	37
Number of Detects	30	Number of Non-Detects	9
Number of Distinct Detects	29	Number of Distinct Non-Detects	8
Minimum Detect	3.3600E-5	Minimum Non-Detect	8.6600E-5
Maximum Detect	8.1100E-4	Maximum Non-Detect	2.5200E-4
Variance Detects	3.6283E-8	Percent Non-Detects	23.08%
Mean Detects	2.1296E-4	SD Detects	1.9048E-4
Median Detects	1.4250E-4	CV Detects	0.894
Skewness Detects	1.663	Kurtosis Detects	2.584
Mean of Logged Detects	-8.802	SD of Logged Detects	0.858

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.813	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.927	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.24	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.159	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.8070E-4	KM Standard Error of Mean	2.8694E-5
KM SD	1.7529E-4	95% KM (BCA) UCL	2.3172E-4
95% KM (t) UCL	2.2907E-4	95% KM (Percentile Bootstrap) UCL	2.2828E-4
95% KM (z) UCL	2.2790E-4	95% KM Bootstrap t UCL	2.4520E-4
90% KM Chebyshev UCL	2.6678E-4	95% KM Chebyshev UCL	3.0577E-4
97.5% KM Chebyshev UCL	3.5989E-4	99% KM Chebyshev UCL	4.6620E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.464	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.762	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.135	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.163	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.585	k star (bias corrected MLE)	1.448
Theta hat (MLE)	1.3439E-4	Theta star (bias corrected MLE)	1.4703E-4
nu hat (MLE)	95.08	nu star (bias corrected)	86.9
Mean (detects)	2.1296E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.3600E-5	Mean	0.00247
Maximum	0.01	Median	2.0600E-4
SD	0.00418	CV	1.692
k hat (MLE)	0.365	k star (bias corrected MLE)	0.354
Theta hat (MLE)	0.00677	Theta star (bias corrected MLE)	0.00698
nu hat (MLE)	28.46	nu star (bias corrected)	27.6
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (27.60, α)	16.62	Adjusted Chi Square Value (27.60, β)	16.28
95% Gamma Approximate UCL (use when n>=50)	0.0041	95% Gamma Adjusted UCL (use when n<50)	0.00419

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.8070E-4	SD (KM)	1.7529E-4
Variance (KM)	3.0726E-8	SE of Mean (KM)	2.8694E-5
k hat (KM)	1.063	k star (KM)	0.998

nu hat (KM)	82.89	nu star (KM)	77.85
theta hat (KM)	1.7004E-4	theta star (KM)	1.8105E-4
80% gamma percentile (KM)	2.9087E-4	90% gamma percentile (KM)	4.1627E-4
95% gamma percentile (KM)	5.4170E-4	99% gamma percentile (KM)	8.3297E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (77.85, α)	58.52	Adjusted Chi Square Value (77.85, β)	57.86
95% Gamma Approximate KM-UCL (use when n>=50)	2.4037E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.4312E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.927	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.09	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.159	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.8025E-4	Mean in Log Scale	-8.98
SD in Original Scale	1.7721E-4	SD in Log Scale	0.826
95% t UCL (assumes normality of ROS data)	2.2810E-4	95% Percentile Bootstrap UCL	2.2825E-4
95% BCA Bootstrap UCL	2.3539E-4	95% Bootstrap t UCL	2.4805E-4
95% H-UCL (Log ROS)	2.3812E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.993	KM Geo Mean	1.2424E-4
KM SD (logged)	0.849	95% Critical H Value (KM-Log)	2.236
KM Standard Error of Mean (logged)	0.145	95% H-UCL (KM -Log)	2.4235E-4
KM SD (logged)	0.849	95% Critical H Value (KM-Log)	2.236
KM Standard Error of Mean (logged)	0.145		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.7915E-4	Mean in Log Scale	-9.003
SD in Original Scale	1.7815E-4	SD in Log Scale	0.85
95% t UCL (Assumes normality)	2.2725E-4	95% H-Stat UCL	2.4056E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	2.4312E-4	95% GROS Adjusted Gamma UCL	0.00419

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.18/15/18 4:08:25 PM
From File	Sediment_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	3.5637E-6	Mean	7.6591E-5
Maximum	3.5330E-4	Median	5.5721E-5
SD	7.9128E-5	Std. Error of Mean	1.2671E-5
Coefficient of Variation	N/A	Skewness	1.789

Normal GOF Test

Shapiro Wilk Test Statistic	0.814	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.7953E-5	95% Adjusted-CLT UCL (Chen-1995)	1.0131E-4
		95% Modified-t UCL (Johnson-1978)	9.8558E-5

Gamma GOF Test

A-D Test Statistic	0.363	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.779	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0949	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.988	k star (bias corrected MLE)	0.929
Theta hat (MLE)	7.7523E-5	Theta star (bias corrected MLE)	8.2438E-5
nu hat (MLE)	77.06	nu star (bias corrected)	72.47
MLE Mean (bias corrected)	7.6591E-5	MLE Sd (bias corrected)	7.9461E-5
		Approximate Chi Square Value (0.05)	53.87
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	53.23

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.0304E-4	95% Adjusted Gamma UCL (use when n<50)	1.0427E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.113	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.54	Mean of logged Data	-10.06
Maximum of Logged Data	-7.948	SD of logged Data	1.211

Assuming Lognormal Distribution

95% H-UCL	1.4973E-4	90% Chebyshev (MVUE) UCL	1.4733E-4
95% Chebyshev (MVUE) UCL	1.7506E-4	97.5% Chebyshev (MVUE) UCL	2.1354E-4
99% Chebyshev (MVUE) UCL	2.8912E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.7432E-5	95% Jackknife UCL	9.7953E-5
95% Standard Bootstrap UCL	9.7299E-5	95% Bootstrap-t UCL	1.0459E-4
95% Hall's Bootstrap UCL	1.0445E-4	95% Percentile Bootstrap UCL	9.6842E-5
95% BCA Bootstrap UCL	1.0086E-4		
90% Chebyshev(Mean, Sd) UCL	1.1460E-4	95% Chebyshev(Mean, Sd) UCL	1.3182E-4
97.5% Chebyshev(Mean, Sd) UCL	1.5572E-4	99% Chebyshev(Mean, Sd) UCL	2.0266E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 1.0427E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	4.7087E-6	Mean	1.7708E-5
Maximum	1.2168E-4	Median	1.3668E-5
SD	1.8355E-5	Std. Error of Mean	2.9391E-6
Coefficient of Variation	N/A	Skewness	5.06

Normal GOF Test

Shapiro Wilk Test Statistic	0.459	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.321	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	2.2663E-5	95% Adjusted-CLT UCL (Chen-1995)	2.5087E-5
		95% Modified-t UCL (Johnson-1978)	2.3060E-5

Gamma GOF Test

A-D Test Statistic	2.118	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.202	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.143	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.638	k star (bias corrected MLE)	2.452
Theta hat (MLE)	6.7132E-6	Theta star (bias corrected MLE)	7.2219E-6
nu hat (MLE)	205.7	nu star (bias corrected)	191.3
MLE Mean (bias corrected)	1.7708E-5	MLE Sd (bias corrected)	1.1309E-5
		Approximate Chi Square Value (0.05)	160.3
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	159.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1132E-5	95% Adjusted Gamma UCL (use when n<50)	2.1281E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.907	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.27	Mean of logged Data	-11.14
Maximum of Logged Data	-9.014	SD of logged Data	0.549

Assuming Lognormal Distribution

95% H-UCL	2.0042E-5	90% Chebyshev (MVUE) UCL	2.1436E-5
95% Chebyshev (MVUE) UCL	2.3553E-5	97.5% Chebyshev (MVUE) UCL	2.6492E-5
99% Chebyshev (MVUE) UCL	3.2264E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.2542E-5	95% Jackknife UCL	2.2663E-5
95% Standard Bootstrap UCL	2.2537E-5	95% Bootstrap-t UCL	3.0663E-5

95% Hall's Bootstrap UCL	4.3354E-5	95% Percentile Bootstrap UCL	2.2861E-5
95% BCA Bootstrap UCL	2.6334E-5		
90% Chebyshev(Mean, Sd) UCL	2.6525E-5	95% Chebyshev(Mean, Sd) UCL	3.0519E-5
97.5% Chebyshev(Mean, Sd) UCL	3.6063E-5	99% Chebyshev(Mean, Sd) UCL	4.6952E-5

Suggested UCL to Use

95% H-UCL 2.0042E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.18/15/18 4:06:48 PM
From File	sed14_ndl_PCB_sum_wide2_flag_sep1_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	0.0378	Mean	0.475
Maximum	3.741	Median	0.275
SD	0.689	Std. Error of Mean	0.11
Coefficient of Variation	1.451	Skewness	3.406

Normal GOF Test

Shapiro Wilk Test Statistic	0.612	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.263	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.661	95% Adjusted-CLT UCL (Chen-1995)	0.721
		95% Modified-t UCL (Johnson-1978)	0.671

Gamma GOF Test

A-D Test Statistic	0.847	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.783	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.879	k star (bias corrected MLE)	0.828
Theta hat (MLE)	0.54	Theta star (bias corrected MLE)	0.573
nu hat (MLE)	68.55	nu star (bias corrected)	64.61
MLE Mean (bias corrected)	0.475	MLE Sd (bias corrected)	0.522
		Approximate Chi Square Value (0.05)	47.11
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	46.52

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.651	95% Adjusted Gamma UCL (use when n<50)	0.66

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.274	Mean of logged Data	-1.412
Maximum of Logged Data	1.319	SD of logged Data	1.166

Assuming Lognormal Distribution

95% H-UCL	0.786	90% Chebyshev (MVUE) UCL	0.784
95% Chebyshev (MVUE) UCL	0.927	97.5% Chebyshev (MVUE) UCL	1.126
99% Chebyshev (MVUE) UCL	1.517		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.656	95% Jackknife UCL	0.661
95% Standard Bootstrap UCL	0.648	95% Bootstrap-t UCL	0.813
95% Hall's Bootstrap UCL	1.507	95% Percentile Bootstrap UCL	0.666
95% BCA Bootstrap UCL	0.733		
90% Chebyshev(Mean, Sd) UCL	0.806	95% Chebyshev(Mean, Sd) UCL	0.956
97.5% Chebyshev(Mean, Sd) UCL	1.164	99% Chebyshev(Mean, Sd) UCL	1.573

Suggested UCL to Use

95% Adjusted Gamma UCL 0.66

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.111/2/18 8:56:23 AM
From File	sed4_PAH_wide2_flag_sep1_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benz(a)anthracene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.045	Mean	1.003
Maximum	7.7	Median	0.44
SD	1.554	Std. Error of Mean	0.249
Coefficient of Variation	1.55	Skewness	3.093

Normal GOF Test

Shapiro Wilk Test Statistic	0.578	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.311	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.422	95% Adjusted-CLT UCL (Chen-1995)	1.544
		95% Modified-t UCL (Johnson-1978)	1.443

Gamma GOF Test

A-D Test Statistic	1.679	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.784	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.186	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.856	k star (bias corrected MLE)	0.807
Theta hat (MLE)	1.171	Theta star (bias corrected MLE)	1.242
nu hat (MLE)	66.78	nu star (bias corrected)	62.98
MLE Mean (bias corrected)	1.003	MLE Sd (bias corrected)	1.116
		Approximate Chi Square Value (0.05)	45.72
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	45.14

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.381	95% Adjusted Gamma UCL (use when n<50)	1.399

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.104	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.101	Mean of logged Data	-0.684
Maximum of Logged Data	2.041	SD of logged Data	1.141

Assuming Lognormal Distribution

95% H-UCL	1.555	90% Chebyshev (MVUE) UCL	1.562

95% Chebyshev (MVUE) UCL	1.843	97.5% Chebyshev (MVUE) UCL	2.233
99% Chebyshev (MVUE) UCL	2.999		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.412	95% Jackknife UCL	1.422
95% Standard Bootstrap UCL	1.401	95% Bootstrap-t UCL	1.697
95% Hall's Bootstrap UCL	1.827	95% Percentile Bootstrap UCL	1.416
95% BCA Bootstrap UCL	1.587		
90% Chebyshev(Mean, Sd) UCL	1.749	95% Chebyshev(Mean, Sd) UCL	2.088
97.5% Chebyshev(Mean, Sd) UCL	2.557	99% Chebyshev(Mean, Sd) UCL	3.479

Suggested UCL to Use

95% H-UCL	1.555

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Benzo(a)pyrene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	29
		Number of Missing Observations	0
Minimum	0.065	Mean	1.076
Maximum	6.6	Median	0.59
SD	1.381	Std. Error of Mean	0.221
Coefficient of Variation	1.283	Skewness	2.888

Normal GOF Test

Shapiro Wilk Test Statistic	0.63	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.285	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.449	95% Adjusted-CLT UCL (Chen-1995)	1.549
		95% Modified-t UCL (Johnson-1978)	1.466

Gamma GOF Test

A-D Test Statistic	1.048	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.776	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.067	k star (bias corrected MLE)	1.002
Theta hat (MLE)	1.008	Theta star (bias corrected MLE)	1.073
nu hat (MLE)	83.26	nu star (bias corrected)	78.19
MLE Mean (bias corrected)	1.076	MLE Sd (bias corrected)	1.075
		Approximate Chi Square Value (0.05)	58.82
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	58.15

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.43	95% Adjusted Gamma UCL (use when n<50)	1.447

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.733	Mean of logged Data	-0.463
Maximum of Logged Data	1.887	SD of logged Data	1.056

Assuming Lognormal Distribution

95% H-UCL	1.676	90% Chebyshev (MVUE) UCL	1.719
95% Chebyshev (MVUE) UCL	2.01	97.5% Chebyshev (MVUE) UCL	2.414
99% Chebyshev (MVUE) UCL	3.209		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.44	95% Jackknife UCL	1.449
95% Standard Bootstrap UCL	1.45	95% Bootstrap-t UCL	1.809

95% Hall's Bootstrap UCL	2.335	95% Percentile Bootstrap UCL	1.48
95% BCA Bootstrap UCL	1.612		
90% Chebyshev(Mean, Sd) UCL	1.739	95% Chebyshev(Mean, Sd) UCL	2.04
97.5% Chebyshev(Mean, Sd) UCL	2.457	99% Chebyshev(Mean, Sd) UCL	3.276

Suggested UCL to Use

95% H-UCL 1.676

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	0.077	Mean	0.979
Maximum	6.4	Median	0.6
SD	1.222	Std. Error of Mean	0.196
Coefficient of Variation	1.249	Skewness	2.993

Normal GOF Test

Shapiro Wilk Test Statistic	0.649	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.288	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.308	95% Adjusted-CLT UCL (Chen-1995)	1.401
		95% Modified-t UCL (Johnson-1978)	1.324

Gamma GOF Test

A-D Test Statistic	0.929	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.775	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.161	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.114	k star (bias corrected MLE)	1.046
Theta hat (MLE)	0.878	Theta star (bias corrected MLE)	0.936
nu hat (MLE)	86.92	nu star (bias corrected)	81.57
MLE Mean (bias corrected)	0.979	MLE Sd (bias corrected)	0.957
		Approximate Chi Square Value (0.05)	61.76
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	61.08

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.293	95% Adjusted Gamma UCL (use when n<50)	1.307

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0994	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.564	Mean of logged Data	-0.533
Maximum of Logged Data	1.856	SD of logged Data	1.03

Assuming Lognormal Distribution

95% H-UCL	1.498	90% Chebyshev (MVUE) UCL	1.544
95% Chebyshev (MVUE) UCL	1.8	97.5% Chebyshev (MVUE) UCL	2.157
99% Chebyshev (MVUE) UCL	2.856		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3	95% Jackknife UCL	1.308
95% Standard Bootstrap UCL	1.293	95% Bootstrap-t UCL	1.541

95% Hall's Bootstrap UCL	1.792	95% Percentile Bootstrap UCL	1.315
95% BCA Bootstrap UCL	1.431		
90% Chebyshev(Mean, Sd) UCL	1.566	95% Chebyshev(Mean, Sd) UCL	1.831
97.5% Chebyshev(Mean, Sd) UCL	2.2	99% Chebyshev(Mean, Sd) UCL	2.925

Suggested UCL to Use

95% H-UCL	1.498

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Benzo(k)fluoranthene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	32
		Number of Missing Observations	0
Minimum	0.069	Mean	0.896
Maximum	5.4	Median	0.51
SD	1.052	Std. Error of Mean	0.168
Coefficient of Variation	1.174	Skewness	2.758

Normal GOF Test

Shapiro Wilk Test Statistic	0.682	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.255	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.18	95% Adjusted-CLT UCL (Chen-1995)	1.252
		95% Modified-t UCL (Johnson-1978)	1.192

Gamma GOF Test

A-D Test Statistic	0.863	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.774	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.128	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.165	k star (bias corrected MLE)	1.092
Theta hat (MLE)	0.769	Theta star (bias corrected MLE)	0.82
nu hat (MLE)	90.87	nu star (bias corrected)	85.21
MLE Mean (bias corrected)	0.896	MLE Sd (bias corrected)	0.857
		Approximate Chi Square Value (0.05)	64.94
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	64.24

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.176	95% Adjusted Gamma UCL (use when n<50)	1.188

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.105	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.674	Mean of logged Data	-0.597
Maximum of Logged Data	1.686	SD of logged Data	1.017

Assuming Lognormal Distribution

95% H-UCL	1.376	90% Chebyshev (MVUE) UCL	1.422
95% Chebyshev (MVUE) UCL	1.656	97.5% Chebyshev (MVUE) UCL	1.981
99% Chebyshev (MVUE) UCL	2.619		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.173	95% Jackknife UCL	1.18
95% Standard Bootstrap UCL	1.166	95% Bootstrap-t UCL	1.358

95% Hall's Bootstrap UCL	1.381	95% Percentile Bootstrap UCL	1.189
95% BCA Bootstrap UCL	1.257		
90% Chebyshev(Mean, Sd) UCL	1.401	95% Chebyshev(Mean, Sd) UCL	1.63
97.5% Chebyshev(Mean, Sd) UCL	1.947	99% Chebyshev(Mean, Sd) UCL	2.571

Suggested UCL to Use

95% Adjusted Gamma UCL 1.188

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chrysene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	0.076	Mean	0.998
Maximum	6.9	Median	0.47
SD	1.428	Std. Error of Mean	0.229
Coefficient of Variation	1.43	Skewness	2.892

Normal GOF Test

Shapiro Wilk Test Statistic	0.605	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.299	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.384	95% Adjusted-CLT UCL (Chen-1995)	1.488
		95% Modified-t UCL (Johnson-1978)	1.401

Gamma GOF Test

A-D Test Statistic	1.562	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.781	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.174	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.942	k star (bias corrected MLE)	0.886
Theta hat (MLE)	1.06	Theta star (bias corrected MLE)	1.126
nu hat (MLE)	73.44	nu star (bias corrected)	69.13
MLE Mean (bias corrected)	0.998	MLE Sd (bias corrected)	1.06
		Approximate Chi Square Value (0.05)	50.99
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	50.37

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.353	95% Adjusted Gamma UCL (use when n<50)	1.37

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.115	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.577	Mean of logged Data	-0.619
Maximum of Logged Data	1.932	SD of logged Data	1.085

Assuming Lognormal Distribution

95% H-UCL	1.506	90% Chebyshev (MVUE) UCL	1.534
95% Chebyshev (MVUE) UCL	1.8	97.5% Chebyshev (MVUE) UCL	2.168
99% Chebyshev (MVUE) UCL	2.893		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.374	95% Jackknife UCL	1.384
95% Standard Bootstrap UCL	1.377	95% Bootstrap-t UCL	1.66

95% Hall's Bootstrap UCL	1.654	95% Percentile Bootstrap UCL	1.387
95% BCA Bootstrap UCL	1.494		
90% Chebyshev(Mean, Sd) UCL	1.684	95% Chebyshev(Mean, Sd) UCL	1.995
97.5% Chebyshev(Mean, Sd) UCL	2.426	99% Chebyshev(Mean, Sd) UCL	3.273

Suggested UCL to Use

95% H-UCL 1.506

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Dibenz(a,h)anthracene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	32
		Number of Missing Observations	0
Minimum	0.016	Mean	0.222
Maximum	1.4	Median	0.12
SD	0.283	Std. Error of Mean	0.0454
Coefficient of Variation	1.276	Skewness	2.738

Normal GOF Test

Shapiro Wilk Test Statistic	0.645	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.281	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.299	95% Adjusted-CLT UCL (Chen-1995)	0.318
		95% Modified-t UCL (Johnson-1978)	0.302

Gamma GOF Test

A-D Test Statistic	1.167	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.777	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.147	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.051	k star (bias corrected MLE)	0.987
Theta hat (MLE)	0.211	Theta star (bias corrected MLE)	0.225
nu hat (MLE)	81.95	nu star (bias corrected)	76.98
MLE Mean (bias corrected)	0.222	MLE Sd (bias corrected)	0.223
		Approximate Chi Square Value (0.05)	57.77
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	57.11

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.296	95% Adjusted Gamma UCL (use when n<50)	0.299

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.135	Mean of logged Data	-2.051
Maximum of Logged Data	0.336	SD of logged Data	1.063

Assuming Lognormal Distribution

95% H-UCL	0.346	90% Chebyshev (MVUE) UCL	0.355
95% Chebyshev (MVUE) UCL	0.415	97.5% Chebyshev (MVUE) UCL	0.499
99% Chebyshev (MVUE) UCL	0.664		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.297	95% Jackknife UCL	0.299
95% Standard Bootstrap UCL	0.299	95% Bootstrap-t UCL	0.35

95% Hall's Bootstrap UCL	0.334	95% Percentile Bootstrap UCL	0.3
95% BCA Bootstrap UCL	0.318		
90% Chebyshev(Mean, Sd) UCL	0.358	95% Chebyshev(Mean, Sd) UCL	0.42
97.5% Chebyshev(Mean, Sd) UCL	0.505	99% Chebyshev(Mean, Sd) UCL	0.673

Suggested UCL to Use

95% H-UCL 0.346

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Indeno(1,2,3-c,d)-pyrene

General Statistics

Total Number of Observations	39	Number of Distinct Observations	32
		Number of Missing Observations	0
Minimum	0.036	Mean	0.564
Maximum	3.9	Median	0.33
SD	0.725	Std. Error of Mean	0.116
Coefficient of Variation	1.285	Skewness	3.144

Normal GOF Test

Shapiro Wilk Test Statistic	0.632	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.264	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.76	95% Adjusted-CLT UCL (Chen-1995)	0.817
		95% Modified-t UCL (Johnson-1978)	0.769

Gamma GOF Test

A-D Test Statistic	0.999	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.776	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.086	k star (bias corrected MLE)	1.02
Theta hat (MLE)	0.519	Theta star (bias corrected MLE)	0.553
nu hat (MLE)	84.72	nu star (bias corrected)	79.53
MLE Mean (bias corrected)	0.564	MLE Sd (bias corrected)	0.559
		Approximate Chi Square Value (0.05)	59.99
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	59.32

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.748	95% Adjusted Gamma UCL (use when n<50)	0.756

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.324	Mean of logged Data	-1.099
Maximum of Logged Data	1.361	SD of logged Data	1.042

Assuming Lognormal Distribution

95% H-UCL	0.868	90% Chebyshev (MVUE) UCL	0.892
95% Chebyshev (MVUE) UCL	1.042	97.5% Chebyshev (MVUE) UCL	1.25
99% Chebyshev (MVUE) UCL	1.658		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.755	95% Jackknife UCL	0.76
95% Standard Bootstrap UCL	0.748	95% Bootstrap-t UCL	0.904

95% Hall's Bootstrap UCL	0.975	95% Percentile Bootstrap UCL	0.769
95% BCA Bootstrap UCL	0.839		
90% Chebyshev(Mean, Sd) UCL	0.912	95% Chebyshev(Mean, Sd) UCL	1.07
97.5% Chebyshev(Mean, Sd) UCL	1.288	99% Chebyshev(Mean, Sd) UCL	1.718

Suggested UCL to Use

95% Adjusted Gamma UCL	0.756

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.18/15/18 3:51:31 PM
From File	sed8_TPH_wide2_flag_sep1_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

PHC as gasoline

General Statistics

Total Number of Observations	39	Number of Distinct Observations	30
Number of Detects	7	Number of Non-Detects	32
Number of Distinct Detects	7	Number of Distinct Non-Detects	25
Minimum Detect	2.3	Minimum Non-Detect	0.3
Maximum Detect	37	Maximum Non-Detect	8.8
Variance Detects	146.8	Percent Non-Detects	82.05%
Mean Detects	10.53	SD Detects	12.12
Median Detects	6.8	CV Detects	1.151
Skewness Detects	2.27	Kurtosis Detects	5.435
Mean of Logged Detects	1.933	SD of Logged Detects	0.941

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.691	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.323	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.698	KM Standard Error of Mean	1.119
KM SD	6.089	95% KM (BCA) UCL	5.669
95% KM (t) UCL	4.585	95% KM (Percentile Bootstrap) UCL	5.125
95% KM (z) UCL	4.539	95% KM Bootstrap t UCL	5.561
90% KM Chebyshev UCL	6.056	95% KM Chebyshev UCL	7.577
97.5% KM Chebyshev UCL	9.689	99% KM Chebyshev UCL	13.84

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.482	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.723	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.318	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.33	k star (bias corrected MLE)	0.855
Theta hat (MLE)	7.915	Theta star (bias corrected MLE)	12.31
nu hat (MLE)	18.62	nu star (bias corrected)	11.98
Mean (detects)	10.53		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.898
Maximum	37	Median	0.01
SD	6.317	CV	3.328
k hat (MLE)	0.183	k star (bias corrected MLE)	0.186
Theta hat (MLE)	10.36	Theta star (bias corrected MLE)	10.19

nu hat (MLE)	14.29	nu star (bias corrected)	14.52
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (14.52, α)	6.931	Adjusted Chi Square Value (14.52, β)	6.723
95% Gamma Approximate UCL (use when n>=50)	3.977	95% Gamma Adjusted UCL (use when n<50)	4.1

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.698	SD (KM)	6.089
Variance (KM)	37.07	SE of Mean (KM)	1.119
k hat (KM)	0.196	k star (KM)	0.198
nu hat (KM)	15.31	nu star (KM)	15.47
theta hat (KM)	13.74	theta star (KM)	13.6
80% gamma percentile (KM)	3.539	90% gamma percentile (KM)	8.159
95% gamma percentile (KM)	13.93	99% gamma percentile (KM)	29.85

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (15.47, α)	7.589	Adjusted Chi Square Value (15.47, β)	7.371
95% Gamma Approximate KM-UCL (use when n>=50)	5.499	95% Gamma Adjusted KM-UCL (use when n<50)	5.662

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.429	Mean in Log Scale	-0.072
SD in Original Scale	6.162	SD in Log Scale	1.098
95% t UCL (assumes normality of ROS data)	4.093	95% Percentile Bootstrap UCL	4.282
95% BCA Bootstrap UCL	5.47	95% Bootstrap t UCL	7.804
95% H-UCL (Log ROS)	2.663		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.117	KM Geo Mean	0.889
KM SD (logged)	1.358	95% Critical H Value (KM-Log)	2.846
KM Standard Error of Mean (logged)	0.437	95% H-UCL (KM -Log)	4.183
KM SD (logged)	1.358	95% Critical H Value (KM-Log)	2.846
KM Standard Error of Mean (logged)	0.437		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.56	Mean in Log Scale	0.813
SD in Original Scale	5.912	SD in Log Scale	0.853
95% t UCL (Assumes normality)	5.156	95% H-Stat UCL	4.425

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ımma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	5.662

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

TPH (C9-C40)

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
Number of Detects	38	Number of Non-Detects	1
Number of Distinct Detects	37	Number of Distinct Non-Detects	1
Minimum Detect	11.4	Minimum Non-Detect	10.4
Maximum Detect	1290	Maximum Non-Detect	10.4
Variance Detects	105493	Percent Non-Detects	2.564%
Mean Detects	301.8	SD Detects	324.8
Median Detects	204.5	CV Detects	1.076
Skewness Detects	1.836	Kurtosis Detects	3.116
Mean of Logged Detects	5.165	SD of Logged Detects	1.123

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.768	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	294.3	KM Standard Error of Mean	51.88
KM SD	319.7	95% KM (BCA) UCL	383
95% KM (t) UCL	381.8	95% KM (Percentile Bootstrap) UCL	385.8
95% KM (z) UCL	379.7	95% KM Bootstrap t UCL	409.7
90% KM Chebyshev UCL	450	95% KM Chebyshev UCL	520.5
97.5% KM Chebyshev UCL	618.3	99% KM Chebyshev UCL	810.5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.457	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.776	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.11	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.053	k star (bias corrected MLE)	0.988
Theta hat (MLE)	286.6	Theta star (bias corrected MLE)	305.6
nu hat (MLE)	80.04	nu star (bias corrected)	75.05
Mean (detects)	301.8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	294.1
Maximum	1290	Median	179
SD	324.1	CV	1.102
k hat (MLE)	0.775	k star (bias corrected MLE)	0.732
Theta hat (MLE)	379.6	Theta star (bias corrected MLE)	401.6
nu hat (MLE)	60.43	nu star (bias corrected)	57.11
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (57.11, α)	40.74	Adjusted Chi Square Value (57.11, β)	40.19
95% Gamma Approximate UCL (use when n>=50)	412.2	95% Gamma Adjusted UCL (use when n<50)	417.8

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	294.3	SD (KM)	319.7
Variance (KM)	102205	SE of Mean (KM)	51.88
k hat (KM)	0.848	k star (KM)	0.799

nu hat (KM)	66.11	nu star (KM)	62.36
theta hat (KM)	347.3	theta star (KM)	368.2
80% gamma percentile (KM)	481	90% gamma percentile (KM)	715.8
95% gamma percentile (KM)	955	99% gamma percentile (KM)	1520

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (62.36, α)	45.19	Adjusted Chi Square Value (62.36, β)	44.62
95% Gamma Approximate KM-UCL (use when n>=50)	406.1	95% Gamma Adjusted KM-UCL (use when n<50)	411.3

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0961	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	294.3	Mean in Log Scale	5.091
SD in Original Scale	323.9	SD in Log Scale	1.199
95% t UCL (assumes normality of ROS data)	381.7	95% Percentile Bootstrap UCL	385.4
95% BCA Bootstrap UCL	401.5	95% Bootstrap t UCL	407.6
95% H-UCL (Log ROS)	558		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.093	KM Geo Mean	162.8
KM SD (logged)	1.181	95% Critical H Value (KM-Log)	2.619
KM Standard Error of Mean (logged)	0.192	95% H-UCL (KM -Log)	540.1
KM SD (logged)	1.181	95% Critical H Value (KM-Log)	2.619
KM Standard Error of Mean (logged)	0.192		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	294.2	Mean in Log Scale	5.075
SD in Original Scale	324	SD in Log Scale	1.243
95% t UCL (Assumes normality)	381.7	95% H-Stat UCL	596.2

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ımma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	411.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.18/15/18 3:20:24 PM
From File	sed3_met_wide2_flag_sep1_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	4670	Mean	10784
Maximum	23300	Median	8810
SD	5062	Std. Error of Mean	810.6
Coefficient of Variation	0.469	Skewness	0.866

Normal GOF Test

Shapiro Wilk Test Statistic	0.881	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.208	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	12150	95% Adjusted-CLT UCL (Chen-1995)	12237
		95% Modified-t UCL (Johnson-1978)	12169

Gamma GOF Test

A-D Test Statistic	1.033	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.169	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.142	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.141	k star (bias corrected MLE)	4.763
Theta hat (MLE)	2097	Theta star (bias corrected MLE)	2264
nu hat (MLE)	401	nu star (bias corrected)	371.5
MLE Mean (bias corrected)	10784	MLE Sd (bias corrected)	4941
		Approximate Chi Square Value (0.05)	327.8
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	326.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	12220	95% Adjusted Gamma UCL (use when n<50)	12281

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.143	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	8.449	Mean of logged Data	9.185
Maximum of Logged Data	10.06	SD of logged Data	0.449

Assuming Lognormal Distribution

95% H-UCL	12368	90% Chebyshev (MVUE) UCL	13163
95% Chebyshev (MVUE) UCL	14254	97.5% Chebyshev (MVUE) UCL	15767
99% Chebyshev (MVUE) UCL	18740		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	12117	95% Jackknife UCL	12150
95% Standard Bootstrap UCL	12108	95% Bootstrap-t UCL	12251
95% Hall's Bootstrap UCL	12175	95% Percentile Bootstrap UCL	12126
95% BCA Bootstrap UCL	12233		
90% Chebyshev(Mean, Sd) UCL	13215	95% Chebyshev(Mean, Sd) UCL	14317
97.5% Chebyshev(Mean, Sd) UCL	15846	99% Chebyshev(Mean, Sd) UCL	18849

Suggested UCL to Use

95% Student's-t UCL	12150	or 95% Modified-t UCL	12169
or 95% H-UCL	12368		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Antimony

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
Number of Detects	38	Number of Non-Detects	1
Number of Distinct Detects	37	Number of Distinct Non-Detects	1
Minimum Detect	0.171	Minimum Non-Detect	0.0877
Maximum Detect	7.79	Maximum Non-Detect	0.0877
Variance Detects	2.819	Percent Non-Detects	2.564%
Mean Detects	1.207	SD Detects	1.679
Median Detects	0.584	CV Detects	1.39
Skewness Detects	2.52	Kurtosis Detects	6.486
Mean of Logged Detects	-0.41	SD of Logged Detects	1.012

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.629	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.322	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.179	KM Standard Error of Mean	0.267
KM SD	1.645	95% KM (BCA) UCL	1.618
95% KM (t) UCL	1.629	95% KM (Percentile Bootstrap) UCL	1.644
95% KM (z) UCL	1.618	95% KM Bootstrap t UCL	1.867
90% KM Chebyshev UCL	1.98	95% KM Chebyshev UCL	2.342
97.5% KM Chebyshev UCL	2.846	99% KM Chebyshev UCL	3.835

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.54	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.779	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.251	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.148	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.968	k star (bias corrected MLE)	0.909
Theta hat (MLE)	1.247	Theta star (bias corrected MLE)	1.328
nu hat (MLE)	73.57	nu star (bias corrected)	69.1
Mean (detects)	1.207		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.177
Maximum	7.79	Median	0.571
SD	1.668	CV	1.417
k hat (MLE)	0.864	k star (bias corrected MLE)	0.814
Theta hat (MLE)	1.362	Theta star (bias corrected MLE)	1.445
nu hat (MLE)	67.37	nu star (bias corrected)	63.52
Adjusted Level of Significance (β)	0.0437		
Approximate Chi Square Value (63.52, α)	46.19	Adjusted Chi Square Value (63.52, β)	45.6
95% Gamma Approximate UCL (use when n>=50)	1.618	95% Gamma Adjusted UCL (use when n<50)	1.639

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.179	SD (KM)	1.645
Variance (KM)	2.705	SE of Mean (KM)	0.267
k hat (KM)	0.514	k star (KM)	0.491

nu hat (KM)	40.06	nu star (KM)	38.31
theta hat (KM)	2.295	theta star (KM)	2.4
80% gamma percentile (KM)	1.934	90% gamma percentile (KM)	3.201
95% gamma percentile (KM)	4.557	99% gamma percentile (KM)	7.897

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (38.31, α)	25.14	Adjusted Chi Square Value (38.31, β)	24.72
95% Gamma Approximate KM-UCL (use when n>=50)	1.797	95% Gamma Adjusted KM-UCL (use when n<50)	1.827

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.906	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.172	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.178	Mean in Log Scale	-0.475
SD in Original Scale	1.667	SD in Log Scale	1.078
95% t UCL (assumes normality of ROS data)	1.628	95% Percentile Bootstrap UCL	1.631
95% BCA Bootstrap UCL	1.778	95% Bootstrap t UCL	1.861
95% H-UCL (Log ROS)	1.719		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.462	KM Geo Mean	0.63
KM SD (logged)	1.037	95% Critical H Value (KM-Log)	2.444
KM Standard Error of Mean (logged)	0.168	95% H-UCL (KM -Log)	1.626
KM SD (logged)	1.037	95% Critical H Value (KM-Log)	2.444
KM Standard Error of Mean (logged)	0.168		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.178	Mean in Log Scale	-0.48
SD in Original Scale	1.667	SD in Log Scale	1.089
95% t UCL (Assumes normality)	1.628	95% H-Stat UCL	1.745

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	2.342

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	2.39	Mean	16.15
Maximum	115	Median	9.45
SD	20.9	Std. Error of Mean	3.347
Coefficient of Variation	1.294	Skewness	3.541

Normal GOF Test

Shapiro Wilk Test Statistic	0.543	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.335	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	21.79	95% Adjusted-CLT UCL (Chen-1995)	23.68
		95% Modified-t UCL (Johnson-1978)	22.11

Gamma GOF Test

A-D Test Statistic	2.815	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.767	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.237	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.144	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.461	k star (bias corrected MLE)	1.366
Theta hat (MLE)	11.05	Theta star (bias corrected MLE)	11.82
nu hat (MLE)	114	nu star (bias corrected)	106.5
MLE Mean (bias corrected)	16.15	MLE Sd (bias corrected)	13.82
		Approximate Chi Square Value (0.05)	83.72
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	82.92

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	20.55	95% Adjusted Gamma UCL (use when n<50)	20.75

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.16	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.871	Mean of logged Data	2.402
Maximum of Logged Data	4.745	SD of logged Data	0.767

Assuming Lognormal Distribution

95% H-UCL	19.38	90% Chebyshev (MVUE) UCL	20.66
95% Chebyshev (MVUE) UCL	23.37	97.5% Chebyshev (MVUE) UCL	27.13
99% Chebyshev (MVUE) UCL	34.51		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	21.65	95% Jackknife UCL	21.79
95% Standard Bootstrap UCL	21.43	95% Bootstrap-t UCL	28.27

95% Hall's Bootstrap UCL	36.03	95% Percentile Bootstrap UCL	22.57
95% BCA Bootstrap UCL	24.74		
90% Chebyshev(Mean, Sd) UCL	26.19	95% Chebyshev(Mean, Sd) UCL	30.74
97.5% Chebyshev(Mean, Sd) UCL	37.05	99% Chebyshev(Mean, Sd) UCL	49.45

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	30.74

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	0.137	Mean	1.525
Maximum	13.7	Median	0.836
SD	2.233	Std. Error of Mean	0.358
Coefficient of Variation	1.464	Skewness	4.52

Normal GOF Test

Shapiro Wilk Test Statistic	0.526	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.267	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.128	95% Adjusted-CLT UCL (Chen-1995)	2.39
		95% Modified-t UCL (Johnson-1978)	2.171

Gamma GOF Test

A-D Test Statistic	0.957	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.775	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.171	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.133	k star (bias corrected MLE)	1.063
Theta hat (MLE)	1.346	Theta star (bias corrected MLE)	1.434
nu hat (MLE)	88.41	nu star (bias corrected)	82.94
MLE Mean (bias corrected)	1.525	MLE Sd (bias corrected)	1.479
		Approximate Chi Square Value (0.05)	62.95
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	62.27

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.009	95% Adjusted Gamma UCL (use when n<50)	2.032

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.984	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0951	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.988	Mean of logged Data	-0.08
Maximum of Logged Data	2.617	SD of logged Data	0.963

Assuming Lognormal Distribution

95% H-UCL	2.12	90% Chebyshev (MVUE) UCL	2.213
95% Chebyshev (MVUE) UCL	2.562	97.5% Chebyshev (MVUE) UCL	3.046
99% Chebyshev (MVUE) UCL	3.997		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.113	95% Jackknife UCL	2.128
95% Standard Bootstrap UCL	2.084	95% Bootstrap-t UCL	2.791

95% Hall's Bootstrap UCL	4.462	95% Percentile Bootstrap UCL	2.166
95% BCA Bootstrap UCL	2.478		
90% Chebyshev(Mean, Sd) UCL	2.598	95% Chebyshev(Mean, Sd) UCL	3.084
97.5% Chebyshev(Mean, Sd) UCL	3.759	99% Chebyshev(Mean, Sd) UCL	5.084

Suggested UCL to Use

95% H-UCL 2.12

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Chromium [as Cr(III)]

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	18.1	Mean	88.68
Maximum	280	Median	70.3
SD	62.54	Std. Error of Mean	10.01
Coefficient of Variation	0.705	Skewness	1.529

Normal GOF Test

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	105.6	95% Adjusted-CLT UCL (Chen-1995)	107.8
		95% Modified-t UCL (Johnson-1978)	106

Gamma GOF Test

A-D Test Statistic	0.293	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.757	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.086	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.143	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.386	k star (bias corrected MLE)	2.22
Theta hat (MLE)	37.17	Theta star (bias corrected MLE)	39.95
nu hat (MLE)	186.1	nu star (bias corrected)	173.1
MLE Mean (bias corrected)	88.68	MLE Sd (bias corrected)	59.53
		Approximate Chi Square Value (0.05)	143.7
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	142.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	106.8	95% Adjusted Gamma UCL (use when n<50)	107.6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0843	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.896	Mean of logged Data	4.261
Maximum of Logged Data	5.635	SD of logged Data	0.688

Assuming Lognormal Distribution

95% H-UCL	113.2	90% Chebyshev (MVUE) UCL	121.1
95% Chebyshev (MVUE) UCL	135.6	97.5% Chebyshev (MVUE) UCL	155.7
99% Chebyshev (MVUE) UCL	195.2		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	105.2	95% Jackknife UCL	105.6
95% Standard Bootstrap UCL	104.9	95% Bootstrap-t UCL	109.9

95% Hall's Bootstrap UCL	110.6	95% Percentile Bootstrap UCL	105.7
95% BCA Bootstrap UCL	107.8		
90% Chebyshev(Mean, Sd) UCL	118.7	95% Chebyshev(Mean, Sd) UCL	132.3
97.5% Chebyshev(Mean, Sd) UCL	151.2	99% Chebyshev(Mean, Sd) UCL	188.3

Suggested UCL to Use

95% Adjusted Gamma UCL 107.6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	3.41	Mean	9.584
Maximum	37.4	Median	7.14
SD	6.443	Std. Error of Mean	1.032
Coefficient of Variation	0.672	Skewness	2.491

Normal GOF Test

Shapiro Wilk Test Statistic	0.759	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.221	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	11.32	95% Adjusted-CLT UCL (Chen-1995)	11.72
		95% Modified-t UCL (Johnson-1978)	11.39

Gamma GOF Test

A-D Test Statistic	1.118	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.195	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.142	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.387	k star (bias corrected MLE)	3.143
Theta hat (MLE)	2.83	Theta star (bias corrected MLE)	3.049
nu hat (MLE)	264.2	nu star (bias corrected)	245.2
MLE Mean (bias corrected)	9.584	MLE Sd (bias corrected)	5.406
		Approximate Chi Square Value (0.05)	209.9
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	208.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	11.19	95% Adjusted Gamma UCL (use when n<50)	11.26

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.165	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.227	Mean of logged Data	2.105
Maximum of Logged Data	3.622	SD of logged Data	0.531

Assuming Lognormal Distribution

95% H-UCL	11.18	90% Chebyshev (MVUE) UCL	11.95
95% Chebyshev (MVUE) UCL	13.09	97.5% Chebyshev (MVUE) UCL	14.69
99% Chebyshev (MVUE) UCL	17.81		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	11.28	95% Jackknife UCL	11.32
95% Standard Bootstrap UCL	11.27	95% Bootstrap-t UCL	12.08

95% Hall's Bootstrap UCL	12.87	95% Percentile Bootstrap UCL	11.4
95% BCA Bootstrap UCL	11.78		
90% Chebyshev(Mean, Sd) UCL	12.68	95% Chebyshev(Mean, Sd) UCL	14.08
97.5% Chebyshev(Mean, Sd) UCL	16.03	99% Chebyshev(Mean, Sd) UCL	19.85

Suggested UCL to Use

95% H-UCL 11.18

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Copper

General Statistics

Total Number of Observations	39	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	14.5	Mean	132
Maximum	443	Median	100.4
SD	114.5	Std. Error of Mean	18.34
Coefficient of Variation	0.867	Skewness	1.483

Normal GOF Test

Shapiro Wilk Test Statistic	0.805	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.219	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	163	95% Adjusted-CLT UCL (Chen-1995)	166.9
		95% Modified-t UCL (Johnson-1978)	163.7

Gamma GOF Test

A-D Test Statistic	0.597	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.764	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.115	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.144	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.625	k star (bias corrected MLE)	1.517
Theta hat (MLE)	81.24	Theta star (bias corrected MLE)	87.01
nu hat (MLE)	126.8	nu star (bias corrected)	118.4
MLE Mean (bias corrected)	132	MLE Sd (bias corrected)	107.2
		Approximate Chi Square Value (0.05)	94.24
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	93.39

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	165.8	95% Adjusted Gamma UCL (use when n<50)	167.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.067	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.674	Mean of logged Data	4.545
Maximum of Logged Data	6.094	SD of logged Data	0.85

Assuming Lognormal Distribution

95% H-UCL	184	90% Chebyshev (MVUE) UCL	194.9
95% Chebyshev (MVUE) UCL	222.7	97.5% Chebyshev (MVUE) UCL	261.3
99% Chebyshev (MVUE) UCL	337		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	162.2	95% Jackknife UCL	163
95% Standard Bootstrap UCL	162	95% Bootstrap-t UCL	166.1

95% Hall's Bootstrap UCL	168.4	95% Percentile Bootstrap UCL	163.1
95% BCA Bootstrap UCL	165		
90% Chebyshev(Mean, Sd) UCL	187.1	95% Chebyshev(Mean, Sd) UCL	212
97.5% Chebyshev(Mean, Sd) UCL	246.6	99% Chebyshev(Mean, Sd) UCL	314.5

Suggested UCL to Use

95% Adjusted Gamma UCL 167.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chromium (VI)

General Statistics

Total Number of Observations	32	Number of Distinct Observations	20
		Number of Missing Observations	6
Number of Detects	3	Number of Non-Detects	29
Number of Distinct Detects	3	Number of Distinct Non-Detects	18
Minimum Detect	1.1	Minimum Non-Detect	0.62
Maximum Detect	8	Maximum Non-Detect	1.4
Variance Detects	14.07	Percent Non-Detects	90.63%
Mean Detects	3.7	SD Detects	3.751
Median Detects	2	CV Detects	1.014
Skewness Detects	1.621	Kurtosis Detects	N/A
Mean of Logged Detects	0.956	SD of Logged Detects	1.018

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.846	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.341	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.914	KM Standard Error of Mean	0.281
KM SD	1.298	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.391	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.377	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.758	95% KM Chebyshev UCL	2.14
97.5% KM Chebyshev UCL	2.671	99% KM Chebyshev UCL	3.713

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.565	k star (bias corrected MLE)	N/A
Theta hat (MLE)	2.364	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	9.389	nu star (bias corrected)	N/A
Mean (detects)	3.7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.356
Maximum	8	Median	0.01
SD	1.45	CV	4.073
k hat (MLE)	0.235	k star (bias corrected MLE)	0.234
Theta hat (MLE)	1.514	Theta star (bias corrected MLE)	1.522
nu hat (MLE)	15.05	nu star (bias corrected)	14.97
Adjusted Level of Significance (β)	0.0416		
Approximate Chi Square Value (14.97, α)	7.241	Adjusted Chi Square Value (14.97, β)	6.954
95% Gamma Approximate UCL (use when n>=50)	0.736	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.914	SD (KM)	1.298
Variance (KM)	1.685	SE of Mean (KM)	0.281

k hat (KM)	0.496	k star (KM)	0.47
nu hat (KM)	31.75	nu star (KM)	30.11
theta hat (KM)	1.843	theta star (KM)	1.943
80% gamma percentile (KM)	1.497	90% gamma percentile (KM)	2.504
95% gamma percentile (KM)	3.589	99% gamma percentile (KM)	6.271

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (30.11, α)	18.58	Adjusted Chi Square Value (30.11, β)	18.09
95% Gamma Approximate KM-UCL (use when n>=50)	1.482	95% Gamma Adjusted KM-UCL (use when n<50)	1.521

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.269	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.366	Mean in Log Scale	-4.031
SD in Original Scale	1.448	SD in Log Scale	1.996
95% t UCL (assumes normality of ROS data)	0.8	95% Percentile Bootstrap UCL	0.839
95% BCA Bootstrap UCL	1.215	95% Bootstrap t UCL	2.724
95% H-UCL (Log ROS)	0.512		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.337	KM Geo Mean	0.714
KM SD (logged)	0.491	95% Critical H Value (KM-Log)	1.925
KM Standard Error of Mean (logged)	0.107	95% H-UCL (KM -Log)	0.955
KM SD (logged)	0.491	95% Critical H Value (KM-Log)	1.925
KM Standard Error of Mean (logged)	0.107		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.773	Mean in Log Scale	-0.624
SD in Original Scale	1.355	SD in Log Scale	0.629
95% t UCL (Assumes normality)	1.179	95% H-Stat UCL	0.823

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	1.391

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	9060	Mean	26381
Maximum	148000	Median	18200
SD	24445	Std. Error of Mean	3914
Coefficient of Variation	0.927	Skewness	3.778

Normal GOF Test

Shapiro Wilk Test Statistic	0.577	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.239	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	32981	95% Adjusted-CLT UCL (Chen-1995)	35350
		95% Modified-t UCL (Johnson-1978)	33375

Gamma GOF Test

A-D Test Statistic	2.139	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.183	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.143	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.574	k star (bias corrected MLE)	2.393
Theta hat (MLE)	10249	Theta star (bias corrected MLE)	11024
nu hat (MLE)	200.8	nu star (bias corrected)	186.7
MLE Mean (bias corrected)	26381	MLE Sd (bias corrected)	17053
		Approximate Chi Square Value (0.05)	156.1
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	155

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	31554	95% Adjusted Gamma UCL (use when n<50)	31779

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	9.112	Mean of logged Data	9.974
Maximum of Logged Data	11.9	SD of logged Data	0.571

Assuming Lognormal Distribution

95% H-UCL	30322	90% Chebyshev (MVUE) UCL	32449
95% Chebyshev (MVUE) UCL	35763	97.5% Chebyshev (MVUE) UCL	40362
99% Chebyshev (MVUE) UCL	49396		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	32820	95% Jackknife UCL	32981
95% Standard Bootstrap UCL	32828	95% Bootstrap-t UCL	40012

95% Hall's Bootstrap UCL	63267	95% Percentile Bootstrap UCL	33175
95% BCA Bootstrap UCL	36437		
90% Chebyshev(Mean, Sd) UCL	38124	95% Chebyshev(Mean, Sd) UCL	43444
97.5% Chebyshev(Mean, Sd) UCL	50826	99% Chebyshev(Mean, Sd) UCL	65329

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 43444

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	26.1	Mean	205.7
Maximum	2190	Median	108
SD	376.9	Std. Error of Mean	60.35
Coefficient of Variation	1.833	Skewness	4.474

Normal GOF Test

Shapiro Wilk Test Statistic	0.434	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.325	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	307.4	95% Adjusted-CLT UCL (Chen-1995)	351.1
		95% Modified-t UCL (Johnson-1978)	314.6

Gamma GOF Test

A-D Test Statistic	2.762	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.778	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.214	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1	k star (bias corrected MLE)	0.94
Theta hat (MLE)	205.7	Theta star (bias corrected MLE)	218.7
nu hat (MLE)	78	nu star (bias corrected)	73.33
MLE Mean (bias corrected)	205.7	MLE Sd (bias corrected)	212.1
		Approximate Chi Square Value (0.05)	54.61
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	53.98

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	276.1	95% Adjusted Gamma UCL (use when n<50)	279.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.139	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.262	Mean of logged Data	4.749
Maximum of Logged Data	7.692	SD of logged Data	0.912

Assuming Lognormal Distribution

95% H-UCL	245.9	90% Chebyshev (MVUE) UCL	258.5
95% Chebyshev (MVUE) UCL	297.5	97.5% Chebyshev (MVUE) UCL	351.7
99% Chebyshev (MVUE) UCL	458		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	304.9	95% Jackknife UCL	307.4
95% Standard Bootstrap UCL	301.2	95% Bootstrap-t UCL	567

95% Hall's Bootstrap UCL	745.2	95% Percentile Bootstrap UCL	313.3
95% BCA Bootstrap UCL	369.9		
90% Chebyshev(Mean, Sd) UCL	386.7	95% Chebyshev(Mean, Sd) UCL	468.7
97.5% Chebyshev(Mean, Sd) UCL	582.6	99% Chebyshev(Mean, Sd) UCL	806.1

Suggested UCL to Use

95% H-UCL 245.9

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Manganese

General Statistics

Total Number of Observations	39	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	76.8	Mean	255.9
Maximum	589	Median	200
SD	141.1	Std. Error of Mean	22.59
Coefficient of Variation	0.551	Skewness	1.029

Normal GOF Test

Shapiro Wilk Test Statistic	0.873	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	294	95% Adjusted-CLT UCL (Chen-1995)	297
		95% Modified-t UCL (Johnson-1978)	294.6

Gamma GOF Test

A-D Test Statistic	0.759	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.158	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.142	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.736	k star (bias corrected MLE)	3.465
Theta hat (MLE)	68.49	Theta star (bias corrected MLE)	73.84
nu hat (MLE)	291.4	nu star (bias corrected)	270.3
MLE Mean (bias corrected)	255.9	MLE Sd (bias corrected)	137.4
		Approximate Chi Square Value (0.05)	233.2
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	231.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	296.5	95% Adjusted Gamma UCL (use when n<50)	298.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	4.341	Mean of logged Data	5.405
Maximum of Logged Data	6.378	SD of logged Data	0.536

Assuming Lognormal Distribution

95% H-UCL	304.3	90% Chebyshev (MVUE) UCL	325.4
95% Chebyshev (MVUE) UCL	356.8	97.5% Chebyshev (MVUE) UCL	400.6
99% Chebyshev (MVUE) UCL	486.4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	293	95% Jackknife UCL	294
95% Standard Bootstrap UCL	291.8	95% Bootstrap-t UCL	300.3

95% Hall's Bootstrap UCL	298.3	95% Percentile Bootstrap UCL	291.9
95% BCA Bootstrap UCL	293.2		
90% Chebyshev(Mean, Sd) UCL	323.6	95% Chebyshev(Mean, Sd) UCL	354.3
97.5% Chebyshev(Mean, Sd) UCL	397	99% Chebyshev(Mean, Sd) UCL	480.7

Suggested UCL to Use

95% H-UCL 304.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Mercury

General Statistics

Total Number of Observations	39	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	0.142	Mean	1.535
Maximum	7.39	Median	1.19
SD	1.441	Std. Error of Mean	0.231
Coefficient of Variation	0.939	Skewness	2.108

Normal GOF Test

Shapiro Wilk Test Statistic	0.81	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.924	95% Adjusted-CLT UCL (Chen-1995)	1.998
		95% Modified-t UCL (Johnson-1978)	1.937

Gamma GOF Test

A-D Test Statistic	0.203	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.769	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0693	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.144	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.379	k star (bias corrected MLE)	1.29
Theta hat (MLE)	1.114	Theta star (bias corrected MLE)	1.19
nu hat (MLE)	107.5	nu star (bias corrected)	100.6
MLE Mean (bias corrected)	1.535	MLE Sd (bias corrected)	1.352
		Approximate Chi Square Value (0.05)	78.46
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	77.69

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.969	95% Adjusted Gamma UCL (use when n<50)	1.988

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0748	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.952	Mean of logged Data	0.0241
Maximum of Logged Data	2	SD of logged Data	0.961

Assuming Lognormal Distribution

95% H-UCL	2.348	90% Chebyshev (MVUE) UCL	2.451
95% Chebyshev (MVUE) UCL	2.837	97.5% Chebyshev (MVUE) UCL	3.373
99% Chebyshev (MVUE) UCL	4.425		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.915	95% Jackknife UCL	1.924
95% Standard Bootstrap UCL	1.908	95% Bootstrap-t UCL	2.013

95% Hall's Bootstrap UCL	2.183	95% Percentile Bootstrap UCL	1.933
95% BCA Bootstrap UCL	2.018		
90% Chebyshev(Mean, Sd) UCL	2.228	95% Chebyshev(Mean, Sd) UCL	2.541
97.5% Chebyshev(Mean, Sd) UCL	2.976	99% Chebyshev(Mean, Sd) UCL	3.831

Suggested UCL to Use

95% Adjusted Gamma UCL	1.988

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Nickel

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	10.3	Mean	41.65
Maximum	182	Median	24.9
SD	36.61	Std. Error of Mean	5.863
Coefficient of Variation	0.879	Skewness	2.116

Normal GOF Test

Shapiro Wilk Test Statistic	0.745	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	51.54	95% Adjusted-CLT UCL (Chen-1995)	53.42
		95% Modified-t UCL (Johnson-1978)	51.87

Gamma GOF Test

A-D Test Statistic	1.603	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.759	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.177	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.143	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.995	k star (bias corrected MLE)	1.859
Theta hat (MLE)	20.88	Theta star (bias corrected MLE)	22.41
nu hat (MLE)	155.6	nu star (bias corrected)	145
MLE Mean (bias corrected)	41.65	MLE Sd (bias corrected)	30.55
		Approximate Chi Square Value (0.05)	118.1
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	117.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	51.11	95% Adjusted Gamma UCL (use when n<50)	51.52

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.148	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.332	Mean of logged Data	3.458
Maximum of Logged Data	5.204	SD of logged Data	0.702

Assuming Lognormal Distribution

95% H-UCL	51.57	90% Chebyshev (MVUE) UCL	55.15
95% Chebyshev (MVUE) UCL	61.87	97.5% Chebyshev (MVUE) UCL	71.18
99% Chebyshev (MVUE) UCL	89.49		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	51.3	95% Jackknife UCL	51.54
95% Standard Bootstrap UCL	51.41	95% Bootstrap-t UCL	54.74

95% Hall's Bootstrap UCL	55	95% Percentile Bootstrap UCL	51.84
95% BCA Bootstrap UCL	53.33		
90% Chebyshev(Mean, Sd) UCL	59.24	95% Chebyshev(Mean, Sd) UCL	67.21
97.5% Chebyshev(Mean, Sd) UCL	78.27	99% Chebyshev(Mean, Sd) UCL	99.99

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	67.21

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Thallium

General Statistics

Total Number of Observations	39	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.0541	Mean	0.207
Maximum	0.717	Median	0.169
SD	0.139	Std. Error of Mean	0.0223
Coefficient of Variation	0.673	Skewness	2.111

Normal GOF Test

Shapiro Wilk Test Statistic	0.788	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.244	95% Adjusted-CLT UCL (Chen-1995)	0.252
		95% Modified-t UCL (Johnson-1978)	0.246

Gamma GOF Test

A-D Test Statistic	0.75	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.14	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.142	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.134	k star (bias corrected MLE)	2.91
Theta hat (MLE)	0.066	Theta star (bias corrected MLE)	0.0711
nu hat (MLE)	244.5	nu star (bias corrected)	227
MLE Mean (bias corrected)	0.207	MLE Sd (bias corrected)	0.121
		Approximate Chi Square Value (0.05)	193.1
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	191.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.243	95% Adjusted Gamma UCL (use when n<50)	0.245

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0989	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.917	Mean of logged Data	-1.744
Maximum of Logged Data	-0.333	SD of logged Data	0.568

Assuming Lognormal Distribution

95% H-UCL	0.246	90% Chebyshev (MVUE) UCL	0.264
95% Chebyshev (MVUE) UCL	0.29	97.5% Chebyshev (MVUE) UCL	0.328
99% Chebyshev (MVUE) UCL	0.401		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.244	95% Jackknife UCL	0.244
95% Standard Bootstrap UCL	0.243	95% Bootstrap-t UCL	0.257

95% Hall's Bootstrap UCL	0.261	95% Percentile Bootstrap UCL	0.246
95% BCA Bootstrap UCL	0.251		
90% Chebyshev(Mean, Sd) UCL	0.274	95% Chebyshev(Mean, Sd) UCL	0.304
97.5% Chebyshev(Mean, Sd) UCL	0.346	99% Chebyshev(Mean, Sd) UCL	0.429

Suggested UCL to Use

95% Adjusted Gamma UCL	0.245

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Vanadium

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	12	Mean	33.46
Maximum	142	Median	25.3
SD	23.7	Std. Error of Mean	3.795
Coefficient of Variation	0.708	Skewness	2.887

Normal GOF Test

Shapiro Wilk Test Statistic	0.717	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.208	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	39.86	95% Adjusted-CLT UCL (Chen-1995)	41.58
		95% Modified-t UCL (Johnson-1978)	40.15

Gamma GOF Test

A-D Test Statistic	1.205	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.153	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.142	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.307	k star (bias corrected MLE)	3.069
Theta hat (MLE)	10.12	Theta star (bias corrected MLE)	10.9
nu hat (MLE)	257.9	nu star (bias corrected)	239.4
MLE Mean (bias corrected)	33.46	MLE Sd (bias corrected)	19.1
		Approximate Chi Square Value (0.05)	204.6
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	203.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	39.15	95% Adjusted Gamma UCL (use when n<50)	39.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.485	Mean of logged Data	3.352
Maximum of Logged Data	4.956	SD of logged Data	0.531

Assuming Lognormal Distribution

95% H-UCL	38.84	90% Chebyshev (MVUE) UCL	41.51
95% Chebyshev (MVUE) UCL	45.49	97.5% Chebyshev (MVUE) UCL	51.02
99% Chebyshev (MVUE) UCL	61.87		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	39.7	95% Jackknife UCL	39.86
95% Standard Bootstrap UCL	39.71	95% Bootstrap-t UCL	43.43

95% Hall's Bootstrap UCL	51.17	95% Percentile Bootstrap UCL	39.89
95% BCA Bootstrap UCL	42.16		
90% Chebyshev(Mean, Sd) UCL	44.84	95% Chebyshev(Mean, Sd) UCL	50
97.5% Chebyshev(Mean, Sd) UCL	57.16	99% Chebyshev(Mean, Sd) UCL	71.22

Suggested UCL to Use

95% H-UCL 38.84

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Zinc

General Statistics

Total Number of Observations	39	Number of Distinct Observations	38
		Number of Missing Observations	0
Minimum	70.3	Mean	461.7
Maximum	6810	Median	206
SD	1111	Std. Error of Mean	178
Coefficient of Variation	2.407	Skewness	5.313

Normal GOF Test

Shapiro Wilk Test Statistic	0.325	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.385	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	761.7	95% Adjusted-CLT UCL (Chen-1995)	916.2
		95% Modified-t UCL (Johnson-1978)	787

Gamma GOF Test

A-D Test Statistic	4.74	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.784	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.295	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.866	k star (bias corrected MLE)	0.817
Theta hat (MLE)	532.9	Theta star (bias corrected MLE)	565.3
nu hat (MLE)	67.57	nu star (bias corrected)	63.71
MLE Mean (bias corrected)	461.7	MLE Sd (bias corrected)	510.9
		Approximate Chi Square Value (0.05)	46.35
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	45.76

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	634.7	95% Adjusted Gamma UCL (use when n<50)	642.8

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.848	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	4.253	Mean of logged Data	5.457
Maximum of Logged Data	8.826	SD of logged Data	0.881

Assuming Lognormal Distribution

95% H-UCL	478	90% Chebyshev (MVUE) UCL	504.5
95% Chebyshev (MVUE) UCL	578.6	97.5% Chebyshev (MVUE) UCL	681.4
99% Chebyshev (MVUE) UCL	883.4		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	754.4	95% Jackknife UCL	761.7
95% Standard Bootstrap UCL	758.1	95% Bootstrap-t UCL	2313

95% Hall's Bootstrap UCL	1938	95% Percentile Bootstrap UCL	815.2
95% BCA Bootstrap UCL	1001		
90% Chebyshev(Mean, Sd) UCL	995.6	95% Chebyshev(Mean, Sd) UCL	1237
97.5% Chebyshev(Mean, Sd) UCL	1573	99% Chebyshev(Mean, Sd) UCL	2232

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1237

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Appendix D-1B

Sitewide Surface Water

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.111/13/18 12:14:59 PM
From File	SV_InputFile1_dlc_wide_flag1_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Units pg/L

2,3,7,8-TCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	100
Number of Detects	48	Number of Non-Detects	64
Number of Distinct Detects	44	Number of Distinct Non-Detects	59
Minimum Detect	0.219	Minimum Non-Detect	0.241
Maximum Detect	5.31	Maximum Non-Detect	2.81
Variance Detects	1.246	Percent Non-Detects	57.14%
Mean Detects	1.705	SD Detects	1.116
Median Detects	1.46	CV Detects	0.655
Skewness Detects	1.349	Kurtosis Detects	2.072
Mean of Logged Detects	0.322	SD of Logged Detects	0.69

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.892	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.947	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.127	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.064	KM Standard Error of Mean	0.0966
KM SD	0.945	95% KM (BCA) UCL	1.238
95% KM (t) UCL	1.224	95% KM (Percentile Bootstrap) UCL	1.225
95% KM (z) UCL	1.223	95% KM Bootstrap t UCL	1.237
90% KM Chebyshev UCL	1.354	95% KM Chebyshev UCL	1.485
97.5% KM Chebyshev UCL	1.667	99% KM Chebyshev UCL	2.025

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.152	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.759	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0632	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.129	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.515	k star (bias corrected MLE)	2.371
Theta hat (MLE)	0.678	Theta star (bias corrected MLE)	0.719
nu hat (MLE)	241.4	nu star (bias corrected)	227.6
Mean (detects)	1.705		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.931
Maximum	5.31	Median	0.534
SD	1.001	CV	1.075
k hat (MLE)	1.068	k star (bias corrected MLE)	1.045
Theta hat (MLE)	0.872	Theta star (bias corrected MLE)	0.891

nu hat (MLE)	239.1	nu star (bias corrected)	234.1
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (234.07, α)	199.7	Adjusted Chi Square Value (234.07, β)	199.2
95% Gamma Approximate UCL (use when n>=50)	1.092	95% Gamma Adjusted UCL (use when n<50)	1.094

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.064	SD (KM)	0.945
Variance (KM)	0.893	SE of Mean (KM)	0.0966
k hat (KM)	1.268	k star (KM)	1.24
nu hat (KM)	284.1	nu star (KM)	277.8
theta hat (KM)	0.839	theta star (KM)	0.858
80% gamma percentile (KM)	1.679	90% gamma percentile (KM)	2.323
95% gamma percentile (KM)	2.957	99% gamma percentile (KM)	4.405

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (277.79, α)	240.2	Adjusted Chi Square Value (277.79, β)	239.7
95% Gamma Approximate KM-UCL (use when n>=50)	1.231	95% Gamma Adjusted KM-UCL (use when n<50)	1.233

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.947	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0889	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.127	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.047	Mean in Log Scale	-0.214
SD in Original Scale	0.929	SD in Log Scale	0.669
95% t UCL (assumes normality of ROS data)	1.193	95% Percentile Bootstrap UCL	1.193
95% BCA Bootstrap UCL	1.212	95% Bootstrap t UCL	1.212
95% H-UCL (Log ROS)	1.143		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.253	KM Geo Mean	0.777
KM SD (logged)	0.784	95% Critical H Value (KM-Log)	2.031
KM Standard Error of Mean (logged)	0.104	95% H-UCL (KM -Log)	1.229
KM SD (logged)	0.784	95% Critical H Value (KM-Log)	2.031
KM Standard Error of Mean (logged)	0.104		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.087	Mean in Log Scale	-0.181
SD in Original Scale	0.925	SD in Log Scale	0.703
95% t UCL (Assumes normality)	1.232	95% H-Stat UCL	1.219

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.224

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	89
Number of Detects	18	Number of Non-Detects	94
Number of Distinct Detects	16	Number of Distinct Non-Detects	79
Minimum Detect	0.673	Minimum Non-Detect	0.58
Maximum Detect	1.39	Maximum Non-Detect	3.61
Variance Detects	0.0385	Percent Non-Detects	83.93%
Mean Detects	1.053	SD Detects	0.196
Median Detects	1.045	CV Detects	0.186
Skewness Detects	-0.118	Kurtosis Detects	-0.615
Mean of Logged Detects	0.0339	SD of Logged Detects	0.194

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.801	KM Standard Error of Mean	0.0399
KM SD	0.229	95% KM (BCA) UCL	0.87
95% KM (t) UCL	0.867	95% KM (Percentile Bootstrap) UCL	0.871
95% KM (z) UCL	0.866	95% KM Bootstrap t UCL	0.868
90% KM Chebyshev UCL	0.92	95% KM Chebyshev UCL	0.975
97.5% KM Chebyshev UCL	1.05	99% KM Chebyshev UCL	1.197

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.184	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.112	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	29.06	k star (bias corrected MLE)	24.26
Theta hat (MLE)	0.0362	Theta star (bias corrected MLE)	0.0434
nu hat (MLE)	1046	nu star (bias corrected)	873.2
Mean (detects)	1.053		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.551	Mean	0.796
Maximum	1.39	Median	0.783
SD	0.154	CV	0.193
k hat (MLE)	31.39	k star (bias corrected MLE)	30.55
Theta hat (MLE)	0.0254	Theta star (bias corrected MLE)	0.0261
nu hat (MLE)	7031	nu star (bias corrected)	6844
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (N/A, α)	6652	Adjusted Chi Square Value (N/A, β)	6650
95% Gamma Approximate UCL (use when n>=50)	0.819	95% Gamma Adjusted UCL (use when n<50)	0.82

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.801	SD (KM)	0.229
Variance (KM)	0.0523	SE of Mean (KM)	0.0399
k hat (KM)	12.26	k star (KM)	11.94

nu hat (KM)	2747	nu star (KM)	2674
theta hat (KM)	0.0653	theta star (KM)	0.0671
80% gamma percentile (KM)	0.987	90% gamma percentile (KM)	1.109
95% gamma percentile (KM)	1.216	99% gamma percentile (KM)	1.436

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	2555	Adjusted Chi Square Value (N/A, β)	2554
95% Gamma Approximate KM-UCL (use when n>=50)	0.838	95% Gamma Adjusted KM-UCL (use when n<50)	0.839

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.102	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.803	Mean in Log Scale	-0.233
SD in Original Scale	0.147	SD in Log Scale	0.162
95% t UCL (assumes normality of ROS data)	0.826	95% Percentile Bootstrap UCL	0.827
95% BCA Bootstrap UCL	0.829	95% Bootstrap t UCL	0.83
95% H-UCL (Log ROS)	0.823		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.26	KM Geo Mean	0.771
KM SD (logged)	0.272	95% Critical H Value (KM-Log)	1.725
KM Standard Error of Mean (logged)	0.051	95% H-UCL (KM -Log)	0.836
KM SD (logged)	0.272	95% Critical H Value (KM-Log)	1.725
KM Standard Error of Mean (logged)	0.051		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.783	Mean in Log Scale	-0.32
SD in Original Scale	0.309	SD in Log Scale	0.393
95% t UCL (Assumes normality)	0.832	95% H-Stat UCL	0.838

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.867

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	112	Number of Distinct Observations	93
		Number of Missing Observations	0
Minimum	45.5	Mean	151.2
Maximum	428	Median	122.5
SD	79.84	Std. Error of Mean	7.545
Coefficient of Variation	0.528	Skewness	1.391

Normal GOF Test

Shapiro Wilk Test Statistic	0.859	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	4.441E-16	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.084	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	163.7	95% Adjusted-CLT UCL (Chen-1995)	164.6
		95% Modified-t UCL (Johnson-1978)	163.8

Gamma GOF Test

A-D Test Statistic	1.86	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.0866	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.358	k star (bias corrected MLE)	4.247
Theta hat (MLE)	34.69	Theta star (bias corrected MLE)	35.59
nu hat (MLE)	976.1	nu star (bias corrected)	951.3
MLE Mean (bias corrected)	151.2	MLE Sd (bias corrected)	73.35
		Approximate Chi Square Value (0.05)	880.7
Adjusted Level of Significance	0.0479	Adjusted Chi Square Value	879.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	163.3	95% Adjusted Gamma UCL (use when n<50)	163.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	0.0162	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.111	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.084	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.818	Mean of logged Data	4.899
Maximum of Logged Data	6.059	SD of logged Data	0.479

Assuming Lognormal Distribution

95% H-UCL	163.5	90% Chebyshev (MVUE) UCL	171.8
95% Chebyshev (MVUE) UCL	181.6	97.5% Chebyshev (MVUE) UCL	195.1
99% Chebyshev (MVUE) UCL	221.6		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	163.6	95% Jackknife UCL	163.7
95% Standard Bootstrap UCL	163.5	95% Bootstrap-t UCL	165.5

95% Hall's Bootstrap UCL	165	95% Percentile Bootstrap UCL	164
95% BCA Bootstrap UCL	164.3		
90% Chebyshev(Mean, Sd) UCL	173.8	95% Chebyshev(Mean, Sd) UCL	184
97.5% Chebyshev(Mean, Sd) UCL	198.3	99% Chebyshev(Mean, Sd) UCL	226.2

Suggested UCL to Use

95% Student's-t UCL	163.7	or 95% Modified-t UCL	163.8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	112	Number of Distinct Observations	95
Number of Detects	111	Number of Non-Detects	1
Number of Distinct Detects	94	Number of Distinct Non-Detects	1
Minimum Detect	4.7	Minimum Non-Detect	12.5
Maximum Detect	60.6	Maximum Non-Detect	12.5
Variance Detects	101.8	Percent Non-Detects	0.893%
Mean Detects	19.07	SD Detects	10.09
Median Detects	16.7	CV Detects	0.529
Skewness Detects	1.483	Kurtosis Detects	2.938
Mean of Logged Detects	2.825	SD of Logged Detects	0.494

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.883	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	1.806E-12	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.117	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0844	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	18.99	KM Standard Error of Mean	0.953
KM SD	10.03	95% KM (BCA) UCL	20.56
95% KM (t) UCL	20.57	95% KM (Percentile Bootstrap) UCL	20.65
95% KM (z) UCL	20.56	95% KM Bootstrap t UCL	20.76
90% KM Chebyshev UCL	21.85	95% KM Chebyshev UCL	23.14
97.5% KM Chebyshev UCL	24.94	99% KM Chebyshev UCL	28.47

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.83	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.756	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0873	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.0869	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.231	k star (bias corrected MLE)	4.123
Theta hat (MLE)	4.507	Theta star (bias corrected MLE)	4.626
nu hat (MLE)	939.3	nu star (bias corrected)	915.3
Mean (detects)	19.07		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.7	Mean	18.99
Maximum	60.6	Median	16.5
SD	10.08	CV	0.531
k hat (MLE)	4.21	k star (bias corrected MLE)	4.103
Theta hat (MLE)	4.509	Theta star (bias corrected MLE)	4.627
nu hat (MLE)	943.1	nu star (bias corrected)	919.1
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (919.15, α)	849.8	Adjusted Chi Square Value (919.15, β)	848.9
95% Gamma Approximate UCL (use when n>=50)	20.53	95% Gamma Adjusted UCL (use when n<50)	20.56

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	18.99	SD (KM)	10.03
Variance (KM)	100.7	SE of Mean (KM)	0.953
k hat (KM)	3.582	k star (KM)	3.492

nu hat (KM)	802.3	nu star (KM)	782.1
theta hat (KM)	5.302	theta star (KM)	5.439
80% gamma percentile (KM)	26.6	90% gamma percentile (KM)	32.62
95% gamma percentile (KM)	38.19	99% gamma percentile (KM)	50.17

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (782.12, α)	718.2	Adjusted Chi Square Value (782.12, β)	717.4
95% Gamma Approximate KM-UCL (use when n>=50)	20.68	95% Gamma Adjusted KM-UCL (use when n<50)	20.7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.983	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.686	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0772	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0844	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	18.99	Mean in Log Scale	2.821
SD in Original Scale	10.08	SD in Log Scale	0.494
95% t UCL (assumes normality of ROS data)	20.57	95% Percentile Bootstrap UCL	20.61
95% BCA Bootstrap UCL	20.73	95% Bootstrap t UCL	20.71
95% H-UCL (Log ROS)	20.68		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.821	KM Geo Mean	16.79
KM SD (logged)	0.493	95% Critical H Value (KM-Log)	1.83
KM Standard Error of Mean (logged)	0.0468	95% H-UCL (KM -Log)	20.65
KM SD (logged)	0.493	95% Critical H Value (KM-Log)	1.83
KM Standard Error of Mean (logged)	0.0468		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	18.96	Mean in Log Scale	2.816
SD in Original Scale	10.11	SD in Log Scale	0.501
95% t UCL (Assumes normality)	20.54	95% H-Stat UCL	20.68

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	18.74	KM H-UCL	20.65

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	112	Number of Distinct Observations	104
Number of Detects	110	Number of Non-Detects	2
Number of Distinct Detects	102	Number of Distinct Non-Detects	2
Minimum Detect	15.6	Minimum Non-Detect	29.7
Maximum Detect	180	Maximum Non-Detect	33.5
Variance Detects	1110	Percent Non-Detects	1.786%
Mean Detects	60.14	SD Detects	33.31
Median Detects	49.35	CV Detects	0.554
Skewness Detects	1.377	Kurtosis Detects	2.033
Mean of Logged Detects	3.962	SD of Logged Detects	0.515

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.872	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	6.595E-14	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0848	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	59.54	KM Standard Error of Mean	3.148
KM SD	33.16	95% KM (BCA) UCL	64.56
95% KM (t) UCL	64.76	95% KM (Percentile Bootstrap) UCL	64.72
95% KM (z) UCL	64.72	95% KM Bootstrap t UCL	65.03
90% KM Chebyshev UCL	68.98	95% KM Chebyshev UCL	73.26
97.5% KM Chebyshev UCL	79.2	99% KM Chebyshev UCL	90.87

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.235	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.757	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.114	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.0872	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.875	k star (bias corrected MLE)	3.776
Theta hat (MLE)	15.52	Theta star (bias corrected MLE)	15.93
nu hat (MLE)	852.5	nu star (bias corrected)	830.6
Mean (detects)	60.14		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	15.6	Mean	59.44
Maximum	180	Median	48.9
SD	33.42	CV	0.562
k hat (MLE)	3.745	k star (bias corrected MLE)	3.651
Theta hat (MLE)	15.87	Theta star (bias corrected MLE)	16.28
nu hat (MLE)	838.9	nu star (bias corrected)	817.8
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (817.79, α)	752.4	Adjusted Chi Square Value (817.79, β)	751.6
95% Gamma Approximate UCL (use when n>=50)	64.6	95% Gamma Adjusted UCL (use when n<50)	64.67

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	59.54	SD (KM)	33.16
Variance (KM)	1100	SE of Mean (KM)	3.148
k hat (KM)	3.223	k star (KM)	3.143

nu hat (KM)	721.9	nu star (KM)	703.9
theta hat (KM)	18.47	theta star (KM)	18.95
80% gamma percentile (KM)	84.45	90% gamma percentile (KM)	104.6
95% gamma percentile (KM)	123.3	99% gamma percentile (KM)	163.8

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (703.94, α)	643.4	Adjusted Chi Square Value (703.94, β)	642.6
95% Gamma Approximate KM-UCL (use when n>=50)	65.14	95% Gamma Adjusted KM-UCL (use when n<50)	65.22

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.971	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.141	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0889	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0848	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	59.53	Mean in Log Scale	3.95
SD in Original Scale	33.32	SD in Log Scale	0.519
95% t UCL (assumes normality of ROS data)	64.75	95% Percentile Bootstrap UCL	64.94
95% BCA Bootstrap UCL	65.2	95% Bootstrap t UCL	65.14
95% H-UCL (Log ROS)	65.04		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	3.95	KM Geo Mean	51.92
KM SD (logged)	0.517	95% Critical H Value (KM-Log)	1.844
KM Standard Error of Mean (logged)	0.0491	95% H-UCL (KM -Log)	64.95
KM SD (logged)	0.517	95% Critical H Value (KM-Log)	1.844
KM Standard Error of Mean (logged)	0.0491		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	59.35	Mean in Log Scale	3.941
SD in Original Scale	33.53	SD in Log Scale	0.535
95% t UCL (Assumes normality)	64.6	95% H-Stat UCL	65.22

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	64.95

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	101
Number of Detects	104	Number of Non-Detects	8
Number of Distinct Detects	95	Number of Distinct Non-Detects	8
Minimum Detect	15.1	Minimum Non-Detect	10.5
Maximum Detect	194	Maximum Non-Detect	40.7
Variance Detects	1431	Percent Non-Detects	7.143%
Mean Detects	61.53	SD Detects	37.83
Median Detects	49.9	CV Detects	0.615
Skewness Detects	1.15	Kurtosis Detects	0.959
Mean of Logged Detects	3.941	SD of Logged Detects	0.607

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.889	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	9.208E-11	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0872	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	58.24	KM Standard Error of Mean	3.631
KM SD	38.22	95% KM (BCA) UCL	64.77
95% KM (t) UCL	64.27	95% KM (Percentile Bootstrap) UCL	64.1
95% KM (z) UCL	64.21	95% KM Bootstrap t UCL	64.87
90% KM Chebyshev UCL	69.14	95% KM Chebyshev UCL	74.07
97.5% KM Chebyshev UCL	80.92	99% KM Chebyshev UCL	94.37

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.741	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.759	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0892	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.0891	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.952	k star (bias corrected MLE)	2.874
Theta hat (MLE)	20.84	Theta star (bias corrected MLE)	21.41
nu hat (MLE)	614.1	nu star (bias corrected)	597.7
Mean (detects)	61.53		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.19	Mean	57.81
Maximum	194	Median	45.8
SD	38.91	CV	0.673
k hat (MLE)	1.981	k star (bias corrected MLE)	1.934
Theta hat (MLE)	29.18	Theta star (bias corrected MLE)	29.89
nu hat (MLE)	443.9	nu star (bias corrected)	433.3
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (433.29, α)	386	Adjusted Chi Square Value (433.29, β)	385.5
95% Gamma Approximate UCL (use when n>=50)	64.89	95% Gamma Adjusted UCL (use when n<50)	64.99

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	58.24	SD (KM)	38.22
Variance (KM)	1461	SE of Mean (KM)	3.631
k hat (KM)	2.322	k star (KM)	2.266

nu hat (KM)	520.2	nu star (KM)	507.6
theta hat (KM)	25.08	theta star (KM)	25.7
80% gamma percentile (KM)	85.91	90% gamma percentile (KM)	110
95% gamma percentile (KM)	132.9	99% gamma percentile (KM)	183.1

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (507.61, α)	456.4	Adjusted Chi Square Value (507.61, β)	455.7
95% Gamma Approximate KM-UCL (use when n>=50)	64.78	95% Gamma Adjusted KM-UCL (use when n<50)	64.87

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0924	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0572	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0872	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	58.33	Mean in Log Scale	3.856
SD in Original Scale	38.27	SD in Log Scale	0.665
95% t UCL (assumes normality of ROS data)	64.33	95% Percentile Bootstrap UCL	64.05
95% BCA Bootstrap UCL	64.92	95% Bootstrap t UCL	64.78
95% H-UCL (Log ROS)	66.7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	3.848	KM Geo Mean	46.91
KM SD (logged)	0.68	95% Critical H Value (KM-Log)	1.952
KM Standard Error of Mean (logged)	0.0648	95% H-UCL (KM -Log)	67.03
KM SD (logged)	0.68	95% Critical H Value (KM-Log)	1.952
KM Standard Error of Mean (logged)	0.0648		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	57.9	Mean in Log Scale	3.82
SD in Original Scale	38.76	SD in Log Scale	0.741
95% t UCL (Assumes normality)	63.98	95% H-Stat UCL	69.07

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	64.78	95% GROS Approximate Gamma UCL	64.89

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	112	Number of Distinct Observations	103
Number of Detects	2	Number of Non-Detects	110
Number of Distinct Detects	2	Number of Distinct Non-Detects	101
Minimum Detect	0.347	Minimum Non-Detect	0.332
Maximum Detect	1.04	Maximum Non-Detect	12.4
Variance Detects	0.24	Percent Non-Detects	98.21%
Mean Detects	0.694	SD Detects	0.49
Median Detects	0.694	CV Detects	0.707
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-0.51	SD of Logged Detects	0.776

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.344	KM Standard Error of Mean	0.0134
KM SD	0.08	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.366	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.366	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.384	95% KM Chebyshev UCL	0.403
97.5% KM Chebyshev UCL	0.428	99% KM Chebyshev UCL	0.477

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	3.64	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.191	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	14.56	nu star (bias corrected)	N/A
Mean (detects)	0.694		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.344	SD (KM)	0.08
Variance (KM)	0.00641	SE of Mean (KM)	0.0134
k hat (KM)	18.49	k star (KM)	18
nu hat (KM)	4141	nu star (KM)	4032
theta hat (KM)	0.0186	theta star (KM)	0.0191
80% gamma percentile (KM)	0.41	90% gamma percentile (KM)	0.451
95% gamma percentile (KM)	0.488	99% gamma percentile (KM)	0.56

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0479
Approximate Chi Square Value (N/A, α)	3885	Adjusted Chi Square Value (N/A, β)	3883
95% Gamma Approximate KM-UCL (use when n>=50)	0.357	95% Gamma Adjusted KM-UCL (use when n<50)	0.357

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.13	Mean in Log Scale	-2.103
SD in Original Scale	0.0912	SD in Log Scale	0.274
95% t UCL (assumes normality of ROS data)	0.145	95% Percentile Bootstrap UCL	0.147
95% BCA Bootstrap UCL	0.158	95% Bootstrap t UCL	0.186
95% H-UCL (Log ROS)	0.133		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.079	KM Geo Mean	0.34
KM SD (logged)	0.129	95% Critical H Value (KM-Log)	1.678
KM Standard Error of Mean (logged)	0.0234	95% H-UCL (KM -Log)	0.35
KM SD (logged)	0.129	95% Critical H Value (KM-Log)	1.678
KM Standard Error of Mean (logged)	0.0234		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.523	Mean in Log Scale	-0.853
SD in Original Scale	0.592	SD in Log Scale	0.568
95% t UCL (Assumes normality)	0.616	95% H-Stat UCL	0.554

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.403

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	106
Number of Detects	80	Number of Non-Detects	32
Number of Distinct Detects	78	Number of Distinct Non-Detects	31
Minimum Detect	1.05	Minimum Non-Detect	1.71
Maximum Detect	16.6	Maximum Non-Detect	10.8
Variance Detects	14.12	Percent Non-Detects	28.57%
Mean Detects	5.576	SD Detects	3.757
Median Detects	4.02	CV Detects	0.674
Skewness Detects	1.237	Kurtosis Detects	0.88
Mean of Logged Detects	1.509	SD of Logged Detects	0.656

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.859	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	1.937E-10	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.183	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0991	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.713	KM Standard Error of Mean	0.34
KM SD	3.51	95% KM (BCA) UCL	5.259
95% KM (t) UCL	5.278	95% KM (Percentile Bootstrap) UCL	5.284
95% KM (z) UCL	5.273	95% KM Bootstrap t UCL	5.362
90% KM Chebyshev UCL	5.734	95% KM Chebyshev UCL	6.196
97.5% KM Chebyshev UCL	6.837	99% KM Chebyshev UCL	8.097

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.968	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.761	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.131	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.101	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.542	k star (bias corrected MLE)	2.455
Theta hat (MLE)	2.193	Theta star (bias corrected MLE)	2.271
nu hat (MLE)	406.8	nu star (bias corrected)	392.9
Mean (detects)	5.576		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.35	Mean	4.599
Maximum	16.6	Median	3.235
SD	3.565	CV	0.775
k hat (MLE)	2.015	k star (bias corrected MLE)	1.967
Theta hat (MLE)	2.282	Theta star (bias corrected MLE)	2.338
nu hat (MLE)	451.5	nu star (bias corrected)	440.7
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (440.71, α)	393	Adjusted Chi Square Value (440.71, β)	392.5
95% Gamma Approximate UCL (use when n>=50)	5.157	95% Gamma Adjusted UCL (use when n<50)	5.165

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.713	SD (KM)	3.51
Variance (KM)	12.32	SE of Mean (KM)	0.34
k hat (KM)	1.803	k star (KM)	1.76

nu hat (KM)	403.8	nu star (KM)	394.4
theta hat (KM)	2.614	theta star (KM)	2.677
80% gamma percentile (KM)	7.163	90% gamma percentile (KM)	9.449
95% gamma percentile (KM)	11.65	99% gamma percentile (KM)	16.56

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (394.35, α)	349.3	Adjusted Chi Square Value (394.35, β)	348.8
95% Gamma Approximate KM-UCL (use when n>=50)	5.321	95% Gamma Adjusted KM-UCL (use when n<50)	5.329

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.969	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.172	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0918	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0991	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.695	Mean in Log Scale	1.329
SD in Original Scale	3.481	SD in Log Scale	0.641
95% t UCL (assumes normality of ROS data)	5.24	95% Percentile Bootstrap UCL	5.275
95% BCA Bootstrap UCL	5.262	95% Bootstrap t UCL	5.289
95% H-UCL (Log ROS)	5.21		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.313	KM Geo Mean	3.719
KM SD (logged)	0.68	95% Critical H Value (KM-Log)	1.952
KM Standard Error of Mean (logged)	0.0692	95% H-UCL (KM -Log)	5.315
KM SD (logged)	0.68	95% Critical H Value (KM-Log)	1.952
KM Standard Error of Mean (logged)	0.0692		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.67	Mean in Log Scale	1.294
SD in Original Scale	3.538	SD in Log Scale	0.704
95% t UCL (Assumes normality)	5.224	95% H-Stat UCL	5.328

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	5.315

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	112	Number of Distinct Observations	101
Number of Detects	104	Number of Non-Detects	8
Number of Distinct Detects	96	Number of Distinct Non-Detects	8
Minimum Detect	4.35	Minimum Non-Detect	6.07
Maximum Detect	49.5	Maximum Non-Detect	21.7
Variance Detects	96.95	Percent Non-Detects	7.143%
Mean Detects	15.93	SD Detects	9.846
Median Detects	11.5	CV Detects	0.618
Skewness Detects	1.378	Kurtosis Detects	1.531
Mean of Logged Detects	2.606	SD of Logged Detects	0.559

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.84	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0872	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	15.36	KM Standard Error of Mean	0.923
KM SD	9.698	95% KM (BCA) UCL	16.95
95% KM (t) UCL	16.89	95% KM (Percentile Bootstrap) UCL	16.9
95% KM (z) UCL	16.88	95% KM Bootstrap t UCL	17
90% KM Chebyshev UCL	18.13	95% KM Chebyshev UCL	19.38
97.5% KM Chebyshev UCL	21.12	99% KM Chebyshev UCL	24.54

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.523	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.148	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.089	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.232	k star (bias corrected MLE)	3.145
Theta hat (MLE)	4.93	Theta star (bias corrected MLE)	5.066
nu hat (MLE)	672.2	nu star (bias corrected)	654.1
Mean (detects)	15.93		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.668	Mean	15.26
Maximum	49.5	Median	11.09
SD	9.841	CV	0.645
k hat (MLE)	2.802	k star (bias corrected MLE)	2.733
Theta hat (MLE)	5.447	Theta star (bias corrected MLE)	5.584
nu hat (MLE)	627.6	nu star (bias corrected)	612.1
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (612.09, α)	555.7	Adjusted Chi Square Value (612.09, β)	555
95% Gamma Approximate UCL (use when n>=50)	16.81	95% Gamma Adjusted UCL (use when n<50)	16.83

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	15.36	SD (KM)	9.698
Variance (KM)	94.06	SE of Mean (KM)	0.923
k hat (KM)	2.508	k star (KM)	2.447

nu hat (KM)	561.9	nu star (KM)	548.2
theta hat (KM)	6.123	theta star (KM)	6.277
80% gamma percentile (KM)	22.45	90% gamma percentile (KM)	28.51
95% gamma percentile (KM)	34.23	99% gamma percentile (KM)	46.76

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (548.17, α)	494.9	Adjusted Chi Square Value (548.17, β)	494.2
95% Gamma Approximate KM-UCL (use when n>=50)	17.01	95% Gamma Adjusted KM-UCL (use when n<50)	17.04

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.942	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	3.0419E-4	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.121	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0872	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	15.35	Mean in Log Scale	2.561
SD in Original Scale	9.742	SD in Log Scale	0.571
95% t UCL (assumes normality of ROS data)	16.87	95% Percentile Bootstrap UCL	16.83
95% BCA Bootstrap UCL	16.91	95% Bootstrap t UCL	17.03
95% H-UCL (Log ROS)	16.88		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.563	KM Geo Mean	12.98
KM SD (logged)	0.565	95% Critical H Value (KM-Log)	1.874
KM Standard Error of Mean (logged)	0.0541	95% H-UCL (KM -Log)	16.83
KM SD (logged)	0.565	95% Critical H Value (KM-Log)	1.874
KM Standard Error of Mean (logged)	0.0541		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	15.24	Mean in Log Scale	2.543
SD in Original Scale	9.839	SD in Log Scale	0.599
95% t UCL (Assumes normality)	16.78	95% H-Stat UCL	16.94

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	19.38

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	106
Number of Detects	85	Number of Non-Detects	27
Number of Distinct Detects	81	Number of Distinct Non-Detects	26
Minimum Detect	1.55	Minimum Non-Detect	1.56
Maximum Detect	115	Maximum Non-Detect	33.6
Variance Detects	201.2	Percent Non-Detects	24.11%
Mean Detects	10.93	SD Detects	14.19
Median Detects	6.83	CV Detects	1.298
Skewness Detects	5.26	Kurtosis Detects	35.46
Mean of Logged Detects	2.013	SD of Logged Detects	0.806

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.54	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.255	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0962	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.243	KM Standard Error of Mean	1.215
KM SD	12.72	95% KM (BCA) UCL	11.46
95% KM (t) UCL	11.26	95% KM (Percentile Bootstrap) UCL	11.47
95% KM (z) UCL	11.24	95% KM Bootstrap t UCL	12.71
90% KM Chebyshev UCL	12.89	95% KM Chebyshev UCL	14.54
97.5% KM Chebyshev UCL	16.83	99% KM Chebyshev UCL	21.33

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.061	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.772	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.118	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.0988	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.466	k star (bias corrected MLE)	1.422
Theta hat (MLE)	7.453	Theta star (bias corrected MLE)	7.683
nu hat (MLE)	249.2	nu star (bias corrected)	241.7
Mean (detects)	10.93		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	8.657
Maximum	115	Median	4.915
SD	13.02	CV	1.504
k hat (MLE)	0.647	k star (bias corrected MLE)	0.635
Theta hat (MLE)	13.39	Theta star (bias corrected MLE)	13.63
nu hat (MLE)	144.8	nu star (bias corrected)	142.3
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (142.29, α)	115.7	Adjusted Chi Square Value (142.29, β)	115.4
95% Gamma Approximate UCL (use when n>=50)	10.64	95% Gamma Adjusted UCL (use when n<50)	10.67

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.243	SD (KM)	12.72
Variance (KM)	161.8	SE of Mean (KM)	1.215
k hat (KM)	0.528	k star (KM)	0.52

nu hat (KM)	118.3	nu star (KM)	116.4
theta hat (KM)	17.5	theta star (KM)	17.78
80% gamma percentile (KM)	15.2	90% gamma percentile (KM)	24.8
95% gamma percentile (KM)	35.01	99% gamma percentile (KM)	60.04

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (116.45, α)	92.53	Adjusted Chi Square Value (116.45, β)	92.26
95% Gamma Approximate KM-UCL (use when n>=50)	11.63	95% Gamma Adjusted KM-UCL (use when n<50)	11.67

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.966	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.112	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0962	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.164	Mean in Log Scale	1.816
SD in Original Scale	12.75	SD in Log Scale	0.816
95% t UCL (assumes normality of ROS data)	11.16	95% Percentile Bootstrap UCL	11.38
95% BCA Bootstrap UCL	12.08	95% Bootstrap t UCL	12.69
95% H-UCL (Log ROS)	10.05		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.817	KM Geo Mean	6.154
KM SD (logged)	0.825	95% Critical H Value (KM-Log)	2.064
KM Standard Error of Mean (logged)	0.0818	95% H-UCL (KM -Log)	10.17
KM SD (logged)	0.825	95% Critical H Value (KM-Log)	2.064
KM Standard Error of Mean (logged)	0.0818		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9.351	Mean in Log Scale	1.822
SD in Original Scale	12.77	SD in Log Scale	0.857
95% t UCL (Assumes normality)	11.35	95% H-Stat UCL	10.58

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	10.17

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	90
Number of Detects	0	Number of Non-Detects	112
Number of Distinct Detects	0	Number of Distinct Non-Detects	90

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable 1,2,3,4,7,8-HxCDD was not processed!

PCB-189

General Statistics

Total Number of Observations	112	Number of Distinct Observations	104
Number of Detects	31	Number of Non-Detects	81
Number of Distinct Detects	29	Number of Distinct Non-Detects	77
Minimum Detect	0.561	Minimum Non-Detect	0.262
Maximum Detect	3.75	Maximum Non-Detect	15.6
Variance Detects	0.595	Percent Non-Detects	72.32%
Mean Detects	1.663	SD Detects	0.771
Median Detects	1.62	CV Detects	0.464
Skewness Detects	1.097	Kurtosis Detects	1.444
Mean of Logged Detects	0.407	SD of Logged Detects	0.468

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.161	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.722	KM Standard Error of Mean	0.0769
KM SD	0.751	95% KM (BCA) UCL	0.895
95% KM (t) UCL	0.85	95% KM (Percentile Bootstrap) UCL	0.865
95% KM (z) UCL	0.849	95% KM Bootstrap t UCL	0.853
90% KM Chebyshev UCL	0.953	95% KM Chebyshev UCL	1.058
97.5% KM Chebyshev UCL	1.203	99% KM Chebyshev UCL	1.488

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.326	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.11	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.158	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.064	k star (bias corrected MLE)	4.596
Theta hat (MLE)	0.328	Theta star (bias corrected MLE)	0.362
nu hat (MLE)	314	nu star (bias corrected)	284.9
Mean (detects)	1.663		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.508
Maximum	3.75	Median	0.0174
SD	0.827	CV	1.627
k hat (MLE)	0.349	k star (bias corrected MLE)	0.345
Theta hat (MLE)	1.458	Theta star (bias corrected MLE)	1.473
nu hat (MLE)	78.1	nu star (bias corrected)	77.34
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (77.34, α)	58.08	Adjusted Chi Square Value (77.34, β)	57.86
95% Gamma Approximate UCL (use when n>=50)	0.677	95% Gamma Adjusted UCL (use when n<50)	0.68

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.722	SD (KM)	0.751
Variance (KM)	0.563	SE of Mean (KM)	0.0769
k hat (KM)	0.926	k star (KM)	0.907
nu hat (KM)	207.4	nu star (KM)	203.2
theta hat (KM)	0.78	theta star (KM)	0.796
80% gamma percentile (KM)	1.171	90% gamma percentile (KM)	1.703
95% gamma percentile (KM)	2.24	99% gamma percentile (KM)	3.494

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (203.15, α)	171.2	Adjusted Chi Square Value (203.15, β)	170.8
95% Gamma Approximate KM-UCL (use when n>=50)	0.857	95% Gamma Adjusted KM-UCL (use when n<50)	0.859

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.103	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.785	Mean in Log Scale	-0.475
SD in Original Scale	0.68	SD in Log Scale	0.613
95% t UCL (assumes normality of ROS data)	0.892	95% Percentile Bootstrap UCL	0.889
95% BCA Bootstrap UCL	0.91	95% Bootstrap t UCL	0.913
95% H-UCL (Log ROS)	0.838		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.729	KM Geo Mean	0.483
KM SD (logged)	0.834	95% Critical H Value (KM-Log)	2.071
KM Standard Error of Mean (logged)	0.0926	95% H-UCL (KM -Log)	0.805
KM SD (logged)	0.834	95% Critical H Value (KM-Log)	2.071
KM Standard Error of Mean (logged)	0.0926		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.92	Mean in Log Scale	-0.449
SD in Original Scale	0.987	SD in Log Scale	0.824
95% t UCL (Assumes normality)	1.075	95% H-Stat UCL	1.054

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	0.857	95% GROS Approximate Gamma UCL	0.677

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	95
Number of Detects	2	Number of Non-Detects	110
Number of Distinct Detects	2	Number of Distinct Non-Detects	93
Minimum Detect	0.557	Minimum Non-Detect	0.353
Maximum Detect	0.706	Maximum Non-Detect	3.62
Variance Detects	0.0111	Percent Non-Detects	98.21%
Mean Detects	0.632	SD Detects	0.105
Median Detects	0.632	CV Detects	0.167
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-0.467	SD of Logged Detects	0.168

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.38	KM Standard Error of Mean	0.0259
KM SD	0.0831	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.423	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.423	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.458	95% KM Chebyshev UCL	0.493
97.5% KM Chebyshev UCL	0.542	99% KM Chebyshev UCL	0.638

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	71.52	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.00883	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	286.1	nu star (bias corrected)	N/A
Mean (detects)	0.632		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.38	SD (KM)	0.0831
Variance (KM)	0.00691	SE of Mean (KM)	0.0259
k hat (KM)	20.92	k star (KM)	20.36
nu hat (KM)	4686	nu star (KM)	4562
theta hat (KM)	0.0182	theta star (KM)	0.0187
80% gamma percentile (KM)	0.449	90% gamma percentile (KM)	0.491
95% gamma percentile (KM)	0.529	99% gamma percentile (KM)	0.603

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0479
Approximate Chi Square Value (N/A, α)	4406	Adjusted Chi Square Value (N/A, β)	4404
95% Gamma Approximate KM-UCL (use when n>=50)	0.394	95% Gamma Adjusted KM-UCL (use when n<50)	0.394

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.315	Mean in Log Scale	-1.165
SD in Original Scale	0.0542	SD in Log Scale	0.139
95% t UCL (assumes normality of ROS data)	0.324	95% Percentile Bootstrap UCL	0.324
95% BCA Bootstrap UCL	0.326	95% Bootstrap t UCL	0.327
95% H-UCL (Log ROS)	0.322		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.984	KM Geo Mean	0.374
KM SD (logged)	0.171	95% Critical H Value (KM-Log)	1.69
KM Standard Error of Mean (logged)	0.0542	95% H-UCL (KM -Log)	0.39
KM SD (logged)	0.171	95% Critical H Value (KM-Log)	1.69
KM Standard Error of Mean (logged)	0.0542		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.616	Mean in Log Scale	-0.603
SD in Original Scale	0.304	SD in Log Scale	0.502
95% t UCL (Assumes normality)	0.664	95% H-Stat UCL	0.677

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.423	KM H-UCL	0.39
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	99
Number of Detects	5	Number of Non-Detects	107
Number of Distinct Detects	5	Number of Distinct Non-Detects	94
Minimum Detect	0.396	Minimum Non-Detect	0.244
Maximum Detect	2.73	Maximum Non-Detect	1.95
Variance Detects	1.019	Percent Non-Detects	95.54%
Mean Detects	0.93	SD Detects	1.01
Median Detects	0.534	CV Detects	1.086
Skewness Detects	2.202	Kurtosis Detects	4.877
Mean of Logged Detects	-0.398	SD of Logged Detects	0.801

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.622	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.435	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.32	KM Standard Error of Mean	0.0359
KM SD	0.249	95% KM (BCA) UCL	0.414
95% KM (t) UCL	0.379	95% KM (Percentile Bootstrap) UCL	0.39
95% KM (z) UCL	0.379	95% KM Bootstrap t UCL	0.351
90% KM Chebyshev UCL	0.427	95% KM Chebyshev UCL	0.476
97.5% KM Chebyshev UCL	0.544	99% KM Chebyshev UCL	0.677

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.911	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.686	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.418	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.361	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.685	k star (bias corrected MLE)	0.807
Theta hat (MLE)	0.552	Theta star (bias corrected MLE)	1.151
nu hat (MLE)	16.85	nu star (bias corrected)	8.075
Mean (detects)	0.93		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0511
Maximum	2.73	Median	0.01
SD	0.27	CV	5.297
k hat (MLE)	0.448	k star (bias corrected MLE)	0.442
Theta hat (MLE)	0.114	Theta star (bias corrected MLE)	0.116
nu hat (MLE)	100.4	nu star (bias corrected)	99
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (99.00, α)	77.04	Adjusted Chi Square Value (99.00, β)	76.79
95% Gamma Approximate UCL (use when n>=50)	0.0656	95% Gamma Adjusted UCL (use when n<50)	0.0658

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.32	SD (KM)	0.249
Variance (KM)	0.0619	SE of Mean (KM)	0.0359
k hat (KM)	1.652	k star (KM)	1.614

nu hat (KM)	370.1	nu star (KM)	361.5
theta hat (KM)	0.194	theta star (KM)	0.198
80% gamma percentile (KM)	0.491	90% gamma percentile (KM)	0.654
95% gamma percentile (KM)	0.813	99% gamma percentile (KM)	1.169

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (361.49, α)	318.4	Adjusted Chi Square Value (361.49, β)	317.9
95% Gamma Approximate KM-UCL (use when n>=50)	0.363	95% Gamma Adjusted KM-UCL (use when n<50)	0.364

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.729	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.373	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.343	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.172	Mean in Log Scale	-1.948
SD in Original Scale	0.255	SD in Log Scale	0.432
95% t UCL (assumes normality of ROS data)	0.211	95% Percentile Bootstrap UCL	0.22
95% BCA Bootstrap UCL	0.263	95% Bootstrap t UCL	0.314
95% H-UCL (Log ROS)	0.168		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.233	KM Geo Mean	0.291
KM SD (logged)	0.347	95% Critical H Value (KM-Log)	1.756
KM Standard Error of Mean (logged)	0.0806	95% H-UCL (KM -Log)	0.328
KM SD (logged)	0.347	95% Critical H Value (KM-Log)	1.756
KM Standard Error of Mean (logged)	0.0806		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.468	Mean in Log Scale	-0.887
SD in Original Scale	0.293	SD in Log Scale	0.495
95% t UCL (Assumes normality)	0.514	95% H-Stat UCL	0.508

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.476

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	112	Number of Distinct Observations	100
Number of Detects	108	Number of Non-Detects	4
Number of Distinct Detects	97	Number of Distinct Non-Detects	4
Minimum Detect	0.934	Minimum Non-Detect	0.883
Maximum Detect	17.1	Maximum Non-Detect	13.4
Variance Detects	10.3	Percent Non-Detects	3.571%
Mean Detects	5.318	SD Detects	3.21
Median Detects	4.365	CV Detects	0.604
Skewness Detects	1.379	Kurtosis Detects	1.952
Mean of Logged Detects	1.509	SD of Logged Detects	0.57

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.87	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	8.449E-14	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.139	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0855	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.215	KM Standard Error of Mean	0.306
KM SD	3.209	95% KM (BCA) UCL	5.775
95% KM (t) UCL	5.722	95% KM (Percentile Bootstrap) UCL	5.717
95% KM (z) UCL	5.717	95% KM Bootstrap t UCL	5.752
90% KM Chebyshev UCL	6.132	95% KM Chebyshev UCL	6.547
97.5% KM Chebyshev UCL	7.124	99% KM Chebyshev UCL	8.256

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.21	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.108	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.0879	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.24	k star (bias corrected MLE)	3.156
Theta hat (MLE)	1.641	Theta star (bias corrected MLE)	1.685
nu hat (MLE)	699.9	nu star (bias corrected)	681.8
Mean (detects)	5.318		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.131	Mean	5.2
Maximum	17.1	Median	4.245
SD	3.23	CV	0.621
k hat (MLE)	2.689	k star (bias corrected MLE)	2.623
Theta hat (MLE)	1.934	Theta star (bias corrected MLE)	1.983
nu hat (MLE)	602.2	nu star (bias corrected)	587.4
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (587.44, α)	532.2	Adjusted Chi Square Value (587.44, β)	531.5
95% Gamma Approximate UCL (use when n>=50)	5.74	95% Gamma Adjusted UCL (use when n<50)	5.747

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.215	SD (KM)	3.209
Variance (KM)	10.3	SE of Mean (KM)	0.306
k hat (KM)	2.641	k star (KM)	2.576

nu hat (KM)	591.5	nu star (KM)	577
theta hat (KM)	1.975	theta star (KM)	2.024
80% gamma percentile (KM)	7.575	90% gamma percentile (KM)	9.568
95% gamma percentile (KM)	11.44	99% gamma percentile (KM)	15.54

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (577.00, α)	522.3	Adjusted Chi Square Value (577.00, β)	521.6
95% Gamma Approximate KM-UCL (use when n>=50)	5.761	95% Gamma Adjusted KM-UCL (use when n<50)	5.768

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.977	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.345	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0862	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0855	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.214	Mean in Log Scale	1.48
SD in Original Scale	3.209	SD in Log Scale	0.593
95% t UCL (assumes normality of ROS data)	5.716	95% Percentile Bootstrap UCL	5.71
95% BCA Bootstrap UCL	5.837	95% Bootstrap t UCL	5.769
95% H-UCL (Log ROS)	5.821		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.475	KM Geo Mean	4.372
KM SD (logged)	0.602	95% Critical H Value (KM-Log)	1.898
KM Standard Error of Mean (logged)	0.0575	95% H-UCL (KM -Log)	5.84
KM SD (logged)	0.602	95% Critical H Value (KM-Log)	1.898
KM Standard Error of Mean (logged)	0.0575		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.22	Mean in Log Scale	1.467
SD in Original Scale	3.229	SD in Log Scale	0.64
95% t UCL (Assumes normality)	5.726	95% H-Stat UCL	5.98

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	5.84

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	98
Number of Detects	4	Number of Non-Detects	108
Number of Distinct Detects	4	Number of Distinct Non-Detects	94
Minimum Detect	0.554	Minimum Non-Detect	0.375
Maximum Detect	1.45	Maximum Non-Detect	3.46
Variance Detects	0.155	Percent Non-Detects	96.43%
Mean Detects	0.884	SD Detects	0.394
Median Detects	0.765	CV Detects	0.446
Skewness Detects	1.526	Kurtosis Detects	2.541
Mean of Logged Detects	-0.19	SD of Logged Detects	0.409

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.871	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.306	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.434	KM Standard Error of Mean	0.0323
KM SD	0.158	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.488	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.487	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.531	95% KM Chebyshev UCL	0.575
97.5% KM Chebyshev UCL	0.636	99% KM Chebyshev UCL	0.755

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.336	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.658	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.273	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.395	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.678	k star (bias corrected MLE)	2.086
Theta hat (MLE)	0.115	Theta star (bias corrected MLE)	0.424
nu hat (MLE)	61.42	nu star (bias corrected)	16.69
Mean (detects)	0.884		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0562
Maximum	1.45	Median	0.01
SD	0.178	CV	3.164
k hat (MLE)	0.502	k star (bias corrected MLE)	0.494
Theta hat (MLE)	0.112	Theta star (bias corrected MLE)	0.114
nu hat (MLE)	112.4	nu star (bias corrected)	110.8
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (110.77, α)	87.47	Adjusted Chi Square Value (110.77, β)	87.2
95% Gamma Approximate UCL (use when n>=50)	0.0711	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.434	SD (KM)	0.158
Variance (KM)	0.025	SE of Mean (KM)	0.0323
k hat (KM)	7.559	k star (KM)	7.362

nu hat (KM)	1693	nu star (KM)	1649
theta hat (KM)	0.0575	theta star (KM)	0.059
80% gamma percentile (KM)	0.56	90% gamma percentile (KM)	0.648
95% gamma percentile (KM)	0.727	99% gamma percentile (KM)	0.89

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1556	Adjusted Chi Square Value (N/A, β)	1555
95% Gamma Approximate KM-UCL (use when n>=50)	0.46	95% Gamma Adjusted KM-UCL (use when n<50)	0.461

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.272	Mean in Log Scale	-1.359
SD in Original Scale	0.141	SD in Log Scale	0.281
95% t UCL (assumes normality of ROS data)	0.294	95% Percentile Bootstrap UCL	0.295
95% BCA Bootstrap UCL	0.302	95% Bootstrap t UCL	0.315
95% H-UCL (Log ROS)	0.28		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.873	KM Geo Mean	0.418
KM SD (logged)	0.25	95% Critical H Value (KM-Log)	1.717
KM Standard Error of Mean (logged)	0.0601	95% H-UCL (KM -Log)	0.449
KM SD (logged)	0.25	95% Critical H Value (KM-Log)	1.717
KM Standard Error of Mean (logged)	0.0601		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.635	Mean in Log Scale	-0.578
SD in Original Scale	0.337	SD in Log Scale	0.494
95% t UCL (Assumes normality)	0.688	95% H-Stat UCL	0.691

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.488

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	97
Number of Detects	10	Number of Non-Detects	102
Number of Distinct Detects	10	Number of Distinct Non-Detects	88
Minimum Detect	0.321	Minimum Non-Detect	0.233
Maximum Detect	6.46	Maximum Non-Detect	2.3
Variance Detects	3.482	Percent Non-Detects	91.07%
Mean Detects	1.204	SD Detects	1.866
Median Detects	0.544	CV Detects	1.55
Skewness Detects	3.045	Kurtosis Detects	9.437
Mean of Logged Detects	-0.317	SD of Logged Detects	0.862

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.489	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.407	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.381	KM Standard Error of Mean	0.0639
KM SD	0.6	95% KM (BCA) UCL	0.539
95% KM (t) UCL	0.487	95% KM (Percentile Bootstrap) UCL	0.496
95% KM (z) UCL	0.486	95% KM Bootstrap t UCL	0.585
90% KM Chebyshev UCL	0.573	95% KM Chebyshev UCL	0.659
97.5% KM Chebyshev UCL	0.78	99% KM Chebyshev UCL	1.017

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.48	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.746	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.293	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.273	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.132	k star (bias corrected MLE)	0.859
Theta hat (MLE)	1.064	Theta star (bias corrected MLE)	1.402
nu hat (MLE)	22.64	nu star (bias corrected)	17.18
Mean (detects)	1.204		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.117
Maximum	6.46	Median	0.01
SD	0.632	CV	5.419
k hat (MLE)	0.328	k star (bias corrected MLE)	0.325
Theta hat (MLE)	0.356	Theta star (bias corrected MLE)	0.359
nu hat (MLE)	73.43	nu star (bias corrected)	72.79
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (72.79, α)	54.15	Adjusted Chi Square Value (72.79, β)	53.94
95% Gamma Approximate UCL (use when n>=50)	0.157	95% Gamma Adjusted UCL (use when n<50)	0.157

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.381	SD (KM)	0.6
Variance (KM)	0.359	SE of Mean (KM)	0.0639
k hat (KM)	0.404	k star (KM)	0.399

nu hat (KM)	90.43	nu star (KM)	89.34
theta hat (KM)	0.944	theta star (KM)	0.955
80% gamma percentile (KM)	0.615	90% gamma percentile (KM)	1.077
95% gamma percentile (KM)	1.584	99% gamma percentile (KM)	2.862

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (89.34, α)	68.55	Adjusted Chi Square Value (89.34, β)	68.31
95% Gamma Approximate KM-UCL (use when n>=50)	0.496	95% Gamma Adjusted KM-UCL (use when n<50)	0.498

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.776	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.236	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.237	Mean in Log Scale	-1.846
SD in Original Scale	0.614	SD in Log Scale	0.607
95% t UCL (assumes normality of ROS data)	0.333	95% Percentile Bootstrap UCL	0.348
95% BCA Bootstrap UCL	0.444	95% Bootstrap t UCL	0.612
95% H-UCL (Log ROS)	0.212		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.176	KM Geo Mean	0.308
KM SD (logged)	0.47	95% Critical H Value (KM-Log)	1.818
KM Standard Error of Mean (logged)	0.0816	95% H-UCL (KM -Log)	0.374
KM SD (logged)	0.47	95% Critical H Value (KM-Log)	1.818
KM Standard Error of Mean (logged)	0.0816		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.501	Mean in Log Scale	-0.896
SD in Original Scale	0.61	SD in Log Scale	0.558
95% t UCL (Assumes normality)	0.597	95% H-Stat UCL	0.527

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	0.374

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	101
Number of Detects	2	Number of Non-Detects	110
Number of Distinct Detects	2	Number of Distinct Non-Detects	99
Minimum Detect	0.309	Minimum Non-Detect	0.252
Maximum Detect	1.66	Maximum Non-Detect	2.5
Variance Detects	0.913	Percent Non-Detects	98.21%
Mean Detects	0.985	SD Detects	0.955
Median Detects	0.985	CV Detects	0.97
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-0.334	SD of Logged Detects	1.189

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.277	KM Standard Error of Mean	0.0237
KM SD	0.138	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.316	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.316	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.348	95% KM Chebyshev UCL	0.38
97.5% KM Chebyshev UCL	0.425	99% KM Chebyshev UCL	0.513

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.719	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.573	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	6.877	nu star (bias corrected)	N/A
Mean (detects)	0.985		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.277	SD (KM)	0.138
Variance (KM)	0.0191	SE of Mean (KM)	0.0237
k hat (KM)	4.015	k star (KM)	3.913
nu hat (KM)	899.3	nu star (KM)	876.5
theta hat (KM)	0.069	theta star (KM)	0.0707
80% gamma percentile (KM)	0.383	90% gamma percentile (KM)	0.464
95% gamma percentile (KM)	0.54	99% gamma percentile (KM)	0.701

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0479
Approximate Chi Square Value (876.50, α)	808.8	Adjusted Chi Square Value (876.50, β)	807.9
95% Gamma Approximate KM-UCL (use when n>=50)	0.3	95% Gamma Adjusted KM-UCL (use when n<50)	0.3

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0838	Mean in Log Scale	-2.687
SD in Original Scale	0.153	SD in Log Scale	0.422
95% t UCL (assumes normality of ROS data)	0.108	95% Percentile Bootstrap UCL	0.111
95% BCA Bootstrap UCL	0.129	95% Bootstrap t UCL	0.235
95% H-UCL (Log ROS)	0.0799		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.32	KM Geo Mean	0.267
KM SD (logged)	0.197	95% Critical H Value (KM-Log)	1.698
KM Standard Error of Mean (logged)	0.0569	95% H-UCL (KM -Log)	0.281
KM SD (logged)	0.197	95% Critical H Value (KM-Log)	1.698
KM Standard Error of Mean (logged)	0.0569		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.463	Mean in Log Scale	-0.9
SD in Original Scale	0.25	SD in Log Scale	0.515
95% t UCL (Assumes normality)	0.502	95% H-Stat UCL	0.508

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.38

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	103
Number of Detects	17	Number of Non-Detects	95
Number of Distinct Detects	17	Number of Distinct Non-Detects	88
Minimum Detect	0.296	Minimum Non-Detect	0.229
Maximum Detect	1.88	Maximum Non-Detect	2.17
Variance Detects	0.178	Percent Non-Detects	84.82%
Mean Detects	0.806	SD Detects	0.422
Median Detects	0.752	CV Detects	0.524
Skewness Detects	1.269	Kurtosis Detects	1.659
Mean of Logged Detects	-0.335	SD of Logged Detects	0.506

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.385	KM Standard Error of Mean	0.0348
KM SD	0.28	95% KM (BCA) UCL	0.459
95% KM (t) UCL	0.443	95% KM (Percentile Bootstrap) UCL	0.45
95% KM (z) UCL	0.443	95% KM Bootstrap t UCL	0.446
90% KM Chebyshev UCL	0.49	95% KM Chebyshev UCL	0.537
97.5% KM Chebyshev UCL	0.603	99% KM Chebyshev UCL	0.732

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.238	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.121	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.21	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.324	k star (bias corrected MLE)	3.6
Theta hat (MLE)	0.186	Theta star (bias corrected MLE)	0.224
nu hat (MLE)	147	nu star (bias corrected)	122.4
Mean (detects)	0.806		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.17
Maximum	1.88	Median	0.0627
SD	0.32	CV	1.882
k hat (MLE)	0.53	k star (bias corrected MLE)	0.521
Theta hat (MLE)	0.321	Theta star (bias corrected MLE)	0.326
nu hat (MLE)	118.6	nu star (bias corrected)	116.8
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (116.77, α)	92.82	Adjusted Chi Square Value (116.77, β)	92.54
95% Gamma Approximate UCL (use when n>=50)	0.214	95% Gamma Adjusted UCL (use when n<50)	0.215

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.385	SD (KM)	0.28
Variance (KM)	0.0783	SE of Mean (KM)	0.0348
k hat (KM)	1.896	k star (KM)	1.852

nu hat (KM)	424.8	nu star (KM)	414.8
theta hat (KM)	0.203	theta star (KM)	0.208
80% gamma percentile (KM)	0.582	90% gamma percentile (KM)	0.763
95% gamma percentile (KM)	0.937	99% gamma percentile (KM)	1.324

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (414.75, α)	368.5	Adjusted Chi Square Value (414.75, β)	368
95% Gamma Approximate KM-UCL (use when n>=50)	0.434	95% Gamma Adjusted KM-UCL (use when n<50)	0.434

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.321	Mean in Log Scale	-1.298
SD in Original Scale	0.264	SD in Log Scale	0.481
95% t UCL (assumes normality of ROS data)	0.362	95% Percentile Bootstrap UCL	0.363
95% BCA Bootstrap UCL	0.375	95% Bootstrap t UCL	0.377
95% H-UCL (Log ROS)	0.333		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.114	KM Geo Mean	0.328
KM SD (logged)	0.509	95% Critical H Value (KM-Log)	1.84
KM Standard Error of Mean (logged)	0.076	95% H-UCL (KM -Log)	0.408
KM SD (logged)	0.509	95% Critical H Value (KM-Log)	1.84
KM Standard Error of Mean (logged)	0.076		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.48	Mean in Log Scale	-0.885
SD in Original Scale	0.287	SD in Log Scale	0.551
95% t UCL (Assumes normality)	0.524	95% H-Stat UCL	0.53

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.443

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	112	Number of Distinct Observations	102
Number of Detects	22	Number of Non-Detects	90
Number of Distinct Detects	22	Number of Distinct Non-Detects	82
Minimum Detect	0.372	Minimum Non-Detect	0.345
Maximum Detect	5.24	Maximum Non-Detect	11.3
Variance Detects	1.012	Percent Non-Detects	80.36%
Mean Detects	1.118	SD Detects	1.006
Median Detects	0.826	CV Detects	0.899
Skewness Detects	3.553	Kurtosis Detects	14.48
Mean of Logged Detects	-0.0896	SD of Logged Detects	0.578

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.583	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.24	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.184	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.58	KM Standard Error of Mean	0.0558
KM SD	0.531	95% KM (BCA) UCL	0.691
95% KM (t) UCL	0.672	95% KM (Percentile Bootstrap) UCL	0.671
95% KM (z) UCL	0.671	95% KM Bootstrap t UCL	0.72
90% KM Chebyshev UCL	0.747	95% KM Chebyshev UCL	0.823
97.5% KM Chebyshev UCL	0.928	99% KM Chebyshev UCL	1.135

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.996	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.752	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.147	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.187	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.636	k star (bias corrected MLE)	2.307
Theta hat (MLE)	0.424	Theta star (bias corrected MLE)	0.485
nu hat (MLE)	116	nu star (bias corrected)	101.5
Mean (detects)	1.118		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.235
Maximum	5.24	Median	0.01
SD	0.621	CV	2.638
k hat (MLE)	0.319	k star (bias corrected MLE)	0.317
Theta hat (MLE)	0.737	Theta star (bias corrected MLE)	0.743
nu hat (MLE)	71.54	nu star (bias corrected)	70.96
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (70.96, α)	52.56	Adjusted Chi Square Value (70.96, β)	52.36
95% Gamma Approximate UCL (use when n>=50)	0.318	95% Gamma Adjusted UCL (use when n<50)	0.319

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.58	SD (KM)	0.531
Variance (KM)	0.282	SE of Mean (KM)	0.0558
k hat (KM)	1.191	k star (KM)	1.165

nu hat (KM)	266.8	nu star (KM)	261
theta hat (KM)	0.487	theta star (KM)	0.498
80% gamma percentile (KM)	0.92	90% gamma percentile (KM)	1.285
95% gamma percentile (KM)	1.646	99% gamma percentile (KM)	2.474

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (260.96, α)	224.6	Adjusted Chi Square Value (260.96, β)	224.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.674	95% Gamma Adjusted KM-UCL (use when n<50)	0.675

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.911	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.113	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.184	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.472	Mean in Log Scale	-0.962
SD in Original Scale	0.545	SD in Log Scale	0.532
95% t UCL (assumes normality of ROS data)	0.558	95% Percentile Bootstrap UCL	0.569
95% BCA Bootstrap UCL	0.614	95% Bootstrap t UCL	0.634
95% H-UCL (Log ROS)	0.483		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.7	KM Geo Mean	0.497
KM SD (logged)	0.466	95% Critical H Value (KM-Log)	1.815
KM Standard Error of Mean (logged)	0.0627	95% H-UCL (KM -Log)	0.6
KM SD (logged)	0.466	95% Critical H Value (KM-Log)	1.815
KM Standard Error of Mean (logged)	0.0627		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.63	Mean in Log Scale	-0.691
SD in Original Scale	0.72	SD in Log Scale	0.575
95% t UCL (Assumes normality)	0.743	95% H-Stat UCL	0.655

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	0.674	95% GROS Approximate Gamma UCL	0.318

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	112	Number of Distinct Observations	97
Number of Detects	5	Number of Non-Detects	107
Number of Distinct Detects	5	Number of Distinct Non-Detects	93
Minimum Detect	0.556	Minimum Non-Detect	0.373
Maximum Detect	1.13	Maximum Non-Detect	3.18
Variance Detects	0.0657	Percent Non-Detects	95.54%
Mean Detects	0.928	SD Detects	0.256
Median Detects	1.07	CV Detects	0.276
Skewness Detects	-0.935	Kurtosis Detects	-1.247
Mean of Logged Detects	-0.11	SD of Logged Detects	0.311

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.83	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.31	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.44	KM Standard Error of Mean	0.0315
KM SD	0.182	95% KM (BCA) UCL	0.514
95% KM (t) UCL	0.492	95% KM (Percentile Bootstrap) UCL	0.498
95% KM (z) UCL	0.491	95% KM Bootstrap t UCL	0.458
90% KM Chebyshev UCL	0.534	95% KM Chebyshev UCL	0.577
97.5% KM Chebyshev UCL	0.636	99% KM Chebyshev UCL	0.753

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.557	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.679	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.337	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.357	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	14.12	k star (bias corrected MLE)	5.782
Theta hat (MLE)	0.0657	Theta star (bias corrected MLE)	0.161
nu hat (MLE)	141.2	nu star (bias corrected)	57.82
Mean (detects)	0.928		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.222
Maximum	1.13	Median	0.19
SD	0.18	CV	0.808
k hat (MLE)	2.582	k star (bias corrected MLE)	2.518
Theta hat (MLE)	0.0861	Theta star (bias corrected MLE)	0.0882
nu hat (MLE)	578.3	nu star (bias corrected)	564.1
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (564.14, α)	510	Adjusted Chi Square Value (564.14, β)	509.4
95% Gamma Approximate UCL (use when n>=50)	0.246	95% Gamma Adjusted UCL (use when n<50)	0.246

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.44	SD (KM)	0.182
Variance (KM)	0.033	SE of Mean (KM)	0.0315
k hat (KM)	5.861	k star (KM)	5.71

nu hat (KM)	1313	nu star (KM)	1279
theta hat (KM)	0.075	theta star (KM)	0.077
80% gamma percentile (KM)	0.582	90% gamma percentile (KM)	0.686
95% gamma percentile (KM)	0.779	99% gamma percentile (KM)	0.976

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1197	Adjusted Chi Square Value (N/A, β)	1196
95% Gamma Approximate KM-UCL (use when n>=50)	0.47	95% Gamma Adjusted KM-UCL (use when n<50)	0.47

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.818	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.316	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.349	Mean in Log Scale	-1.097
SD in Original Scale	0.142	SD in Log Scale	0.258
95% t UCL (assumes normality of ROS data)	0.371	95% Percentile Bootstrap UCL	0.371
95% BCA Bootstrap UCL	0.377	95% Bootstrap t UCL	0.384
95% H-UCL (Log ROS)	0.36		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.874	KM Geo Mean	0.417
KM SD (logged)	0.286	95% Critical H Value (KM-Log)	1.731
KM Standard Error of Mean (logged)	0.0531	95% H-UCL (KM -Log)	0.456
KM SD (logged)	0.286	95% Critical H Value (KM-Log)	1.731
KM Standard Error of Mean (logged)	0.0531		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.631	Mean in Log Scale	-0.58
SD in Original Scale	0.306	SD in Log Scale	0.507
95% t UCL (Assumes normality)	0.679	95% H-Stat UCL	0.695

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.492

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	100
Number of Detects	8	Number of Non-Detects	104
Number of Distinct Detects	8	Number of Distinct Non-Detects	93
Minimum Detect	0.149	Minimum Non-Detect	0.255
Maximum Detect	1.76	Maximum Non-Detect	3.61
Variance Detects	0.249	Percent Non-Detects	92.86%
Mean Detects	0.689	SD Detects	0.499
Median Detects	0.514	CV Detects	0.724
Skewness Detects	1.672	Kurtosis Detects	2.982
Mean of Logged Detects	-0.584	SD of Logged Detects	0.711

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.79	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.354	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.241	KM Standard Error of Mean	0.0342
KM SD	0.222	95% KM (BCA) UCL	0.381
95% KM (t) UCL	0.298	95% KM (Percentile Bootstrap) UCL	0.362
95% KM (z) UCL	0.298	95% KM Bootstrap t UCL	0.296
90% KM Chebyshev UCL	0.344	95% KM Chebyshev UCL	0.39
97.5% KM Chebyshev UCL	0.455	99% KM Chebyshev UCL	0.582

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.624	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.723	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.294	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.297	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.522	k star (bias corrected MLE)	1.66
Theta hat (MLE)	0.273	Theta star (bias corrected MLE)	0.415
nu hat (MLE)	40.35	nu star (bias corrected)	26.56
Mean (detects)	0.689		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0902
Maximum	1.76	Median	0.0363
SD	0.214	CV	2.371
k hat (MLE)	0.678	k star (bias corrected MLE)	0.666
Theta hat (MLE)	0.133	Theta star (bias corrected MLE)	0.135
nu hat (MLE)	151.9	nu star (bias corrected)	149.2
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (149.20, α)	122	Adjusted Chi Square Value (149.20, β)	121.7
95% Gamma Approximate UCL (use when n>=50)	0.11	95% Gamma Adjusted UCL (use when n<50)	0.111

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.241	SD (KM)	0.222
Variance (KM)	0.0495	SE of Mean (KM)	0.0342
k hat (KM)	1.176	k star (KM)	1.151

nu hat (KM)	263.5	nu star (KM)	257.8
theta hat (KM)	0.205	theta star (KM)	0.21
80% gamma percentile (KM)	0.384	90% gamma percentile (KM)	0.537
95% gamma percentile (KM)	0.688	99% gamma percentile (KM)	1.036

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (257.80, α)	221.6	Adjusted Chi Square Value (257.80, β)	221.2
95% Gamma Approximate KM-UCL (use when n>=50)	0.281	95% Gamma Adjusted KM-UCL (use when n<50)	0.281

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.89	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.282	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.219	Mean in Log Scale	-1.633
SD in Original Scale	0.184	SD in Log Scale	0.379
95% t UCL (assumes normality of ROS data)	0.248	95% Percentile Bootstrap UCL	0.251
95% BCA Bootstrap UCL	0.262	95% Bootstrap t UCL	0.289
95% H-UCL (Log ROS)	0.224		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.63	KM Geo Mean	0.196
KM SD (logged)	0.553	95% Critical H Value (KM-Log)	1.866
KM Standard Error of Mean (logged)	0.103	95% H-UCL (KM -Log)	0.252
KM SD (logged)	0.553	95% Critical H Value (KM-Log)	1.866
KM Standard Error of Mean (logged)	0.103		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.46	Mean in Log Scale	-0.927
SD in Original Scale	0.286	SD in Log Scale	0.546
95% t UCL (Assumes normality)	0.505	95% H-Stat UCL	0.506

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	0.281	95% GROS Approximate Gamma UCL	0.11

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	112	Number of Distinct Observations	99
Number of Detects	95	Number of Non-Detects	17
Number of Distinct Detects	85	Number of Distinct Non-Detects	17
Minimum Detect	0.637	Minimum Non-Detect	0.804
Maximum Detect	12.9	Maximum Non-Detect	12.4
Variance Detects	4.453	Percent Non-Detects	15.18%
Mean Detects	3.104	SD Detects	2.11
Median Detects	2.51	CV Detects	0.68
Skewness Detects	1.859	Kurtosis Detects	5.126
Mean of Logged Detects	0.935	SD of Logged Detects	0.633

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.849	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	5.085E-14	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.144	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0911	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.812	KM Standard Error of Mean	0.198
KM SD	2.075	95% KM (BCA) UCL	3.119
95% KM (t) UCL	3.141	95% KM (Percentile Bootstrap) UCL	3.139
95% KM (z) UCL	3.138	95% KM Bootstrap t UCL	3.194
90% KM Chebyshev UCL	3.407	95% KM Chebyshev UCL	3.677
97.5% KM Chebyshev UCL	4.051	99% KM Chebyshev UCL	4.786

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.571	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.761	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0652	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.0927	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.68	k star (bias corrected MLE)	2.602
Theta hat (MLE)	1.158	Theta star (bias corrected MLE)	1.193
nu hat (MLE)	509.2	nu star (bias corrected)	494.5
Mean (detects)	3.104		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.754
Maximum	12.9	Median	2.285
SD	2.127	CV	0.772
k hat (MLE)	1.647	k star (bias corrected MLE)	1.609
Theta hat (MLE)	1.672	Theta star (bias corrected MLE)	1.712
nu hat (MLE)	369	nu star (bias corrected)	360.5
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (360.46, α)	317.5	Adjusted Chi Square Value (360.46, β)	316.9
95% Gamma Approximate UCL (use when n>=50)	3.127	95% Gamma Adjusted UCL (use when n<50)	3.132

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.812	SD (KM)	2.075
Variance (KM)	4.307	SE of Mean (KM)	0.198
k hat (KM)	1.835	k star (KM)	1.792

nu hat (KM)	411.1	nu star (KM)	401.5
theta hat (KM)	1.532	theta star (KM)	1.569
80% gamma percentile (KM)	4.264	90% gamma percentile (KM)	5.613
95% gamma percentile (KM)	6.908	99% gamma percentile (KM)	9.799

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (401.45, α)	356	Adjusted Chi Square Value (401.45, β)	355.5
95% Gamma Approximate KM-UCL (use when n>=50)	3.171	95% Gamma Adjusted KM-UCL (use when n<50)	3.176

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.98	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.549	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0557	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0911	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.805	Mean in Log Scale	0.802
SD in Original Scale	2.074	SD in Log Scale	0.677
95% t UCL (assumes normality of ROS data)	3.13	95% Percentile Bootstrap UCL	3.126
95% BCA Bootstrap UCL	3.156	95% Bootstrap t UCL	3.157
95% H-UCL (Log ROS)	3.18		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.799	KM Geo Mean	2.223
KM SD (logged)	0.686	95% Critical H Value (KM-Log)	1.957
KM Standard Error of Mean (logged)	0.0665	95% H-UCL (KM -Log)	3.194
KM SD (logged)	0.686	95% Critical H Value (KM-Log)	1.957
KM Standard Error of Mean (logged)	0.0665		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.809	Mean in Log Scale	0.766
SD in Original Scale	2.13	SD in Log Scale	0.758
95% t UCL (Assumes normality)	3.143	95% H-Stat UCL	3.313

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	3.171	95% GROS Approximate Gamma UCL	3.127

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	106
Number of Detects	92	Number of Non-Detects	20
Number of Distinct Detects	89	Number of Distinct Non-Detects	20
Minimum Detect	0.824	Minimum Non-Detect	1.09
Maximum Detect	44	Maximum Non-Detect	13.9
Variance Detects	36.32	Percent Non-Detects	17.86%
Mean Detects	6.071	SD Detects	6.027
Median Detects	4.3	CV Detects	0.993
Skewness Detects	3.475	Kurtosis Detects	17.67
Mean of Logged Detects	1.481	SD of Logged Detects	0.785

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.702	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0926	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.381	KM Standard Error of Mean	0.542
KM SD	5.677	95% KM (BCA) UCL	6.287
95% KM (t) UCL	6.28	95% KM (Percentile Bootstrap) UCL	6.307
95% KM (z) UCL	6.273	95% KM Bootstrap t UCL	6.591
90% KM Chebyshev UCL	7.008	95% KM Chebyshev UCL	7.745
97.5% KM Chebyshev UCL	8.768	99% KM Chebyshev UCL	10.78

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.212	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.769	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.121	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.0948	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.7	k star (bias corrected MLE)	1.652
Theta hat (MLE)	3.572	Theta star (bias corrected MLE)	3.676
nu hat (MLE)	312.8	nu star (bias corrected)	303.9
Mean (detects)	6.071		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	5.217
Maximum	44	Median	3.27
SD	5.782	CV	1.108
k hat (MLE)	0.873	k star (bias corrected MLE)	0.855
Theta hat (MLE)	5.977	Theta star (bias corrected MLE)	6.098
nu hat (MLE)	195.5	nu star (bias corrected)	191.6
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (191.61, α)	160.6	Adjusted Chi Square Value (191.61, β)	160.2
95% Gamma Approximate UCL (use when n>=50)	6.224	95% Gamma Adjusted UCL (use when n<50)	6.239

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.381	SD (KM)	5.677
Variance (KM)	32.23	SE of Mean (KM)	0.542
k hat (KM)	0.898	k star (KM)	0.88

nu hat (KM)	201.2	nu star (KM)	197.1
theta hat (KM)	5.99	theta star (KM)	6.114
80% gamma percentile (KM)	8.742	90% gamma percentile (KM)	12.78
95% gamma percentile (KM)	16.87	99% gamma percentile (KM)	26.44

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (197.14, α)	165.7	Adjusted Chi Square Value (197.14, β)	165.3
95% Gamma Approximate KM-UCL (use when n>=50)	6.403	95% Gamma Adjusted KM-UCL (use when n<50)	6.418

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.981	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.612	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0818	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0926	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.346	Mean in Log Scale	1.321
SD in Original Scale	5.689	SD in Log Scale	0.82
95% t UCL (assumes normality of ROS data)	6.238	95% Percentile Bootstrap UCL	6.294
95% BCA Bootstrap UCL	6.477	95% Bootstrap t UCL	6.414
95% H-UCL (Log ROS)	6.151		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.319	KM Geo Mean	3.738
KM SD (logged)	0.833	95% Critical H Value (KM-Log)	2.07
KM Standard Error of Mean (logged)	0.0816	95% H-UCL (KM -Log)	6.226
KM SD (logged)	0.833	95% Critical H Value (KM-Log)	2.07
KM Standard Error of Mean (logged)	0.0816		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.412	Mean in Log Scale	1.317
SD in Original Scale	5.689	SD in Log Scale	0.866
95% t UCL (Assumes normality)	6.304	95% H-Stat UCL	6.453

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	6.226

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	112	Number of Distinct Observations	100
Number of Detects	26	Number of Non-Detects	86
Number of Distinct Detects	26	Number of Distinct Non-Detects	78
Minimum Detect	0.366	Minimum Non-Detect	0.35
Maximum Detect	2.5	Maximum Non-Detect	13.1
Variance Detects	0.257	Percent Non-Detects	76.79%
Mean Detects	1.071	SD Detects	0.507
Median Detects	0.976	CV Detects	0.473
Skewness Detects	1.17	Kurtosis Detects	1.235
Mean of Logged Detects	-0.0308	SD of Logged Detects	0.453

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.619	KM Standard Error of Mean	0.0451
KM SD	0.384	95% KM (BCA) UCL	0.708
95% KM (t) UCL	0.693	95% KM (Percentile Bootstrap) UCL	0.7
95% KM (z) UCL	0.693	95% KM Bootstrap t UCL	0.702
90% KM Chebyshev UCL	0.754	95% KM Chebyshev UCL	0.815
97.5% KM Chebyshev UCL	0.9	99% KM Chebyshev UCL	1.067

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.355	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.13	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.172	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.186	k star (bias corrected MLE)	4.613
Theta hat (MLE)	0.207	Theta star (bias corrected MLE)	0.232
nu hat (MLE)	269.6	nu star (bias corrected)	239.9
Mean (detects)	1.071		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.439
Maximum	2.5	Median	0.283
SD	0.437	CV	0.996
k hat (MLE)	1.369	k star (bias corrected MLE)	1.338
Theta hat (MLE)	0.321	Theta star (bias corrected MLE)	0.328
nu hat (MLE)	306.6	nu star (bias corrected)	299.7
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (299.69, α)	260.6	Adjusted Chi Square Value (299.69, β)	260.1
95% Gamma Approximate UCL (use when n>=50)	0.505	95% Gamma Adjusted UCL (use when n<50)	0.506

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.619	SD (KM)	0.384
Variance (KM)	0.147	SE of Mean (KM)	0.0451
k hat (KM)	2.595	k star (KM)	2.531

nu hat (KM)	581.3	nu star (KM)	567
theta hat (KM)	0.238	theta star (KM)	0.244
80% gamma percentile (KM)	0.9	90% gamma percentile (KM)	1.139
95% gamma percentile (KM)	1.364	99% gamma percentile (KM)	1.857

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (567.01, α)	512.8	Adjusted Chi Square Value (567.01, β)	512.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.684	95% Gamma Adjusted KM-UCL (use when n<50)	0.685

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.17	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.567	Mean in Log Scale	-0.694
SD in Original Scale	0.373	SD in Log Scale	0.45
95% t UCL (assumes normality of ROS data)	0.625	95% Percentile Bootstrap UCL	0.624
95% BCA Bootstrap UCL	0.636	95% Bootstrap t UCL	0.642
95% H-UCL (Log ROS)	0.597		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.614	KM Geo Mean	0.541
KM SD (logged)	0.481	95% Critical H Value (KM-Log)	1.823
KM Standard Error of Mean (logged)	0.068	95% H-UCL (KM -Log)	0.66
KM SD (logged)	0.481	95% Critical H Value (KM-Log)	1.823
KM Standard Error of Mean (logged)	0.068		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.671	Mean in Log Scale	-0.601
SD in Original Scale	0.68	SD in Log Scale	0.557
95% t UCL (Assumes normality)	0.777	95% H-Stat UCL	0.707

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	0.684	95% GROS Approximate Gamma UCL	0.505

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	99
Number of Detects	62	Number of Non-Detects	50
Number of Distinct Detects	54	Number of Distinct Non-Detects	49
Minimum Detect	0.451	Minimum Non-Detect	0.297
Maximum Detect	8.01	Maximum Non-Detect	2.34
Variance Detects	2.07	Percent Non-Detects	44.64%
Mean Detects	1.933	SD Detects	1.439
Median Detects	1.575	CV Detects	0.744
Skewness Detects	2.585	Kurtosis Detects	7.913
Mean of Logged Detects	0.475	SD of Logged Detects	0.575

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.726	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	3.886E-15	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.112	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.284	KM Standard Error of Mean	0.126
KM SD	1.298	95% KM (BCA) UCL	1.542
95% KM (t) UCL	1.493	95% KM (Percentile Bootstrap) UCL	1.511
95% KM (z) UCL	1.491	95% KM Bootstrap t UCL	1.526
90% KM Chebyshev UCL	1.661	95% KM Chebyshev UCL	1.832
97.5% KM Chebyshev UCL	2.069	99% KM Chebyshev UCL	2.534

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.699	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.759	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.149	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.114	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.88	k star (bias corrected MLE)	2.752
Theta hat (MLE)	0.671	Theta star (bias corrected MLE)	0.702
nu hat (MLE)	357.2	nu star (bias corrected)	341.2
Mean (detects)	1.933		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.095
Maximum	8.01	Median	0.876
SD	1.421	CV	1.298
k hat (MLE)	0.418	k star (bias corrected MLE)	0.413
Theta hat (MLE)	2.618	Theta star (bias corrected MLE)	2.651
nu hat (MLE)	93.72	nu star (bias corrected)	92.54
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (92.54, α)	71.35	Adjusted Chi Square Value (92.54, β)	71.11
95% Gamma Approximate UCL (use when n>=50)	1.42	95% Gamma Adjusted UCL (use when n<50)	1.425

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.284	SD (KM)	1.298
Variance (KM)	1.684	SE of Mean (KM)	0.126
k hat (KM)	0.98	k star (KM)	0.959

nu hat (KM)	219.4	nu star (KM)	214.9
theta hat (KM)	1.311	theta star (KM)	1.339
80% gamma percentile (KM)	2.074	90% gamma percentile (KM)	2.988
95% gamma percentile (KM)	3.905	99% gamma percentile (KM)	6.04

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (214.88, α)	182	Adjusted Chi Square Value (214.88, β)	181.6
95% Gamma Approximate KM-UCL (use when n>=50)	1.517	95% Gamma Adjusted KM-UCL (use when n<50)	1.52

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.963	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.145	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.112	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.295	Mean in Log Scale	-0.0531
SD in Original Scale	1.285	SD in Log Scale	0.743
95% t UCL (assumes normality of ROS data)	1.496	95% Percentile Bootstrap UCL	1.499
95% BCA Bootstrap UCL	1.533	95% Bootstrap t UCL	1.552
95% H-UCL (Log ROS)	1.439		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.119	KM Geo Mean	0.887
KM SD (logged)	0.845	95% Critical H Value (KM-Log)	2.08
KM Standard Error of Mean (logged)	0.0926	95% H-UCL (KM -Log)	1.499
KM SD (logged)	0.845	95% Critical H Value (KM-Log)	2.08
KM Standard Error of Mean (logged)	0.0926		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.282	Mean in Log Scale	-0.109
SD in Original Scale	1.299	SD in Log Scale	0.83
95% t UCL (Assumes normality)	1.485	95% H-Stat UCL	1.489

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	1.499

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	112	Number of Distinct Observations	101
Number of Detects	1	Number of Non-Detects	111
Number of Distinct Detects	1	Number of Distinct Non-Detects	100

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable 1,2,3,7,8,9-HxCDF was not processed!

PCB-114

General Statistics

Total Number of Observations	112	Number of Distinct Observations	106
Number of Detects	93	Number of Non-Detects	19
Number of Distinct Detects	88	Number of Distinct Non-Detects	19
Minimum Detect	0.794	Minimum Non-Detect	0.415
Maximum Detect	12.4	Maximum Non-Detect	11.2
Variance Detects	4.343	Percent Non-Detects	16.96%
Mean Detects	3.311	SD Detects	2.084
Median Detects	2.74	CV Detects	0.629
Skewness Detects	1.75	Kurtosis Detects	4.067
Mean of Logged Detects	1.032	SD of Logged Detects	0.568

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.844	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	2.975E-14	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0921	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.915	KM Standard Error of Mean	0.205
KM SD	2.137	95% KM (BCA) UCL	3.269
95% KM (t) UCL	3.256	95% KM (Percentile Bootstrap) UCL	3.264
95% KM (z) UCL	3.253	95% KM Bootstrap t UCL	3.272
90% KM Chebyshev UCL	3.531	95% KM Chebyshev UCL	3.81
97.5% KM Chebyshev UCL	4.197	99% KM Chebyshev UCL	4.958

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.244	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.0934	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.187	k star (bias corrected MLE)	3.091
Theta hat (MLE)	1.039	Theta star (bias corrected MLE)	1.071
nu hat (MLE)	592.7	nu star (bias corrected)	574.9
Mean (detects)	3.311		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.151	Mean	2.874

Maximum	12.4	Median	2.319
SD	2.164	CV	0.753
k hat (MLE)	1.502	k star (bias corrected MLE)	1.468
Theta hat (MLE)	1.913	Theta star (bias corrected MLE)	1.957
nu hat (MLE)	336.6	nu star (bias corrected)	328.9
Adjusted Level of Significance (β)	0.0479		
Approximate Chi Square Value (328.88, α)	287.9	Adjusted Chi Square Value (328.88, β)	287.4
95% Gamma Approximate UCL (use when n>=50)	3.283	95% Gamma Adjusted UCL (use when n<50)	3.289

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.915	SD (KM)	2.137
Variance (KM)	4.566	SE of Mean (KM)	0.205
k hat (KM)	1.861	k star (KM)	1.817
nu hat (KM)	416.9	nu star (KM)	407.1
theta hat (KM)	1.566	theta star (KM)	1.604
80% gamma percentile (KM)	4.414	90% gamma percentile (KM)	5.8
95% gamma percentile (KM)	7.129	99% gamma percentile (KM)	10.1

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (407.09, α)	361.3	Adjusted Chi Square Value (407.09, β)	360.8
95% Gamma Approximate KM-UCL (use when n>=50)	3.284	95% Gamma Adjusted KM-UCL (use when n<50)	3.29

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.117	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0951	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0921	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.95	Mean in Log Scale	0.869
SD in Original Scale	2.074	SD in Log Scale	0.656
95% t UCL (assumes normality of ROS data)	3.275	95% Percentile Bootstrap UCL	3.282
95% BCA Bootstrap UCL	3.297	95% Bootstrap t UCL	3.32
95% H-UCL (Log ROS)	3.333		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.786	KM Geo Mean	2.194
KM SD (logged)	0.815	95% Critical H Value (KM-Log)	2.056
KM Standard Error of Mean (logged)	0.0794	95% H-UCL (KM -Log)	3.586
KM SD (logged)	0.815	95% Critical H Value (KM-Log)	2.056
KM Standard Error of Mean (logged)	0.0794		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.945	Mean in Log Scale	0.783
SD in Original Scale	2.149	SD in Log Scale	0.862
95% t UCL (Assumes normality)	3.282	95% H-Stat UCL	3.765

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 3.586

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.111/20/18 10:58:22 AM
From File	SV_InputFile16_KMTEQ_wide_flag1_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	99	Number of Distinct Observations	99
		Number of Missing Observations	13
Minimum	7.9838E-7	Mean	2.2179E-6
Maximum	7.3016E-6	Median	1.8474E-6
SD	1.2870E-6	Std. Error of Mean	1.2935E-7
Coefficient of Variation	N/A	Skewness	1.812

Normal GOF Test

Shapiro Wilk Test Statistic	0.822	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0893	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.4327E-6	95% Adjusted-CLT UCL (Chen-1995)	2.4558E-6
		95% Modified-t UCL (Johnson-1978)	2.4366E-6

Gamma GOF Test

A-D Test Statistic	1.557	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0937	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.0903	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.935	k star (bias corrected MLE)	3.823
Theta hat (MLE)	5.6362E-7	Theta star (bias corrected MLE)	5.8021E-7
nu hat (MLE)	779.1	nu star (bias corrected)	756.9
MLE Mean (bias corrected)	2.2179E-6	MLE Sd (bias corrected)	1.1344E-6
		Approximate Chi Square Value (0.05)	694
Adjusted Level of Significance	0.0476	Adjusted Chi Square Value	693.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.4187E-6	95% Adjusted Gamma UCL (use when n<50)	2.4218E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.0243	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0668	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.0893	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.04	Mean of logged Data	-13.15
Maximum of Logged Data	-11.83	SD of logged Data	0.499

Assuming Lognormal Distribution

95% H-UCL	2.4155E-6	90% Chebyshev (MVUE) UCL	2.5458E-6
95% Chebyshev (MVUE) UCL	2.7037E-6	97.5% Chebyshev (MVUE) UCL	2.9230E-6
99% Chebyshev (MVUE) UCL	3.3535E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.4306E-6	95% Jackknife UCL	2.4327E-6
95% Standard Bootstrap UCL	2.4284E-6	95% Bootstrap-t UCL	2.4680E-6
95% Hall's Bootstrap UCL	2.4598E-6	95% Percentile Bootstrap UCL	2.4347E-6
95% BCA Bootstrap UCL	2.4668E-6		
90% Chebyshev(Mean, Sd) UCL	2.6059E-6	95% Chebyshev(Mean, Sd) UCL	2.7817E-6
97.5% Chebyshev(Mean, Sd) UCL	3.0257E-6	99% Chebyshev(Mean, Sd) UCL	3.5049E-6

Suggested UCL to Use

95% Student's-t UCL	2.4327E-6	or 95% Modified-t UCL	2.4366E-6
or 95% H-UCL	2.4155E-6		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

KM TEQ PCB

General Statistics

Total Number of Observations	111	Number of Distinct Observations	111
		Number of Missing Observations	1
Minimum	3.8192E-8	Mean	9.9840E-8
Maximum	5.5168E-7	Median	8.9352E-8
SD	5.7951E-8	Std. Error of Mean	5.5005E-9
Coefficient of Variation	N/A	Skewness	4.626

Normal GOF Test

Shapiro Wilk Test Statistic	0.683	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0844	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.0896E-7	95% Adjusted-CLT UCL (Chen-1995)	1.1147E-7
		95% Modified-t UCL (Johnson-1978)	1.0937E-7

Gamma GOF Test

A-D Test Statistic	1.522	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.0867	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.145	k star (bias corrected MLE)	5.012
Theta hat (MLE)	1.9405E-8	Theta star (bias corrected MLE)	1.9920E-8
nu hat (MLE)	1142	nu star (bias corrected)	1113
MLE Mean (bias corrected)	9.9840E-8	MLE Sd (bias corrected)	4.4596E-8
		Approximate Chi Square Value (0.05)	1036
Adjusted Level of Significance	0.0478	Adjusted Chi Square Value	1035

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.0720E-7	95% Adjusted Gamma UCL (use when n<50)	1.0730E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.12	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0726	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.0844	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.08	Mean of logged Data	-16.22
Maximum of Logged Data	-14.41	SD of logged Data	0.422

Assuming Lognormal Distribution

95% H-UCL	1.0608E-7	90% Chebyshev (MVUE) UCL	1.1095E-7
95% Chebyshev (MVUE) UCL	1.1653E-7	97.5% Chebyshev (MVUE) UCL	1.2427E-7
99% Chebyshev (MVUE) UCL	1.3949E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.0889E-7	95% Jackknife UCL	1.0896E-7
95% Standard Bootstrap UCL	1.0883E-7	95% Bootstrap-t UCL	1.1351E-7

95% Hall's Bootstrap UCL	1.2891E-7	95% Percentile Bootstrap UCL	1.0942E-7
95% BCA Bootstrap UCL	1.1273E-7		
90% Chebyshev(Mean, Sd) UCL	1.1634E-7	95% Chebyshev(Mean, Sd) UCL	1.2382E-7
97.5% Chebyshev(Mean, Sd) UCL	1.3419E-7	99% Chebyshev(Mean, Sd) UCL	1.5457E-7

Suggested UCL to Use

95% Student's-t UCL	1.0896E-7	or 95% Modified-t UCL	1.0937E-7
or 95% H-UCL	1.0608E-7		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.111/20/18 10:59:13 AM
From File	SV_InputFile15a_ndl_PCB_sum_flag1_sep.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000
Units pg/L	

Total Non-DL PCB

General Statistics

Total Number of Observations	112	Number of Distinct Observations	112
		Number of Missing Observations	0
Minimum	2277	Mean	6771
Maximum	15117	Median	6261
SD	2816	Std. Error of Mean	266.1
Coefficient of Variation	0.416	Skewness	0.802

Normal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	2.1511E-6	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.084	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7213	95% Adjusted-CLT UCL (Chen-1995)	7230
		95% Modified-t UCL (Johnson-1978)	7216

Gamma GOF Test

A-D Test Statistic	0.699	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0815	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.0865	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.135	k star (bias corrected MLE)	5.977
Theta hat (MLE)	1104	Theta star (bias corrected MLE)	1133
nu hat (MLE)	1374	nu star (bias corrected)	1339
MLE Mean (bias corrected)	6771	MLE Sd (bias corrected)	2770
		Approximate Chi Square Value (0.05)	1255
Adjusted Level of Significance	0.0479	Adjusted Chi Square Value	1254

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	7224	95% Adjusted Gamma UCL (use when n<50)	7230

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.158	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0649	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.084	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	7.731	Mean of logged Data	8.737
Maximum of Logged Data	9.624	SD of logged Data	0.413

Assuming Lognormal Distribution

95% H-UCL	7273	90% Chebyshev (MVUE) UCL	7599
95% Chebyshev (MVUE) UCL	7972	97.5% Chebyshev (MVUE) UCL	8490
99% Chebyshev (MVUE) UCL	9506		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7209	95% Jackknife UCL	7213
95% Standard Bootstrap UCL	7207	95% Bootstrap-t UCL	7245
95% Hall's Bootstrap UCL	7240	95% Percentile Bootstrap UCL	7208
95% BCA Bootstrap UCL	7251		
90% Chebyshev(Mean, Sd) UCL	7570	95% Chebyshev(Mean, Sd) UCL	7931
97.5% Chebyshev(Mean, Sd) UCL	8433	99% Chebyshev(Mean, Sd) UCL	9419

Suggested UCL to Use

95% Approximate Gamma UCL 7224

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.111/13/18 1:40:32 PM
From File	SV_InputFile10_ndl_other_wide_flag1_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Units pg/L

Aldrin

General Statistics

Total Number of Observations	73	Number of Distinct Observations	46
		Number of Missing Observations	39
Number of Detects	7	Number of Non-Detects	66
Number of Distinct Detects	7	Number of Distinct Non-Detects	40
Minimum Detect	8.7	Minimum Non-Detect	3.98
Maximum Detect	40	Maximum Non-Detect	410
Variance Detects	102.3	Percent Non-Detects	90.41%
Mean Detects	19.54	SD Detects	10.12
Median Detects	19	CV Detects	0.518
Skewness Detects	1.502	Kurtosis Detects	3.257
Mean of Logged Detects	2.868	SD of Logged Detects	0.489

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.839	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.3	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.273	KM Standard Error of Mean	1.327
KM SD	7.277	95% KM (BCA) UCL	10.05
95% KM (t) UCL	9.484	95% KM (Percentile Bootstrap) UCL	9.741
95% KM (z) UCL	9.455	95% KM Bootstrap t UCL	9.397
90% KM Chebyshev UCL	11.25	95% KM Chebyshev UCL	13.06
97.5% KM Chebyshev UCL	15.56	99% KM Chebyshev UCL	20.48

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.424	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.71	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.235	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.313	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.961	k star (bias corrected MLE)	2.93
Theta hat (MLE)	3.94	Theta star (bias corrected MLE)	6.67
nu hat (MLE)	69.45	nu star (bias corrected)	41.02
Mean (detects)	19.54		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.228
Maximum	40	Median	0.01
SD	7.264	CV	2.251
k hat (MLE)	0.186	k star (bias corrected MLE)	0.188

Theta hat (MLE)	17.32	Theta star (bias corrected MLE)	17.18
nu hat (MLE)	27.21	nu star (bias corrected)	27.43
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (27.43, α)	16.48	Adjusted Chi Square Value (27.43, β)	16.31
95% Gamma Approximate UCL (use when n>=50)	5.371	95% Gamma Adjusted UCL (use when n<50)	5.427

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.273	SD (KM)	7.277
Variance (KM)	52.96	SE of Mean (KM)	1.327
k hat (KM)	0.999	k star (KM)	0.967
nu hat (KM)	145.8	nu star (KM)	141.2
theta hat (KM)	7.282	theta star (KM)	7.522
80% gamma percentile (KM)	11.74	90% gamma percentile (KM)	16.89
95% gamma percentile (KM)	22.05	99% gamma percentile (KM)	34.07

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (141.15, α)	114.7	Adjusted Chi Square Value (141.15, β)	114.2
95% Gamma Approximate KM-UCL (use when n>=50)	8.95	95% Gamma Adjusted KM-UCL (use when n<50)	8.987

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.232	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.324	Mean in Log Scale	1.59
SD in Original Scale	6.042	SD in Log Scale	0.651
95% t UCL (assumes normality of ROS data)	7.502	95% Percentile Bootstrap UCL	7.537
95% BCA Bootstrap UCL	7.879	95% Bootstrap t UCL	8.059
95% H-UCL (Log ROS)	7.04		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.717	KM Geo Mean	5.566
KM SD (logged)	0.628	95% Critical H Value (KM-Log)	1.937
KM Standard Error of Mean (logged)	0.123	95% H-UCL (KM -Log)	7.825
KM SD (logged)	0.628	95% Critical H Value (KM-Log)	1.937
KM Standard Error of Mean (logged)	0.123		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	85.48	Mean in Log Scale	3.353
SD in Original Scale	91.54	SD in Log Scale	1.717
95% t UCL (Assumes normality)	103.3	95% H-Stat UCL	231.5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 9.484

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benz(a)anthracene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	60
		Number of Missing Observations	38
Number of Detects	56	Number of Non-Detects	18
Number of Distinct Detects	56	Number of Distinct Non-Detects	4
Minimum Detect	2440	Minimum Non-Detect	10000
Maximum Detect	42000	Maximum Non-Detect	200000
Variance Detects	62016334	Percent Non-Detects	24.32%
Mean Detects	8896	SD Detects	7875
Median Detects	5900	CV Detects	0.885
Skewness Detects	2.631	Kurtosis Detects	7.482
Mean of Logged Detects	8.857	SD of Logged Detects	0.633

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.677	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	2.109E-15	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.244	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.118	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8133	KM Standard Error of Mean	840.2
KM SD	7034	95% KM (BCA) UCL	9645
95% KM (t) UCL	9533	95% KM (Percentile Bootstrap) UCL	9558
95% KM (z) UCL	9515	95% KM Bootstrap t UCL	10096
90% KM Chebyshev UCL	10654	95% KM Chebyshev UCL	11795
97.5% KM Chebyshev UCL	13380	99% KM Chebyshev UCL	16493

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.697	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.761	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.194	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.12	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.265	k star (bias corrected MLE)	2.156
Theta hat (MLE)	3927	Theta star (bias corrected MLE)	4126
nu hat (MLE)	253.7	nu star (bias corrected)	241.5
Mean (detects)	8896		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	8120
Maximum	42000	Median	5854
SD	7165	CV	0.882
k hat (MLE)	1.383	k star (bias corrected MLE)	1.336
Theta hat (MLE)	5873	Theta star (bias corrected MLE)	6080
nu hat (MLE)	204.6	nu star (bias corrected)	197.7
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (197.68, α)	166.1	Adjusted Chi Square Value (197.68, β)	165.6
95% Gamma Approximate UCL (use when n>=50)	9661	95% Gamma Adjusted UCL (use when n<50)	9695

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8133	SD (KM)	7034
Variance (KM)	49474087	SE of Mean (KM)	840.2

k hat (KM)	1.337	k star (KM)	1.292
nu hat (KM)	197.9	nu star (KM)	191.2
theta hat (KM)	6083	theta star (KM)	6296
80% gamma percentile (KM)	12784	90% gamma percentile (KM)	17580
95% gamma percentile (KM)	22285	99% gamma percentile (KM)	33016

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (191.18, α)	160.2	Adjusted Chi Square Value (191.18, β)	159.6
95% Gamma Approximate KM-UCL (use when n>=50)	9706	95% Gamma Adjusted KM-UCL (use when n<50)	9740

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.924	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0018	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.118	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8197	Mean in Log Scale	8.803
SD in Original Scale	7025	SD in Log Scale	0.589
95% t UCL (assumes normality of ROS data)	9558	95% Percentile Bootstrap UCL	9589
95% BCA Bootstrap UCL	9867	95% Bootstrap t UCL	10118
95% H-UCL (Log ROS)	9027		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	8.792	KM Geo Mean	6580
KM SD (logged)	0.585	95% Critical H Value (KM-Log)	1.909
KM Standard Error of Mean (logged)	0.0727	95% H-UCL (KM -Log)	8901
KM SD (logged)	0.585	95% Critical H Value (KM-Log)	1.909
KM Standard Error of Mean (logged)	0.0727		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9257	Mean in Log Scale	8.819
SD in Original Scale	12793	SD in Log Scale	0.65
95% t UCL (Assumes normality)	11735	95% H-Stat UCL	9689

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 11795

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benzo(a)pyrene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	48
		Number of Missing Observations	38
Number of Detects	46	Number of Non-Detects	28
Number of Distinct Detects	42	Number of Distinct Non-Detects	8
Minimum Detect	3790	Minimum Non-Detect	10000
Maximum Detect	57400	Maximum Non-Detect	200000
Variance Detects	1.092E+8	Percent Non-Detects	37.84%
Mean Detects	12917	SD Detects	10451
Median Detects	9040	CV Detects	0.809
Skewness Detects	2.476	Kurtosis Detects	7.481
Mean of Logged Detects	9.244	SD of Logged Detects	0.637

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.74	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.945	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.129	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	10555	KM Standard Error of Mean	1057
KM SD	8825	95% KM (BCA) UCL	12413
95% KM (t) UCL	12316	95% KM (Percentile Bootstrap) UCL	12387
95% KM (z) UCL	12293	95% KM Bootstrap t UCL	13009
90% KM Chebyshev UCL	13726	95% KM Chebyshev UCL	15162
97.5% KM Chebyshev UCL	17155	99% KM Chebyshev UCL	21071

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.186	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.759	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.147	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.132	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.404	k star (bias corrected MLE)	2.262
Theta hat (MLE)	5373	Theta star (bias corrected MLE)	5711
nu hat (MLE)	221.2	nu star (bias corrected)	208.1
Mean (detects)	12917		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	10209
Maximum	57400	Median	7284
SD	9150	CV	0.896
k hat (MLE)	0.958	k star (bias corrected MLE)	0.928
Theta hat (MLE)	10655	Theta star (bias corrected MLE)	10998
nu hat (MLE)	141.8	nu star (bias corrected)	137.4
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (137.39, α)	111.3	Adjusted Chi Square Value (137.39, β)	110.8
95% Gamma Approximate UCL (use when n>=50)	12602	95% Gamma Adjusted UCL (use when n<50)	12654

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	10555	SD (KM)	8825
Variance (KM)	77882037	SE of Mean (KM)	1057

k hat (KM)	1.43	k star (KM)	1.381
nu hat (KM)	211.7	nu star (KM)	204.5
theta hat (KM)	7379	theta star (KM)	7640
80% gamma percentile (KM)	16476	90% gamma percentile (KM)	22442
95% gamma percentile (KM)	28268	99% gamma percentile (KM)	41494

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (204.46, α)	172.4	Adjusted Chi Square Value (204.46, β)	171.8
95% Gamma Approximate KM-UCL (use when n>=50)	12520	95% Gamma Adjusted KM-UCL (use when n<50)	12562

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.945	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.129	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	10670	Mean in Log Scale	9.075
SD in Original Scale	8800	SD in Log Scale	0.585
95% t UCL (assumes normality of ROS data)	12375	95% Percentile Bootstrap UCL	12439
95% BCA Bootstrap UCL	12663	95% Bootstrap t UCL	12880
95% H-UCL (Log ROS)	11817		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	9.062	KM Geo Mean	8621
KM SD (logged)	0.576	95% Critical H Value (KM-Log)	1.902
KM Standard Error of Mean (logged)	0.0729	95% H-UCL (KM -Log)	11566
KM SD (logged)	0.576	95% Critical H Value (KM-Log)	1.902
KM Standard Error of Mean (logged)	0.0729		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	11327	Mean in Log Scale	9.029
SD in Original Scale	13791	SD in Log Scale	0.669
95% t UCL (Assumes normality)	13998	95% H-Stat UCL	12178

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 11566

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	56
		Number of Missing Observations	38
Number of Detects	47	Number of Non-Detects	27
Number of Distinct Detects	46	Number of Distinct Non-Detects	13
Minimum Detect	5690	Minimum Non-Detect	10000
Maximum Detect	67900	Maximum Non-Detect	200000
Variance Detects	1.814E+8	Percent Non-Detects	36.49%
Mean Detects	17950	SD Detects	13468
Median Detects	12800	CV Detects	0.75
Skewness Detects	2.273	Kurtosis Detects	6.03
Mean of Logged Detects	9.598	SD of Logged Detects	0.602

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.748	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.946	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.128	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	14582	KM Standard Error of Mean	1389
KM SD	11664	95% KM (BCA) UCL	17132
95% KM (t) UCL	16896	95% KM (Percentile Bootstrap) UCL	17044
95% KM (z) UCL	16867	95% KM Bootstrap t UCL	17561
90% KM Chebyshev UCL	18749	95% KM Chebyshev UCL	20637
97.5% KM Chebyshev UCL	23257	99% KM Chebyshev UCL	28404

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.287	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.139	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.13	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.685	k star (bias corrected MLE)	2.528
Theta hat (MLE)	6684	Theta star (bias corrected MLE)	7100
nu hat (MLE)	252.4	nu star (bias corrected)	237.6
Mean (detects)	17950		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	13659
Maximum	67900	Median	9693
SD	12266	CV	0.898
k hat (MLE)	0.932	k star (bias corrected MLE)	0.904
Theta hat (MLE)	14649	Theta star (bias corrected MLE)	15116
nu hat (MLE)	138	nu star (bias corrected)	133.7
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (133.74, α)	108	Adjusted Chi Square Value (133.74, β)	107.6
95% Gamma Approximate UCL (use when n>=50)	16911	95% Gamma Adjusted UCL (use when n<50)	16983

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	14582	SD (KM)	11664
Variance (KM)	1.361E+8	SE of Mean (KM)	1389

k hat (KM)	1.563	k star (KM)	1.508
nu hat (KM)	231.3	nu star (KM)	223.2
theta hat (KM)	9331	theta star (KM)	9667
80% gamma percentile (KM)	22547	90% gamma percentile (KM)	30344
95% gamma percentile (KM)	37913	99% gamma percentile (KM)	54998

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (223.25, α)	189.7	Adjusted Chi Square Value (223.25, β)	189.1
95% Gamma Approximate KM-UCL (use when n>=50)	17163	95% Gamma Adjusted KM-UCL (use when n<50)	17219

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.941	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.946	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.117	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.128	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	14555	Mean in Log Scale	9.392
SD in Original Scale	11666	SD in Log Scale	0.574
95% t UCL (assumes normality of ROS data)	16814	95% Percentile Bootstrap UCL	16868
95% BCA Bootstrap UCL	17252	95% Bootstrap t UCL	17555
95% H-UCL (Log ROS)	16059		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	9.394	KM Geo Mean	12019
KM SD (logged)	0.563	95% Critical H Value (KM-Log)	1.894
KM Standard Error of Mean (logged)	0.0692	95% H-UCL (KM -Log)	15955
KM SD (logged)	0.563	95% Critical H Value (KM-Log)	1.894
KM Standard Error of Mean (logged)	0.0692		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	14877	Mean in Log Scale	9.301
SD in Original Scale	15759	SD in Log Scale	0.713
95% t UCL (Assumes normality)	17929	95% H-Stat UCL	16671

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 15955

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benzo(k)fluoranthene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	51
		Number of Missing Observations	38
Number of Detects	51	Number of Non-Detects	23
Number of Distinct Detects	47	Number of Distinct Non-Detects	4
Minimum Detect	1980	Minimum Non-Detect	10000
Maximum Detect	29300	Maximum Non-Detect	200000
Variance Detects	32143589	Percent Non-Detects	31.08%
Mean Detects	7251	SD Detects	5670
Median Detects	4390	CV Detects	0.782
Skewness Detects	2.072	Kurtosis Detects	5.018
Mean of Logged Detects	8.664	SD of Logged Detects	0.647

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.773	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	5.083E-10	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.123	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6542	KM Standard Error of Mean	611.5
KM SD	4959	95% KM (BCA) UCL	7618
95% KM (t) UCL	7561	95% KM (Percentile Bootstrap) UCL	7667
95% KM (z) UCL	7548	95% KM Bootstrap t UCL	7769
90% KM Chebyshev UCL	8377	95% KM Chebyshev UCL	9208
97.5% KM Chebyshev UCL	10361	99% KM Chebyshev UCL	12627

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.533	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.761	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.197	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.126	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.376	k star (bias corrected MLE)	2.249
Theta hat (MLE)	3052	Theta star (bias corrected MLE)	3224
nu hat (MLE)	242.4	nu star (bias corrected)	229.4
Mean (detects)	7251		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	217.1	Mean	6536
Maximum	29300	Median	4904
SD	5050	CV	0.773
k hat (MLE)	2.173	k star (bias corrected MLE)	2.094
Theta hat (MLE)	3008	Theta star (bias corrected MLE)	3122
nu hat (MLE)	321.6	nu star (bias corrected)	309.9
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (309.87, α)	270.1	Adjusted Chi Square Value (309.87, β)	269.4
95% Gamma Approximate UCL (use when n>=50)	7499	95% Gamma Adjusted UCL (use when n<50)	7519

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6542	SD (KM)	4959
Variance (KM)	24596368	SE of Mean (KM)	611.5

k hat (KM)	1.74	k star (KM)	1.679
nu hat (KM)	257.6	nu star (KM)	248.4
theta hat (KM)	3760	theta star (KM)	3897
80% gamma percentile (KM)	9996	90% gamma percentile (KM)	13266
95% gamma percentile (KM)	16419	99% gamma percentile (KM)	23487

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (248.45, α)	213	Adjusted Chi Square Value (248.45, β)	212.3
95% Gamma Approximate KM-UCL (use when n>=50)	7633	95% Gamma Adjusted KM-UCL (use when n<50)	7656

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.942	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0225	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.176	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.123	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6561	Mean in Log Scale	8.595
SD in Original Scale	4927	SD in Log Scale	0.593
95% t UCL (assumes normality of ROS data)	7515	95% Percentile Bootstrap UCL	7508
95% BCA Bootstrap UCL	7704	95% Bootstrap t UCL	7806
95% H-UCL (Log ROS)	7360		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	8.586	KM Geo Mean	5357
KM SD (logged)	0.595	95% Critical H Value (KM-Log)	1.916
KM Standard Error of Mean (logged)	0.0781	95% H-UCL (KM -Log)	7306
KM SD (logged)	0.595	95% Critical H Value (KM-Log)	1.916
KM Standard Error of Mean (logged)	0.0781		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7855	Mean in Log Scale	8.662
SD in Original Scale	11872	SD in Log Scale	0.635
95% t UCL (Assumes normality)	10154	95% H-Stat UCL	8173

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	9208

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chrysene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	62
		Number of Missing Observations	38
Number of Detects	69	Number of Non-Detects	5
Number of Distinct Detects	60	Number of Distinct Non-Detects	2
Minimum Detect	6370	Minimum Non-Detect	10000
Maximum Detect	63900	Maximum Non-Detect	200000
Variance Detects	1.172E+8	Percent Non-Detects	6.757%
Mean Detects	15092	SD Detects	10824
Median Detects	12100	CV Detects	0.717
Skewness Detects	2.961	Kurtosis Detects	10.28
Mean of Logged Detects	9.47	SD of Logged Detects	0.502

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.666	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.107	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	14722	KM Standard Error of Mean	1245
KM SD	10561	95% KM (BCA) UCL	16859
95% KM (t) UCL	16797	95% KM (Percentile Bootstrap) UCL	16853
95% KM (z) UCL	16771	95% KM Bootstrap t UCL	17693
90% KM Chebyshev UCL	18459	95% KM Chebyshev UCL	20151
97.5% KM Chebyshev UCL	22500	99% KM Chebyshev UCL	27115

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.081	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.757	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.165	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.108	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.451	k star (bias corrected MLE)	3.311
Theta hat (MLE)	4373	Theta star (bias corrected MLE)	4559
nu hat (MLE)	476.2	nu star (bias corrected)	456.9
Mean (detects)	15092		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2763	Mean	14567
Maximum	63900	Median	11650
SD	10668	CV	0.732
k hat (MLE)	3.215	k star (bias corrected MLE)	3.093
Theta hat (MLE)	4532	Theta star (bias corrected MLE)	4709
nu hat (MLE)	475.8	nu star (bias corrected)	457.8
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (457.80, α)	409.2	Adjusted Chi Square Value (457.80, β)	408.3
95% Gamma Approximate UCL (use when n>=50)	16297	95% Gamma Adjusted UCL (use when n<50)	16333

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	14722	SD (KM)	10561
Variance (KM)	1.115E+8	SE of Mean (KM)	1245

k hat (KM)	1.943	k star (KM)	1.873
nu hat (KM)	287.6	nu star (KM)	277.3
theta hat (KM)	7576	theta star (KM)	7858
80% gamma percentile (KM)	22211	90% gamma percentile (KM)	29078
95% gamma percentile (KM)	35655	99% gamma percentile (KM)	50299

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (277.27, α)	239.7	Adjusted Chi Square Value (277.27, β)	239
95% Gamma Approximate KM-UCL (use when n>=50)	17029	95% Gamma Adjusted KM-UCL (use when n<50)	17078

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.902	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	8.7459E-6	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.107	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	14684	Mean in Log Scale	9.444
SD in Original Scale	10572	SD in Log Scale	0.499
95% t UCL (assumes normality of ROS data)	16732	95% Percentile Bootstrap UCL	16736
95% BCA Bootstrap UCL	17250	95% Bootstrap t UCL	17455
95% H-UCL (Log ROS)	15937		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	9.446	KM Geo Mean	12652
KM SD (logged)	0.496	95% Critical H Value (KM-Log)	1.851
KM Standard Error of Mean (logged)	0.0586	95% H-UCL (KM -Log)	15935
KM SD (logged)	0.496	95% Critical H Value (KM-Log)	1.851
KM Standard Error of Mean (logged)	0.0586		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	15694	Mean in Log Scale	9.446
SD in Original Scale	14598	SD in Log Scale	0.584
95% t UCL (Assumes normality)	18521	95% H-Stat UCL	17111

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 20151

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chloroform

General Statistics

Total Number of Observations	74	Number of Distinct Observations	8
		Number of Missing Observations	38
Number of Detects	27	Number of Non-Detects	47
Number of Distinct Detects	7	Number of Distinct Non-Detects	1
Minimum Detect	90000	Minimum Non-Detect	500000
Maximum Detect	160000	Maximum Non-Detect	500000
Variance Detects	2.641E+8	Percent Non-Detects	63.51%
Mean Detects	114444	SD Detects	16251
Median Detects	110000	CV Detects	0.142
Skewness Detects	0.949	Kurtosis Detects	0.853
Mean of Logged Detects	11.64	SD of Logged Detects	0.136

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.183	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	114444	KM Standard Error of Mean	3128
KM SD	15947	95% KM (BCA) UCL	119545
95% KM (t) UCL	119655	95% KM (Percentile Bootstrap) UCL	119655
95% KM (z) UCL	119589	95% KM Bootstrap t UCL	120714
90% KM Chebyshev UCL	123827	95% KM Chebyshev UCL	128077
97.5% KM Chebyshev UCL	133976	99% KM Chebyshev UCL	145563

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.96	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.743	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.194	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.168	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	54.68	k star (bias corrected MLE)	48.63
Theta hat (MLE)	2093	Theta star (bias corrected MLE)	2354
nu hat (MLE)	2953	nu star (bias corrected)	2626
Mean (detects)	114444		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	82287	Mean	114476
Maximum	160000	Median	112500
SD	15999	CV	0.14
k hat (MLE)	52.91	k star (bias corrected MLE)	50.78
Theta hat (MLE)	2163	Theta star (bias corrected MLE)	2254
nu hat (MLE)	7831	nu star (bias corrected)	7515
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (N/A, α)	7315	Adjusted Chi Square Value (N/A, β)	7311
95% Gamma Approximate UCL (use when n>=50)	117614	95% Gamma Adjusted UCL (use when n<50)	117677

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	114444	SD (KM)	15947
Variance (KM)	2.543E+8	SE of Mean (KM)	3128

k hat (KM)	51.5	k star (KM)	49.42
nu hat (KM)	7622	nu star (KM)	7314
theta hat (KM)	2222	theta star (KM)	2316
80% gamma percentile (KM)	127872	90% gamma percentile (KM)	135740
95% gamma percentile (KM)	142472	99% gamma percentile (KM)	155682

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	7117	Adjusted Chi Square Value (N/A, β)	7113
95% Gamma Approximate KM-UCL (use when n>=50)	117625	95% Gamma Adjusted KM-UCL (use when n<50)	117689

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	114423	Mean in Log Scale	11.64
SD in Original Scale	15630	SD in Log Scale	0.134
95% t UCL (assumes normality of ROS data)	117450	95% Percentile Bootstrap UCL	117423
95% BCA Bootstrap UCL	117396	95% Bootstrap t UCL	117519
95% H-UCL (Log ROS)	117502		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	11.64	KM Geo Mean	113399
KM SD (logged)	0.134	95% Critical H Value (KM-Log)	1.686
KM Standard Error of Mean (logged)	0.0262	95% H-UCL (KM -Log)	117477
KM SD (logged)	0.134	95% Critical H Value (KM-Log)	1.686
KM Standard Error of Mean (logged)	0.0262		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	200541	Mean in Log Scale	12.14
SD in Original Scale	66413	SD in Log Scale	0.392
95% t UCL (Assumes normality)	213403	95% H-Stat UCL	219613

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	119655	KM H-UCL	117477
95% KM (BCA) UCL	119545		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dibenz(a,h)anthracene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	43
		Number of Missing Observations	38
Number of Detects	43	Number of Non-Detects	31
Number of Distinct Detects	41	Number of Distinct Non-Detects	2
Minimum Detect	788	Minimum Non-Detect	10000
Maximum Detect	10500	Maximum Non-Detect	200000
Variance Detects	6055526	Percent Non-Detects	41.89%
Mean Detects	2475	SD Detects	2461
Median Detects	1570	CV Detects	0.994
Skewness Detects	2.289	Kurtosis Detects	4.518
Mean of Logged Detects	7.51	SD of Logged Detects	0.715

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.651	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.273	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2396	KM Standard Error of Mean	345.2
KM SD	2310	95% KM (BCA) UCL	2997
95% KM (t) UCL	2971	95% KM (Percentile Bootstrap) UCL	3016
95% KM (z) UCL	2964	95% KM Bootstrap t UCL	3176
90% KM Chebyshev UCL	3432	95% KM Chebyshev UCL	3901
97.5% KM Chebyshev UCL	4552	99% KM Chebyshev UCL	5831

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.555	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.763	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.193	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.137	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.795	k star (bias corrected MLE)	1.685
Theta hat (MLE)	1379	Theta star (bias corrected MLE)	1468
nu hat (MLE)	154.4	nu star (bias corrected)	144.9
Mean (detects)	2475		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2385
Maximum	10500	Median	1595
SD	2208	CV	0.926
k hat (MLE)	0.937	k star (bias corrected MLE)	0.908
Theta hat (MLE)	2545	Theta star (bias corrected MLE)	2626
nu hat (MLE)	138.7	nu star (bias corrected)	134.4
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (134.41, α)	108.6	Adjusted Chi Square Value (134.41, β)	108.2
95% Gamma Approximate UCL (use when n>=50)	2951	95% Gamma Adjusted UCL (use when n<50)	2964

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2396	SD (KM)	2310
Variance (KM)	5336224	SE of Mean (KM)	345.2

k hat (KM)	1.076	k star (KM)	1.041
nu hat (KM)	159.3	nu star (KM)	154.1
theta hat (KM)	2227	theta star (KM)	2301
80% gamma percentile (KM)	3844	90% gamma percentile (KM)	5463
95% gamma percentile (KM)	7076	99% gamma percentile (KM)	10813

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (154.13, α)	126.4	Adjusted Chi Square Value (154.13, β)	125.9
95% Gamma Approximate KM-UCL (use when n>=50)	2921	95% Gamma Adjusted KM-UCL (use when n<50)	2933

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.885	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.151	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2317	Mean in Log Scale	7.494
SD in Original Scale	2051	SD in Log Scale	0.671
95% t UCL (assumes normality of ROS data)	2714	95% Percentile Bootstrap UCL	2738
95% BCA Bootstrap UCL	2793	95% Bootstrap t UCL	2813
95% H-UCL (Log ROS)	2626		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	7.493	KM Geo Mean	1796
KM SD (logged)	0.689	95% Critical H Value (KM-Log)	1.979
KM Standard Error of Mean (logged)	0.105	95% H-UCL (KM -Log)	2669
KM SD (logged)	0.689	95% Critical H Value (KM-Log)	1.979
KM Standard Error of Mean (logged)	0.105		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4816	Mean in Log Scale	7.973
SD in Original Scale	11438	SD in Log Scale	0.845
95% t UCL (Assumes normality)	7032	95% H-Stat UCL	5107

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	3901

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	74	Number of Distinct Observations	53
		Number of Missing Observations	38
Number of Detects	71	Number of Non-Detects	3
Number of Distinct Detects	53	Number of Distinct Non-Detects	3
Minimum Detect	160	Minimum Non-Detect	200
Maximum Detect	987	Maximum Non-Detect	290
Variance Detects	28104	Percent Non-Detects	4.054%
Mean Detects	361.2	SD Detects	167.6
Median Detects	300	CV Detects	0.464
Skewness Detects	1.314	Kurtosis Detects	1.677
Mean of Logged Detects	5.797	SD of Logged Detects	0.42

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.87	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	3.1660E-8	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.105	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	354.8	KM Standard Error of Mean	19.46
KM SD	166.1	95% KM (BCA) UCL	386.9
95% KM (t) UCL	387.2	95% KM (Percentile Bootstrap) UCL	386.7
95% KM (z) UCL	386.8	95% KM Bootstrap t UCL	391.1
90% KM Chebyshev UCL	413.2	95% KM Chebyshev UCL	439.6
97.5% KM Chebyshev UCL	476.3	99% KM Chebyshev UCL	548.4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.57	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.754	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.119	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.106	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.604	k star (bias corrected MLE)	5.377
Theta hat (MLE)	64.44	Theta star (bias corrected MLE)	67.17
nu hat (MLE)	795.8	nu star (bias corrected)	763.5
Mean (detects)	361.2		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	113	Mean	353.6
Maximum	987	Median	292.5
SD	168.5	CV	0.477
k hat (MLE)	5.266	k star (bias corrected MLE)	5.061
Theta hat (MLE)	67.16	Theta star (bias corrected MLE)	69.87
nu hat (MLE)	779.3	nu star (bias corrected)	749.1
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (749.06, α)	686.5	Adjusted Chi Square Value (749.06, β)	685.4
95% Gamma Approximate UCL (use when n>=50)	385.8	95% Gamma Adjusted UCL (use when n<50)	386.5

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	354.8	SD (KM)	166.1
Variance (KM)	27599	SE of Mean (KM)	19.46

k hat (KM)	4.561	k star (KM)	4.385
nu hat (KM)	675	nu star (KM)	649
theta hat (KM)	77.79	theta star (KM)	80.91
80% gamma percentile (KM)	484	90% gamma percentile (KM)	581.8
95% gamma percentile (KM)	671.4	99% gamma percentile (KM)	862

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (648.96, α)	590.9	Adjusted Chi Square Value (648.96, β)	589.8
95% Gamma Approximate KM-UCL (use when n>=50)	389.7	95% Gamma Adjusted KM-UCL (use when n<50)	390.4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.95	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0154	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.105	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	354.6	Mean in Log Scale	5.776
SD in Original Scale	167.4	SD in Log Scale	0.426
95% t UCL (assumes normality of ROS data)	387	95% Percentile Bootstrap UCL	387.6
95% BCA Bootstrap UCL	390.4	95% Bootstrap t UCL	390.2
95% H-UCL (Log ROS)	386.6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.777	KM Geo Mean	322.9
KM SD (logged)	0.422	95% Critical H Value (KM-Log)	1.808
KM Standard Error of Mean (logged)	0.0495	95% H-UCL (KM -Log)	385.9
KM SD (logged)	0.422	95% Critical H Value (KM-Log)	1.808
KM Standard Error of Mean (logged)	0.0495		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	351.5	Mean in Log Scale	5.757
SD in Original Scale	170.9	SD in Log Scale	0.458
95% t UCL (Assumes normality)	384.6	95% H-Stat UCL	387.5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	366.2	KM H-UCL	385.9

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Indeno(1,2,3-c,d)-pyrene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	52
		Number of Missing Observations	38
Number of Detects	53	Number of Non-Detects	21
Number of Distinct Detects	48	Number of Distinct Non-Detects	4
Minimum Detect	2130	Minimum Non-Detect	10000
Maximum Detect	32700	Maximum Non-Detect	200000
Variance Detects	40892394	Percent Non-Detects	28.38%
Mean Detects	8248	SD Detects	6395
Median Detects	6290	CV Detects	0.775
Skewness Detects	1.789	Kurtosis Detects	3.783
Mean of Logged Detects	8.769	SD of Logged Detects	0.703

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.82	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	2.2089E-8	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.169	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.121	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7389	KM Standard Error of Mean	699.9
KM SD	5716	95% KM (BCA) UCL	8529
95% KM (t) UCL	8555	95% KM (Percentile Bootstrap) UCL	8657
95% KM (z) UCL	8540	95% KM Bootstrap t UCL	8714
90% KM Chebyshev UCL	9488	95% KM Chebyshev UCL	10439
97.5% KM Chebyshev UCL	11759	99% KM Chebyshev UCL	14353

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.823	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.762	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.11	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.124	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.161	k star (bias corrected MLE)	2.051
Theta hat (MLE)	3818	Theta star (bias corrected MLE)	4022
nu hat (MLE)	229	nu star (bias corrected)	217.4
Mean (detects)	8248		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	158.2	Mean	7337
Maximum	32700	Median	5905
SD	5786	CV	0.789
k hat (MLE)	1.942	k star (bias corrected MLE)	1.872
Theta hat (MLE)	3778	Theta star (bias corrected MLE)	3918
nu hat (MLE)	287.4	nu star (bias corrected)	277.1
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (277.11, α)	239.6	Adjusted Chi Square Value (277.11, β)	238.9
95% Gamma Approximate UCL (use when n>=50)	8487	95% Gamma Adjusted UCL (use when n<50)	8511

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7389	SD (KM)	5716
Variance (KM)	32670577	SE of Mean (KM)	699.9

k hat (KM)	1.671	k star (KM)	1.612
nu hat (KM)	247.3	nu star (KM)	238.6
theta hat (KM)	4422	theta star (KM)	4583
80% gamma percentile (KM)	11341	90% gamma percentile (KM)	15129
95% gamma percentile (KM)	18790	99% gamma percentile (KM)	27021

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (238.61, α)	203.8	Adjusted Chi Square Value (238.61, β)	203.2
95% Gamma Approximate KM-UCL (use when n>=50)	8648	95% Gamma Adjusted KM-UCL (use when n<50)	8675

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0.0706	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0896	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.121	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7367	Mean in Log Scale	8.681
SD in Original Scale	5683	SD in Log Scale	0.652
95% t UCL (assumes normality of ROS data)	8468	95% Percentile Bootstrap UCL	8537
95% BCA Bootstrap UCL	8622	95% Bootstrap t UCL	8749
95% H-UCL (Log ROS)	8457		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	8.676	KM Geo Mean	5858
KM SD (logged)	0.66	95% Critical H Value (KM-Log)	1.959
KM Standard Error of Mean (logged)	0.0859	95% H-UCL (KM -Log)	8475
KM SD (logged)	0.66	95% Critical H Value (KM-Log)	1.959
KM Standard Error of Mean (logged)	0.0859		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8621	Mean in Log Scale	8.74
SD in Original Scale	12130	SD in Log Scale	0.686
95% t UCL (Assumes normality)	10970	95% H-Stat UCL	9265

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	8648	95% GROS Approximate Gamma UCL	8487

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Naphthalene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	37
		Number of Missing Observations	38
Number of Detects	35	Number of Non-Detects	39
Number of Distinct Detects	34	Number of Distinct Non-Detects	3
Minimum Detect	16000	Minimum Non-Detect	50000
Maximum Detect	57400	Maximum Non-Detect	200000
Variance Detects	1.850E+8	Percent Non-Detects	52.7%
Mean Detects	34217	SD Detects	13603
Median Detects	34900	CV Detects	0.398
Skewness Detects	0.0843	Kurtosis Detects	-1.328
Mean of Logged Detects	10.35	SD of Logged Detects	0.435

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	32105	KM Standard Error of Mean	2035
KM SD	12330	95% KM (BCA) UCL	35441
95% KM (t) UCL	35495	95% KM (Percentile Bootstrap) UCL	35533
95% KM (z) UCL	35452	95% KM Bootstrap t UCL	35470
90% KM Chebyshev UCL	38209	95% KM Chebyshev UCL	40974
97.5% KM Chebyshev UCL	44812	99% KM Chebyshev UCL	52350

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.058	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.749	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.137	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.149	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.96	k star (bias corrected MLE)	5.468
Theta hat (MLE)	5741	Theta star (bias corrected MLE)	6257
nu hat (MLE)	417.2	nu star (bias corrected)	382.8
Mean (detects)	34217		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	13387	Mean	31803
Maximum	57400	Median	30867
SD	11402	CV	0.359
k hat (MLE)	7.663	k star (bias corrected MLE)	7.362
Theta hat (MLE)	4150	Theta star (bias corrected MLE)	4320
nu hat (MLE)	1134	nu star (bias corrected)	1090
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (N/A, α)	1014	Adjusted Chi Square Value (N/A, β)	1012
95% Gamma Approximate UCL (use when n>=50)	34175	95% Gamma Adjusted UCL (use when n<50)	34224

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	32105	SD (KM)	12330
Variance (KM)	1.520E+8	SE of Mean (KM)	2035

k hat (KM)	6.779	k star (KM)	6.514
nu hat (KM)	1003	nu star (KM)	964
theta hat (KM)	4736	theta star (KM)	4929
80% gamma percentile (KM)	41937	90% gamma percentile (KM)	48910
95% gamma percentile (KM)	55199	99% gamma percentile (KM)	68334

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (964.02, α)	893	Adjusted Chi Square Value (964.02, β)	891.6
95% Gamma Approximate KM-UCL (use when n>=50)	34660	95% Gamma Adjusted KM-UCL (use when n<50)	34713

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.891	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.148	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	31402	Mean in Log Scale	10.29
SD in Original Scale	11546	SD in Log Scale	0.38
95% t UCL (assumes normality of ROS data)	33638	95% Percentile Bootstrap UCL	33651
95% BCA Bootstrap UCL	33639	95% Bootstrap t UCL	33711
95% H-UCL (Log ROS)	34099		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	10.3	KM Geo Mean	29628
KM SD (logged)	0.41	95% Critical H Value (KM-Log)	1.802
KM Standard Error of Mean (logged)	0.0698	95% H-UCL (KM -Log)	35136
KM SD (logged)	0.41	95% Critical H Value (KM-Log)	1.802
KM Standard Error of Mean (logged)	0.0698		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	30469	Mean in Log Scale	10.26
SD in Original Scale	13204	SD in Log Scale	0.351
95% t UCL (Assumes normality)	33026	95% H-Stat UCL	32549

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 35495

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDD

General Statistics

Total Number of Observations	73	Number of Distinct Observations	53
		Number of Missing Observations	39
Number of Detects	59	Number of Non-Detects	14
Number of Distinct Detects	40	Number of Distinct Non-Detects	14
Minimum Detect	66.3	Minimum Non-Detect	19.1
Maximum Detect	330	Maximum Non-Detect	248
Variance Detects	3105	Percent Non-Detects	19.18%
Mean Detects	139	SD Detects	55.72
Median Detects	120	CV Detects	0.401
Skewness Detects	1.014	Kurtosis Detects	0.913
Mean of Logged Detects	4.862	SD of Logged Detects	0.381

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.906	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	1.1034E-4	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	120.7	KM Standard Error of Mean	7.819
KM SD	65.17	95% KM (BCA) UCL	135.3
95% KM (t) UCL	133.7	95% KM (Percentile Bootstrap) UCL	134.2
95% KM (z) UCL	133.5	95% KM Bootstrap t UCL	133.9
90% KM Chebyshev UCL	144.1	95% KM Chebyshev UCL	154.8
97.5% KM Chebyshev UCL	169.5	99% KM Chebyshev UCL	198.5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.055	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.752	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.116	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.016	k star (bias corrected MLE)	6.671
Theta hat (MLE)	19.81	Theta star (bias corrected MLE)	20.84
nu hat (MLE)	827.9	nu star (bias corrected)	787.2
Mean (detects)	139		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	43.09	Mean	124
Maximum	330	Median	110
SD	59.92	CV	0.483
k hat (MLE)	4.395	k star (bias corrected MLE)	4.223
Theta hat (MLE)	28.22	Theta star (bias corrected MLE)	29.36
nu hat (MLE)	641.6	nu star (bias corrected)	616.6
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (616.59, α)	560	Adjusted Chi Square Value (616.59, β)	558.9
95% Gamma Approximate UCL (use when n>=50)	136.5	95% Gamma Adjusted UCL (use when n<50)	136.8

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	120.7	SD (KM)	65.17
Variance (KM)	4247	SE of Mean (KM)	7.819

k hat (KM)	3.43	k star (KM)	3.298
nu hat (KM)	500.7	nu star (KM)	481.5
theta hat (KM)	35.19	theta star (KM)	36.59
80% gamma percentile (KM)	170.2	90% gamma percentile (KM)	209.8
95% gamma percentile (KM)	246.6	99% gamma percentile (KM)	325.9

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (481.50, α)	431.6	Adjusted Chi Square Value (481.50, β)	430.7
95% Gamma Approximate KM-UCL (use when n>=50)	134.6	95% Gamma Adjusted KM-UCL (use when n<50)	134.9

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.956	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0666	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.128	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	125.7	Mean in Log Scale	4.737
SD in Original Scale	57.67	SD in Log Scale	0.442
95% t UCL (assumes normality of ROS data)	137	95% Percentile Bootstrap UCL	136.6
95% BCA Bootstrap UCL	138.2	95% Bootstrap t UCL	137.8
95% H-UCL (Log ROS)	138.3		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	4.584	KM Geo Mean	97.9
KM SD (logged)	0.743	95% Critical H Value (KM-Log)	2.023
KM Standard Error of Mean (logged)	0.0907	95% H-UCL (KM -Log)	154.1
KM SD (logged)	0.743	95% Critical H Value (KM-Log)	2.023
KM Standard Error of Mean (logged)	0.0907		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	120.2	Mean in Log Scale	4.58
SD in Original Scale	65.11	SD in Log Scale	0.763
95% t UCL (Assumes normality)	132.9	95% H-Stat UCL	156.6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	115.8	KM H-UCL	154.1

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	73	Number of Distinct Observations	51
		Number of Missing Observations	39
Number of Detects	29	Number of Non-Detects	44
Number of Distinct Detects	24	Number of Distinct Non-Detects	27
Minimum Detect	41.2	Minimum Non-Detect	19.9
Maximum Detect	230	Maximum Non-Detect	491
Variance Detects	1547	Percent Non-Detects	60.27%
Mean Detects	100.2	SD Detects	39.33
Median Detects	91.7	CV Detects	0.392
Skewness Detects	1.441	Kurtosis Detects	3.06
Mean of Logged Detects	4.541	SD of Logged Detects	0.367

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	68.94	KM Standard Error of Mean	7.037
KM SD	47.89	95% KM (BCA) UCL	83.05
95% KM (t) UCL	80.67	95% KM (Percentile Bootstrap) UCL	81.8
95% KM (z) UCL	80.52	95% KM Bootstrap t UCL	81.73
90% KM Chebyshev UCL	90.05	95% KM Chebyshev UCL	99.62
97.5% KM Chebyshev UCL	112.9	99% KM Chebyshev UCL	139

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.576	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.157	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.163	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.698	k star (bias corrected MLE)	6.925
Theta hat (MLE)	13.02	Theta star (bias corrected MLE)	14.48
nu hat (MLE)	446.5	nu star (bias corrected)	401.7
Mean (detects)	100.2		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.619	Mean	67.89
Maximum	230	Median	62.34
SD	44.3	CV	0.652
k hat (MLE)	2.243	k star (bias corrected MLE)	2.16
Theta hat (MLE)	30.26	Theta star (bias corrected MLE)	31.43
nu hat (MLE)	327.5	nu star (bias corrected)	315.4
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (315.38, α)	275.2	Adjusted Chi Square Value (315.38, β)	274.5
95% Gamma Approximate UCL (use when n>=50)	77.79	95% Gamma Adjusted UCL (use when n<50)	78

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	68.94	SD (KM)	47.89
Variance (KM)	2293	SE of Mean (KM)	7.037

k hat (KM)	2.073	k star (KM)	1.997
nu hat (KM)	302.6	nu star (KM)	291.5
theta hat (KM)	33.26	theta star (KM)	34.53
80% gamma percentile (KM)	103.2	90% gamma percentile (KM)	134.1
95% gamma percentile (KM)	163.6	99% gamma percentile (KM)	229

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (291.50, α)	253	Adjusted Chi Square Value (291.50, β)	252.2
95% Gamma Approximate KM-UCL (use when n>=50)	79.45	95% Gamma Adjusted KM-UCL (use when n<50)	79.67

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.134	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	73.79	Mean in Log Scale	4.187
SD in Original Scale	38.23	SD in Log Scale	0.471
95% t UCL (assumes normality of ROS data)	81.25	95% Percentile Bootstrap UCL	81.42
95% BCA Bootstrap UCL	81.75	95% Bootstrap t UCL	82.55
95% H-UCL (Log ROS)	81.41		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	3.961	KM Geo Mean	52.52
KM SD (logged)	0.774	95% Critical H Value (KM-Log)	2.049
KM Standard Error of Mean (logged)	0.119	95% H-UCL (KM -Log)	85.4
KM SD (logged)	0.774	95% Critical H Value (KM-Log)	2.049
KM Standard Error of Mean (logged)	0.119		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	110	Mean in Log Scale	4.382
SD in Original Scale	73.44	SD in Log Scale	0.897
95% t UCL (Assumes normality)	124.3	95% H-Stat UCL	150.3

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	79.45	95% GROS Approximate Gamma UCL	77.79

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	73	Number of Distinct Observations	43
		Number of Missing Observations	39
Number of Detects	4	Number of Non-Detects	69
Number of Distinct Detects	4	Number of Distinct Non-Detects	39
Minimum Detect	29	Minimum Non-Detect	20.8
Maximum Detect	74	Maximum Non-Detect	410
Variance Detects	428.3	Percent Non-Detects	94.52%
Mean Detects	47.25	SD Detects	20.69
Median Detects	43	CV Detects	0.438
Skewness Detects	0.779	Kurtosis Detects	-1.408
Mean of Logged Detects	3.785	SD of Logged Detects	0.433

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.254	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	25.32	KM Standard Error of Mean	2.511
KM SD	11.07	95% KM (BCA) UCL	N/A
95% KM (t) UCL	29.5	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	29.45	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	32.85	95% KM Chebyshev UCL	36.26
97.5% KM Chebyshev UCL	41	99% KM Chebyshev UCL	50.3

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.319	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.658	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.283	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.395	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.214	k star (bias corrected MLE)	1.97
Theta hat (MLE)	6.55	Theta star (bias corrected MLE)	23.98
nu hat (MLE)	57.71	nu star (bias corrected)	15.76
Mean (detects)	47.25		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	7.062
Maximum	74	Median	0.01
SD	15.09	CV	2.136
k hat (MLE)	0.168	k star (bias corrected MLE)	0.17
Theta hat (MLE)	42.03	Theta star (bias corrected MLE)	41.48
nu hat (MLE)	24.53	nu star (bias corrected)	24.86
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (24.86, α)	14.5	Adjusted Chi Square Value (24.86, β)	14.34
95% Gamma Approximate UCL (use when n>=50)	12.1	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	25.32	SD (KM)	11.07
Variance (KM)	122.7	SE of Mean (KM)	2.511

k hat (KM)	5.226	k star (KM)	5.02
nu hat (KM)	763	nu star (KM)	733
theta hat (KM)	4.844	theta star (KM)	5.043
80% gamma percentile (KM)	34.02	90% gamma percentile (KM)	40.44
95% gamma percentile (KM)	46.3	99% gamma percentile (KM)	58.68

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (732.98, α)	671.2	Adjusted Chi Square Value (732.98, β)	670
95% Gamma Approximate KM-UCL (use when n>=50)	27.65	95% Gamma Adjusted KM-UCL (use when n<50)	27.7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.247	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	16.5	Mean in Log Scale	2.651
SD in Original Scale	11.43	SD in Log Scale	0.521
95% t UCL (assumes normality of ROS data)	18.73	95% Percentile Bootstrap UCL	18.89
95% BCA Bootstrap UCL	19.26	95% Bootstrap t UCL	19.46
95% H-UCL (Log ROS)	18.18		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	3.174	KM Geo Mean	23.91
KM SD (logged)	0.298	95% Critical H Value (KM-Log)	1.745
KM Standard Error of Mean (logged)	0.0734	95% H-UCL (KM -Log)	26.59
KM SD (logged)	0.298	95% Critical H Value (KM-Log)	1.745
KM Standard Error of Mean (logged)	0.0734		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	109.8	Mean in Log Scale	4.188
SD in Original Scale	85.28	SD in Log Scale	1.149
95% t UCL (Assumes normality)	126.4	95% H-Stat UCL	176.4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 29.5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	74	Number of Distinct Observations	57
		Number of Missing Observations	38
Number of Detects	64	Number of Non-Detects	10
Number of Distinct Detects	49	Number of Distinct Non-Detects	10
Minimum Detect	180	Minimum Non-Detect	71.1
Maximum Detect	900	Maximum Non-Detect	430
Variance Detects	18713	Percent Non-Detects	13.51%
Mean Detects	352.3	SD Detects	136.8
Median Detects	303	CV Detects	0.388
Skewness Detects	1.289	Kurtosis Detects	2.717
Mean of Logged Detects	5.798	SD of Logged Detects	0.363

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.901	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	2.1380E-5	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.154	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.111	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	324.9	KM Standard Error of Mean	17.46
KM SD	147.5	95% KM (BCA) UCL	356.2
95% KM (t) UCL	354	95% KM (Percentile Bootstrap) UCL	354.2
95% KM (z) UCL	353.6	95% KM Bootstrap t UCL	355.8
90% KM Chebyshev UCL	377.3	95% KM Chebyshev UCL	401
97.5% KM Chebyshev UCL	433.9	99% KM Chebyshev UCL	498.6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.785	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.752	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.124	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.112	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.653	k star (bias corrected MLE)	7.305
Theta hat (MLE)	46.04	Theta star (bias corrected MLE)	48.23
nu hat (MLE)	979.6	nu star (bias corrected)	935
Mean (detects)	352.3		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	101.6	Mean	326.9
Maximum	900	Median	290
SD	144.3	CV	0.441
k hat (MLE)	5.435	k star (bias corrected MLE)	5.224
Theta hat (MLE)	60.14	Theta star (bias corrected MLE)	62.58
nu hat (MLE)	804.4	nu star (bias corrected)	773.2
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (773.15, α)	709.6	Adjusted Chi Square Value (773.15, β)	708.4
95% Gamma Approximate UCL (use when n>=50)	356.2	95% Gamma Adjusted UCL (use when n<50)	356.8

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	324.9	SD (KM)	147.5
Variance (KM)	21764	SE of Mean (KM)	17.46

k hat (KM)	4.85	k star (KM)	4.663
nu hat (KM)	717.8	nu star (KM)	690.1
theta hat (KM)	66.99	theta star (KM)	69.68
80% gamma percentile (KM)	440.2	90% gamma percentile (KM)	526.4
95% gamma percentile (KM)	605.3	99% gamma percentile (KM)	772.5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (690.08, α)	630.1	Adjusted Chi Square Value (690.08, β)	629
95% Gamma Approximate KM-UCL (use when n>=50)	355.8	95% Gamma Adjusted KM-UCL (use when n<50)	356.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.962	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.115	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.111	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	329.9	Mean in Log Scale	5.717
SD in Original Scale	140.3	SD in Log Scale	0.404
95% t UCL (assumes normality of ROS data)	357.1	95% Percentile Bootstrap UCL	357.5
95% BCA Bootstrap UCL	358.5	95% Bootstrap t UCL	359.6
95% H-UCL (Log ROS)	359.2		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.667	KM Geo Mean	289.2
KM SD (logged)	0.518	95% Critical H Value (KM-Log)	1.865
KM Standard Error of Mean (logged)	0.063	95% H-UCL (KM -Log)	370.5
KM SD (logged)	0.518	95% Critical H Value (KM-Log)	1.865
KM Standard Error of Mean (logged)	0.063		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	319.2	Mean in Log Scale	5.625
SD in Original Scale	153.9	SD in Log Scale	0.597
95% t UCL (Assumes normality)	349	95% H-Stat UCL	378.7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	332.5	KM H-UCL	370.5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	73	Number of Distinct Observations	56
		Number of Missing Observations	39
Number of Detects	58	Number of Non-Detects	15
Number of Distinct Detects	42	Number of Distinct Non-Detects	15
Minimum Detect	168	Minimum Non-Detect	45
Maximum Detect	1200	Maximum Non-Detect	686
Variance Detects	31883	Percent Non-Detects	20.55%
Mean Detects	359.3	SD Detects	178.6
Median Detects	310	CV Detects	0.497
Skewness Detects	2.296	Kurtosis Detects	7.869
Mean of Logged Detects	5.793	SD of Logged Detects	0.411

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.806	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	5.377E-10	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.116	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	307.2	KM Standard Error of Mean	23.35
KM SD	195.1	95% KM (BCA) UCL	347.4
95% KM (t) UCL	346.1	95% KM (Percentile Bootstrap) UCL	346.8
95% KM (z) UCL	345.6	95% KM Bootstrap t UCL	348.9
90% KM Chebyshev UCL	377.3	95% KM Chebyshev UCL	409
97.5% KM Chebyshev UCL	453	99% KM Chebyshev UCL	539.5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.155	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.753	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.12	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.117	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.629	k star (bias corrected MLE)	5.349
Theta hat (MLE)	63.84	Theta star (bias corrected MLE)	67.17
nu hat (MLE)	652.9	nu star (bias corrected)	620.5
Mean (detects)	359.3		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	70.97	Mean	310.7
Maximum	1200	Median	270
SD	189.2	CV	0.609
k hat (MLE)	2.884	k star (bias corrected MLE)	2.774
Theta hat (MLE)	107.7	Theta star (bias corrected MLE)	112
nu hat (MLE)	421	nu star (bias corrected)	405.1
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (405.07, α)	359.4	Adjusted Chi Square Value (405.07, β)	358.6
95% Gamma Approximate UCL (use when n>=50)	350.1	95% Gamma Adjusted UCL (use when n<50)	351

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	307.2	SD (KM)	195.1
Variance (KM)	38068	SE of Mean (KM)	23.35

k hat (KM)	2.479	k star (KM)	2.386
nu hat (KM)	362	nu star (KM)	348.4
theta hat (KM)	123.9	theta star (KM)	128.7
80% gamma percentile (KM)	450.4	90% gamma percentile (KM)	573.5
95% gamma percentile (KM)	689.8	99% gamma percentile (KM)	945.1

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (348.43, α)	306.2	Adjusted Chi Square Value (348.43, β)	305.4
95% Gamma Approximate KM-UCL (use when n>=50)	349.6	95% Gamma Adjusted KM-UCL (use when n<50)	350.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.95	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0375	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.116	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	320.4	Mean in Log Scale	5.649
SD in Original Scale	178.3	SD in Log Scale	0.481
95% t UCL (assumes normality of ROS data)	355.1	95% Percentile Bootstrap UCL	355.8
95% BCA Bootstrap UCL	360.5	95% Bootstrap t UCL	363.7
95% H-UCL (Log ROS)	353.7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.479	KM Geo Mean	239.5
KM SD (logged)	0.802	95% Critical H Value (KM-Log)	2.075
KM Standard Error of Mean (logged)	0.0978	95% H-UCL (KM -Log)	402
KM SD (logged)	0.802	95% Critical H Value (KM-Log)	2.075
KM Standard Error of Mean (logged)	0.0978		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	307.9	Mean in Log Scale	5.493
SD in Original Scale	193.8	SD in Log Scale	0.793
95% t UCL (Assumes normality)	345.7	95% H-Stat UCL	403.7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	285.2	KM H-UCL	402

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	73	Number of Distinct Observations	55
		Number of Missing Observations	39
Number of Detects	38	Number of Non-Detects	35
Number of Distinct Detects	27	Number of Distinct Non-Detects	30
Minimum Detect	51	Minimum Non-Detect	26.4
Maximum Detect	640	Maximum Non-Detect	400
Variance Detects	11374	Percent Non-Detects	47.95%
Mean Detects	131	SD Detects	106.6
Median Detects	97.2	CV Detects	0.814
Skewness Detects	3.455	Kurtosis Detects	14.19
Mean of Logged Detects	4.704	SD of Logged Detects	0.523

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.607	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.272	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	91.71	KM Standard Error of Mean	11.33
KM SD	91.46	95% KM (BCA) UCL	112.2
95% KM (t) UCL	110.6	95% KM (Percentile Bootstrap) UCL	112.5
95% KM (z) UCL	110.3	95% KM Bootstrap t UCL	119.9
90% KM Chebyshev UCL	125.7	95% KM Chebyshev UCL	141.1
97.5% KM Chebyshev UCL	162.5	99% KM Chebyshev UCL	204.5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.378	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.754	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.207	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.144	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.077	k star (bias corrected MLE)	2.852
Theta hat (MLE)	42.58	Theta star (bias corrected MLE)	45.95
nu hat (MLE)	233.9	nu star (bias corrected)	216.8
Mean (detects)	131		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	78.56
Maximum	640	Median	71
SD	97.36	CV	1.239
k hat (MLE)	0.286	k star (bias corrected MLE)	0.284
Theta hat (MLE)	274.3	Theta star (bias corrected MLE)	276.8
nu hat (MLE)	41.82	nu star (bias corrected)	41.44
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (41.44, α)	27.68	Adjusted Chi Square Value (41.44, β)	27.46
95% Gamma Approximate UCL (use when n>=50)	117.6	95% Gamma Adjusted UCL (use when n<50)	118.6

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	91.71	SD (KM)	91.46
Variance (KM)	8366	SE of Mean (KM)	11.33

k hat (KM)	1.005	k star (KM)	0.973
nu hat (KM)	146.8	nu star (KM)	142.1
theta hat (KM)	91.22	theta star (KM)	94.24
80% gamma percentile (KM)	147.9	90% gamma percentile (KM)	212.6
95% gamma percentile (KM)	277.4	99% gamma percentile (KM)	428.2

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (142.08, α)	115.5	Adjusted Chi Square Value (142.08, β)	115.1
95% Gamma Approximate KM-UCL (use when n>=50)	112.8	95% Gamma Adjusted KM-UCL (use when n<50)	113.2

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.888	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.18	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	92.72	Mean in Log Scale	4.3
SD in Original Scale	87.77	SD in Log Scale	0.62
95% t UCL (assumes normality of ROS data)	109.8	95% Percentile Bootstrap UCL	110.6
95% BCA Bootstrap UCL	117.5	95% Bootstrap t UCL	121.2
95% H-UCL (Log ROS)	102.8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	4.203	KM Geo Mean	66.86
KM SD (logged)	0.769	95% Critical H Value (KM-Log)	2.045
KM Standard Error of Mean (logged)	0.101	95% H-UCL (KM -Log)	108.2
KM SD (logged)	0.769	95% Critical H Value (KM-Log)	2.045
KM Standard Error of Mean (logged)	0.101		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	103.6	Mean in Log Scale	4.268
SD in Original Scale	96.14	SD in Log Scale	0.917
95% t UCL (Assumes normality)	122.3	95% H-Stat UCL	137.6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	141.1

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	73	Number of Distinct Observations	56
		Number of Missing Observations	39
Number of Detects	25	Number of Non-Detects	48
Number of Distinct Detects	20	Number of Distinct Non-Detects	36
Minimum Detect	3.5	Minimum Non-Detect	1.85
Maximum Detect	110	Maximum Non-Detect	410
Variance Detects	471.1	Percent Non-Detects	65.75%
Mean Detects	15.16	SD Detects	21.7
Median Detects	8	CV Detects	1.431
Skewness Detects	3.866	Kurtosis Detects	16.3
Mean of Logged Detects	2.328	SD of Logged Detects	0.737

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.467	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.365	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.803	KM Standard Error of Mean	2.122
KM SD	15.43	95% KM (BCA) UCL	13.04
95% KM (t) UCL	12.34	95% KM (Percentile Bootstrap) UCL	12.33
95% KM (z) UCL	12.29	95% KM Bootstrap t UCL	17.37
90% KM Chebyshev UCL	15.17	95% KM Chebyshev UCL	18.05
97.5% KM Chebyshev UCL	22.05	99% KM Chebyshev UCL	29.91

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.915	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.763	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.29	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.178	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.425	k star (bias corrected MLE)	1.28
Theta hat (MLE)	10.64	Theta star (bias corrected MLE)	11.84
nu hat (MLE)	71.23	nu star (bias corrected)	64.02
Mean (detects)	15.16		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6.2
Maximum	110	Median	0.01
SD	14.62	CV	2.357
k hat (MLE)	0.213	k star (bias corrected MLE)	0.213
Theta hat (MLE)	29.14	Theta star (bias corrected MLE)	29.09
nu hat (MLE)	31.07	nu star (bias corrected)	31.12
Adjusted Level of Significance (β)	0.0467		
Approximate Chi Square Value (31.12, α)	19.38	Adjusted Chi Square Value (31.12, β)	19.19
95% Gamma Approximate UCL (use when n>=50)	9.958	95% Gamma Adjusted UCL (use when n<50)	10.06

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.803	SD (KM)	15.43
Variance (KM)	238.1	SE of Mean (KM)	2.122

k hat (KM)	0.326	k star (KM)	0.321
nu hat (KM)	47.53	nu star (KM)	46.91
theta hat (KM)	27.04	theta star (KM)	27.4
80% gamma percentile (KM)	13.71	90% gamma percentile (KM)	25.74
95% gamma percentile (KM)	39.38	99% gamma percentile (KM)	74.55

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (46.91, α)	32.19	Adjusted Chi Square Value (46.91, β)	31.95
95% Gamma Approximate KM-UCL (use when n>=50)	12.83	95% Gamma Adjusted KM-UCL (use when n<50)	12.93

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.815	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.222	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.914	Mean in Log Scale	1.629
SD in Original Scale	13.78	SD in Log Scale	0.79
95% t UCL (assumes normality of ROS data)	10.6	95% Percentile Bootstrap UCL	10.95
95% BCA Bootstrap UCL	12.42	95% Bootstrap t UCL	14.51
95% H-UCL (Log ROS)	8.435		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.63	KM Geo Mean	5.102
KM SD (logged)	0.921	95% Critical H Value (KM-Log)	2.18
KM Standard Error of Mean (logged)	0.145	95% H-UCL (KM -Log)	9.883
KM SD (logged)	0.921	95% Critical H Value (KM-Log)	2.18
KM Standard Error of Mean (logged)	0.145		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	51.67	Mean in Log Scale	2.607
SD in Original Scale	78.4	SD in Log Scale	1.674
95% t UCL (Assumes normality)	66.96	95% H-Stat UCL	99.52

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	18.05

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	74	Number of Distinct Observations	60
		Number of Missing Observations	38
Number of Detects	67	Number of Non-Detects	7
Number of Distinct Detects	55	Number of Distinct Non-Detects	7
Minimum Detect	63	Minimum Non-Detect	68
Maximum Detect	474	Maximum Non-Detect	190
Variance Detects	7744	Percent Non-Detects	9.459%
Mean Detects	166.4	SD Detects	88
Median Detects	143	CV Detects	0.529
Skewness Detects	1.221	Kurtosis Detects	1.358
Mean of Logged Detects	4.99	SD of Logged Detects	0.497

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.887	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	1.3943E-6	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.141	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.108	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	158.2	KM Standard Error of Mean	10.24
KM SD	87.23	95% KM (BCA) UCL	175.4
95% KM (t) UCL	175.3	95% KM (Percentile Bootstrap) UCL	176
95% KM (z) UCL	175.1	95% KM Bootstrap t UCL	177.3
90% KM Chebyshev UCL	188.9	95% KM Chebyshev UCL	202.8
97.5% KM Chebyshev UCL	222.2	99% KM Chebyshev UCL	260.1

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.766	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0935	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.109	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.178	k star (bias corrected MLE)	4.001
Theta hat (MLE)	39.83	Theta star (bias corrected MLE)	41.6
nu hat (MLE)	559.8	nu star (bias corrected)	536.1
Mean (detects)	166.4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	18.18	Mean	156.4
Maximum	474	Median	135
SD	89.87	CV	0.575
k hat (MLE)	3.262	k star (bias corrected MLE)	3.139
Theta hat (MLE)	47.93	Theta star (bias corrected MLE)	49.81
nu hat (MLE)	482.8	nu star (bias corrected)	464.6
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (464.58, α)	415.6	Adjusted Chi Square Value (464.58, β)	414.7
95% Gamma Approximate UCL (use when n>=50)	174.8	95% Gamma Adjusted UCL (use when n<50)	175.2

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	158.2	SD (KM)	87.23
Variance (KM)	7609	SE of Mean (KM)	10.24

k hat (KM)	3.29	k star (KM)	3.165
nu hat (KM)	486.9	nu star (KM)	468.5
theta hat (KM)	48.09	theta star (KM)	49.98
80% gamma percentile (KM)	224.2	90% gamma percentile (KM)	277.5
95% gamma percentile (KM)	327	99% gamma percentile (KM)	434.1

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (468.49, α)	419.3	Adjusted Chi Square Value (468.49, β)	418.4
95% Gamma Approximate KM-UCL (use when n>=50)	176.8	95% Gamma Adjusted KM-UCL (use when n<50)	177.2

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.96	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0848	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0883	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.108	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	157.7	Mean in Log Scale	4.922
SD in Original Scale	88.22	SD in Log Scale	0.526
95% t UCL (assumes normality of ROS data)	174.8	95% Percentile Bootstrap UCL	176.5
95% BCA Bootstrap UCL	176.4	95% Bootstrap t UCL	175.4
95% H-UCL (Log ROS)	176.8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	4.929	KM Geo Mean	138.2
KM SD (logged)	0.512	95% Critical H Value (KM-Log)	1.861
KM Standard Error of Mean (logged)	0.0603	95% H-UCL (KM -Log)	176.1
KM SD (logged)	0.512	95% Critical H Value (KM-Log)	1.861
KM Standard Error of Mean (logged)	0.0603		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	155.6	Mean in Log Scale	4.886
SD in Original Scale	90.41	SD in Log Scale	0.585
95% t UCL (Assumes normality)	173.1	95% H-Stat UCL	178.9

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	176.8	95% GROS Approximate Gamma UCL	174.8

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Trichloroethylene

General Statistics

Total Number of Observations	74	Number of Distinct Observations	9
		Number of Missing Observations	38
Number of Detects	40	Number of Non-Detects	34
Number of Distinct Detects	8	Number of Distinct Non-Detects	1
Minimum Detect	100000	Minimum Non-Detect	500000
Maximum Detect	180000	Maximum Non-Detect	500000
Variance Detects	5.846E+8	Percent Non-Detects	45.95%
Mean Detects	124750	SD Detects	24177
Median Detects	120000	CV Detects	0.194
Skewness Detects	0.783	Kurtosis Detects	-0.672
Mean of Logged Detects	11.72	SD of Logged Detects	0.185

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.851	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.94	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.253	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.139	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	124750	KM Standard Error of Mean	3823
KM SD	23873	95% KM (BCA) UCL	130976
95% KM (t) UCL	131119	95% KM (Percentile Bootstrap) UCL	130909
95% KM (z) UCL	131038	95% KM Bootstrap t UCL	131454
90% KM Chebyshev UCL	136218	95% KM Chebyshev UCL	141413
97.5% KM Chebyshev UCL	148623	99% KM Chebyshev UCL	162786

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.958	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.746	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.233	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.139	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	29.26	k star (bias corrected MLE)	27.08
Theta hat (MLE)	4263	Theta star (bias corrected MLE)	4606
nu hat (MLE)	2341	nu star (bias corrected)	2167
Mean (detects)	124750		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	82051	Mean	124737
Maximum	180000	Median	120000
SD	23398	CV	0.188
k hat (MLE)	29.88	k star (bias corrected MLE)	28.68
Theta hat (MLE)	4175	Theta star (bias corrected MLE)	4350
nu hat (MLE)	4422	nu star (bias corrected)	4244
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (N/A, α)	4094	Adjusted Chi Square Value (N/A, β)	4091
95% Gamma Approximate UCL (use when n>=50)	129320	95% Gamma Adjusted UCL (use when n<50)	129411

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	124750	SD (KM)	23873
Variance (KM)	5.699E+8	SE of Mean (KM)	3823

k hat (KM)	27.31	k star (KM)	26.21
nu hat (KM)	4041	nu star (KM)	3879
theta hat (KM)	4569	theta star (KM)	4760
80% gamma percentile (KM)	144661	90% gamma percentile (KM)	156820
95% gamma percentile (KM)	167351	99% gamma percentile (KM)	188322

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	3735	Adjusted Chi Square Value (N/A, β)	3732
95% Gamma Approximate KM-UCL (use when n>=50)	129551	95% Gamma Adjusted KM-UCL (use when n<50)	129647

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.867	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.94	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.222	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.139	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	124602	Mean in Log Scale	11.72
SD in Original Scale	22893	SD in Log Scale	0.179
95% t UCL (assumes normality of ROS data)	129036	95% Percentile Bootstrap UCL	128819
95% BCA Bootstrap UCL	128902	95% Bootstrap t UCL	129213
95% H-UCL (Log ROS)	129099		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	11.72	KM Geo Mean	122624
KM SD (logged)	0.183	95% Critical H Value (KM-Log)	1.701
KM Standard Error of Mean (logged)	0.0292	95% H-UCL (KM -Log)	129299
KM SD (logged)	0.183	95% Critical H Value (KM-Log)	1.701
KM Standard Error of Mean (logged)	0.0292		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	182297	Mean in Log Scale	12.04
SD in Original Scale	65282	SD in Log Scale	0.382
95% t UCL (Assumes normality)	194940	95% H-Stat UCL	198208

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	131119	KM H-UCL	129299
95% KM (BCA) UCL	130976		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Antimony

General Statistics

Total Number of Observations	74	Number of Distinct Observations	14
		Number of Missing Observations	38
Number of Detects	14	Number of Non-Detects	60
Number of Distinct Detects	13	Number of Distinct Non-Detects	1
Minimum Detect	420000	Minimum Non-Detect	1000000
Maximum Detect	1350000	Maximum Non-Detect	1000000
Variance Detects	8.567E+10	Percent Non-Detects	81.08%
Mean Detects	760714	SD Detects	292692
Median Detects	695000	CV Detects	0.385
Skewness Detects	0.814	Kurtosis Detects	-0.436
Mean of Logged Detects	13.48	SD of Logged Detects	0.37

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.907	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	630405	KM Standard Error of Mean	40750
KM SD	175780	95% KM (BCA) UCL	703071
95% KM (t) UCL	698295	95% KM (Percentile Bootstrap) UCL	698288
95% KM (z) UCL	697433	95% KM Bootstrap t UCL	705158
90% KM Chebyshev UCL	752655	95% KM Chebyshev UCL	808030
97.5% KM Chebyshev UCL	884889	99% KM Chebyshev UCL	1035862

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.361	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.171	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.229	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.861	k star (bias corrected MLE)	6.224
Theta hat (MLE)	96774	Theta star (bias corrected MLE)	122225
nu hat (MLE)	220.1	nu star (bias corrected)	174.3
Mean (detects)	760714		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	260811	Mean	637227
Maximum	1350000	Median	606423
SD	211338	CV	0.332
k hat (MLE)	9.579	k star (bias corrected MLE)	9.2
Theta hat (MLE)	66523	Theta star (bias corrected MLE)	69266
nu hat (MLE)	1418	nu star (bias corrected)	1362
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (N/A, α)	1277	Adjusted Chi Square Value (N/A, β)	1275
95% Gamma Approximate UCL (use when n>=50)	679488	95% Gamma Adjusted UCL (use when n<50)	680348

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	630405	SD (KM)	175780
Variance (KM)	3.090E+10	SE of Mean (KM)	40750

k hat (KM)	12.86	k star (KM)	12.35
nu hat (KM)	1904	nu star (KM)	1828
theta hat (KM)	49014	theta star (KM)	51047
80% gamma percentile (KM)	774327	90% gamma percentile (KM)	868444
95% gamma percentile (KM)	951532	99% gamma percentile (KM)	1120822

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1729	Adjusted Chi Square Value (N/A, β)	1728
95% Gamma Approximate KM-UCL (use when n>=50)	666237	95% Gamma Adjusted KM-UCL (use when n<50)	666962

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	638774	Mean in Log Scale	13.32
SD in Original Scale	199347	SD in Log Scale	0.299
95% t UCL (assumes normality of ROS data)	677381	95% Percentile Bootstrap UCL	677102
95% BCA Bootstrap UCL	684064	95% Bootstrap t UCL	679193
95% H-UCL (Log ROS)	679020		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	13.32	KM Geo Mean	609454
KM SD (logged)	0.254	95% Critical H Value (KM-Log)	1.727
KM Standard Error of Mean (logged)	0.0667	95% H-UCL (KM -Log)	662457
KM SD (logged)	0.254	95% Critical H Value (KM-Log)	1.727
KM Standard Error of Mean (logged)	0.0667		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	549324	Mean in Log Scale	13.19
SD in Original Scale	160703	SD in Log Scale	0.21
95% t UCL (Assumes normality)	580447	95% H-Stat UCL	570001

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 698295

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	74	Number of Distinct Observations	43
		Number of Missing Observations	38
Minimum	730000	Mean	1222838
Maximum	1840000	Median	1190000
SD	266111	Std. Error of Mean	30935
Coefficient of Variation	0.218	Skewness	0.5

Normal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	1.5021E-4	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1274375	95% Adjusted-CLT UCL (Chen-1995)	1275641
		95% Modified-t UCL (Johnson-1978)	1274675

Gamma GOF Test

A-D Test Statistic	1.509	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.113	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.103	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	22.08	k star (bias corrected MLE)	21.2
Theta hat (MLE)	55371	Theta star (bias corrected MLE)	57686
nu hat (MLE)	3268	nu star (bias corrected)	3137
MLE Mean (bias corrected)	1222838	MLE Sd (bias corrected)	265596
		Approximate Chi Square Value (0.05)	3008
Adjusted Level of Significance	0.0468	Adjusted Chi Square Value	3006

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1275337	95% Adjusted Gamma UCL (use when n<50)	1276392

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	0.0063	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	13.5	Mean of logged Data	13.99
Maximum of Logged Data	14.43	SD of logged Data	0.214

Assuming Lognormal Distribution

95% H-UCL	1276652	90% Chebyshev (MVUE) UCL	1314898
95% Chebyshev (MVUE) UCL	1356698	97.5% Chebyshev (MVUE) UCL	1414713
99% Chebyshev (MVUE) UCL	1528673		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1273721	95% Jackknife UCL	1274375
95% Standard Bootstrap UCL	1272037	95% Bootstrap-t UCL	1273594

95% Hall's Bootstrap UCL	1274996	95% Percentile Bootstrap UCL	1274054
95% BCA Bootstrap UCL	1275405		
90% Chebyshev(Mean, Sd) UCL	1315642	95% Chebyshev(Mean, Sd) UCL	1357679
97.5% Chebyshev(Mean, Sd) UCL	1416026	99% Chebyshev(Mean, Sd) UCL	1530635

Suggested UCL to Use

95% Student's-t UCL	1274375	or 95% Modified-t UCL	1274675

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chromium [as Cr(III)]

General Statistics

Total Number of Observations	74	Number of Distinct Observations	55
		Number of Missing Observations	38
Minimum	430000	Mean	1143243
Maximum	5610000	Median	875000
SD	739176	Std. Error of Mean	85927
Coefficient of Variation	0.647	Skewness	3.398

Normal GOF Test

Shapiro Wilk Test Statistic	0.719	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1286398	95% Adjusted-CLT UCL (Chen-1995)	1320847
		95% Modified-t UCL (Johnson-1978)	1292055

Gamma GOF Test

A-D Test Statistic	1.858	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.143	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.104	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.936	k star (bias corrected MLE)	3.786
Theta hat (MLE)	290424	Theta star (bias corrected MLE)	301975
nu hat (MLE)	582.6	nu star (bias corrected)	560.3
MLE Mean (bias corrected)	1143243	MLE Sd (bias corrected)	587564
		Approximate Chi Square Value (0.05)	506.4
Adjusted Level of Significance	0.0468	Adjusted Chi Square Value	505.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1264931	95% Adjusted Gamma UCL (use when n<50)	1267458

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	0.00819	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.124	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	12.97	Mean of logged Data	13.82
Maximum of Logged Data	15.54	SD of logged Data	0.483

Assuming Lognormal Distribution

95% H-UCL	1249354	90% Chebyshev (MVUE) UCL	1322559
95% Chebyshev (MVUE) UCL	1412662	97.5% Chebyshev (MVUE) UCL	1537722
99% Chebyshev (MVUE) UCL	1783378		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1284581	95% Jackknife UCL	1286398
95% Standard Bootstrap UCL	1287812	95% Bootstrap-t UCL	1339882

95% Hall's Bootstrap UCL	1460623	95% Percentile Bootstrap UCL	1292703
95% BCA Bootstrap UCL	1327027		
90% Chebyshev(Mean, Sd) UCL	1401026	95% Chebyshev(Mean, Sd) UCL	1517792
97.5% Chebyshev(Mean, Sd) UCL	1679860	99% Chebyshev(Mean, Sd) UCL	1998211

Suggested UCL to Use

95% Student's-t UCL	1286398	or 95% Modified-t UCL	1292055

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chromium (VI)

General Statistics

Total Number of Observations	57	Number of Distinct Observations	32
		Number of Missing Observations	55
Number of Detects	28	Number of Non-Detects	29
Number of Distinct Detects	18	Number of Distinct Non-Detects	15
Minimum Detect	62000	Minimum Non-Detect	20000
Maximum Detect	740000	Maximum Non-Detect	1190000
Variance Detects	2.597E+10	Percent Non-Detects	50.88%
Mean Detects	185000	SD Detects	161165
Median Detects	160000	CV Detects	0.871
Skewness Detects	2.998	Kurtosis Detects	8.825
Mean of Logged Detects	11.93	SD of Logged Detects	0.571

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.57	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.319	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.164	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	129256	KM Standard Error of Mean	21411
KM SD	142155	95% KM (BCA) UCL	167591
95% KM (t) UCL	165067	95% KM (Percentile Bootstrap) UCL	165856
95% KM (z) UCL	164475	95% KM Bootstrap t UCL	191106
90% KM Chebyshev UCL	193491	95% KM Chebyshev UCL	222586
97.5% KM Chebyshev UCL	262970	99% KM Chebyshev UCL	342297

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.871	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.213	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.167	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.664	k star (bias corrected MLE)	2.402
Theta hat (MLE)	69451	Theta star (bias corrected MLE)	77014
nu hat (MLE)	149.2	nu star (bias corrected)	134.5
Mean (detects)	185000		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	110769
Maximum	740000	Median	76459
SD	136941	CV	1.236
k hat (MLE)	0.211	k star (bias corrected MLE)	0.212
Theta hat (MLE)	524202	Theta star (bias corrected MLE)	522782
nu hat (MLE)	24.09	nu star (bias corrected)	24.15
Adjusted Level of Significance (β)	0.0458		
Approximate Chi Square Value (24.15, α)	13.97	Adjusted Chi Square Value (24.15, β)	13.76
95% Gamma Approximate UCL (use when n>=50)	191574	95% Gamma Adjusted UCL (use when n<50)	194380

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	129256	SD (KM)	142155
Variance (KM)	2.021E+10	SE of Mean (KM)	21411

k hat (KM)	0.827	k star (KM)	0.795
nu hat (KM)	94.25	nu star (KM)	90.62
theta hat (KM)	156340	theta star (KM)	162598
80% gamma percentile (KM)	211304	90% gamma percentile (KM)	314777
95% gamma percentile (KM)	420255	99% gamma percentile (KM)	669470

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (90.62, α)	69.67	Adjusted Chi Square Value (90.62, β)	69.2
95% Gamma Approximate KM-UCL (use when n>=50)	168123	95% Gamma Adjusted KM-UCL (use when n<50)	169280

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.877	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.161	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.164	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	127543	Mean in Log Scale	11.5
SD in Original Scale	127269	SD in Log Scale	0.669
95% t UCL (assumes normality of ROS data)	155737	95% Percentile Bootstrap UCL	158027
95% BCA Bootstrap UCL	166864	95% Bootstrap t UCL	187829
95% H-UCL (Log ROS)	148039		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	11.32	KM Geo Mean	82293
KM SD (logged)	0.987	95% Critical H Value (KM-Log)	2.323
KM Standard Error of Mean (logged)	0.163	95% H-UCL (KM -Log)	181994
KM SD (logged)	0.987	95% Critical H Value (KM-Log)	2.323
KM Standard Error of Mean (logged)	0.163		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	200263	Mean in Log Scale	11.68
SD in Original Scale	183666	SD in Log Scale	1.201
95% t UCL (Assumes normality)	240951	95% H-Stat UCL	372367

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 181994

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	74	Number of Distinct Observations	68
		Number of Missing Observations	38
Minimum	1.300E+8	Mean	3.754E+8
Maximum	2.320E+9	Median	2.700E+8
SD	3.104E+8	Std. Error of Mean	36080189
Coefficient of Variation	0.827	Skewness	3.891

Normal GOF Test

Shapiro Wilk Test Statistic	0.64	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.355E+8	95% Adjusted-CLT UCL (Chen-1995)	4.522E+8
		95% Modified-t UCL (Johnson-1978)	4.382E+8

Gamma GOF Test

A-D Test Statistic	2.899	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.759	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.159	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.105	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.872	k star (bias corrected MLE)	2.764
Theta hat (MLE)	1.307E+8	Theta star (bias corrected MLE)	1.358E+8
nu hat (MLE)	425	nu star (bias corrected)	409.1
MLE Mean (bias corrected)	3.754E+8	MLE Sd (bias corrected)	2.258E+8
		Approximate Chi Square Value (0.05)	363.2
Adjusted Level of Significance	0.0468	Adjusted Chi Square Value	362.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.228E+8	95% Adjusted Gamma UCL (use when n<50)	4.238E+8

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	6.6241E-4	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.115	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	18.68	Mean of logged Data	19.56
Maximum of Logged Data	21.56	SD of logged Data	0.553

Assuming Lognormal Distribution

95% H-UCL	4.111E+8	90% Chebyshev (MVUE) UCL	4.375E+8
95% Chebyshev (MVUE) UCL	4.712E+8	97.5% Chebyshev (MVUE) UCL	5.180E+8
99% Chebyshev (MVUE) UCL	6.100E+8		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	4.348E+8	95% Jackknife UCL	4.355E+8
95% Standard Bootstrap UCL	4.332E+8	95% Bootstrap-t UCL	4.656E+8

95% Hall's Bootstrap UCL	5.242E+8	95% Percentile Bootstrap UCL	4.377E+8
95% BCA Bootstrap UCL	4.543E+8		
90% Chebyshev(Mean, Sd) UCL	4.836E+8	95% Chebyshev(Mean, Sd) UCL	5.327E+8
97.5% Chebyshev(Mean, Sd) UCL	6.007E+8	99% Chebyshev(Mean, Sd) UCL	7.344E+8

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 5.33E+08

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Manganese

General Statistics

Total Number of Observations	74	Number of Distinct Observations	71
		Number of Missing Observations	38
Minimum	28900000	Mean	64989189
Maximum	1.170E+8	Median	60050000
SD	21236177	Std. Error of Mean	2468655
Coefficient of Variation	0.327	Skewness	0.66

Normal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	7.7176E-5	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.103	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	69101960	95% Adjusted-CLT UCL (Chen-1995)	69252017
		95% Modified-t UCL (Johnson-1978)	69133507

Gamma GOF Test

A-D Test Statistic	1.219	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.104	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.889	k star (bias corrected MLE)	9.497
Theta hat (MLE)	6571897	Theta star (bias corrected MLE)	6843085
nu hat (MLE)	1464	nu star (bias corrected)	1406
MLE Mean (bias corrected)	64989189	MLE Sd (bias corrected)	21088541
		Approximate Chi Square Value (0.05)	1320
Adjusted Level of Significance	0.0468	Adjusted Chi Square Value	1318

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	69227801	95% Adjusted Gamma UCL (use when n<50)	69313994

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	0.0401	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0946	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.103	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	17.18	Mean of logged Data	17.94
Maximum of Logged Data	18.58	SD of logged Data	0.323

Assuming Lognormal Distribution

95% H-UCL	69513260	90% Chebyshev (MVUE) UCL	72488898
95% Chebyshev (MVUE) UCL	75883583	97.5% Chebyshev (MVUE) UCL	80595274
99% Chebyshev (MVUE) UCL	89850479		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	69049766	95% Jackknife UCL	69101960
95% Standard Bootstrap UCL	69018438	95% Bootstrap-t UCL	69474688

95% Hall's Bootstrap UCL	69237980	95% Percentile Bootstrap UCL	69029730
95% BCA Bootstrap UCL	69285135		
90% Chebyshev(Mean, Sd) UCL	72395156	95% Chebyshev(Mean, Sd) UCL	75749809
97.5% Chebyshev(Mean, Sd) UCL	80405938	99% Chebyshev(Mean, Sd) UCL	89552001

Suggested UCL to Use

95% Student's-t UCL	69101960	or 95% Modified-t UCL	69133507
or 95% H-UCL	69513260		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Mercury

General Statistics

Total Number of Observations	131	Number of Distinct Observations	119
		Number of Missing Observations	0
Minimum	1700	Mean	20610
Maximum	76300	Median	14800
SD	15125	Std. Error of Mean	1321
Coefficient of Variation	0.734	Skewness	1.488

Normal GOF Test

Shapiro Wilk Test Statistic	0.824	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.175	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0778	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	22799	95% Adjusted-CLT UCL (Chen-1995)	22967
		95% Modified-t UCL (Johnson-1978)	22828

Gamma GOF Test

A-D Test Statistic	2.855	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.763	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.12	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.0824	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.32	k star (bias corrected MLE)	2.272
Theta hat (MLE)	8883	Theta star (bias corrected MLE)	9071
nu hat (MLE)	607.9	nu star (bias corrected)	595.3
MLE Mean (bias corrected)	20610	MLE Sd (bias corrected)	13673
		Approximate Chi Square Value (0.05)	539.7
Adjusted Level of Significance	0.0482	Adjusted Chi Square Value	539.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	22733	95% Adjusted Gamma UCL (use when n<50)	22758

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	0.035	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0854	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.0778	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	7.438	Mean of logged Data	9.703
Maximum of Logged Data	11.24	SD of logged Data	0.677

Assuming Lognormal Distribution

95% H-UCL	23084	90% Chebyshev (MVUE) UCL	24545
95% Chebyshev (MVUE) UCL	26362	97.5% Chebyshev (MVUE) UCL	28884
99% Chebyshev (MVUE) UCL	33837		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	22784	95% Jackknife UCL	22799
95% Standard Bootstrap UCL	22743	95% Bootstrap-t UCL	23045

95% Hall's Bootstrap UCL	22909	95% Percentile Bootstrap UCL	22856
95% BCA Bootstrap UCL	22898		
90% Chebyshev(Mean, Sd) UCL	24574	95% Chebyshev(Mean, Sd) UCL	26370
97.5% Chebyshev(Mean, Sd) UCL	28863	99% Chebyshev(Mean, Sd) UCL	33758

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 26370

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Thallium

General Statistics

Total Number of Observations	74	Number of Distinct Observations	17
		Number of Missing Observations	38
Number of Detects	38	Number of Non-Detects	36
Number of Distinct Detects	16	Number of Distinct Non-Detects	1
Minimum Detect	6000	Minimum Non-Detect	20000
Maximum Detect	48000	Maximum Non-Detect	20000
Variance Detects	63144381	Percent Non-Detects	48.65%
Mean Detects	11868	SD Detects	7946
Median Detects	9500	CV Detects	0.67
Skewness Detects	2.907	Kurtosis Detects	11.05
Mean of Logged Detects	9.242	SD of Logged Detects	0.493

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.697	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.23	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	10816	KM Standard Error of Mean	835.5
KM SD	6203	95% KM (BCA) UCL	12368
95% KM (t) UCL	12208	95% KM (Percentile Bootstrap) UCL	12311
95% KM (z) UCL	12191	95% KM Bootstrap t UCL	12509
90% KM Chebyshev UCL	13323	95% KM Chebyshev UCL	14458
97.5% KM Chebyshev UCL	16034	99% KM Chebyshev UCL	19129

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.565	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.753	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.158	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.144	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.741	k star (bias corrected MLE)	3.463
Theta hat (MLE)	3172	Theta star (bias corrected MLE)	3427
nu hat (MLE)	284.3	nu star (bias corrected)	263.2
Mean (detects)	11868		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1573	Mean	10996
Maximum	48000	Median	9534
SD	6728	CV	0.612
k hat (MLE)	3.501	k star (bias corrected MLE)	3.368
Theta hat (MLE)	3141	Theta star (bias corrected MLE)	3265
nu hat (MLE)	518.1	nu star (bias corrected)	498.5
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (498.45, α)	447.7	Adjusted Chi Square Value (498.45, β)	446.7
95% Gamma Approximate UCL (use when n>=50)	12243	95% Gamma Adjusted UCL (use when n<50)	12269

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	10816	SD (KM)	6203
Variance (KM)	38479001	SE of Mean (KM)	835.5

k hat (KM)	3.04	k star (KM)	2.926
nu hat (KM)	450	nu star (KM)	433.1
theta hat (KM)	3557	theta star (KM)	3696
80% gamma percentile (KM)	15474	90% gamma percentile (KM)	19294
95% gamma percentile (KM)	22863	99% gamma percentile (KM)	30609

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (433.08, α)	385.8	Adjusted Chi Square Value (433.08, β)	385
95% Gamma Approximate KM-UCL (use when n>=50)	12141	95% Gamma Adjusted KM-UCL (use when n<50)	12169

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.895	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.153	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.142	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	10969	Mean in Log Scale	9.193
SD in Original Scale	6298	SD in Log Scale	0.445
95% t UCL (assumes normality of ROS data)	12189	95% Percentile Bootstrap UCL	12238
95% BCA Bootstrap UCL	12552	95% Bootstrap t UCL	12609
95% H-UCL (Log ROS)	11932		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	9.183	KM Geo Mean	9734
KM SD (logged)	0.426	95% Critical H Value (KM-Log)	1.81
KM Standard Error of Mean (logged)	0.0641	95% H-UCL (KM -Log)	11661
KM SD (logged)	0.426	95% Critical H Value (KM-Log)	1.81
KM Standard Error of Mean (logged)	0.0641		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	10959	Mean in Log Scale	9.227
SD in Original Scale	5735	SD in Log Scale	0.351
95% t UCL (Assumes normality)	12070	95% H-Stat UCL	11627

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	12208	KM H-UCL	11661
95% KM (BCA) UCL	12368		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Titanium

General Statistics

Total Number of Observations	74	Number of Distinct Observations	52
		Number of Missing Observations	38
Number of Detects	59	Number of Non-Detects	15
Number of Distinct Detects	50	Number of Distinct Non-Detects	2
Minimum Detect	700000	Minimum Non-Detect	1000000
Maximum Detect	43300000	Maximum Non-Detect	30000000
Variance Detects	4.162E+13	Percent Non-Detects	20.27%
Mean Detects	6854237	SD Detects	6451338
Median Detects	4800000	CV Detects	0.941
Skewness Detects	3.396	Kurtosis Detects	17.02
Mean of Logged Detects	15.43	SD of Logged Detects	0.807

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.717	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	1.366E-14	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6545158	KM Standard Error of Mean	750240
KM SD	6078611	95% KM (BCA) UCL	8002162
95% KM (t) UCL	7795054	95% KM (Percentile Bootstrap) UCL	7751258
95% KM (z) UCL	7779192	95% KM Bootstrap t UCL	8120091
90% KM Chebyshev UCL	8795877	95% KM Chebyshev UCL	9815377
97.5% KM Chebyshev UCL	11230404	99% KM Chebyshev UCL	14009949

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.488	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.766	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0827	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.118	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.738	k star (bias corrected MLE)	1.661
Theta hat (MLE)	3944541	Theta star (bias corrected MLE)	4127577
nu hat (MLE)	205	nu star (bias corrected)	196
Mean (detects)	6854237		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6515530
Maximum	43300000	Median	4700000
SD	6180211	CV	0.949
k hat (MLE)	0.574	k star (bias corrected MLE)	0.56
Theta hat (MLE)	11348192	Theta star (bias corrected MLE)	11637374
nu hat (MLE)	84.97	nu star (bias corrected)	82.86
Adjusted Level of Significance (β)	0.0468		
Approximate Chi Square Value (82.86, α)	62.88	Adjusted Chi Square Value (82.86, β)	62.54
95% Gamma Approximate UCL (use when n>=50)	8585543	95% Gamma Adjusted UCL (use when n<50)	8632870

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6545158	SD (KM)	6078611
Variance (KM)	3.695E+13	SE of Mean (KM)	750240

k hat (KM)	1.159	k star (KM)	1.121
nu hat (KM)	171.6	nu star (KM)	166
theta hat (KM)	5645320	theta star (KM)	5836585
80% gamma percentile (KM)	10430030	90% gamma percentile (KM)	14650454
95% gamma percentile (KM)	18833842	99% gamma percentile (KM)	28467792

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (165.97, α)	137.2	Adjusted Chi Square Value (165.97, β)	136.7
95% Gamma Approximate KM-UCL (use when n>=50)	7918724	95% Gamma Adjusted KM-UCL (use when n<50)	7948692

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.986	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.895	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0758	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6507511	Mean in Log Scale	15.36
SD in Original Scale	6081982	SD in Log Scale	0.832
95% t UCL (assumes normality of ROS data)	7685397	95% Percentile Bootstrap UCL	7717383
95% BCA Bootstrap UCL	8047761	95% Bootstrap t UCL	8133946
95% H-UCL (Log ROS)	8140570		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	15.35	KM Geo Mean	4661456
KM SD (logged)	0.854	95% Critical H Value (KM-Log)	2.122
KM Standard Error of Mean (logged)	0.11	95% H-UCL (KM -Log)	8302857
KM SD (logged)	0.854	95% Critical H Value (KM-Log)	2.122
KM Standard Error of Mean (logged)	0.11		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8113514	Mean in Log Scale	15.56
SD in Original Scale	6662044	SD in Log Scale	0.928
95% t UCL (Assumes normality)	9403739	95% H-Stat UCL	11119219

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL	7918724	95% GROS Approximate Gamma UCL	8585543

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Appendix D-1C

American Eel

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 2:07:27 PM
From File	fsh1_dlc_wide2_flag_sep1_AE.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	2.4800E-6	Minimum Non-Detect	5.6600E-8
Maximum Detect	1.4700E-5	Maximum Non-Detect	5.6600E-8
Variance Detects	1.585E-11	Percent Non-Detects	5.556%
Mean Detects	7.4424E-6	SD Detects	3.9814E-6
Median Detects	6.6600E-6	CV Detects	N/A
Skewness Detects	0.762	Kurtosis Detects	-0.512
Mean of Logged Detects	-11.94	SD of Logged Detects	0.545

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.0320E-6	KM Standard Error of Mean	1.0003E-6
KM SD	4.1174E-6	95% KM (BCA) UCL	8.6872E-6
95% KM (t) UCL	8.7722E-6	95% KM (Percentile Bootstrap) UCL	8.6587E-6
95% KM (z) UCL	8.6774E-6	95% KM Bootstrap t UCL	9.0401E-6
90% KM Chebyshev UCL	1.0033E-5	95% KM Chebyshev UCL	1.1392E-5
97.5% KM Chebyshev UCL	1.3279E-5	99% KM Chebyshev UCL	1.6985E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.279	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.116	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.21	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.829	k star (bias corrected MLE)	3.193
Theta hat (MLE)	1.9435E-6	Theta star (bias corrected MLE)	2.3309E-6
nu hat (MLE)	130.2	nu star (bias corrected)	108.6
Mean (detects)	7.4424E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.4800E-6	Mean	5.6258E-4
Maximum	0.01	Median	7.0200E-6
SD	0.00236	CV	4.187
k hat (MLE)	0.184	k star (bias corrected MLE)	0.19
Theta hat (MLE)	0.00306	Theta star (bias corrected MLE)	0.00296

nu hat (MLE)	6.621	nu star (bias corrected)	6.851
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (6.85, α)	2.089	Adjusted Chi Square Value (6.85, β)	1.846
95% Gamma Approximate UCL (use when n>=50)	0.00184	95% Gamma Adjusted UCL (use when n<50)	0.00209

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.0320E-6	SD (KM)	4.1174E-6
Variance (KM)	1.695E-11	SE of Mean (KM)	1.0003E-6
k hat (KM)	2.917	k star (KM)	2.468
nu hat (KM)	105	nu star (KM)	88.84
theta hat (KM)	2.4108E-6	theta star (KM)	2.8495E-6
80% gamma percentile (KM)	1.0268E-5	90% gamma percentile (KM)	1.3028E-5
95% gamma percentile (KM)	1.5630E-5	99% gamma percentile (KM)	2.1332E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (88.84, α)	68.11	Adjusted Chi Square Value (88.84, β)	66.37
95% Gamma Approximate KM-UCL (use when n>=50)	9.1724E-6	95% Gamma Adjusted KM-UCL (use when n<50)	9.4131E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0971	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.1226E-6	Mean in Log Scale	-12.02
SD in Original Scale	4.0938E-6	SD in Log Scale	0.617
95% t UCL (assumes normality of ROS data)	8.8012E-6	95% Percentile Bootstrap UCL	8.7241E-6
95% BCA Bootstrap UCL	8.8150E-6	95% Bootstrap t UCL	9.0633E-6
95% H-UCL (Log ROS)	1.0042E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.21	KM Geo Mean	4.9903E-6
KM SD (logged)	1.202	95% Critical H Value (KM-Log)	2.944
KM Standard Error of Mean (logged)	0.292	95% H-UCL (KM -Log)	2.4230E-5
KM SD (logged)	1.202	95% Critical H Value (KM-Log)	2.944
KM Standard Error of Mean (logged)	0.292		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.0305E-6	Mean in Log Scale	-12.25
SD in Original Scale	4.2395E-6	SD in Log Scale	1.386
95% t UCL (Assumes normality)	8.7688E-6	95% H-Stat UCL	3.7311E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 8.7722E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	15	Number of Non-Detects	3
Number of Distinct Detects	15	Number of Distinct Non-Detects	3
Minimum Detect	1.8500E-7	Minimum Non-Detect	1.2200E-7
Maximum Detect	1.2600E-6	Maximum Non-Detect	2.3000E-7
Variance Detects	1.355E-13	Percent Non-Detects	16.67%
Mean Detects	6.2440E-7	SD Detects	3.6812E-7
Median Detects	5.3200E-7	CV Detects	N/A
Skewness Detects	0.697	Kurtosis Detects	-0.685
Mean of Logged Detects	-14.46	SD of Logged Detects	0.631

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.151	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.4244E-7	KM Standard Error of Mean	9.1009E-8
KM SD	3.7293E-7	95% KM (BCA) UCL	6.8948E-7
95% KM (t) UCL	7.0076E-7	95% KM (Percentile Bootstrap) UCL	6.9228E-7
95% KM (z) UCL	6.9214E-7	95% KM Bootstrap t UCL	7.2286E-7
90% KM Chebyshev UCL	8.1547E-7	95% KM Chebyshev UCL	9.3914E-7
97.5% KM Chebyshev UCL	1.1108E-6	99% KM Chebyshev UCL	1.4480E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.271	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.122	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.223	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.027	k star (bias corrected MLE)	2.466
Theta hat (MLE)	2.0628E-7	Theta star (bias corrected MLE)	2.5320E-7
nu hat (MLE)	90.81	nu star (bias corrected)	73.98
Mean (detects)	6.2440E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.8500E-7	Mean	0.00167
Maximum	0.01	Median	6.4800E-7
SD	0.00383	CV	2.3
k hat (MLE)	0.123	k star (bias corrected MLE)	0.14
Theta hat (MLE)	0.0135	Theta star (bias corrected MLE)	0.0119
nu hat (MLE)	4.431	nu star (bias corrected)	5.026
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.03, α)	1.164	Adjusted Chi Square Value (5.03, β)	0.998
95% Gamma Approximate UCL (use when n>=50)	0.0072	95% Gamma Adjusted UCL (use when n<50)	0.00839

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.4244E-7	SD (KM)	3.7293E-7
Variance (KM)	1.391E-13	SE of Mean (KM)	9.1009E-8
k hat (KM)	2.116	k star (KM)	1.8

nu hat (KM)	76.17	nu star (KM)	64.8
theta hat (KM)	2.5639E-7	theta star (KM)	3.0134E-7
80% gamma percentile (KM)	8.2218E-7	90% gamma percentile (KM)	1.0816E-6
95% gamma percentile (KM)	1.3307E-6	99% gamma percentile (KM)	1.8867E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (64.80, α)	47.28	Adjusted Chi Square Value (64.80, β)	45.85
95% Gamma Approximate KM-UCL (use when n>=50)	7.4346E-7	95% Gamma Adjusted KM-UCL (use when n<50)	7.6675E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.4279E-7	Mean in Log Scale	-14.69
SD in Original Scale	3.8333E-7	SD in Log Scale	0.78
95% t UCL (assumes normality of ROS data)	6.9997E-7	95% Percentile Bootstrap UCL	6.8813E-7
95% BCA Bootstrap UCL	7.0330E-7	95% Bootstrap t UCL	7.2810E-7
95% H-UCL (Log ROS)	8.8047E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-14.69	KM Geo Mean	4.1622E-7
KM SD (logged)	0.762	95% Critical H Value (KM-Log)	2.314
KM Standard Error of Mean (logged)	0.186	95% H-UCL (KM -Log)	8.5370E-7
KM SD (logged)	0.762	95% Critical H Value (KM-Log)	2.314
KM Standard Error of Mean (logged)	0.186		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.3386E-7	Mean in Log Scale	-14.78
SD in Original Scale	3.9382E-7	SD in Log Scale	0.936
95% t UCL (Assumes normality)	6.9534E-7	95% H-Stat UCL	1.0542E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 7.0076E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.6900E-7	Mean	1.3758E-6
Maximum	3.7600E-6	Median	1.2850E-6
SD	9.5594E-7	Std. Error of Mean	2.2532E-7
Coefficient of Variation	N/A	Skewness	1.32

Normal GOF Test

Shapiro Wilk Test Statistic	0.855	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.234	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.7677E-6	95% Adjusted-CLT UCL (Chen-1995)	1.8213E-6
		95% Modified-t UCL (Johnson-1978)	1.7794E-6

Gamma GOF Test

A-D Test Statistic	0.419	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.149	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.453	k star (bias corrected MLE)	2.081
Theta hat (MLE)	5.6084E-7	Theta star (bias corrected MLE)	6.6104E-7
nu hat (MLE)	88.31	nu star (bias corrected)	74.92
MLE Mean (bias corrected)	1.3758E-6	MLE Sd (bias corrected)	9.5365E-7
		Approximate Chi Square Value (0.05)	55.99
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	54.42

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.8411E-6	95% Adjusted Gamma UCL (use when n<50)	1.8942E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.172	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.81	Mean of logged Data	-13.71
Maximum of Logged Data	-12.49	SD of logged Data	0.688

Assuming Lognormal Distribution

95% H-UCL	2.0335E-6	90% Chebyshev (MVUE) UCL	2.0939E-6
95% Chebyshev (MVUE) UCL	2.4168E-6	97.5% Chebyshev (MVUE) UCL	2.8650E-6
99% Chebyshev (MVUE) UCL	3.7455E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.7464E-6	95% Jackknife UCL	1.7677E-6
95% Standard Bootstrap UCL	1.7378E-6	95% Bootstrap-t UCL	1.8871E-6

95% Hall's Bootstrap UCL	1.9517E-6	95% Percentile Bootstrap UCL	1.7403E-6
95% BCA Bootstrap UCL	1.8274E-6		
90% Chebyshev(Mean, Sd) UCL	2.0517E-6	95% Chebyshev(Mean, Sd) UCL	2.3579E-6
97.5% Chebyshev(Mean, Sd) UCL	2.7829E-6	99% Chebyshev(Mean, Sd) UCL	3.6177E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 1.8942E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.0600E-8	Mean	2.4378E-7
Maximum	7.6000E-7	Median	2.1300E-7
SD	1.8493E-7	Std. Error of Mean	4.3589E-8
Coefficient of Variation	N/A	Skewness	1.521

Normal GOF Test

Shapiro Wilk Test Statistic	0.859	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	3.1961E-7	95% Adjusted-CLT UCL (Chen-1995)	3.3217E-7
		95% Modified-t UCL (Johnson-1978)	3.2221E-7

Gamma GOF Test

A-D Test Statistic	0.223	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.115	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.077	k star (bias corrected MLE)	1.768
Theta hat (MLE)	1.1738E-7	Theta star (bias corrected MLE)	1.3790E-7
nu hat (MLE)	74.77	nu star (bias corrected)	63.64
MLE Mean (bias corrected)	2.4378E-7	MLE Sd (bias corrected)	1.8335E-7
		Approximate Chi Square Value (0.05)	46.29
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	44.87

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.3517E-7	95% Adjusted Gamma UCL (use when n<50)	3.4577E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.103	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.8	Mean of logged Data	-15.49
Maximum of Logged Data	-14.09	SD of logged Data	0.761

Assuming Lognormal Distribution

95% H-UCL	3.8477E-7	90% Chebyshev (MVUE) UCL	3.8816E-7
95% Chebyshev (MVUE) UCL	4.5247E-7	97.5% Chebyshev (MVUE) UCL	5.4172E-7
99% Chebyshev (MVUE) UCL	7.1705E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.1547E-7	95% Jackknife UCL	3.1961E-7
95% Standard Bootstrap UCL	3.1279E-7	95% Bootstrap-t UCL	3.5130E-7

95% Hall's Bootstrap UCL	3.7477E-7	95% Percentile Bootstrap UCL	3.2087E-7
95% BCA Bootstrap UCL	3.2702E-7		
90% Chebyshev(Mean, Sd) UCL	3.7454E-7	95% Chebyshev(Mean, Sd) UCL	4.3378E-7
97.5% Chebyshev(Mean, Sd) UCL	5.1599E-7	99% Chebyshev(Mean, Sd) UCL	6.7748E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 3.4577E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.4600E-7	Mean	9.6833E-7
Maximum	2.8500E-6	Median	7.2600E-7
SD	7.9030E-7	Std. Error of Mean	1.8628E-7
Coefficient of Variation	N/A	Skewness	1.325

Normal GOF Test

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.172	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.2924E-6	95% Adjusted-CLT UCL (Chen-1995)	1.3369E-6
		95% Modified-t UCL (Johnson-1978)	1.3021E-6

Gamma GOF Test

A-D Test Statistic	0.211	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0938	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.747	k star (bias corrected MLE)	1.493
Theta hat (MLE)	5.5422E-7	Theta star (bias corrected MLE)	6.4857E-7
nu hat (MLE)	62.9	nu star (bias corrected)	53.75
MLE Mean (bias corrected)	9.6833E-7	MLE Sd (bias corrected)	7.9248E-7
		Approximate Chi Square Value (0.05)	37.91
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	36.63

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.3731E-6	95% Adjusted Gamma UCL (use when n<50)	1.4209E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0812	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.74	Mean of logged Data	-14.16
Maximum of Logged Data	-12.77	SD of logged Data	0.84

Assuming Lognormal Distribution

95% H-UCL	1.6480E-6	90% Chebyshev (MVUE) UCL	1.6156E-6
95% Chebyshev (MVUE) UCL	1.9022E-6	97.5% Chebyshev (MVUE) UCL	2.3001E-6
99% Chebyshev (MVUE) UCL	3.0816E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.2747E-6	95% Jackknife UCL	1.2924E-6
95% Standard Bootstrap UCL	1.2734E-6	95% Bootstrap-t UCL	1.4060E-6

95% Hall's Bootstrap UCL	1.4619E-6	95% Percentile Bootstrap UCL	1.2685E-6
95% BCA Bootstrap UCL	1.3339E-6		
90% Chebyshev(Mean, Sd) UCL	1.5272E-6	95% Chebyshev(Mean, Sd) UCL	1.7803E-6
97.5% Chebyshev(Mean, Sd) UCL	2.1316E-6	99% Chebyshev(Mean, Sd) UCL	2.8217E-6

Suggested UCL to Use

95% Student's-t UCL 1.2924E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.1100E-7	Mean	1.9917E-6
Maximum	1.2300E-5	Median	1.0850E-6
SD	2.7301E-6	Std. Error of Mean	6.4348E-7
Coefficient of Variation	N/A	Skewness	3.501

Normal GOF Test

Shapiro Wilk Test Statistic	0.549	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.278	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.1111E-6	95% Adjusted-CLT UCL (Chen-1995)	3.6174E-6
		95% Modified-t UCL (Johnson-1978)	3.1996E-6

Gamma GOF Test

A-D Test Statistic	0.793	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.762	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.158	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.231	k star (bias corrected MLE)	1.063
Theta hat (MLE)	1.6180E-6	Theta star (bias corrected MLE)	1.8739E-6
nu hat (MLE)	44.31	nu star (bias corrected)	38.26
MLE Mean (bias corrected)	1.9917E-6	MLE Sd (bias corrected)	1.9319E-6
		Approximate Chi Square Value (0.05)	25.1
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	24.07

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.0365E-6	95% Adjusted Gamma UCL (use when n<50)	3.1654E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.98	Mean of logged Data	-13.58
Maximum of Logged Data	-11.31	SD of logged Data	0.899

Assuming Lognormal Distribution

95% H-UCL	3.2504E-6	90% Chebyshev (MVUE) UCL	3.1048E-6
95% Chebyshev (MVUE) UCL	3.6816E-6	97.5% Chebyshev (MVUE) UCL	4.4822E-6
99% Chebyshev (MVUE) UCL	6.0548E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.0501E-6	95% Jackknife UCL	3.1111E-6
95% Standard Bootstrap UCL	3.0210E-6	95% Bootstrap-t UCL	4.8841E-6

95% Hall's Bootstrap UCL	7.2099E-6	95% Percentile Bootstrap UCL	3.2246E-6
95% BCA Bootstrap UCL	3.8508E-6		
90% Chebyshev(Mean, Sd) UCL	3.9221E-6	95% Chebyshev(Mean, Sd) UCL	4.7965E-6
97.5% Chebyshev(Mean, Sd) UCL	6.0102E-6	99% Chebyshev(Mean, Sd) UCL	8.3942E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 3.1654E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	4	Number of Non-Detects	14
Number of Distinct Detects	4	Number of Distinct Non-Detects	14
Minimum Detect	5.6400E-8	Minimum Non-Detect	6.1100E-8
Maximum Detect	1.5800E-7	Maximum Non-Detect	2.6100E-7
Variance Detects	2.239E-15	Percent Non-Detects	77.78%
Mean Detects	1.2660E-7	SD Detects	4.7317E-8
Median Detects	1.4600E-7	CV Detects	N/A
Skewness Detects	-1.872	Kurtosis Detects	3.56
Mean of Logged Detects	-15.96	SD of Logged Detects	0.491

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.761	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.37	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.0583E-8	KM Standard Error of Mean	1.3942E-8
KM SD	4.1035E-8	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.0484E-7	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.0352E-7	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.2241E-7	95% KM Chebyshev UCL	1.4135E-7
97.5% KM Chebyshev UCL	1.6765E-7	99% KM Chebyshev UCL	2.1930E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.725	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.658	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.41	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.396	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.762	k star (bias corrected MLE)	1.857
Theta hat (MLE)	1.8721E-8	Theta star (bias corrected MLE)	6.8165E-8
nu hat (MLE)	54.1	nu star (bias corrected)	14.86
Mean (detects)	1.2660E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.6400E-8	Mean	0.00778
Maximum	0.01	Median	0.01
SD	0.00428	CV	0.55
k hat (MLE)	0.303	k star (bias corrected MLE)	0.29
Theta hat (MLE)	0.0257	Theta star (bias corrected MLE)	0.0269
nu hat (MLE)	10.91	nu star (bias corrected)	10.43
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (10.43, α)	4.209	Adjusted Chi Square Value (10.43, β)	3.837
95% Gamma Approximate UCL (use when n>=50)	0.0193	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.0583E-8	SD (KM)	4.1035E-8
Variance (KM)	1.684E-15	SE of Mean (KM)	1.3942E-8
k hat (KM)	3.856	k star (KM)	3.251

nu hat (KM)	138.8	nu star (KM)	117
theta hat (KM)	2.0896E-8	theta star (KM)	2.4789E-8
80% gamma percentile (KM)	1.1385E-7	90% gamma percentile (KM)	1.4051E-7
95% gamma percentile (KM)	1.6530E-7	99% gamma percentile (KM)	2.1880E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (117.03, α)	93.05	Adjusted Chi Square Value (117.03, β)	91
95% Gamma Approximate KM-UCL (use when n>=50)	1.0135E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.0363E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.716	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.396	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.0399E-8	Mean in Log Scale	-16.39
SD in Original Scale	3.2725E-8	SD in Log Scale	0.327
95% t UCL (assumes normality of ROS data)	9.3817E-8	95% Percentile Bootstrap UCL	9.3789E-8
95% BCA Bootstrap UCL	9.6525E-8	95% Bootstrap t UCL	9.9873E-8
95% H-UCL (Log ROS)	9.2786E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.44	KM Geo Mean	7.2619E-8
KM SD (logged)	0.428	95% Critical H Value (KM-Log)	1.955
KM Standard Error of Mean (logged)	0.146	95% H-UCL (KM -Log)	9.7482E-8
KM SD (logged)	0.428	95% Critical H Value (KM-Log)	1.955
KM Standard Error of Mean (logged)	0.146		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.3222E-8	Mean in Log Scale	-16.43
SD in Original Scale	4.1535E-8	SD in Log Scale	0.526
95% t UCL (Assumes normality)	1.0025E-7	95% H-Stat UCL	1.0948E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.0484E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	1.2600E-7	Minimum Non-Detect	1.0800E-7
Maximum Detect	3.2500E-6	Maximum Non-Detect	1.0800E-7
Variance Detects	7.018E-13	Percent Non-Detects	5.556%
Mean Detects	1.1046E-6	SD Detects	8.3774E-7
Median Detects	9.3400E-7	CV Detects	N/A
Skewness Detects	1.229	Kurtosis Detects	1.35
Mean of Logged Detects	-14.02	SD of Logged Detects	0.866

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.189	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.0492E-6	KM Standard Error of Mean	1.9975E-7
KM SD	8.2216E-7	95% KM (BCA) UCL	1.3296E-6
95% KM (t) UCL	1.3967E-6	95% KM (Percentile Bootstrap) UCL	1.3738E-6
95% KM (z) UCL	1.3778E-6	95% KM Bootstrap t UCL	1.4739E-6
90% KM Chebyshev UCL	1.6485E-6	95% KM Chebyshev UCL	1.9199E-6
97.5% KM Chebyshev UCL	2.2967E-6	99% KM Chebyshev UCL	3.0367E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.151	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0908	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.212	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.806	k star (bias corrected MLE)	1.526
Theta hat (MLE)	6.1168E-7	Theta star (bias corrected MLE)	7.2367E-7
nu hat (MLE)	61.4	nu star (bias corrected)	51.9
Mean (detects)	1.1046E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.2600E-7	Mean	5.5660E-4
Maximum	0.01	Median	1.0120E-6
SD	0.00236	CV	4.234
k hat (MLE)	0.131	k star (bias corrected MLE)	0.146
Theta hat (MLE)	0.00426	Theta star (bias corrected MLE)	0.00382
nu hat (MLE)	4.702	nu star (bias corrected)	5.252
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.25, α)	1.27	Adjusted Chi Square Value (5.25, β)	1.094
95% Gamma Approximate UCL (use when n>=50)	0.0023	95% Gamma Adjusted UCL (use when n<50)	0.00267

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.0492E-6	SD (KM)	8.2216E-7
Variance (KM)	6.759E-13	SE of Mean (KM)	1.9975E-7
k hat (KM)	1.629	k star (KM)	1.394

nu hat (KM)	58.63	nu star (KM)	50.19
theta hat (KM)	6.4423E-7	theta star (KM)	7.5254E-7
80% gamma percentile (KM)	1.6362E-6	90% gamma percentile (KM)	2.2258E-6
95% gamma percentile (KM)	2.8012E-6	99% gamma percentile (KM)	4.1068E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (50.19, α)	34.92	Adjusted Chi Square Value (50.19, β)	33.7
95% Gamma Approximate KM-UCL (use when n>=50)	1.5079E-6	95% Gamma Adjusted KM-UCL (use when n<50)	1.5625E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.0488E-6	Mean in Log Scale	-14.13
SD in Original Scale	8.4655E-7	SD in Log Scale	0.976
95% t UCL (assumes normality of ROS data)	1.3959E-6	95% Percentile Bootstrap UCL	1.3808E-6
95% BCA Bootstrap UCL	1.4431E-6	95% Bootstrap t UCL	1.4782E-6
95% H-UCL (Log ROS)	2.1655E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-14.13	KM Geo Mean	7.3002E-7
KM SD (logged)	0.939	95% Critical H Value (KM-Log)	2.55
KM Standard Error of Mean (logged)	0.228	95% H-UCL (KM -Log)	2.0273E-6
KM SD (logged)	0.939	95% Critical H Value (KM-Log)	2.55
KM Standard Error of Mean (logged)	0.228		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0462E-6	Mean in Log Scale	-14.17
SD in Original Scale	8.4962E-7	SD in Log Scale	1.056
95% t UCL (Assumes normality)	1.3946E-6	95% H-Stat UCL	2.4639E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.3967E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	6.8400E-7	Mean	2.7142E-6
Maximum	9.2300E-6	Median	1.9050E-6
SD	2.2102E-6	Std. Error of Mean	5.2095E-7
Coefficient of Variation	N/A	Skewness	1.763

Normal GOF Test

Shapiro Wilk Test Statistic	0.81	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.221	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.6204E-6	95% Adjusted-CLT UCL (Chen-1995)	3.8024E-6
		95% Modified-t UCL (Johnson-1978)	3.6565E-6

Gamma GOF Test

A-D Test Statistic	0.43	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.155	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.066	k star (bias corrected MLE)	1.759
Theta hat (MLE)	1.3137E-6	Theta star (bias corrected MLE)	1.5432E-6
nu hat (MLE)	74.38	nu star (bias corrected)	63.31
MLE Mean (bias corrected)	2.7142E-6	MLE Sd (bias corrected)	2.0466E-6
		Approximate Chi Square Value (0.05)	46.01
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	44.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.7350E-6	95% Adjusted Gamma UCL (use when n<50)	3.8535E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.2	Mean of logged Data	-13.08
Maximum of Logged Data	-11.59	SD of logged Data	0.728

Assuming Lognormal Distribution

95% H-UCL	4.0675E-6	90% Chebyshev (MVUE) UCL	4.1446E-6
95% Chebyshev (MVUE) UCL	4.8099E-6	97.5% Chebyshev (MVUE) UCL	5.7334E-6
99% Chebyshev (MVUE) UCL	7.5473E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.5711E-6	95% Jackknife UCL	3.6204E-6
95% Standard Bootstrap UCL	3.5471E-6	95% Bootstrap-t UCL	4.1242E-6

95% Hall's Bootstrap UCL	4.1075E-6	95% Percentile Bootstrap UCL	3.6471E-6
95% BCA Bootstrap UCL	3.7943E-6		
90% Chebyshev(Mean, Sd) UCL	4.2770E-6	95% Chebyshev(Mean, Sd) UCL	4.9849E-6
97.5% Chebyshev(Mean, Sd) UCL	5.9675E-6	99% Chebyshev(Mean, Sd) UCL	7.8976E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 3.8535E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.8400E-7	Mean	1.8458E-6
Maximum	4.7100E-6	Median	1.2900E-6
SD	1.3557E-6	Std. Error of Mean	3.1954E-7
Coefficient of Variation	N/A	Skewness	0.851

Normal GOF Test

Shapiro Wilk Test Statistic	0.892	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.4017E-6	95% Adjusted-CLT UCL (Chen-1995)	2.4399E-6
		95% Modified-t UCL (Johnson-1978)	2.4124E-6

Gamma GOF Test

A-D Test Statistic	0.368	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.797	k star (bias corrected MLE)	1.535
Theta hat (MLE)	1.0270E-6	Theta star (bias corrected MLE)	1.2027E-6
nu hat (MLE)	64.7	nu star (bias corrected)	55.25
MLE Mean (bias corrected)	1.8458E-6	MLE Sd (bias corrected)	1.4899E-6
		Approximate Chi Square Value (0.05)	39.17
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	37.87

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2.6036E-6	95% Adjusted Gamma UCL (use when n<50)	2.6929E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.153	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.51	Mean of logged Data	-13.51
Maximum of Logged Data	-12.27	SD of logged Data	0.877

Assuming Lognormal Distribution

95% H-UCL	3.3800E-6	90% Chebyshev (MVUE) UCL	3.2619E-6
95% Chebyshev (MVUE) UCL	3.8578E-6	97.5% Chebyshev (MVUE) UCL	4.6849E-6
99% Chebyshev (MVUE) UCL	6.3095E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.3714E-6	95% Jackknife UCL	2.4017E-6
95% Standard Bootstrap UCL	2.3497E-6	95% Bootstrap-t UCL	2.5007E-6

95% Hall's Bootstrap UCL	2.3768E-6	95% Percentile Bootstrap UCL	2.3734E-6
95% BCA Bootstrap UCL	2.4071E-6		
90% Chebyshev(Mean, Sd) UCL	2.8045E-6	95% Chebyshev(Mean, Sd) UCL	3.2387E-6
97.5% Chebyshev(Mean, Sd) UCL	3.8414E-6	99% Chebyshev(Mean, Sd) UCL	5.0253E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 2.6929E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	3.9700E-7	Mean	1.6442E-6
Maximum	3.8500E-6	Median	1.5550E-6
SD	9.1370E-7	Std. Error of Mean	2.1536E-7
Coefficient of Variation	N/A	Skewness	0.753

Normal GOF Test

Shapiro Wilk Test Statistic	0.949	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.129	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.0188E-6	95% Adjusted-CLT UCL (Chen-1995)	2.0393E-6
		95% Modified-t UCL (Johnson-1978)	2.0252E-6

Gamma GOF Test

A-D Test Statistic	0.261	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0977	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.105	k star (bias corrected MLE)	2.624
Theta hat (MLE)	5.2960E-7	Theta star (bias corrected MLE)	6.2655E-7
nu hat (MLE)	111.8	nu star (bias corrected)	94.47
MLE Mean (bias corrected)	1.6442E-6	MLE Sd (bias corrected)	1.0150E-6
		Approximate Chi Square Value (0.05)	73.05
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	71.25

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1262E-6	95% Adjusted Gamma UCL (use when n<50)	2.1801E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.74	Mean of logged Data	-13.49
Maximum of Logged Data	-12.47	SD of logged Data	0.642

Assuming Lognormal Distribution

95% H-UCL	2.3904E-6	90% Chebyshev (MVUE) UCL	2.4871E-6
95% Chebyshev (MVUE) UCL	2.8516E-6	97.5% Chebyshev (MVUE) UCL	3.3575E-6
99% Chebyshev (MVUE) UCL	4.3512E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.9984E-6	95% Jackknife UCL	2.0188E-6
95% Standard Bootstrap UCL	1.9903E-6	95% Bootstrap-t UCL	2.0857E-6

95% Hall's Bootstrap UCL	2.0820E-6	95% Percentile Bootstrap UCL	1.9956E-6
95% BCA Bootstrap UCL	2.0135E-6		
90% Chebyshev(Mean, Sd) UCL	2.2903E-6	95% Chebyshev(Mean, Sd) UCL	2.5829E-6
97.5% Chebyshev(Mean, Sd) UCL	2.9891E-6	99% Chebyshev(Mean, Sd) UCL	3.7870E-6

Suggested UCL to Use

95% Student's-t UCL 2.0188E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	13	Number of Distinct Non-Detects	4
Minimum Detect	4.5900E-8	Minimum Non-Detect	7.2600E-8
Maximum Detect	2.5400E-7	Maximum Non-Detect	9.4700E-8
Variance Detects	2.940E-15	Percent Non-Detects	22.22%
Mean Detects	1.0171E-7	SD Detects	5.4226E-8
Median Detects	8.9800E-8	CV Detects	N/A
Skewness Detects	1.816	Kurtosis Detects	4.19
Mean of Logged Detects	-16.21	SD of Logged Detects	0.464

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.823	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.198	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.2976E-8	KM Standard Error of Mean	1.2072E-8
KM SD	4.9077E-8	95% KM (BCA) UCL	1.1366E-7
95% KM (t) UCL	1.1398E-7	95% KM (Percentile Bootstrap) UCL	1.1256E-7
95% KM (z) UCL	1.1283E-7	95% KM Bootstrap t UCL	1.2583E-7
90% KM Chebyshev UCL	1.2919E-7	95% KM Chebyshev UCL	1.4560E-7
97.5% KM Chebyshev UCL	1.6837E-7	99% KM Chebyshev UCL	2.1309E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.445	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.198	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.229	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.824	k star (bias corrected MLE)	3.838
Theta hat (MLE)	2.1085E-8	Theta star (bias corrected MLE)	2.6502E-8
nu hat (MLE)	135.1	nu star (bias corrected)	107.5
Mean (detects)	1.0171E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.5900E-8	Mean	0.00222
Maximum	0.01	Median	1.1050E-7
SD	0.00428	CV	1.925
k hat (MLE)	0.107	k star (bias corrected MLE)	0.126
Theta hat (MLE)	0.0208	Theta star (bias corrected MLE)	0.0176
nu hat (MLE)	3.854	nu star (bias corrected)	4.545
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.54, α)	0.948	Adjusted Chi Square Value (4.54, β)	0.804
95% Gamma Approximate UCL (use when n>=50)	0.0107	95% Gamma Adjusted UCL (use when n<50)	0.0126

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.2976E-8	SD (KM)	4.9077E-8
Variance (KM)	2.409E-15	SE of Mean (KM)	1.2072E-8
k hat (KM)	3.589	k star (KM)	3.028

nu hat (KM)	129.2	nu star (KM)	109
theta hat (KM)	2.5905E-8	theta star (KM)	3.0705E-8
80% gamma percentile (KM)	1.3247E-7	90% gamma percentile (KM)	1.6462E-7
95% gamma percentile (KM)	1.9460E-7	99% gamma percentile (KM)	2.5956E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (109.01, α)	85.91	Adjusted Chi Square Value (109.01, β)	83.94
95% Gamma Approximate KM-UCL (use when n>=50)	1.1797E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.2074E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.18	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.3355E-8	Mean in Log Scale	-16.29
SD in Original Scale	5.0081E-8	SD in Log Scale	0.433
95% t UCL (assumes normality of ROS data)	1.1389E-7	95% Percentile Bootstrap UCL	1.1244E-7
95% BCA Bootstrap UCL	1.1843E-7	95% Bootstrap t UCL	1.2786E-7
95% H-UCL (Log ROS)	1.1393E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.3	KM Geo Mean	8.3740E-8
KM SD (logged)	0.432	95% Critical H Value (KM-Log)	1.959
KM Standard Error of Mean (logged)	0.108	95% H-UCL (KM -Log)	1.1291E-7
KM SD (logged)	0.432	95% Critical H Value (KM-Log)	1.959
KM Standard Error of Mean (logged)	0.108		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.8514E-8	Mean in Log Scale	-16.38
SD in Original Scale	5.3841E-8	SD in Log Scale	0.526
95% t UCL (Assumes normality)	1.1059E-7	95% H-Stat UCL	1.1470E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.1398E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	8.9700E-8	Mean	2.9068E-7
Maximum	6.3000E-7	Median	2.5250E-7
SD	1.7663E-7	Std. Error of Mean	4.1633E-8
Coefficient of Variation	N/A	Skewness	0.603

Normal GOF Test

Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.6310E-7	95% Adjusted-CLT UCL (Chen-1995)	3.6548E-7
		95% Modified-t UCL (Johnson-1978)	3.6409E-7

Gamma GOF Test

A-D Test Statistic	0.368	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.75	k star (bias corrected MLE)	2.329
Theta hat (MLE)	1.0571E-7	Theta star (bias corrected MLE)	1.2483E-7
nu hat (MLE)	98.99	nu star (bias corrected)	83.83
MLE Mean (bias corrected)	2.9068E-7	MLE Sd (bias corrected)	1.9049E-7
		Approximate Chi Square Value (0.05)	63.73
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	62.05

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.8237E-7	95% Adjusted Gamma UCL (use when n<50)	3.9273E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.23	Mean of logged Data	-15.24
Maximum of Logged Data	-14.28	SD of logged Data	0.661

Assuming Lognormal Distribution

95% H-UCL	4.2366E-7	90% Chebyshev (MVUE) UCL	4.3905E-7
95% Chebyshev (MVUE) UCL	5.0477E-7	97.5% Chebyshev (MVUE) UCL	5.9599E-7
99% Chebyshev (MVUE) UCL	7.7518E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.5916E-7	95% Jackknife UCL	3.6310E-7
95% Standard Bootstrap UCL	3.5786E-7	95% Bootstrap-t UCL	3.7879E-7

95% Hall's Bootstrap UCL	3.6148E-7	95% Percentile Bootstrap UCL	3.5759E-7
95% BCA Bootstrap UCL	3.6199E-7		
90% Chebyshev(Mean, Sd) UCL	4.1558E-7	95% Chebyshev(Mean, Sd) UCL	4.7215E-7
97.5% Chebyshev(Mean, Sd) UCL	5.5067E-7	99% Chebyshev(Mean, Sd) UCL	7.0492E-7

Suggested UCL to Use

95% Student's-t UCL 3.6310E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.4100E-7	Mean	3.7669E-6
Maximum	8.5800E-6	Median	3.1800E-6
SD	2.4073E-6	Std. Error of Mean	5.6740E-7
Coefficient of Variation	N/A	Skewness	0.663

Normal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.18	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.7539E-6	95% Adjusted-CLT UCL (Chen-1995)	4.7949E-6
		95% Modified-t UCL (Johnson-1978)	4.7687E-6

Gamma GOF Test

A-D Test Statistic	0.217	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0882	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.207	k star (bias corrected MLE)	1.876
Theta hat (MLE)	1.7066E-6	Theta star (bias corrected MLE)	2.0075E-6
nu hat (MLE)	79.46	nu star (bias corrected)	67.55
MLE Mean (bias corrected)	3.7669E-6	MLE Sd (bias corrected)	2.7499E-6
		Approximate Chi Square Value (0.05)	49.64
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	48.16

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.1266E-6	95% Adjusted Gamma UCL (use when n<50)	5.2834E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.43	Mean of logged Data	-12.73
Maximum of Logged Data	-11.67	SD of logged Data	0.793

Assuming Lognormal Distribution

95% H-UCL	6.3558E-6	90% Chebyshev (MVUE) UCL	6.3435E-6
95% Chebyshev (MVUE) UCL	7.4250E-6	97.5% Chebyshev (MVUE) UCL	8.9261E-6
99% Chebyshev (MVUE) UCL	1.1875E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.7002E-6	95% Jackknife UCL	4.7539E-6
95% Standard Bootstrap UCL	4.6963E-6	95% Bootstrap-t UCL	4.9036E-6

95% Hall's Bootstrap UCL	4.7391E-6	95% Percentile Bootstrap UCL	4.6861E-6
95% BCA Bootstrap UCL	4.7967E-6		
90% Chebyshev(Mean, Sd) UCL	5.4691E-6	95% Chebyshev(Mean, Sd) UCL	6.2401E-6
97.5% Chebyshev(Mean, Sd) UCL	7.3103E-6	99% Chebyshev(Mean, Sd) UCL	9.4124E-6

Suggested UCL to Use

95% Student's-t UCL 4.7539E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	15	Number of Non-Detects	3
Number of Distinct Detects	15	Number of Distinct Non-Detects	3
Minimum Detect	3.7200E-8	Minimum Non-Detect	1.1000E-7
Maximum Detect	2.6200E-7	Maximum Non-Detect	1.2800E-7
Variance Detects	5.869E-15	Percent Non-Detects	16.67%
Mean Detects	1.4134E-7	SD Detects	7.6612E-8
Median Detects	1.2100E-7	CV Detects	N/A
Skewness Detects	0.232	Kurtosis Detects	-1.354
Mean of Logged Detects	-15.94	SD of Logged Detects	0.631

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.2977E-7	KM Standard Error of Mean	1.8076E-8
KM SD	7.3104E-8	95% KM (BCA) UCL	1.5906E-7
95% KM (t) UCL	1.6122E-7	95% KM (Percentile Bootstrap) UCL	1.5899E-7
95% KM (z) UCL	1.5951E-7	95% KM Bootstrap t UCL	1.6137E-7
90% KM Chebyshev UCL	1.8400E-7	95% KM Chebyshev UCL	2.0857E-7
97.5% KM Chebyshev UCL	2.4266E-7	99% KM Chebyshev UCL	3.0963E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.35	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.157	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.223	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.17	k star (bias corrected MLE)	2.581
Theta hat (MLE)	4.4583E-8	Theta star (bias corrected MLE)	5.4769E-8
nu hat (MLE)	95.11	nu star (bias corrected)	77.42
Mean (detects)	1.4134E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.7200E-8	Mean	0.00167
Maximum	0.01	Median	1.7150E-7
SD	0.00383	CV	2.301
k hat (MLE)	0.105	k star (bias corrected MLE)	0.125
Theta hat (MLE)	0.0158	Theta star (bias corrected MLE)	0.0133
nu hat (MLE)	3.795	nu star (bias corrected)	4.496
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.50, α)	0.927	Adjusted Chi Square Value (4.50, β)	0.785
95% Gamma Approximate UCL (use when n>=50)	0.00809	95% Gamma Adjusted UCL (use when n<50)	0.00955

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.2977E-7	SD (KM)	7.3104E-8
Variance (KM)	5.344E-15	SE of Mean (KM)	1.8076E-8
k hat (KM)	3.151	k star (KM)	2.663

nu hat (KM)	113.4	nu star (KM)	95.87
theta hat (KM)	4.1181E-8	theta star (KM)	4.8730E-8
80% gamma percentile (KM)	1.8776E-7	90% gamma percentile (KM)	2.3635E-7
95% gamma percentile (KM)	2.8196E-7	99% gamma percentile (KM)	3.8149E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (95.87, α)	74.29	Adjusted Chi Square Value (95.87, β)	72.46
95% Gamma Approximate KM-UCL (use when n>=50)	1.6748E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.7169E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.2979E-7	Mean in Log Scale	-16.02
SD in Original Scale	7.4451E-8	SD in Log Scale	0.605
95% t UCL (assumes normality of ROS data)	1.6031E-7	95% Percentile Bootstrap UCL	1.5772E-7
95% BCA Bootstrap UCL	1.5957E-7	95% Bootstrap t UCL	1.6479E-7
95% H-UCL (Log ROS)	1.8054E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.03	KM Geo Mean	1.0877E-7
KM SD (logged)	0.615	95% Critical H Value (KM-Log)	2.14
KM Standard Error of Mean (logged)	0.156	95% H-UCL (KM -Log)	1.8082E-7
KM SD (logged)	0.615	95% Critical H Value (KM-Log)	2.14
KM Standard Error of Mean (logged)	0.156		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.2770E-7	Mean in Log Scale	-16.05
SD in Original Scale	7.6296E-8	SD in Log Scale	0.633
95% t UCL (Assumes normality)	1.5898E-7	95% H-Stat UCL	1.8130E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.6122E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	8.2100E-8	Mean	2.9017E-7
Maximum	6.7700E-7	Median	2.6750E-7
SD	1.7115E-7	Std. Error of Mean	4.0340E-8
Coefficient of Variation	N/A	Skewness	1.046

Normal GOF Test

Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.169	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.6035E-7	95% Adjusted-CLT UCL (Chen-1995)	3.6716E-7
		95% Modified-t UCL (Johnson-1978)	3.6201E-7

Gamma GOF Test

A-D Test Statistic	0.215	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0955	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.23	k star (bias corrected MLE)	2.728
Theta hat (MLE)	8.9849E-8	Theta star (bias corrected MLE)	1.0635E-7
nu hat (MLE)	116.3	nu star (bias corrected)	98.22
MLE Mean (bias corrected)	2.9017E-7	MLE Sd (bias corrected)	1.7567E-7
		Approximate Chi Square Value (0.05)	76.36
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	74.51

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.7325E-7	95% Adjusted Gamma UCL (use when n<50)	3.8252E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.32	Mean of logged Data	-15.22
Maximum of Logged Data	-14.21	SD of logged Data	0.597

Assuming Lognormal Distribution

95% H-UCL	4.0078E-7	90% Chebyshev (MVUE) UCL	4.2035E-7
95% Chebyshev (MVUE) UCL	4.7875E-7	97.5% Chebyshev (MVUE) UCL	5.5980E-7
99% Chebyshev (MVUE) UCL	7.1902E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.5653E-7	95% Jackknife UCL	3.6035E-7
95% Standard Bootstrap UCL	3.5451E-7	95% Bootstrap-t UCL	3.7680E-7

95% Hall's Bootstrap UCL	3.8070E-7	95% Percentile Bootstrap UCL	3.5333E-7
95% BCA Bootstrap UCL	3.6728E-7		
90% Chebyshev(Mean, Sd) UCL	4.1119E-7	95% Chebyshev(Mean, Sd) UCL	4.6601E-7
97.5% Chebyshev(Mean, Sd) UCL	5.4210E-7	99% Chebyshev(Mean, Sd) UCL	6.9155E-7

Suggested UCL to Use

95% Student's-t UCL 3.6035E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0100E-5	Mean	5.9617E-5
Maximum	1.4000E-4	Median	4.9950E-5
SD	3.7199E-5	Std. Error of Mean	8.7678E-6
Coefficient of Variation	N/A	Skewness	0.683

Normal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.4869E-5	95% Adjusted-CLT UCL (Chen-1995)	7.5547E-5
		95% Modified-t UCL (Johnson-1978)	7.5104E-5

Gamma GOF Test

A-D Test Statistic	0.19	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.108	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.456	k star (bias corrected MLE)	2.084
Theta hat (MLE)	2.4274E-5	Theta star (bias corrected MLE)	2.8611E-5
nu hat (MLE)	88.42	nu star (bias corrected)	75.01
MLE Mean (bias corrected)	5.9617E-5	MLE Sd (bias corrected)	4.1300E-5
		Approximate Chi Square Value (0.05)	56.07
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	54.49

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.9764E-5	95% Adjusted Gamma UCL (use when n<50)	8.2065E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.133	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.5	Mean of logged Data	-9.945
Maximum of Logged Data	-8.874	SD of logged Data	0.727

Assuming Lognormal Distribution

95% H-UCL	9.3278E-5	90% Chebyshev (MVUE) UCL	9.5061E-5
95% Chebyshev (MVUE) UCL	1.1031E-4	97.5% Chebyshev (MVUE) UCL	1.3148E-4
99% Chebyshev (MVUE) UCL	1.7306E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.4038E-5	95% Jackknife UCL	7.4869E-5
95% Standard Bootstrap UCL	7.3636E-5	95% Bootstrap-t UCL	7.6274E-5

95% Hall's Bootstrap UCL	7.6531E-5	95% Percentile Bootstrap UCL	7.3867E-5
95% BCA Bootstrap UCL	7.5567E-5		
90% Chebyshev(Mean, Sd) UCL	8.5920E-5	95% Chebyshev(Mean, Sd) UCL	9.7835E-5
97.5% Chebyshev(Mean, Sd) UCL	1.1437E-4	99% Chebyshev(Mean, Sd) UCL	1.4686E-4

Suggested UCL to Use

95% Student's-t UCL 7.4869E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	14	Number of Distinct Observations	12
		Number of Missing Observations	4
Number of Detects	4	Number of Non-Detects	10
Number of Distinct Detects	4	Number of Distinct Non-Detects	8
Minimum Detect	9.0500E-6	Minimum Non-Detect	1.7500E-6
Maximum Detect	3.4700E-5	Maximum Non-Detect	8.7500E-6
Variance Detects	1.229E-10	Percent Non-Detects	71.43%
Mean Detects	1.8838E-5	SD Detects	1.1087E-5
Median Detects	1.5800E-5	CV Detects	N/A
Skewness Detects	1.454	Kurtosis Detects	2.567
Mean of Logged Detects	-11	SD of Logged Detects	0.556

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.882	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.316	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.6321E-6	KM Standard Error of Mean	2.8607E-6
KM SD	9.2697E-6	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.1698E-5	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.1338E-5	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.5214E-5	95% KM Chebyshev UCL	1.9102E-5
97.5% KM Chebyshev UCL	2.4497E-5	99% KM Chebyshev UCL	3.5096E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.299	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.659	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.269	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.396	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.329	k star (bias corrected MLE)	1.249
Theta hat (MLE)	4.3512E-6	Theta star (bias corrected MLE)	1.5082E-5
nu hat (MLE)	34.63	nu star (bias corrected)	9.992
Mean (detects)	1.8838E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	9.0500E-6	Mean	0.00715
Maximum	0.01	Median	0.01
SD	0.00468	CV	0.655
k hat (MLE)	0.435	k star (bias corrected MLE)	0.39
Theta hat (MLE)	0.0164	Theta star (bias corrected MLE)	0.0183
nu hat (MLE)	12.19	nu star (bias corrected)	10.91
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (10.91, α)	4.518	Adjusted Chi Square Value (10.91, β)	3.987
95% Gamma Approximate UCL (use when n>=50)	0.0173	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.6321E-6	SD (KM)	9.2697E-6
Variance (KM)	8.593E-11	SE of Mean (KM)	2.8607E-6

k hat (KM)	0.512	k star (KM)	0.45
nu hat (KM)	14.33	nu star (KM)	12.59
theta hat (KM)	1.2956E-5	theta star (KM)	1.4744E-5
80% gamma percentile (KM)	1.0824E-5	90% gamma percentile (KM)	1.8329E-5
95% gamma percentile (KM)	2.6450E-5	99% gamma percentile (KM)	4.6627E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (12.59, α)	5.621	Adjusted Chi Square Value (12.59, β)	5.016
95% Gamma Approximate KM-UCL (use when n>=50)	1.4860E-5	95% Gamma Adjusted KM-UCL (use when n<50)	1.6653E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.238	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.6787E-6	Mean in Log Scale	-12.62
SD in Original Scale	9.6068E-6	SD in Log Scale	1.13
95% t UCL (assumes normality of ROS data)	1.1226E-5	95% Percentile Bootstrap UCL	1.1138E-5
95% BCA Bootstrap UCL	1.2798E-5	95% Bootstrap t UCL	1.5745E-5
95% H-UCL (Log ROS)	1.6108E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.61	KM Geo Mean	3.3344E-6
KM SD (logged)	1.051	95% Critical H Value (KM-Log)	2.877
KM Standard Error of Mean (logged)	0.324	95% H-UCL (KM -Log)	1.3409E-5
KM SD (logged)	1.051	95% Critical H Value (KM-Log)	2.877
KM Standard Error of Mean (logged)	0.324		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.2489E-6	Mean in Log Scale	-12.53
SD in Original Scale	9.4078E-6	SD in Log Scale	1.25
95% t UCL (Assumes normality)	1.1702E-5	95% H-Stat UCL	2.4216E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.1698E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00554	Mean	0.0167
Maximum	0.0402	Median	0.0162
SD	0.00973	Std. Error of Mean	0.00229
Coefficient of Variation	0.584	Skewness	0.854

Normal GOF Test

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0207	95% Adjusted-CLT UCL (Chen-1995)	0.0209
		95% Modified-t UCL (Johnson-1978)	0.0207

Gamma GOF Test

A-D Test Statistic	0.271	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.121	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.121	k star (bias corrected MLE)	2.638
Theta hat (MLE)	0.00534	Theta star (bias corrected MLE)	0.00632
nu hat (MLE)	112.4	nu star (bias corrected)	94.98
MLE Mean (bias corrected)	0.0167	MLE Sd (bias corrected)	0.0103
		Approximate Chi Square Value (0.05)	73.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	71.69

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0215	95% Adjusted Gamma UCL (use when n<50)	0.0221

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.196	Mean of logged Data	-4.262
Maximum of Logged Data	-3.214	SD of logged Data	0.613

Assuming Lognormal Distribution

95% H-UCL	0.0234	90% Chebyshev (MVUE) UCL	0.0244
95% Chebyshev (MVUE) UCL	0.0279	97.5% Chebyshev (MVUE) UCL	0.0327
99% Chebyshev (MVUE) UCL	0.0422		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0204	95% Jackknife UCL	0.0207
95% Standard Bootstrap UCL	0.0203	95% Bootstrap-t UCL	0.0211

95% Hall's Bootstrap UCL	0.0214	95% Percentile Bootstrap UCL	0.0204
95% BCA Bootstrap UCL	0.0208		
90% Chebyshev(Mean, Sd) UCL	0.0236	95% Chebyshev(Mean, Sd) UCL	0.0267
97.5% Chebyshev(Mean, Sd) UCL	0.031	99% Chebyshev(Mean, Sd) UCL	0.0395

Suggested UCL to Use

95% Student's-t UCL	0.0207

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.9200E-4	Mean	0.00106
Maximum	0.00252	Median	9.1150E-4
SD	6.2891E-4	Std. Error of Mean	1.4823E-4
Coefficient of Variation	0.593	Skewness	0.731

Normal GOF Test

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00132	95% Adjusted-CLT UCL (Chen-1995)	0.00133
		95% Modified-t UCL (Johnson-1978)	0.00132

Gamma GOF Test

A-D Test Statistic	0.396	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.158	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.808	k star (bias corrected MLE)	2.377
Theta hat (MLE)	3.7766E-4	Theta star (bias corrected MLE)	4.4614E-4
nu hat (MLE)	101.1	nu star (bias corrected)	85.58
MLE Mean (bias corrected)	0.00106	MLE Sd (bias corrected)	6.8786E-4
		Approximate Chi Square Value (0.05)	65.26
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	63.55

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00139	95% Adjusted Gamma UCL (use when n<50)	0.00143

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.139	Mean of logged Data	-7.037
Maximum of Logged Data	-5.983	SD of logged Data	0.665

Assuming Lognormal Distribution

95% H-UCL	0.00156	90% Chebyshev (MVUE) UCL	0.00162
95% Chebyshev (MVUE) UCL	0.00186	97.5% Chebyshev (MVUE) UCL	0.0022
99% Chebyshev (MVUE) UCL	0.00286		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0013	95% Jackknife UCL	0.00132
95% Standard Bootstrap UCL	0.0013	95% Bootstrap-t UCL	0.00134

95% Hall's Bootstrap UCL	0.00136	95% Percentile Bootstrap UCL	0.0013
95% BCA Bootstrap UCL	0.00134		
90% Chebyshev(Mean, Sd) UCL	0.00151	95% Chebyshev(Mean, Sd) UCL	0.00171
97.5% Chebyshev(Mean, Sd) UCL	0.00199	99% Chebyshev(Mean, Sd) UCL	0.00254

Suggested UCL to Use

95% Student's-t UCL	0.00132

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0172	Mean	0.0577
Maximum	0.127	Median	0.0531
SD	0.0325	Std. Error of Mean	0.00766
Coefficient of Variation	0.563	Skewness	0.561

Normal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.0711	95% Adjusted-CLT UCL (Chen-1995)	0.0714
		95% Modified-t UCL (Johnson-1978)	0.0712

Gamma GOF Test

A-D Test Statistic	0.288	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.127	k star (bias corrected MLE)	2.643
Theta hat (MLE)	0.0185	Theta star (bias corrected MLE)	0.0218
nu hat (MLE)	112.6	nu star (bias corrected)	95.15
MLE Mean (bias corrected)	0.0577	MLE Sd (bias corrected)	0.0355
		Approximate Chi Square Value (0.05)	73.65
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	71.84

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0746	95% Adjusted Gamma UCL (use when n<50)	0.0765

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.949	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.127	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.063	Mean of logged Data	-3.02
Maximum of Logged Data	-2.064	SD of logged Data	0.622

Assuming Lognormal Distribution

95% H-UCL	0.0819	90% Chebyshev (MVUE) UCL	0.0855
95% Chebyshev (MVUE) UCL	0.0978	97.5% Chebyshev (MVUE) UCL	0.115
99% Chebyshev (MVUE) UCL	0.148		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0703	95% Jackknife UCL	0.0711
95% Standard Bootstrap UCL	0.0698	95% Bootstrap-t UCL	0.0724

95% Hall's Bootstrap UCL	0.0715	95% Percentile Bootstrap UCL	0.0703
95% BCA Bootstrap UCL	0.0713		
90% Chebyshev(Mean, Sd) UCL	0.0807	95% Chebyshev(Mean, Sd) UCL	0.0911
97.5% Chebyshev(Mean, Sd) UCL	0.106	99% Chebyshev(Mean, Sd) UCL	0.134

Suggested UCL to Use

95% Student's-t UCL	0.0711

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	2
Minimum	2.9400E-4	Mean	0.00114
Maximum	0.00228	Median	0.00119
SD	6.2811E-4	Std. Error of Mean	1.5703E-4
Coefficient of Variation	0.551	Skewness	0.247

Normal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0993	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00141	95% Adjusted-CLT UCL (Chen-1995)	0.00141
		95% Modified-t UCL (Johnson-1978)	0.00142

Gamma GOF Test

A-D Test Statistic	0.438	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.147	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.217	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.876	k star (bias corrected MLE)	2.378
Theta hat (MLE)	3.9609E-4	Theta star (bias corrected MLE)	4.7896E-4
nu hat (MLE)	92.03	nu star (bias corrected)	76.11
MLE Mean (bias corrected)	0.00114	MLE Sd (bias corrected)	7.3866E-4
		Approximate Chi Square Value (0.05)	57.02
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	55.14

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00152	95% Adjusted Gamma UCL (use when n<50)	0.00157

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.175	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.132	Mean of logged Data	-6.961
Maximum of Logged Data	-6.084	SD of logged Data	0.677

Assuming Lognormal Distribution

95% H-UCL	0.00177	90% Chebyshev (MVUE) UCL	0.0018
95% Chebyshev (MVUE) UCL	0.00208	97.5% Chebyshev (MVUE) UCL	0.00248
99% Chebyshev (MVUE) UCL	0.00325		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0014	95% Jackknife UCL	0.00141
95% Standard Bootstrap UCL	0.00139	95% Bootstrap-t UCL	0.00143

95% Hall's Bootstrap UCL	0.00142	95% Percentile Bootstrap UCL	0.00138
95% BCA Bootstrap UCL	0.0014		
90% Chebyshev(Mean, Sd) UCL	0.00161	95% Chebyshev(Mean, Sd) UCL	0.00182
97.5% Chebyshev(Mean, Sd) UCL	0.00212	99% Chebyshev(Mean, Sd) UCL	0.0027

Suggested UCL to Use

95% Student's-t UCL	0.00141

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	17	Number of Distinct Observations	15
		Number of Missing Observations	1
Number of Detects	4	Number of Non-Detects	13
Number of Distinct Detects	4	Number of Distinct Non-Detects	11
Minimum Detect	1.3400E-5	Minimum Non-Detect	1.5600E-6
Maximum Detect	5.1900E-4	Maximum Non-Detect	8.0000E-6
Variance Detects	4.9562E-8	Percent Non-Detects	76.47%
Mean Detects	2.2510E-4	SD Detects	2.2262E-4
Median Detects	1.8400E-4	CV Detects	0.989
Skewness Detects	0.847	Kurtosis Detects	-0.313
Mean of Logged Detects	-9.055	SD of Logged Detects	1.594

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.949	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.213	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.4158E-5	KM Standard Error of Mean	3.7298E-5
KM SD	1.3318E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.1928E-4	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.1551E-4	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.6605E-4	95% KM Chebyshev UCL	2.1674E-4
97.5% KM Chebyshev UCL	2.8709E-4	99% KM Chebyshev UCL	4.2527E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.214	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.668	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.199	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.404	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.892	k star (bias corrected MLE)	0.39
Theta hat (MLE)	2.5222E-4	Theta star (bias corrected MLE)	5.7749E-4
nu hat (MLE)	7.14	nu star (bias corrected)	3.118
Mean (detects)	2.2510E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.3400E-5	Mean	0.0077
Maximum	0.01	Median	0.01
SD	0.00428	CV	0.555
k hat (MLE)	0.761	k star (bias corrected MLE)	0.666
Theta hat (MLE)	0.0101	Theta star (bias corrected MLE)	0.0116
nu hat (MLE)	25.86	nu star (bias corrected)	22.63
Adjusted Level of Significance (β)	0.0346		
Approximate Chi Square Value (22.63, α)	12.81	Adjusted Chi Square Value (22.63, β)	12.04
95% Gamma Approximate UCL (use when n>=50)	0.0136	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.4158E-5	SD (KM)	1.3318E-4
Variance (KM)	1.7737E-8	SE of Mean (KM)	3.7298E-5

k hat (KM)	0.165	k star (KM)	0.175
nu hat (KM)	5.622	nu star (KM)	5.963
theta hat (KM)	3.2751E-4	theta star (KM)	3.0878E-4
80% gamma percentile (KM)	6.6096E-5	90% gamma percentile (KM)	1.6310E-4
95% gamma percentile (KM)	2.8825E-4	99% gamma percentile (KM)	6.4068E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.96, α)	1.621	Adjusted Chi Square Value (5.96, β)	1.397
95% Gamma Approximate KM-UCL (use when n>=50)	1.9921E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.3123E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.211	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.3120E-5	Mean in Log Scale	-14.16
SD in Original Scale	1.3770E-4	SD in Log Scale	3.09
95% t UCL (assumes normality of ROS data)	1.1143E-4	95% Percentile Bootstrap UCL	1.1033E-4
95% BCA Bootstrap UCL	1.3897E-4	95% Bootstrap t UCL	3.2050E-4
95% H-UCL (Log ROS)	0.0124		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.36	KM Geo Mean	4.3070E-6
KM SD (logged)	1.95	95% Critical H Value (KM-Log)	4.293
KM Standard Error of Mean (logged)	0.546	95% H-UCL (KM -Log)	2.3346E-4
KM SD (logged)	1.95	95% Critical H Value (KM-Log)	4.293
KM Standard Error of Mean (logged)	0.546		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.5418E-5	Mean in Log Scale	-11.93
SD in Original Scale	1.3677E-4	SD in Log Scale	1.884
95% t UCL (Assumes normality)	1.1333E-4	95% H-Stat UCL	2.7756E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.1928E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	2
Minimum	0.00154	Mean	0.00493
Maximum	0.0109	Median	0.00472
SD	0.00268	Std. Error of Mean	7.1700E-4
Coefficient of Variation	0.544	Skewness	0.798

Normal GOF Test

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.137	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0062	95% Adjusted-CLT UCL (Chen-1995)	0.00627
		95% Modified-t UCL (Johnson-1978)	0.00622

Gamma GOF Test

A-D Test Statistic	0.209	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.23	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.567	k star (bias corrected MLE)	2.851
Theta hat (MLE)	0.00138	Theta star (bias corrected MLE)	0.00173
nu hat (MLE)	99.88	nu star (bias corrected)	79.81
MLE Mean (bias corrected)	0.00493	MLE Sd (bias corrected)	0.00292
		Approximate Chi Square Value (0.05)	60.23
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	57.98

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00653	95% Adjusted Gamma UCL (use when n<50)	0.00678

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.476	Mean of logged Data	-5.46
Maximum of Logged Data	-4.519	SD of logged Data	0.581

Assuming Lognormal Distribution

95% H-UCL	0.00712	90% Chebyshev (MVUE) UCL	0.00737
95% Chebyshev (MVUE) UCL	0.00845	97.5% Chebyshev (MVUE) UCL	0.00996
99% Chebyshev (MVUE) UCL	0.0129		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00611	95% Jackknife UCL	0.0062
95% Standard Bootstrap UCL	0.00605	95% Bootstrap-t UCL	0.00658

95% Hall's Bootstrap UCL	0.00646	95% Percentile Bootstrap UCL	0.0061
95% BCA Bootstrap UCL	0.00615		
90% Chebyshev(Mean, Sd) UCL	0.00708	95% Chebyshev(Mean, Sd) UCL	0.00805
97.5% Chebyshev(Mean, Sd) UCL	0.00941	99% Chebyshev(Mean, Sd) UCL	0.0121

Suggested UCL to Use

95% Student's-t UCL 0.0062

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	12	Number of Distinct Observations	12
		Number of Missing Observations	4
Minimum	7.1100E-4	Mean	0.00212
Maximum	0.00473	Median	0.00201
SD	0.00111	Std. Error of Mean	3.2137E-4
Coefficient of Variation	0.525	Skewness	1.013

Normal GOF Test

Shapiro Wilk Test Statistic	0.926	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.243	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0027	95% Adjusted-CLT UCL (Chen-1995)	0.00275
		95% Modified-t UCL (Johnson-1978)	0.00271

Gamma GOF Test

A-D Test Statistic	0.225	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.14	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.246	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.985	k star (bias corrected MLE)	3.045
Theta hat (MLE)	5.3159E-4	Theta star (bias corrected MLE)	6.9585E-4
nu hat (MLE)	95.65	nu star (bias corrected)	73.07
MLE Mean (bias corrected)	0.00212	MLE Sd (bias corrected)	0.00121
		Approximate Chi Square Value (0.05)	54.39
Adjusted Level of Significance	0.029	Adjusted Chi Square Value	51.93

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00285	95% Adjusted Gamma UCL (use when n<50)	0.00298

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.859	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.243	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.249	Mean of logged Data	-6.288
Maximum of Logged Data	-5.354	SD of logged Data	0.55

Assuming Lognormal Distribution

95% H-UCL	0.00311	90% Chebyshev (MVUE) UCL	0.00317
95% Chebyshev (MVUE) UCL	0.00365	97.5% Chebyshev (MVUE) UCL	0.0043
99% Chebyshev (MVUE) UCL	0.00559		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00265	95% Jackknife UCL	0.0027
95% Standard Bootstrap UCL	0.00262	95% Bootstrap-t UCL	0.00284

95% Hall's Bootstrap UCL	0.00303	95% Percentile Bootstrap UCL	0.00265
95% BCA Bootstrap UCL	0.00272		
90% Chebyshev(Mean, Sd) UCL	0.00308	95% Chebyshev(Mean, Sd) UCL	0.00352
97.5% Chebyshev(Mean, Sd) UCL	0.00413	99% Chebyshev(Mean, Sd) UCL	0.00532

Suggested UCL to Use

95% Student's-t UCL 0.0027

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	15
Minimum Detect	2.4900E-6	Minimum Non-Detect	1.4600E-6
Maximum Detect	7.9400E-6	Maximum Non-Detect	7.5000E-6
Variance Detects	1.485E-11	Percent Non-Detects	88.89%
Mean Detects	5.2150E-6	SD Detects	3.8537E-6
Median Detects	5.2150E-6	CV Detects	N/A
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-12.32	SD of Logged Detects	0.82

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.0146E-6	KM Standard Error of Mean	5.3856E-7
KM SD	1.4919E-6	95% KM (BCA) UCL	N/A
95% KM (t) UCL	2.9514E-6	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	2.9004E-6	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	3.6302E-6	95% KM Chebyshev UCL	4.3621E-6
97.5% KM Chebyshev UCL	5.3779E-6	99% KM Chebyshev UCL	7.3732E-6

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	3.293	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.5835E-6	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	13.17	nu star (bias corrected)	N/A
Mean (detects)	5.2150E-6		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.0146E-6	SD (KM)	1.4919E-6
Variance (KM)	2.226E-12	SE of Mean (KM)	5.3856E-7
k hat (KM)	1.823	k star (KM)	1.557
nu hat (KM)	65.65	nu star (KM)	56.04
theta hat (KM)	1.1048E-6	theta star (KM)	1.2942E-6
80% gamma percentile (KM)	3.1042E-6	90% gamma percentile (KM)	4.1603E-6
95% gamma percentile (KM)	5.1833E-6	99% gamma percentile (KM)	7.4880E-6

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (56.04, α)	39.83	Adjusted Chi Square Value (56.04, β)	38.52
95% Gamma Approximate KM-UCL (use when n>=50)	2.8341E-6	95% Gamma Adjusted KM-UCL (use when n<50)	2.9305E-6

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.0615E-6	Mean in Log Scale	-14.21
SD in Original Scale	1.7790E-6	SD in Log Scale	0.744
95% t UCL (assumes normality of ROS data)	1.7909E-6	95% Percentile Bootstrap UCL	1.8672E-6
95% BCA Bootstrap UCL	2.3148E-6	95% Bootstrap t UCL	1.1407E-5
95% H-UCL (Log ROS)	1.3436E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-13.24	KM Geo Mean	1.7742E-6
KM SD (logged)	0.419	95% Critical H Value (KM-Log)	1.947
KM Standard Error of Mean (logged)	0.176	95% H-UCL (KM -Log)	2.3597E-6
KM SD (logged)	0.419	95% Critical H Value (KM-Log)	1.947
KM Standard Error of Mean (logged)	0.176		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	3.1903E-6	Mean in Log Scale	-12.85
SD in Original Scale	1.7111E-6	SD in Log Scale	0.725
95% t UCL (Assumes normality)	3.8919E-6	95% H-Stat UCL	5.0941E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	4.3621E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-189

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0500E-4	Mean	4.0794E-4
Maximum	8.0500E-4	Median	4.1200E-4
SD	1.8259E-4	Std. Error of Mean	4.3037E-5
Coefficient of Variation	0.448	Skewness	0.261

Normal GOF Test

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0804	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.8281E-4	95% Adjusted-CLT UCL (Chen-1995)	4.8157E-4
		95% Modified-t UCL (Johnson-1978)	4.8325E-4

Gamma GOF Test

A-D Test Statistic	0.263	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.479	k star (bias corrected MLE)	3.77
Theta hat (MLE)	9.1074E-5	Theta star (bias corrected MLE)	1.0822E-4
nu hat (MLE)	161.3	nu star (bias corrected)	135.7
MLE Mean (bias corrected)	4.0794E-4	MLE Sd (bias corrected)	2.1011E-4
		Approximate Chi Square Value (0.05)	109.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	107.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.0423E-4	95% Adjusted Gamma UCL (use when n<50)	5.1471E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.941	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.162	Mean of logged Data	-7.92
Maximum of Logged Data	-7.125	SD of logged Data	0.531

Assuming Lognormal Distribution

95% H-UCL	5.4512E-4	90% Chebyshev (MVUE) UCL	5.7664E-4
95% Chebyshev (MVUE) UCL	6.4995E-4	97.5% Chebyshev (MVUE) UCL	7.5171E-4
99% Chebyshev (MVUE) UCL	9.5158E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.7873E-4	95% Jackknife UCL	4.8281E-4
95% Standard Bootstrap UCL	4.7720E-4	95% Bootstrap-t UCL	4.8562E-4

95% Hall's Bootstrap UCL	4.8495E-4	95% Percentile Bootstrap UCL	4.7633E-4
95% BCA Bootstrap UCL	4.8428E-4		
90% Chebyshev(Mean, Sd) UCL	5.3705E-4	95% Chebyshev(Mean, Sd) UCL	5.9554E-4
97.5% Chebyshev(Mean, Sd) UCL	6.7671E-4	99% Chebyshev(Mean, Sd) UCL	8.3615E-4

Suggested UCL to Use

95% Student's-t UCL 4.8281E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 10:08:06 AM
From File	American_Eel_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.9786E-7	Mean	9.0298E-6
Maximum	1.9555E-5	Median	8.0212E-6
SD	5.3785E-6	Std. Error of Mean	1.2677E-6
Coefficient of Variation	N/A	Skewness	0.612

Normal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.135	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.1235E-5	95% Adjusted-CLT UCL (Chen-1995)	1.1310E-5
		95% Modified-t UCL (Johnson-1978)	1.1266E-5

Gamma GOF Test

A-D Test Statistic	0.376	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.157	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.165	k star (bias corrected MLE)	1.841
Theta hat (MLE)	4.1707E-6	Theta star (bias corrected MLE)	4.9042E-6
nu hat (MLE)	77.94	nu star (bias corrected)	66.28
MLE Mean (bias corrected)	9.0298E-6	MLE Sd (bias corrected)	6.6546E-6
		Approximate Chi Square Value (0.05)	48.55
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	47.09

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.2328E-5	95% Adjusted Gamma UCL (use when n<50)	1.2710E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.819	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.74	Mean of logged Data	-11.86
Maximum of Logged Data	-10.84	SD of logged Data	0.888

Assuming Lognormal Distribution

95% H-UCL	1.7825E-5	90% Chebyshev (MVUE) UCL	1.7114E-5
95% Chebyshev (MVUE) UCL	2.0267E-5	97.5% Chebyshev (MVUE) UCL	2.4644E-5
99% Chebyshev (MVUE) UCL	3.3242E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.1115E-5	95% Jackknife UCL	1.1235E-5
95% Standard Bootstrap UCL	1.1083E-5	95% Bootstrap-t UCL	1.1432E-5
95% Hall's Bootstrap UCL	1.1255E-5	95% Percentile Bootstrap UCL	1.1122E-5
95% BCA Bootstrap UCL	1.1490E-5		
90% Chebyshev(Mean, Sd) UCL	1.2833E-5	95% Chebyshev(Mean, Sd) UCL	1.4556E-5
97.5% Chebyshev(Mean, Sd) UCL	1.6947E-5	99% Chebyshev(Mean, Sd) UCL	2.1643E-5

Suggested UCL to Use

95% Student's-t UCL 1.1235E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	9.5336E-7	Mean	7.6143E-6
Maximum	5.5082E-5	Median	2.7197E-6
SD	1.3628E-5	Std. Error of Mean	3.2122E-6
Coefficient of Variation	N/A	Skewness	2.99

Normal GOF Test

Shapiro Wilk Test Statistic	0.515	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.416	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3202E-5	95% Adjusted-CLT UCL (Chen-1995)	1.5317E-5
		95% Modified-t UCL (Johnson-1978)	1.3580E-5

Gamma GOF Test

A-D Test Statistic	2.139	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.777	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.328	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.211	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.767	k star (bias corrected MLE)	0.676
Theta hat (MLE)	9.9293E-6	Theta star (bias corrected MLE)	1.1262E-5
nu hat (MLE)	27.61	nu star (bias corrected)	24.34
MLE Mean (bias corrected)	7.6143E-6	MLE Sd (bias corrected)	9.2604E-6
		Approximate Chi Square Value (0.05)	14.11
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	13.36

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.3137E-5	95% Adjusted Gamma UCL (use when n<50)	1.3870E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.849	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.86	Mean of logged Data	-12.56
Maximum of Logged Data	-9.807	SD of logged Data	1.087

Assuming Lognormal Distribution

95% H-UCL	1.3095E-5	90% Chebyshev (MVUE) UCL	1.1212E-5
95% Chebyshev (MVUE) UCL	1.3565E-5	97.5% Chebyshev (MVUE) UCL	1.6831E-5
99% Chebyshev (MVUE) UCL	2.3247E-5		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1.2898E-5	95% Jackknife UCL	1.3202E-5
95% Standard Bootstrap UCL	1.2717E-5	95% Bootstrap-t UCL	2.6637E-5

95% Hall's Bootstrap UCL	2.9507E-5	95% Percentile Bootstrap UCL	1.3454E-5
95% BCA Bootstrap UCL	1.6828E-5		
90% Chebyshev(Mean, Sd) UCL	1.7251E-5	95% Chebyshev(Mean, Sd) UCL	2.1616E-5
97.5% Chebyshev(Mean, Sd) UCL	2.7674E-5	99% Chebyshev(Mean, Sd) UCL	3.9575E-5

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	2.1616E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:32:43 PM
From File	fsh10_ndl_PCB_sum_wide2_flag_sep1_AE.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.167	Mean	0.499
Maximum	0.969	Median	0.519
SD	0.224	Std. Error of Mean	0.0529
Coefficient of Variation	0.45	Skewness	0.286

Normal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.591	95% Adjusted-CLT UCL (Chen-1995)	0.59
		95% Modified-t UCL (Johnson-1978)	0.592

Gamma GOF Test

A-D Test Statistic	0.312	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.137	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.716	k star (bias corrected MLE)	3.967
Theta hat (MLE)	0.106	Theta star (bias corrected MLE)	0.126
nu hat (MLE)	169.8	nu star (bias corrected)	142.8
MLE Mean (bias corrected)	0.499	MLE Sd (bias corrected)	0.251
		Approximate Chi Square Value (0.05)	116.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	113.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.614	95% Adjusted Gamma UCL (use when n<50)	0.626

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.79	Mean of logged Data	-0.804
Maximum of Logged Data	-0.0317	SD of logged Data	0.504

Assuming Lognormal Distribution

95% H-UCL	0.651	90% Chebyshev (MVUE) UCL	0.69
95% Chebyshev (MVUE) UCL	0.775	97.5% Chebyshev (MVUE) UCL	0.892
99% Chebyshev (MVUE) UCL	1.122		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.586	95% Jackknife UCL	0.591
95% Standard Bootstrap UCL	0.585	95% Bootstrap-t UCL	0.595
95% Hall's Bootstrap UCL	0.595	95% Percentile Bootstrap UCL	0.582
95% BCA Bootstrap UCL	0.583		
90% Chebyshev(Mean, Sd) UCL	0.658	95% Chebyshev(Mean, Sd) UCL	0.73
97.5% Chebyshev(Mean, Sd) UCL	0.83	99% Chebyshev(Mean, Sd) UCL	1.026

Suggested UCL to Use

95% Student's-t UCL	0.591

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:23:39 PM
From File	fsh5_PAH_wide2_flag_sep1_AE.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	4

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)anthracene was not processed!

Benzo(a)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	4

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)pyrene was not processed!

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	4

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(b)fluoranthene was not processed!

Chrysene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	4

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chrysene was not processed!

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	4

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Dibenzo(a,h)anthracene was not processed!

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	4

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Indeno(1,2,3-cd)pyrene was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:27:00 PM
From File	fsh7_pest_wide2_flag_sep1_AE.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.3800E-4	Mean	0.00212
Maximum	0.00789	Median	0.00161
SD	0.00188	Std. Error of Mean	4.4358E-4
Coefficient of Variation	0.889	Skewness	2.074

Normal GOF Test

Shapiro Wilk Test Statistic	0.767	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.27	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00289	95% Adjusted-CLT UCL (Chen-1995)	0.00308
		95% Modified-t UCL (Johnson-1978)	0.00292

Gamma GOF Test

A-D Test Statistic	0.444	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.183	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.856	k star (bias corrected MLE)	1.584
Theta hat (MLE)	0.00114	Theta star (bias corrected MLE)	0.00134
nu hat (MLE)	66.82	nu star (bias corrected)	57.01
MLE Mean (bias corrected)	0.00212	MLE Sd (bias corrected)	0.00168
		Approximate Chi Square Value (0.05)	40.66
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	39.33

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00297	95% Adjusted Gamma UCL (use when n<50)	0.00307

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.733	Mean of logged Data	-6.451
Maximum of Logged Data	-4.842	SD of logged Data	0.772

Assuming Lognormal Distribution

95% H-UCL	0.00329	90% Chebyshev (MVUE) UCL	0.00331
95% Chebyshev (MVUE) UCL	0.00386	97.5% Chebyshev (MVUE) UCL	0.00463
99% Chebyshev (MVUE) UCL	0.00614		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00285	95% Jackknife UCL	0.00289
95% Standard Bootstrap UCL	0.00283	95% Bootstrap-t UCL	0.00362
95% Hall's Bootstrap UCL	0.00625	95% Percentile Bootstrap UCL	0.00285
95% BCA Bootstrap UCL	0.00315		
90% Chebyshev(Mean, Sd) UCL	0.00345	95% Chebyshev(Mean, Sd) UCL	0.00405
97.5% Chebyshev(Mean, Sd) UCL	0.00489	99% Chebyshev(Mean, Sd) UCL	0.00653

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00307

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.3600E-4	Mean	0.00109
Maximum	0.00272	Median	6.1850E-4
SD	8.5545E-4	Std. Error of Mean	2.0163E-4
Coefficient of Variation	0.782	Skewness	0.884

Normal GOF Test

Shapiro Wilk Test Statistic	0.816	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.313	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00145	95% Adjusted-CLT UCL (Chen-1995)	0.00147
		95% Modified-t UCL (Johnson-1978)	0.00145

Gamma GOF Test

A-D Test Statistic	1.036	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.273	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.207	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.87	k star (bias corrected MLE)	1.595
Theta hat (MLE)	5.8526E-4	Theta star (bias corrected MLE)	6.8600E-4
nu hat (MLE)	67.32	nu star (bias corrected)	57.43
MLE Mean (bias corrected)	0.00109	MLE Sd (bias corrected)	8.6646E-4
		Approximate Chi Square Value (0.05)	41.01
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	39.68

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00153	95% Adjusted Gamma UCL (use when n<50)	0.00158

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.234	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.352	Mean of logged Data	-7.108
Maximum of Logged Data	-5.907	SD of logged Data	0.785

Assuming Lognormal Distribution

95% H-UCL	0.00174	90% Chebyshev (MVUE) UCL	0.00174
95% Chebyshev (MVUE) UCL	0.00204	97.5% Chebyshev (MVUE) UCL	0.00245
99% Chebyshev (MVUE) UCL	0.00325		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00143	95% Jackknife UCL	0.00145
95% Standard Bootstrap UCL	0.00141	95% Bootstrap-t UCL	0.00151

95% Hall's Bootstrap UCL	0.00143	95% Percentile Bootstrap UCL	0.00142
95% BCA Bootstrap UCL	0.00146		
90% Chebyshev(Mean, Sd) UCL	0.0017	95% Chebyshev(Mean, Sd) UCL	0.00197
97.5% Chebyshev(Mean, Sd) UCL	0.00235	99% Chebyshev(Mean, Sd) UCL	0.0031

Suggested UCL to Use

95% H-UCL 0.00174

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

4,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0163	Mean	0.1
Maximum	0.29	Median	0.0722
SD	0.0754	Std. Error of Mean	0.0178
Coefficient of Variation	0.751	Skewness	1.205

Normal GOF Test

Shapiro Wilk Test Statistic	0.884	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.131	95% Adjusted-CLT UCL (Chen-1995)	0.135
		95% Modified-t UCL (Johnson-1978)	0.132

Gamma GOF Test

A-D Test Statistic	0.175	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.113	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.987	k star (bias corrected MLE)	1.693
Theta hat (MLE)	0.0505	Theta star (bias corrected MLE)	0.0593
nu hat (MLE)	71.52	nu star (bias corrected)	60.93
MLE Mean (bias corrected)	0.1	MLE Sd (bias corrected)	0.0772
		Approximate Chi Square Value (0.05)	43.98
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	42.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.139	95% Adjusted Gamma UCL (use when n<50)	0.144

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.984	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0702	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.117	Mean of logged Data	-2.571
Maximum of Logged Data	-1.238	SD of logged Data	0.789

Assuming Lognormal Distribution

95% H-UCL	0.164	90% Chebyshev (MVUE) UCL	0.163
95% Chebyshev (MVUE) UCL	0.191	97.5% Chebyshev (MVUE) UCL	0.23
99% Chebyshev (MVUE) UCL	0.305		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.13	95% Jackknife UCL	0.131
95% Standard Bootstrap UCL	0.129	95% Bootstrap-t UCL	0.141

95% Hall's Bootstrap UCL	0.139	95% Percentile Bootstrap UCL	0.131
95% BCA Bootstrap UCL	0.136		
90% Chebyshev(Mean, Sd) UCL	0.154	95% Chebyshev(Mean, Sd) UCL	0.178
97.5% Chebyshev(Mean, Sd) UCL	0.211	99% Chebyshev(Mean, Sd) UCL	0.277

Suggested UCL to Use

95% Student's-t UCL	0.131

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0384	Mean	0.216
Maximum	0.679	Median	0.196
SD	0.153	Std. Error of Mean	0.036
Coefficient of Variation	0.707	Skewness	1.678

Normal GOF Test

Shapiro Wilk Test Statistic	0.864	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.185	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.279	95% Adjusted-CLT UCL (Chen-1995)	0.291
		95% Modified-t UCL (Johnson-1978)	0.281

Gamma GOF Test

A-D Test Statistic	0.166	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0991	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.323	k star (bias corrected MLE)	1.973
Theta hat (MLE)	0.0931	Theta star (bias corrected MLE)	0.11
nu hat (MLE)	83.62	nu star (bias corrected)	71.02
MLE Mean (bias corrected)	0.216	MLE Sd (bias corrected)	0.154
		Approximate Chi Square Value (0.05)	52.62
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	51.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.292	95% Adjusted Gamma UCL (use when n<50)	0.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.26	Mean of logged Data	-1.762
Maximum of Logged Data	-0.387	SD of logged Data	0.73

Assuming Lognormal Distribution

95% H-UCL	0.335	90% Chebyshev (MVUE) UCL	0.341
95% Chebyshev (MVUE) UCL	0.396	97.5% Chebyshev (MVUE) UCL	0.472
99% Chebyshev (MVUE) UCL	0.622		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.275	95% Jackknife UCL	0.279
95% Standard Bootstrap UCL	0.274	95% Bootstrap-t UCL	0.303

95% Hall's Bootstrap UCL	0.369	95% Percentile Bootstrap UCL	0.278
95% BCA Bootstrap UCL	0.292		
90% Chebyshev(Mean, Sd) UCL	0.324	95% Chebyshev(Mean, Sd) UCL	0.373
97.5% Chebyshev(Mean, Sd) UCL	0.441	99% Chebyshev(Mean, Sd) UCL	0.575

Suggested UCL to Use

95% Student's-t UCL 0.279

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0011	Mean	0.00558
Maximum	0.0168	Median	0.00332
SD	0.00515	Std. Error of Mean	0.00121
Coefficient of Variation	0.922	Skewness	1.248

Normal GOF Test

Shapiro Wilk Test Statistic	0.811	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00769	95% Adjusted-CLT UCL (Chen-1995)	0.00796
		95% Modified-t UCL (Johnson-1978)	0.00775

Gamma GOF Test

A-D Test Statistic	0.589	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.758	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.162	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.421	k star (bias corrected MLE)	1.221
Theta hat (MLE)	0.00393	Theta star (bias corrected MLE)	0.00457
nu hat (MLE)	51.15	nu star (bias corrected)	43.96
MLE Mean (bias corrected)	0.00558	MLE Sd (bias corrected)	0.00505
		Approximate Chi Square Value (0.05)	29.76
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	28.64

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00825	95% Adjusted Gamma UCL (use when n<50)	0.00857

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.933	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.812	Mean of logged Data	-5.58
Maximum of Logged Data	-4.086	SD of logged Data	0.914

Assuming Lognormal Distribution

95% H-UCL	0.01	90% Chebyshev (MVUE) UCL	0.00948
95% Chebyshev (MVUE) UCL	0.0113	97.5% Chebyshev (MVUE) UCL	0.0137
99% Chebyshev (MVUE) UCL	0.0186		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00758	95% Jackknife UCL	0.00769
95% Standard Bootstrap UCL	0.00751	95% Bootstrap-t UCL	0.00808

95% Hall's Bootstrap UCL	0.00797	95% Percentile Bootstrap UCL	0.00764
95% BCA Bootstrap UCL	0.00803		
90% Chebyshev(Mean, Sd) UCL	0.00922	95% Chebyshev(Mean, Sd) UCL	0.0109
97.5% Chebyshev(Mean, Sd) UCL	0.0132	99% Chebyshev(Mean, Sd) UCL	0.0176

Suggested UCL to Use

95% Student's-t UCL 0.00769

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.00199	Mean	0.0115
Maximum	0.0208	Median	0.0103
SD	0.00625	Std. Error of Mean	0.00147
Coefficient of Variation	0.545	Skewness	0.23

Normal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.145	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.014	95% Adjusted-CLT UCL (Chen-1995)	0.014
		95% Modified-t UCL (Johnson-1978)	0.014

Gamma GOF Test

A-D Test Statistic	0.364	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.154	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.001	k star (bias corrected MLE)	2.538
Theta hat (MLE)	0.00382	Theta star (bias corrected MLE)	0.00452
nu hat (MLE)	108	nu star (bias corrected)	91.35
MLE Mean (bias corrected)	0.0115	MLE Sd (bias corrected)	0.0072
		Approximate Chi Square Value (0.05)	70.31
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	68.54

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0149	95% Adjusted Gamma UCL (use when n<50)	0.0153

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.22	Mean of logged Data	-4.644
Maximum of Logged Data	-3.873	SD of logged Data	0.659

Assuming Lognormal Distribution

95% H-UCL	0.017	90% Chebyshev (MVUE) UCL	0.0176
95% Chebyshev (MVUE) UCL	0.0202	97.5% Chebyshev (MVUE) UCL	0.0239
99% Chebyshev (MVUE) UCL	0.031		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0139	95% Jackknife UCL	0.014
95% Standard Bootstrap UCL	0.0139	95% Bootstrap-t UCL	0.0142

95% Hall's Bootstrap UCL	0.0138	95% Percentile Bootstrap UCL	0.0138
95% BCA Bootstrap UCL	0.0138		
90% Chebyshev(Mean, Sd) UCL	0.0159	95% Chebyshev(Mean, Sd) UCL	0.0179
97.5% Chebyshev(Mean, Sd) UCL	0.0207	99% Chebyshev(Mean, Sd) UCL	0.0261

Suggested UCL to Use

95% Student's-t UCL	0.014

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00129	Mean	0.0117
Maximum	0.0217	Median	0.0103
SD	0.00633	Std. Error of Mean	0.00149
Coefficient of Variation	0.54	Skewness	0.2

Normal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.126	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0143	95% Adjusted-CLT UCL (Chen-1995)	0.0143
		95% Modified-t UCL (Johnson-1978)	0.0143

Gamma GOF Test

A-D Test Statistic	0.37	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.127	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.672	k star (bias corrected MLE)	2.264
Theta hat (MLE)	0.00439	Theta star (bias corrected MLE)	0.00518
nu hat (MLE)	96.19	nu star (bias corrected)	81.49
MLE Mean (bias corrected)	0.0117	MLE Sd (bias corrected)	0.0078
		Approximate Chi Square Value (0.05)	61.69
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	60.04

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0155	95% Adjusted Gamma UCL (use when n<50)	0.0159

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.882	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.173	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.653	Mean of logged Data	-4.644
Maximum of Logged Data	-3.83	SD of logged Data	0.744

Assuming Lognormal Distribution

95% H-UCL	0.0192	90% Chebyshev (MVUE) UCL	0.0194
95% Chebyshev (MVUE) UCL	0.0226	97.5% Chebyshev (MVUE) UCL	0.027
99% Chebyshev (MVUE) UCL	0.0356		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0142	95% Jackknife UCL	0.0143
95% Standard Bootstrap UCL	0.0141	95% Bootstrap-t UCL	0.0144

95% Hall's Bootstrap UCL	0.0142	95% Percentile Bootstrap UCL	0.0143
95% BCA Bootstrap UCL	0.014		
90% Chebyshev(Mean, Sd) UCL	0.0162	95% Chebyshev(Mean, Sd) UCL	0.0182
97.5% Chebyshev(Mean, Sd) UCL	0.021	99% Chebyshev(Mean, Sd) UCL	0.0266

Suggested UCL to Use

95% Student's-t UCL	0.0143

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.7400E-4	Mean	0.00304
Maximum	0.00634	Median	0.00252
SD	0.00174	Std. Error of Mean	4.1012E-4
Coefficient of Variation	0.572	Skewness	0.59

Normal GOF Test

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00375	95% Adjusted-CLT UCL (Chen-1995)	0.00378
		95% Modified-t UCL (Johnson-1978)	0.00376

Gamma GOF Test

A-D Test Statistic	0.233	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0975	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.911	k star (bias corrected MLE)	2.463
Theta hat (MLE)	0.00104	Theta star (bias corrected MLE)	0.00123
nu hat (MLE)	104.8	nu star (bias corrected)	88.67
MLE Mean (bias corrected)	0.00304	MLE Sd (bias corrected)	0.00194
		Approximate Chi Square Value (0.05)	67.96
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	66.22

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00397	95% Adjusted Gamma UCL (use when n<50)	0.00407

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.654	Mean of logged Data	-5.977
Maximum of Logged Data	-5.061	SD of logged Data	0.666

Assuming Lognormal Distribution

95% H-UCL	0.00452	90% Chebyshev (MVUE) UCL	0.00468
95% Chebyshev (MVUE) UCL	0.00538	97.5% Chebyshev (MVUE) UCL	0.00636
99% Chebyshev (MVUE) UCL	0.00828		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00372	95% Jackknife UCL	0.00375
95% Standard Bootstrap UCL	0.00369	95% Bootstrap-t UCL	0.00389

95% Hall's Bootstrap UCL	0.00375	95% Percentile Bootstrap UCL	0.00371
95% BCA Bootstrap UCL	0.00375		
90% Chebyshev(Mean, Sd) UCL	0.00427	95% Chebyshev(Mean, Sd) UCL	0.00483
97.5% Chebyshev(Mean, Sd) UCL	0.0056	99% Chebyshev(Mean, Sd) UCL	0.00712

Suggested UCL to Use

95% Student's-t UCL	0.00375

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Hexachlorobenzene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	7.7100E-4	Mean	0.00336
Maximum	0.00659	Median	0.00297
SD	0.00175	Std. Error of Mean	4.1356E-4
Coefficient of Variation	0.523	Skewness	0.675

Normal GOF Test

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00407	95% Adjusted-CLT UCL (Chen-1995)	0.00411
		95% Modified-t UCL (Johnson-1978)	0.00409

Gamma GOF Test

A-D Test Statistic	0.302	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.136	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.752	k star (bias corrected MLE)	3.164
Theta hat (MLE)	8.9421E-4	Theta star (bias corrected MLE)	0.00106
nu hat (MLE)	135.1	nu star (bias corrected)	113.9
MLE Mean (bias corrected)	0.00336	MLE Sd (bias corrected)	0.00189
		Approximate Chi Square Value (0.05)	90.26
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	88.24

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00423	95% Adjusted Gamma UCL (use when n<50)	0.00433

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.168	Mean of logged Data	-5.836
Maximum of Logged Data	-5.022	SD of logged Data	0.566

Assuming Lognormal Distribution

95% H-UCL	0.00456	90% Chebyshev (MVUE) UCL	0.00481
95% Chebyshev (MVUE) UCL	0.00545	97.5% Chebyshev (MVUE) UCL	0.00634
99% Chebyshev (MVUE) UCL	0.00809		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00404	95% Jackknife UCL	0.00407
95% Standard Bootstrap UCL	0.004	95% Bootstrap-t UCL	0.00416

95% Hall's Bootstrap UCL	0.00405	95% Percentile Bootstrap UCL	0.00404
95% BCA Bootstrap UCL	0.0041		
90% Chebyshev(Mean, Sd) UCL	0.0046	95% Chebyshev(Mean, Sd) UCL	0.00516
97.5% Chebyshev(Mean, Sd) UCL	0.00594	99% Chebyshev(Mean, Sd) UCL	0.00747

Suggested UCL to Use

95% Student's-t UCL	0.00407

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mirex

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	1
Minimum	1.4400E-4	Mean	3.5612E-4
Maximum	5.7400E-4	Median	3.8000E-4
SD	1.4646E-4	Std. Error of Mean	3.5521E-5
Coefficient of Variation	0.411	Skewness	0.00347

Normal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.135	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.1813E-4	95% Adjusted-CLT UCL (Chen-1995)	4.1458E-4
		95% Modified-t UCL (Johnson-1978)	4.1814E-4

Gamma GOF Test

A-D Test Statistic	0.44	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.146	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.21	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.556	k star (bias corrected MLE)	4.615
Theta hat (MLE)	6.4098E-5	Theta star (bias corrected MLE)	7.7172E-5
nu hat (MLE)	188.9	nu star (bias corrected)	156.9
MLE Mean (bias corrected)	3.5612E-4	MLE Sd (bias corrected)	1.6578E-4
		Approximate Chi Square Value (0.05)	128.9
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	126.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.3333E-4	95% Adjusted Gamma UCL (use when n<50)	4.4244E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.918	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.846	Mean of logged Data	-8.033
Maximum of Logged Data	-7.463	SD of logged Data	0.463

Assuming Lognormal Distribution

95% H-UCL	4.5527E-4	90% Chebyshev (MVUE) UCL	4.8308E-4
95% Chebyshev (MVUE) UCL	5.3937E-4	97.5% Chebyshev (MVUE) UCL	6.1749E-4
99% Chebyshev (MVUE) UCL	7.7096E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.1454E-4	95% Jackknife UCL	4.1813E-4
95% Standard Bootstrap UCL	4.1269E-4	95% Bootstrap-t UCL	4.1980E-4

95% Hall's Bootstrap UCL	4.1373E-4	95% Percentile Bootstrap UCL	4.1424E-4
95% BCA Bootstrap UCL	4.0959E-4		
90% Chebyshev(Mean, Sd) UCL	4.6268E-4	95% Chebyshev(Mean, Sd) UCL	5.1095E-4
97.5% Chebyshev(Mean, Sd) UCL	5.7794E-4	99% Chebyshev(Mean, Sd) UCL	7.0955E-4

Suggested UCL to Use

95% Student's-t UCL 4.1813E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Nonachlor, trans-

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00598	Mean	0.0213
Maximum	0.0531	Median	0.0204
SD	0.0121	Std. Error of Mean	0.00286
Coefficient of Variation	0.57	Skewness	1.173

Normal GOF Test

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0262	95% Adjusted-CLT UCL (Chen-1995)	0.0268
		95% Modified-t UCL (Johnson-1978)	0.0264

Gamma GOF Test

A-D Test Statistic	0.177	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0907	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.472	k star (bias corrected MLE)	2.931
Theta hat (MLE)	0.00612	Theta star (bias corrected MLE)	0.00726
nu hat (MLE)	125	nu star (bias corrected)	105.5
MLE Mean (bias corrected)	0.0213	MLE Sd (bias corrected)	0.0124
		Approximate Chi Square Value (0.05)	82.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	80.87

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0271	95% Adjusted Gamma UCL (use when n<50)	0.0277

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.984	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.119	Mean of logged Data	-4.002
Maximum of Logged Data	-2.936	SD of logged Data	0.576

Assuming Lognormal Distribution

95% H-UCL	0.0289	90% Chebyshev (MVUE) UCL	0.0305
95% Chebyshev (MVUE) UCL	0.0346	97.5% Chebyshev (MVUE) UCL	0.0403
99% Chebyshev (MVUE) UCL	0.0515		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.026	95% Jackknife UCL	0.0262
95% Standard Bootstrap UCL	0.0259	95% Bootstrap-t UCL	0.0275

95% Hall's Bootstrap UCL	0.028	95% Percentile Bootstrap UCL	0.0259
95% BCA Bootstrap UCL	0.0267		
90% Chebyshev(Mean, Sd) UCL	0.0298	95% Chebyshev(Mean, Sd) UCL	0.0337
97.5% Chebyshev(Mean, Sd) UCL	0.0391	99% Chebyshev(Mean, Sd) UCL	0.0497

Suggested UCL to Use

95% Student's-t UCL	0.0262

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Oxychlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	0.0026	Mean	0.0116
Maximum	0.0287	Median	0.0104
SD	0.00673	Std. Error of Mean	0.00159
Coefficient of Variation	0.581	Skewness	0.935

Normal GOF Test

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0143	95% Adjusted-CLT UCL (Chen-1995)	0.0146
		95% Modified-t UCL (Johnson-1978)	0.0144

Gamma GOF Test

A-D Test Statistic	0.339	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.956	k star (bias corrected MLE)	2.5
Theta hat (MLE)	0.00392	Theta star (bias corrected MLE)	0.00463
nu hat (MLE)	106.4	nu star (bias corrected)	90
MLE Mean (bias corrected)	0.0116	MLE Sd (bias corrected)	0.00732
		Approximate Chi Square Value (0.05)	69.12
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	67.37

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0151	95% Adjusted Gamma UCL (use when n<50)	0.0155

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.147	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.952	Mean of logged Data	-4.637
Maximum of Logged Data	-3.551	SD of logged Data	0.656

Assuming Lognormal Distribution

95% H-UCL	0.017	90% Chebyshev (MVUE) UCL	0.0176
95% Chebyshev (MVUE) UCL	0.0203	97.5% Chebyshev (MVUE) UCL	0.0239
99% Chebyshev (MVUE) UCL	0.0311		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0142	95% Jackknife UCL	0.0143
95% Standard Bootstrap UCL	0.0141	95% Bootstrap-t UCL	0.0147

95% Hall's Bootstrap UCL	0.0151	95% Percentile Bootstrap UCL	0.0141
95% BCA Bootstrap UCL	0.0146		
90% Chebyshev(Mean, Sd) UCL	0.0163	95% Chebyshev(Mean, Sd) UCL	0.0185
97.5% Chebyshev(Mean, Sd) UCL	0.0215	99% Chebyshev(Mean, Sd) UCL	0.0274

Suggested UCL to Use

95% Student's-t UCL	0.0143

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

cis-Nonachlor

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00271	Mean	0.00893
Maximum	0.0176	Median	0.00827
SD	0.00453	Std. Error of Mean	0.00107
Coefficient of Variation	0.507	Skewness	0.381

Normal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0108	95% Adjusted-CLT UCL (Chen-1995)	0.0108
		95% Modified-t UCL (Johnson-1978)	0.0108

Gamma GOF Test

A-D Test Statistic	0.258	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.124	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.784	k star (bias corrected MLE)	3.19
Theta hat (MLE)	0.00236	Theta star (bias corrected MLE)	0.0028
nu hat (MLE)	136.2	nu star (bias corrected)	114.8
MLE Mean (bias corrected)	0.00893	MLE Sd (bias corrected)	0.005
		Approximate Chi Square Value (0.05)	91.11
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	89.08

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0113	95% Adjusted Gamma UCL (use when n<50)	0.0115

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.911	Mean of logged Data	-4.856
Maximum of Logged Data	-4.04	SD of logged Data	0.564

Assuming Lognormal Distribution

95% H-UCL	0.0121	90% Chebyshev (MVUE) UCL	0.0128
95% Chebyshev (MVUE) UCL	0.0145	97.5% Chebyshev (MVUE) UCL	0.0168
99% Chebyshev (MVUE) UCL	0.0215		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0107	95% Jackknife UCL	0.0108
95% Standard Bootstrap UCL	0.0106	95% Bootstrap-t UCL	0.011

95% Hall's Bootstrap UCL	0.0107	95% Percentile Bootstrap UCL	0.0107
95% BCA Bootstrap UCL	0.0107		
90% Chebyshev(Mean, Sd) UCL	0.0121	95% Chebyshev(Mean, Sd) UCL	0.0136
97.5% Chebyshev(Mean, Sd) UCL	0.0156	99% Chebyshev(Mean, Sd) UCL	0.0195

Suggested UCL to Use

95% Student's-t UCL	0.0108

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.0000E-4	Mean	0.00314
Maximum	0.0071	Median	0.00275
SD	0.00183	Std. Error of Mean	4.3027E-4
Coefficient of Variation	0.582	Skewness	0.477

Normal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00389	95% Adjusted-CLT UCL (Chen-1995)	0.0039
		95% Modified-t UCL (Johnson-1978)	0.00389

Gamma GOF Test

A-D Test Statistic	0.21	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.593	k star (bias corrected MLE)	2.198
Theta hat (MLE)	0.00121	Theta star (bias corrected MLE)	0.00143
nu hat (MLE)	93.36	nu star (bias corrected)	79.13
MLE Mean (bias corrected)	0.00314	MLE Sd (bias corrected)	0.00212
		Approximate Chi Square Value (0.05)	59.64
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	58.01

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00416	95% Adjusted Gamma UCL (use when n<50)	0.00428

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.824	Mean of logged Data	-5.969
Maximum of Logged Data	-4.948	SD of logged Data	0.727

Assuming Lognormal Distribution

95% H-UCL	0.00497	90% Chebyshev (MVUE) UCL	0.00507
95% Chebyshev (MVUE) UCL	0.00588	97.5% Chebyshev (MVUE) UCL	0.00701
99% Chebyshev (MVUE) UCL	0.00922		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00385	95% Jackknife UCL	0.00389
95% Standard Bootstrap UCL	0.00382	95% Bootstrap-t UCL	0.00394

95% Hall's Bootstrap UCL	0.0039	95% Percentile Bootstrap UCL	0.00387
95% BCA Bootstrap UCL	0.00394		
90% Chebyshev(Mean, Sd) UCL	0.00443	95% Chebyshev(Mean, Sd) UCL	0.00501
97.5% Chebyshev(Mean, Sd) UCL	0.00583	99% Chebyshev(Mean, Sd) UCL	0.00742

Suggested UCL to Use

95% Student's-t UCL	0.00389

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	0.00104	Minimum Non-Detect	1.7000E-5
Maximum Detect	0.00145	Maximum Non-Detect	1.7000E-5
Variance Detects	8.4050E-8	Percent Non-Detects	88.89%
Mean Detects	0.00125	SD Detects	2.8991E-4
Median Detects	0.00125	CV Detects	0.233
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-6.702	SD of Logged Detects	0.235

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.5344E-4	KM Standard Error of Mean	1.3064E-4
KM SD	3.9193E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	3.8071E-4	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	3.6833E-4	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	5.4537E-4	95% KM Chebyshev UCL	7.2290E-4
97.5% KM Chebyshev UCL	9.6930E-4	99% KM Chebyshev UCL	0.00145

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	36.55	k star (bias corrected MLE)	N/A
Theta hat (MLE)	3.4066E-5	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	146.2	nu star (bias corrected)	N/A
Mean (detects)	0.00125		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.5344E-4	SD (KM)	3.9193E-4
Variance (KM)	1.5361E-7	SE of Mean (KM)	1.3064E-4
k hat (KM)	0.153	k star (KM)	0.165
nu hat (KM)	5.518	nu star (KM)	5.932
theta hat (KM)	0.001	theta star (KM)	9.3125E-4
80% gamma percentile (KM)	1.7949E-4	90% gamma percentile (KM)	4.5992E-4
95% gamma percentile (KM)	8.2831E-4	99% gamma percentile (KM)	0.00188

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (5.93, α)	1.605	Adjusted Chi Square Value (5.93, β)	1.4
95% Gamma Approximate KM-UCL (use when n>=50)	5.6706E-4	95% Gamma Adjusted KM-UCL (use when n<50)	6.5016E-4

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.7391E-4	Mean in Log Scale	-8.27
SD in Original Scale	3.6503E-4	SD in Log Scale	0.896
95% t UCL (assumes normality of ROS data)	5.2358E-4	95% Percentile Bootstrap UCL	5.1896E-4
95% BCA Bootstrap UCL	5.6384E-4	95% Bootstrap t UCL	6.4631E-4
95% H-UCL (Log ROS)	6.5747E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.51	KM Geo Mean	2.7351E-5
KM SD (logged)	1.346	95% Critical H Value (KM-Log)	3.176
KM Standard Error of Mean (logged)	0.449	95% H-UCL (KM -Log)	1.9094E-4
KM SD (logged)	1.346	95% Critical H Value (KM-Log)	3.176
KM Standard Error of Mean (logged)	0.449		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	1.4589E-4	Mean in Log Scale	-11.12
SD in Original Scale	4.0600E-4	SD in Log Scale	1.609
95% t UCL (Assumes normality)	3.1236E-4	95% H-Stat UCL	2.2152E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	3.8071E-4	KM H-UCL	1.9094E-4
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/25/18 2:16:16 PM
From File	fsh4_met_wide2_flag_sep1_AE.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	9

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Aluminum was not processed!

Arsenic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.598	Mean	1.018
Maximum	1.96	Median	0.878
SD	0.41	Std. Error of Mean	0.0967
Coefficient of Variation	0.403	Skewness	1.126

Normal GOF Test

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.187	95% Adjusted-CLT UCL (Chen-1995)	1.205
		95% Modified-t UCL (Johnson-1978)	1.191

Gamma GOF Test

A-D Test Statistic	0.781	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.741	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.225	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.568	k star (bias corrected MLE)	6.343
Theta hat (MLE)	0.135	Theta star (bias corrected MLE)	0.161
nu hat (MLE)	272.4	nu star (bias corrected)	228.4
MLE Mean (bias corrected)	1.018	MLE Sd (bias corrected)	0.404
		Approximate Chi Square Value (0.05)	194.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	191.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.196	95% Adjusted Gamma UCL (use when n<50)	1.215

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.213	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.514	Mean of logged Data	-0.0493
Maximum of Logged Data	0.673	SD of logged Data	0.367

Assuming Lognormal Distribution

95% H-UCL	1.206	90% Chebyshev (MVUE) UCL	1.283
95% Chebyshev (MVUE) UCL	1.404	97.5% Chebyshev (MVUE) UCL	1.573
99% Chebyshev (MVUE) UCL	1.904		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.178	95% Jackknife UCL	1.187
95% Standard Bootstrap UCL	1.175	95% Bootstrap-t UCL	1.233
95% Hall's Bootstrap UCL	1.223	95% Percentile Bootstrap UCL	1.179
95% BCA Bootstrap UCL	1.205		
90% Chebyshev(Mean, Sd) UCL	1.309	95% Chebyshev(Mean, Sd) UCL	1.44
97.5% Chebyshev(Mean, Sd) UCL	1.623	99% Chebyshev(Mean, Sd) UCL	1.981

Suggested UCL to Use

95% Student's-t UCL	1.187	or 95% Modified-t UCL	1.191
or 95% H-UCL	1.206		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Arsenic - inorganic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.0598	Mean	0.102
Maximum	0.196	Median	0.0878
SD	0.041	Std. Error of Mean	0.00967
Coefficient of Variation	0.403	Skewness	1.126

Normal GOF Test

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.119	95% Adjusted-CLT UCL (Chen-1995)	0.12
		95% Modified-t UCL (Johnson-1978)	0.119

Gamma GOF Test

A-D Test Statistic	0.781	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.225	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.568	k star (bias corrected MLE)	6.343
Theta hat (MLE)	0.0135	Theta star (bias corrected MLE)	0.0161
nu hat (MLE)	272.4	nu star (bias corrected)	228.4
MLE Mean (bias corrected)	0.102	MLE Sd (bias corrected)	0.0404
		Approximate Chi Square Value (0.05)	194.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	191.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.12	95% Adjusted Gamma UCL (use when n<50)	0.122

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.213	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.817	Mean of logged Data	-2.352
Maximum of Logged Data	-1.63	SD of logged Data	0.367

Assuming Lognormal Distribution

95% H-UCL	0.121	90% Chebyshev (MVUE) UCL	0.128
95% Chebyshev (MVUE) UCL	0.14	97.5% Chebyshev (MVUE) UCL	0.157
99% Chebyshev (MVUE) UCL	0.19		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.118	95% Jackknife UCL	0.119
95% Standard Bootstrap UCL	0.118	95% Bootstrap-t UCL	0.124

95% Hall's Bootstrap UCL	0.121	95% Percentile Bootstrap UCL	0.118
95% BCA Bootstrap UCL	0.119		
90% Chebyshev(Mean, Sd) UCL	0.131	95% Chebyshev(Mean, Sd) UCL	0.144
97.5% Chebyshev(Mean, Sd) UCL	0.162	99% Chebyshev(Mean, Sd) UCL	0.198

Suggested UCL to Use

95% Student's-t UCL	0.119	or 95% Modified-t UCL	0.119
or 95% H-UCL	0.121		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Arsenic - organic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.538	Mean	0.917
Maximum	1.764	Median	0.79
SD	0.369	Std. Error of Mean	0.0871
Coefficient of Variation	0.403	Skewness	1.126

Normal GOF Test

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.068	95% Adjusted-CLT UCL (Chen-1995)	1.084
		95% Modified-t UCL (Johnson-1978)	1.072

Gamma GOF Test

A-D Test Statistic	0.781	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.741	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.225	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.568	k star (bias corrected MLE)	6.343
Theta hat (MLE)	0.121	Theta star (bias corrected MLE)	0.144
nu hat (MLE)	272.4	nu star (bias corrected)	228.4
MLE Mean (bias corrected)	0.917	MLE Sd (bias corrected)	0.364
		Approximate Chi Square Value (0.05)	194.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	191.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.077	95% Adjusted Gamma UCL (use when n<50)	1.094

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.213	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.62	Mean of logged Data	-0.155
Maximum of Logged Data	0.568	SD of logged Data	0.367

Assuming Lognormal Distribution

95% H-UCL	1.086	90% Chebyshev (MVUE) UCL	1.154
95% Chebyshev (MVUE) UCL	1.264	97.5% Chebyshev (MVUE) UCL	1.416
99% Chebyshev (MVUE) UCL	1.714		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.06	95% Jackknife UCL	1.068
95% Standard Bootstrap UCL	1.059	95% Bootstrap-t UCL	1.121

95% Hall's Bootstrap UCL	1.086	95% Percentile Bootstrap UCL	1.063
95% BCA Bootstrap UCL	1.084		
90% Chebyshev(Mean, Sd) UCL	1.178	95% Chebyshev(Mean, Sd) UCL	1.296
97.5% Chebyshev(Mean, Sd) UCL	1.46	99% Chebyshev(Mean, Sd) UCL	1.783

Suggested UCL to Use

95% Student's-t UCL	1.068	or 95% Modified-t UCL	1.072
or 95% H-UCL	1.086		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Cadmium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	10

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cadmium was not processed!

Chromium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	11
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	10

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chromium was not processed!

Cobalt

General Statistics

Total Number of Observations	18	Number of Distinct Observations	11
Number of Detects	3	Number of Non-Detects	15
Number of Distinct Detects	3	Number of Distinct Non-Detects	8
Minimum Detect	0	Minimum Non-Detect	0.0136
Maximum Detect	0.0286	Maximum Non-Detect	0.0198
Variance Detects	2.3149E-4	Percent Non-Detects	83.33%
Mean Detects	0.0173	SD Detects	0.0152
Median Detects	0.0233	CV Detects	0.879
Skewness Detects	-1.499	Kurtosis Detects	N/A

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.883	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.32	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00288	KM Standard Error of Mean	0.00237
KM SD	0.0082	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.007	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00678	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00999	95% KM Chebyshev UCL	0.0132
97.5% KM Chebyshev UCL	0.0177	99% KM Chebyshev UCL	0.0264

Gamma Statistics on Detected Data Only

Dataset Contains Values <= 0 - Cannot Compute Gamma Statistics!

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00288	SD (KM)	0.0082
Variance (KM)	6.7289E-5	SE of Mean (KM)	0.00237
k hat (KM)	0.124	k star (KM)	0.14
nu hat (KM)	4.448	nu star (KM)	5.04
theta hat (KM)	0.0233	theta star (KM)	0.0206
80% gamma percentile (KM)	0.00296	90% gamma percentile (KM)	0.00846
95% gamma percentile (KM)	0.0161	99% gamma percentile (KM)	0.0385

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (5.04, α)	1.171	Adjusted Chi Square Value (5.04, β)	1.004
95% Gamma Approximate KM-UCL (use when n>=50)	0.0124	95% Gamma Adjusted KM-UCL (use when n<50)	0.0145

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	N/A	KM Geo Mean	N/A
KM SD (logged)	N/A	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	N/A	95% H-UCL (KM -Log)	N/A
KM SD (logged)	N/A	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	N/A		

DL/2 Statistics

Mean in Original Scale	0.0104	SD in Original Scale	0.00621
95% t UCL (Assumes normality)	0.013		

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.007

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Copper

General Statistics

Total Number of Observations	18	Number of Distinct Observations	13
Number of Detects	11	Number of Non-Detects	7
Number of Distinct Detects	9	Number of Distinct Non-Detects	4
Minimum Detect	0.193	Minimum Non-Detect	0.0552
Maximum Detect	0.323	Maximum Non-Detect	0.0792
Variance Detects	0.00127	Percent Non-Detects	38.89%
Mean Detects	0.242	SD Detects	0.0356
Median Detects	0.231	CV Detects	0.147
Skewness Detects	1.067	Kurtosis Detects	1.586
Mean of Logged Detects	-1.427	SD of Logged Detects	0.141

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.183	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.169	KM Standard Error of Mean	0.0235
KM SD	0.0949	95% KM (BCA) UCL	0.216
95% KM (t) UCL	0.21	95% KM (Percentile Bootstrap) UCL	0.207
95% KM (z) UCL	0.208	95% KM Bootstrap t UCL	0.204
90% KM Chebyshev UCL	0.24	95% KM Chebyshev UCL	0.272
97.5% KM Chebyshev UCL	0.316	99% KM Chebyshev UCL	0.403

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.381	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.728	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.169	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.255	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	54.02	k star (bias corrected MLE)	39.35
Theta hat (MLE)	0.00448	Theta star (bias corrected MLE)	0.00616
nu hat (MLE)	1188	nu star (bias corrected)	865.6
Mean (detects)	0.242		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.13	Mean	0.209
Maximum	0.323	Median	0.216
SD	0.0512	CV	0.245
k hat (MLE)	17.86	k star (bias corrected MLE)	14.92
Theta hat (MLE)	0.0117	Theta star (bias corrected MLE)	0.014
nu hat (MLE)	643	nu star (bias corrected)	537.1
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (537.15, α)	484.4	Adjusted Chi Square Value (537.15, β)	479.6
95% Gamma Approximate UCL (use when n>=50)	0.232	95% Gamma Adjusted UCL (use when n<50)	0.234

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.169	SD (KM)	0.0949
Variance (KM)	0.00901	SE of Mean (KM)	0.0235
k hat (KM)	3.186	k star (KM)	2.692

nu hat (KM)	114.7	nu star (KM)	96.91
theta hat (KM)	0.0532	theta star (KM)	0.063
80% gamma percentile (KM)	0.245	90% gamma percentile (KM)	0.308
95% gamma percentile (KM)	0.367	99% gamma percentile (KM)	0.496

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (96.91, α)	75.2	Adjusted Chi Square Value (96.91, β)	73.37
95% Gamma Approximate KM-UCL (use when n>=50)	0.218	95% Gamma Adjusted KM-UCL (use when n<50)	0.224

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.159	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.213	Mean in Log Scale	-1.568
SD in Original Scale	0.0468	SD in Log Scale	0.215
95% t UCL (assumes normality of ROS data)	0.232	95% Percentile Bootstrap UCL	0.23
95% BCA Bootstrap UCL	0.232	95% Bootstrap t UCL	0.234
95% H-UCL (Log ROS)	0.234		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.999	KM Geo Mean	0.135
KM SD (logged)	0.724	95% Critical H Value (KM-Log)	2.267
KM Standard Error of Mean (logged)	0.179	95% H-UCL (KM -Log)	0.262
KM SD (logged)	0.724	95% Critical H Value (KM-Log)	2.267
KM Standard Error of Mean (logged)	0.179		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.163	Mean in Log Scale	-2.152
SD in Original Scale	0.106	SD in Log Scale	0.944
95% t UCL (Assumes normality)	0.206	95% H-Stat UCL	0.326

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.21

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	6	Number of Non-Detects	12
Number of Distinct Detects	6	Number of Distinct Non-Detects	6
Minimum Detect	3.36	Minimum Non-Detect	3.23
Maximum Detect	21.4	Maximum Non-Detect	4.57
Variance Detects	46.5	Percent Non-Detects	66.67%
Mean Detects	7.792	SD Detects	6.819
Median Detects	4.915	CV Detects	0.875
Skewness Detects	2.222	Kurtosis Detects	5.061
Mean of Logged Detects	1.833	SD of Logged Detects	0.659

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.675	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.339	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.877	KM Standard Error of Mean	1.079
KM SD	4.154	95% KM (BCA) UCL	7.31
95% KM (t) UCL	6.754	95% KM (Percentile Bootstrap) UCL	6.745
95% KM (z) UCL	6.652	95% KM Bootstrap t UCL	10.99
90% KM Chebyshev UCL	8.114	95% KM Chebyshev UCL	9.58
97.5% KM Chebyshev UCL	11.62	99% KM Chebyshev UCL	15.61

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.736	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.703	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.327	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.335	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.422	k star (bias corrected MLE)	1.322
Theta hat (MLE)	3.217	Theta star (bias corrected MLE)	5.894
nu hat (MLE)	29.06	nu star (bias corrected)	15.86
Mean (detects)	7.792		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.803
Maximum	21.4	Median	0.01
SD	5.214	CV	1.86
k hat (MLE)	0.245	k star (bias corrected MLE)	0.241
Theta hat (MLE)	11.46	Theta star (bias corrected MLE)	11.64
nu hat (MLE)	8.803	nu star (bias corrected)	8.669
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (8.67, α)	3.128	Adjusted Chi Square Value (8.67, β)	2.817
95% Gamma Approximate UCL (use when n>=50)	7.767	95% Gamma Adjusted UCL (use when n<50)	8.627

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.877	SD (KM)	4.154
Variance (KM)	17.26	SE of Mean (KM)	1.079
k hat (KM)	1.378	k star (KM)	1.185

nu hat (KM)	49.6	nu star (KM)	42.67
theta hat (KM)	3.539	theta star (KM)	4.114
80% gamma percentile (KM)	7.731	90% gamma percentile (KM)	10.77
95% gamma percentile (KM)	13.76	99% gamma percentile (KM)	20.64

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (42.67, α)	28.69	Adjusted Chi Square Value (42.67, β)	27.59
95% Gamma Approximate KM-UCL (use when n>=50)	7.252	95% Gamma Adjusted KM-UCL (use when n<50)	7.541

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.836	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.296	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.901	Mean in Log Scale	1.008
SD in Original Scale	4.702	SD in Log Scale	0.772
95% t UCL (assumes normality of ROS data)	5.829	95% Percentile Bootstrap UCL	5.915
95% BCA Bootstrap UCL	7.222	95% Bootstrap t UCL	8.985
95% H-UCL (Log ROS)	5.702		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.427	KM Geo Mean	4.166
KM SD (logged)	0.458	95% Critical H Value (KM-Log)	1.981
KM Standard Error of Mean (logged)	0.122	95% H-UCL (KM -Log)	5.764
KM SD (logged)	0.458	95% Critical H Value (KM-Log)	1.981
KM Standard Error of Mean (logged)	0.122		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.066	Mean in Log Scale	1.135
SD in Original Scale	4.588	SD in Log Scale	0.626
95% t UCL (Assumes normality)	5.947	95% H-Stat UCL	5.246

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	7.541	95% GROS Adjusted Gamma UCL	8.627

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	5	Number of Non-Detects	13
Number of Distinct Detects	5	Number of Distinct Non-Detects	7
Minimum Detect	0.0259	Minimum Non-Detect	0.0177
Maximum Detect	0.0339	Maximum Non-Detect	0.0257
Variance Detects	1.0163E-5	Percent Non-Detects	72.22%
Mean Detects	0.0284	SD Detects	0.00319
Median Detects	0.0272	CV Detects	0.112
Skewness Detects	1.926	Kurtosis Detects	3.937
Mean of Logged Detects	-3.567	SD of Logged Detects	0.106

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.773	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.345	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data Not Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0207	KM Standard Error of Mean	0.00132
KM SD	0.00501	95% KM (BCA) UCL	0.0233
95% KM (t) UCL	0.023	95% KM (Percentile Bootstrap) UCL	0.023
95% KM (z) UCL	0.0228	95% KM Bootstrap t UCL	0.0217
90% KM Chebyshev UCL	0.0246	95% KM Chebyshev UCL	0.0264
97.5% KM Chebyshev UCL	0.0289	99% KM Chebyshev UCL	0.0338

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.645	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.678	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.34	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.357	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	106.9	k star (bias corrected MLE)	42.9
Theta hat (MLE)	2.6523E-4	Theta star (bias corrected MLE)	6.6102E-4
nu hat (MLE)	1069	nu star (bias corrected)	429
Mean (detects)	0.0284		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0121	Mean	0.0201
Maximum	0.0339	Median	0.0177
SD	0.00592	CV	0.294
k hat (MLE)	13.22	k star (bias corrected MLE)	11.05
Theta hat (MLE)	0.00152	Theta star (bias corrected MLE)	0.00182
nu hat (MLE)	475.8	nu star (bias corrected)	397.9
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (397.85, α)	352.6	Adjusted Chi Square Value (397.85, β)	348.5
95% Gamma Approximate UCL (use when n>=50)	0.0227	95% Gamma Adjusted UCL (use when n<50)	0.0229

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0207	SD (KM)	0.00501
Variance (KM)	2.5056E-5	SE of Mean (KM)	0.00132
k hat (KM)	17.04	k star (KM)	14.23

nu hat (KM)	613.3	nu star (KM)	512.5
theta hat (KM)	0.00121	theta star (KM)	0.00145
80% gamma percentile (KM)	0.0251	90% gamma percentile (KM)	0.0279
95% gamma percentile (KM)	0.0304	99% gamma percentile (KM)	0.0355

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (512.45, α)	461	Adjusted Chi Square Value (512.45, β)	456.3
95% Gamma Approximate KM-UCL (use when n>=50)	0.023	95% Gamma Adjusted KM-UCL (use when n<50)	0.0232

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.796	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.33	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0215	Mean in Log Scale	-3.859
SD in Original Scale	0.00486	SD in Log Scale	0.21
95% t UCL (assumes normality of ROS data)	0.0235	95% Percentile Bootstrap UCL	0.0234
95% BCA Bootstrap UCL	0.0237	95% Bootstrap t UCL	0.0241
95% H-UCL (Log ROS)	0.0236		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.905	KM Geo Mean	0.0202
KM SD (logged)	0.215	95% Critical H Value (KM-Log)	1.796
KM Standard Error of Mean (logged)	0.0566	95% H-UCL (KM -Log)	0.0226
KM SD (logged)	0.215	95% Critical H Value (KM-Log)	1.796
KM Standard Error of Mean (logged)	0.0566		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0163	Mean in Log Scale	-4.217
SD in Original Scale	0.00801	SD in Log Scale	0.44
95% t UCL (Assumes normality)	0.0196	95% H-Stat UCL	0.02

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.023

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Manganese

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	8	Number of Non-Detects	10
Number of Distinct Detects	8	Number of Distinct Non-Detects	7
Minimum Detect	0.19	Minimum Non-Detect	0.114
Maximum Detect	0.699	Maximum Non-Detect	0.166
Variance Detects	0.0304	Percent Non-Detects	55.56%
Mean Detects	0.434	SD Detects	0.174
Median Detects	0.404	CV Detects	0.402
Skewness Detects	0.126	Kurtosis Detects	-0.955
Mean of Logged Detects	-0.916	SD of Logged Detects	0.444

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.256	KM Standard Error of Mean	0.0485
KM SD	0.192	95% KM (BCA) UCL	0.338
95% KM (t) UCL	0.34	95% KM (Percentile Bootstrap) UCL	0.333
95% KM (z) UCL	0.336	95% KM Bootstrap t UCL	0.344
90% KM Chebyshev UCL	0.401	95% KM Chebyshev UCL	0.467
97.5% KM Chebyshev UCL	0.559	99% KM Chebyshev UCL	0.738

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.26	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.718	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.173	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.295	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.403	k star (bias corrected MLE)	4.085
Theta hat (MLE)	0.0677	Theta star (bias corrected MLE)	0.106
nu hat (MLE)	102.4	nu star (bias corrected)	65.36
Mean (detects)	0.434		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.208
Maximum	0.699	Median	0.0699
SD	0.237	CV	1.136
k hat (MLE)	0.579	k star (bias corrected MLE)	0.52
Theta hat (MLE)	0.359	Theta star (bias corrected MLE)	0.401
nu hat (MLE)	20.85	nu star (bias corrected)	18.71
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (18.71, α)	9.907	Adjusted Chi Square Value (18.71, β)	9.295
95% Gamma Approximate UCL (use when n>=50)	0.393	95% Gamma Adjusted UCL (use when n<50)	0.419

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.256	SD (KM)	0.192
Variance (KM)	0.037	SE of Mean (KM)	0.0485
k hat (KM)	1.77	k star (KM)	1.512

nu hat (KM)	63.7	nu star (KM)	54.42
theta hat (KM)	0.145	theta star (KM)	0.169
80% gamma percentile (KM)	0.396	90% gamma percentile (KM)	0.532
95% gamma percentile (KM)	0.665	99% gamma percentile (KM)	0.965

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (54.42, α)	38.47	Adjusted Chi Square Value (54.42, β)	37.18
95% Gamma Approximate KM-UCL (use when n>=50)	0.362	95% Gamma Adjusted KM-UCL (use when n<50)	0.375

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.256	Mean in Log Scale	-1.626
SD in Original Scale	0.199	SD in Log Scale	0.728
95% t UCL (assumes normality of ROS data)	0.337	95% Percentile Bootstrap UCL	0.333
95% BCA Bootstrap UCL	0.342	95% Bootstrap t UCL	0.359
95% H-UCL (Log ROS)	0.383		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.614	KM Geo Mean	0.199
KM SD (logged)	0.683	95% Critical H Value (KM-Log)	2.217
KM Standard Error of Mean (logged)	0.172	95% H-UCL (KM -Log)	0.363
KM SD (logged)	0.683	95% Critical H Value (KM-Log)	2.217
KM Standard Error of Mean (logged)	0.172		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.233	Mean in Log Scale	-1.87
SD in Original Scale	0.216	SD in Log Scale	0.932
95% t UCL (Assumes normality)	0.322	95% H-Stat UCL	0.423

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.34

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.172	Mean	0.356
Maximum	0.638	Median	0.318
SD	0.155	Std. Error of Mean	0.0366
Coefficient of Variation	0.436	Skewness	0.552

Normal GOF Test

Shapiro Wilk Test Statistic	0.909	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.154	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.419	95% Adjusted-CLT UCL (Chen-1995)	0.421
		95% Modified-t UCL (Johnson-1978)	0.42

Gamma GOF Test

A-D Test Statistic	0.442	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.677	k star (bias corrected MLE)	4.768
Theta hat (MLE)	0.0626	Theta star (bias corrected MLE)	0.0746
nu hat (MLE)	204.4	nu star (bias corrected)	171.6
MLE Mean (bias corrected)	0.356	MLE Sd (bias corrected)	0.163
		Approximate Chi Square Value (0.05)	142.3
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	139.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.429	95% Adjusted Gamma UCL (use when n<50)	0.437

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.76	Mean of logged Data	-1.125
Maximum of Logged Data	-0.449	SD of logged Data	0.44

Assuming Lognormal Distribution

95% H-UCL	0.441	90% Chebyshev (MVUE) UCL	0.47
95% Chebyshev (MVUE) UCL	0.521	97.5% Chebyshev (MVUE) UCL	0.593
99% Chebyshev (MVUE) UCL	0.733		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.416	95% Jackknife UCL	0.419
95% Standard Bootstrap UCL	0.415	95% Bootstrap-t UCL	0.422

95% Hall's Bootstrap UCL	0.417	95% Percentile Bootstrap UCL	0.417
95% BCA Bootstrap UCL	0.415		
90% Chebyshev(Mean, Sd) UCL	0.465	95% Chebyshev(Mean, Sd) UCL	0.515
97.5% Chebyshev(Mean, Sd) UCL	0.584	99% Chebyshev(Mean, Sd) UCL	0.719

Suggested UCL to Use

95% Student's-t UCL	0.419

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Methyl Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.17	Mean	0.388
Maximum	0.764	Median	0.332
SD	0.173	Std. Error of Mean	0.0407
Coefficient of Variation	0.446	Skewness	0.792

Normal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.177	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.459	95% Adjusted-CLT UCL (Chen-1995)	0.463
		95% Modified-t UCL (Johnson-1978)	0.46

Gamma GOF Test

A-D Test Statistic	0.239	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.58	k star (bias corrected MLE)	4.687
Theta hat (MLE)	0.0695	Theta star (bias corrected MLE)	0.0827
nu hat (MLE)	200.9	nu star (bias corrected)	168.7
MLE Mean (bias corrected)	0.388	MLE Sd (bias corrected)	0.179
		Approximate Chi Square Value (0.05)	139.7
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	137.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.468	95% Adjusted Gamma UCL (use when n<50)	0.477

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.772	Mean of logged Data	-1.04
Maximum of Logged Data	-0.269	SD of logged Data	0.444

Assuming Lognormal Distribution

95% H-UCL	0.482	90% Chebyshev (MVUE) UCL	0.513
95% Chebyshev (MVUE) UCL	0.57	97.5% Chebyshev (MVUE) UCL	0.648
99% Chebyshev (MVUE) UCL	0.803		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.455	95% Jackknife UCL	0.459
95% Standard Bootstrap UCL	0.452	95% Bootstrap-t UCL	0.47

95% Hall's Bootstrap UCL	0.469	95% Percentile Bootstrap UCL	0.453
95% BCA Bootstrap UCL	0.459		
90% Chebyshev(Mean, Sd) UCL	0.51	95% Chebyshev(Mean, Sd) UCL	0.565
97.5% Chebyshev(Mean, Sd) UCL	0.642	99% Chebyshev(Mean, Sd) UCL	0.793

Suggested UCL to Use

95% Student's-t UCL	0.459

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Selenium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.338	Mean	0.465
Maximum	0.848	Median	0.445
SD	0.118	Std. Error of Mean	0.0277
Coefficient of Variation	0.253	Skewness	2.104

Normal GOF Test

Shapiro Wilk Test Statistic	0.802	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.175	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.513	95% Adjusted-CLT UCL (Chen-1995)	0.525
		95% Modified-t UCL (Johnson-1978)	0.515

Gamma GOF Test

A-D Test Statistic	0.576	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.134	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	20.23	k star (bias corrected MLE)	16.9
Theta hat (MLE)	0.023	Theta star (bias corrected MLE)	0.0275
nu hat (MLE)	728.3	nu star (bias corrected)	608.3
MLE Mean (bias corrected)	0.465	MLE Sd (bias corrected)	0.113
		Approximate Chi Square Value (0.05)	552.1
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	546.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.512	95% Adjusted Gamma UCL (use when n<50)	0.517

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.906	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.085	Mean of logged Data	-0.792
Maximum of Logged Data	-0.165	SD of logged Data	0.22

Assuming Lognormal Distribution

95% H-UCL	0.511	90% Chebyshev (MVUE) UCL	0.536
95% Chebyshev (MVUE) UCL	0.569	97.5% Chebyshev (MVUE) UCL	0.615
99% Chebyshev (MVUE) UCL	0.705		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.51	95% Jackknife UCL	0.513
95% Standard Bootstrap UCL	0.509	95% Bootstrap-t UCL	0.534

95% Hall's Bootstrap UCL	0.735	95% Percentile Bootstrap UCL	0.511
95% BCA Bootstrap UCL	0.525		
90% Chebyshev(Mean, Sd) UCL	0.548	95% Chebyshev(Mean, Sd) UCL	0.585
97.5% Chebyshev(Mean, Sd) UCL	0.638	99% Chebyshev(Mean, Sd) UCL	0.74

Suggested UCL to Use

95% Student's-t UCL	0.513

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Silver

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	10

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Silver was not processed!

Vanadium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	11
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	9
Minimum Detect	0.0211	Minimum Non-Detect	0.0204
Maximum Detect	0.0317	Maximum Non-Detect	0.0297
Variance Detects	5.6180E-5	Percent Non-Detects	88.89%
Mean Detects	0.0264	SD Detects	0.0075
Median Detects	0.0264	CV Detects	0.284
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-3.655	SD of Logged Detects	0.288

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0212	KM Standard Error of Mean	8.7322E-4
KM SD	0.00257	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0227	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0226	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0238	95% KM Chebyshev UCL	0.025
97.5% KM Chebyshev UCL	0.0266	99% KM Chebyshev UCL	0.0299

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	24.47	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.00108	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	97.9	nu star (bias corrected)	N/A
Mean (detects)	0.0264		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0212	SD (KM)	0.00257
Variance (KM)	6.5806E-6	SE of Mean (KM)	8.7322E-4
k hat (KM)	68.25	k star (KM)	56.91
nu hat (KM)	2457	nu star (KM)	2049
theta hat (KM)	3.1051E-4	theta star (KM)	3.7237E-4
80% gamma percentile (KM)	0.0235	90% gamma percentile (KM)	0.0249
95% gamma percentile (KM)	0.026	99% gamma percentile (KM)	0.0283

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (N/A, α)	1945	Adjusted Chi Square Value (N/A, β)	1935
95% Gamma Approximate KM-UCL (use when n>=50)	0.0223	95% Gamma Adjusted KM-UCL (use when n<50)	0.0224

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0151	Mean in Log Scale	-4.235
SD in Original Scale	0.00524	SD in Log Scale	0.294
95% t UCL (assumes normality of ROS data)	0.0173	95% Percentile Bootstrap UCL	0.0172
95% BCA Bootstrap UCL	0.0179	95% Bootstrap t UCL	0.0187
95% H-UCL (Log ROS)	0.0172		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.86	KM Geo Mean	0.0211
KM SD (logged)	0.1	95% Critical H Value (KM-Log)	1.733
KM Standard Error of Mean (logged)	0.0344	95% H-UCL (KM -Log)	0.0221
KM SD (logged)	0.1	95% Critical H Value (KM-Log)	1.733
KM Standard Error of Mean (logged)	0.0344		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0151	Mean in Log Scale	-4.233
SD in Original Scale	0.00486	SD in Log Scale	0.265
95% t UCL (Assumes normality)	0.017	95% H-Stat UCL	0.0169

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0227	KM H-UCL	0.0221
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Zinc

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	15.3	Mean	26.38
Maximum	43.1	Median	25.2
SD	7.178	Std. Error of Mean	1.692
Coefficient of Variation	0.272	Skewness	0.672

Normal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.154	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	29.32	95% Adjusted-CLT UCL (Chen-1995)	29.45
		95% Modified-t UCL (Johnson-1978)	29.37

Gamma GOF Test

A-D Test Statistic	0.203	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.8	k star (bias corrected MLE)	12.37
Theta hat (MLE)	1.783	Theta star (bias corrected MLE)	2.133
nu hat (MLE)	532.6	nu star (bias corrected)	445.2
MLE Mean (bias corrected)	26.38	MLE Sd (bias corrected)	7.501
		Approximate Chi Square Value (0.05)	397.3
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	392.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	29.56	95% Adjusted Gamma UCL (use when n<50)	29.89

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.104	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.728	Mean of logged Data	3.238
Maximum of Logged Data	3.764	SD of logged Data	0.269

Assuming Lognormal Distribution

95% H-UCL	29.78	90% Chebyshev (MVUE) UCL	31.44
95% Chebyshev (MVUE) UCL	33.74	97.5% Chebyshev (MVUE) UCL	36.93
99% Chebyshev (MVUE) UCL	43.19		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	29.16	95% Jackknife UCL	29.32
95% Standard Bootstrap UCL	29.05	95% Bootstrap-t UCL	29.42

95% Hall's Bootstrap UCL	29.67	95% Percentile Bootstrap UCL	29.27
95% BCA Bootstrap UCL	29.48		
90% Chebyshev(Mean, Sd) UCL	31.45	95% Chebyshev(Mean, Sd) UCL	33.75
97.5% Chebyshev(Mean, Sd) UCL	36.94	99% Chebyshev(Mean, Sd) UCL	43.21

Suggested UCL to Use

95% Student's-t UCL	29.32

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:29:32 PM
From File	fsh8_SVOC_wide2_flag_sep1_AE.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzaldehyde was not processed!

Pyridine

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Pyridine was not processed!

Bluefish

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:34:18 PM
From File	fsh1_dlc_wide2_flag_sep1_BF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	7.6500E-8	Mean	9.6303E-7
Maximum	3.1900E-6	Median	6.2250E-7
SD	8.7143E-7	Std. Error of Mean	2.0540E-7
Coefficient of Variation	N/A	Skewness	1.384

Normal GOF Test

Shapiro Wilk Test Statistic	0.839	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.251	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3203E-6	95% Adjusted-CLT UCL (Chen-1995)	1.3724E-6
		95% Modified-t UCL (Johnson-1978)	1.3315E-6

Gamma GOF Test

A-D Test Statistic	0.307	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.758	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.167	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.398	k star (bias corrected MLE)	1.202
Theta hat (MLE)	6.8862E-7	Theta star (bias corrected MLE)	8.0090E-7
nu hat (MLE)	50.35	nu star (bias corrected)	43.29
MLE Mean (bias corrected)	9.6303E-7	MLE Sd (bias corrected)	8.7823E-7
		Approximate Chi Square Value (0.05)	29.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	28.09

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.4276E-6	95% Adjusted Gamma UCL (use when n<50)	1.4840E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.39	Mean of logged Data	-14.25
Maximum of Logged Data	-12.66	SD of logged Data	0.972

Assuming Lognormal Distribution

95% H-UCL	1.9131E-6	90% Chebyshev (MVUE) UCL	1.7601E-6
95% Chebyshev (MVUE) UCL	2.1044E-6	97.5% Chebyshev (MVUE) UCL	2.5821E-6
99% Chebyshev (MVUE) UCL	3.5206E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3009E-6	95% Jackknife UCL	1.3203E-6
95% Standard Bootstrap UCL	1.2880E-6	95% Bootstrap-t UCL	1.4419E-6
95% Hall's Bootstrap UCL	1.3999E-6	95% Percentile Bootstrap UCL	1.3033E-6
95% BCA Bootstrap UCL	1.3659E-6		
90% Chebyshev(Mean, Sd) UCL	1.5792E-6	95% Chebyshev(Mean, Sd) UCL	1.8583E-6
97.5% Chebyshev(Mean, Sd) UCL	2.2457E-6	99% Chebyshev(Mean, Sd) UCL	3.0067E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 1.4840E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	12	Number of Non-Detects	6
Number of Distinct Detects	12	Number of Distinct Non-Detects	6
Minimum Detect	1.0800E-7	Minimum Non-Detect	6.1200E-8
Maximum Detect	5.7500E-7	Maximum Non-Detect	1.3100E-7
Variance Detects	2.654E-14	Percent Non-Detects	33.33%
Mean Detects	3.0400E-7	SD Detects	1.6290E-7
Median Detects	2.6850E-7	CV Detects	N/A
Skewness Detects	0.468	Kurtosis Detects	-1.168
Mean of Logged Detects	-15.15	SD of Logged Detects	0.577

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.243	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.2448E-7	KM Standard Error of Mean	4.1920E-8
KM SD	1.7009E-7	95% KM (BCA) UCL	3.0046E-7
95% KM (t) UCL	2.9740E-7	95% KM (Percentile Bootstrap) UCL	2.9326E-7
95% KM (z) UCL	2.9343E-7	95% KM Bootstrap t UCL	3.0388E-7
90% KM Chebyshev UCL	3.5024E-7	95% KM Chebyshev UCL	4.0720E-7
97.5% KM Chebyshev UCL	4.8627E-7	99% KM Chebyshev UCL	6.4158E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.258	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.136	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.247	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.625	k star (bias corrected MLE)	2.774
Theta hat (MLE)	8.3865E-8	Theta star (bias corrected MLE)	1.0958E-7
nu hat (MLE)	87	nu star (bias corrected)	66.58
Mean (detects)	3.0400E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.0800E-7	Mean	0.00333
Maximum	0.01	Median	4.4800E-7
SD	0.00485	CV	1.455
k hat (MLE)	0.132	k star (bias corrected MLE)	0.147
Theta hat (MLE)	0.0253	Theta star (bias corrected MLE)	0.0227
nu hat (MLE)	4.751	nu star (bias corrected)	5.292
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.29, α)	1.29	Adjusted Chi Square Value (5.29, β)	1.112
95% Gamma Approximate UCL (use when n>=50)	0.0137	95% Gamma Adjusted UCL (use when n<50)	0.0159

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.2448E-7	SD (KM)	1.7009E-7
Variance (KM)	2.893E-14	SE of Mean (KM)	4.1920E-8
k hat (KM)	1.742	k star (KM)	1.489

nu hat (KM)	62.71	nu star (KM)	53.59
theta hat (KM)	1.2887E-7	theta star (KM)	1.5080E-7
80% gamma percentile (KM)	3.4760E-7	90% gamma percentile (KM)	4.6864E-7
95% gamma percentile (KM)	5.8624E-7	99% gamma percentile (KM)	8.5193E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (53.59, α)	37.77	Adjusted Chi Square Value (53.59, β)	36.5
95% Gamma Approximate KM-UCL (use when n>=50)	3.1849E-7	95% Gamma Adjusted KM-UCL (use when n<50)	3.2960E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.2567E-7	Mean in Log Scale	-15.6
SD in Original Scale	1.7373E-7	SD in Log Scale	0.802
95% t UCL (assumes normality of ROS data)	2.9690E-7	95% Percentile Bootstrap UCL	2.9233E-7
95% BCA Bootstrap UCL	3.0370E-7	95% Bootstrap t UCL	3.1531E-7
95% H-UCL (Log ROS)	3.6751E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.62	KM Geo Mean	1.6459E-7
KM SD (logged)	0.808	95% Critical H Value (KM-Log)	2.373
KM Standard Error of Mean (logged)	0.2	95% H-UCL (KM -Log)	3.6336E-7
KM SD (logged)	0.808	95% Critical H Value (KM-Log)	2.373
KM Standard Error of Mean (logged)	0.2		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.1882E-7	Mean in Log Scale	-15.72
SD in Original Scale	1.8049E-7	SD in Log Scale	0.964
95% t UCL (Assumes normality)	2.9283E-7	95% H-Stat UCL	4.3270E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.9740E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	13	Number of Non-Detects	5
Number of Distinct Detects	13	Number of Distinct Non-Detects	5
Minimum Detect	3.9100E-8	Minimum Non-Detect	2.0800E-8
Maximum Detect	1.6800E-7	Maximum Non-Detect	4.2700E-8
Variance Detects	1.256E-15	Percent Non-Detects	27.78%
Mean Detects	7.0792E-8	SD Detects	3.5444E-8
Median Detects	5.5900E-8	CV Detects	N/A
Skewness Detects	1.96	Kurtosis Detects	4.235
Mean of Logged Detects	-16.55	SD of Logged Detects	0.412

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.781	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.222	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.7109E-8	KM Standard Error of Mean	8.9519E-9
KM SD	3.6441E-8	95% KM (BCA) UCL	7.4011E-8
95% KM (t) UCL	7.2682E-8	95% KM (Percentile Bootstrap) UCL	7.2978E-8
95% KM (z) UCL	7.1833E-8	95% KM Bootstrap t UCL	7.7923E-8
90% KM Chebyshev UCL	8.3964E-8	95% KM Chebyshev UCL	9.6129E-8
97.5% KM Chebyshev UCL	1.1301E-7	99% KM Chebyshev UCL	1.4618E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.685	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.197	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.237	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.827	k star (bias corrected MLE)	4.533
Theta hat (MLE)	1.2150E-8	Theta star (bias corrected MLE)	1.5616E-8
nu hat (MLE)	151.5	nu star (bias corrected)	117.9
Mean (detects)	7.0792E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.9100E-8	Mean	0.00278
Maximum	0.01	Median	7.5400E-8
SD	0.00461	CV	1.659
k hat (MLE)	0.109	k star (bias corrected MLE)	0.128
Theta hat (MLE)	0.0254	Theta star (bias corrected MLE)	0.0217
nu hat (MLE)	3.934	nu star (bias corrected)	4.612
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.61, α)	0.977	Adjusted Chi Square Value (4.61, β)	0.83
95% Gamma Approximate UCL (use when n>=50)	0.0131	95% Gamma Adjusted UCL (use when n<50)	0.0154

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.7109E-8	SD (KM)	3.6441E-8
Variance (KM)	1.328E-15	SE of Mean (KM)	8.9519E-9
k hat (KM)	2.456	k star (KM)	2.084

nu hat (KM)	88.42	nu star (KM)	75.01
theta hat (KM)	2.3252E-8	theta star (KM)	2.7407E-8
80% gamma percentile (KM)	8.5087E-8	90% gamma percentile (KM)	1.1001E-7
95% gamma percentile (KM)	1.3372E-7	99% gamma percentile (KM)	1.8619E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (75.01, α)	56.07	Adjusted Chi Square Value (75.01, β)	54.5
95% Gamma Approximate KM-UCL (use when n>=50)	7.6409E-8	95% Gamma Adjusted KM-UCL (use when n<50)	7.8612E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.179	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.8073E-8	Mean in Log Scale	-16.82
SD in Original Scale	3.6503E-8	SD in Log Scale	0.56
95% t UCL (assumes normality of ROS data)	7.3040E-8	95% Percentile Bootstrap UCL	7.2640E-8
95% BCA Bootstrap UCL	7.3990E-8	95% Bootstrap t UCL	7.9416E-8
95% H-UCL (Log ROS)	7.7145E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.86	KM Geo Mean	4.7598E-8
KM SD (logged)	0.604	95% Critical H Value (KM-Log)	2.129
KM Standard Error of Mean (logged)	0.149	95% H-UCL (KM -Log)	7.8046E-8
KM SD (logged)	0.604	95% Critical H Value (KM-Log)	2.129
KM Standard Error of Mean (logged)	0.149		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.5550E-8	Mean in Log Scale	-16.95
SD in Original Scale	3.9128E-8	SD in Log Scale	0.76
95% t UCL (Assumes normality)	7.1594E-8	95% H-Stat UCL	8.8929E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 7.2682E-8

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.5200E-8	Mean	1.5097E-7
Maximum	3.9200E-7	Median	1.1750E-7
SD	9.0436E-8	Std. Error of Mean	2.1316E-8
Coefficient of Variation	N/A	Skewness	1.22

Normal GOF Test

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.8805E-7	95% Adjusted-CLT UCL (Chen-1995)	1.9258E-7
		95% Modified-t UCL (Johnson-1978)	1.8907E-7

Gamma GOF Test

A-D Test Statistic	0.3	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.164	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.161	k star (bias corrected MLE)	2.671
Theta hat (MLE)	4.7758E-8	Theta star (bias corrected MLE)	5.6514E-8
nu hat (MLE)	113.8	nu star (bias corrected)	96.17
MLE Mean (bias corrected)	1.5097E-7	MLE Sd (bias corrected)	9.2368E-8
		Approximate Chi Square Value (0.05)	74.55
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	72.72

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.9475E-7	95% Adjusted Gamma UCL (use when n<50)	1.9964E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.126	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.16	Mean of logged Data	-15.87
Maximum of Logged Data	-14.75	SD of logged Data	0.609

Assuming Lognormal Distribution

95% H-UCL	2.1085E-7	90% Chebyshev (MVUE) UCL	2.2072E-7
95% Chebyshev (MVUE) UCL	2.5183E-7	97.5% Chebyshev (MVUE) UCL	2.9501E-7
99% Chebyshev (MVUE) UCL	3.7983E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.8603E-7	95% Jackknife UCL	1.8805E-7
95% Standard Bootstrap UCL	1.8502E-7	95% Bootstrap-t UCL	1.9642E-7

95% Hall's Bootstrap UCL	2.0180E-7	95% Percentile Bootstrap UCL	1.8461E-7
95% BCA Bootstrap UCL	1.8938E-7		
90% Chebyshev(Mean, Sd) UCL	2.1491E-7	95% Chebyshev(Mean, Sd) UCL	2.4388E-7
97.5% Chebyshev(Mean, Sd) UCL	2.8408E-7	99% Chebyshev(Mean, Sd) UCL	3.6306E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 1.9964E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	12	Number of Non-Detects	6
Number of Distinct Detects	12	Number of Distinct Non-Detects	6
Minimum Detect	3.4000E-8	Minimum Non-Detect	2.5000E-8
Maximum Detect	1.5300E-7	Maximum Non-Detect	4.3100E-8
Variance Detects	1.137E-15	Percent Non-Detects	33.33%
Mean Detects	6.9117E-8	SD Detects	3.3724E-8
Median Detects	6.1900E-8	CV Detects	N/A
Skewness Detects	1.426	Kurtosis Detects	2.48
Mean of Logged Detects	-16.58	SD of Logged Detects	0.445

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.4988E-8	KM Standard Error of Mean	8.1897E-9
KM SD	3.3170E-8	95% KM (BCA) UCL	6.9267E-8
95% KM (t) UCL	6.9235E-8	95% KM (Percentile Bootstrap) UCL	6.8733E-8
95% KM (z) UCL	6.8459E-8	95% KM Bootstrap t UCL	7.2996E-8
90% KM Chebyshev UCL	7.9557E-8	95% KM Chebyshev UCL	9.0686E-8
97.5% KM Chebyshev UCL	1.0613E-7	99% KM Chebyshev UCL	1.3647E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.454	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.19	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.246	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.403	k star (bias corrected MLE)	4.108
Theta hat (MLE)	1.2793E-8	Theta star (bias corrected MLE)	1.6827E-8
nu hat (MLE)	129.7	nu star (bias corrected)	98.58
Mean (detects)	6.9117E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.4000E-8	Mean	0.00333
Maximum	0.01	Median	8.8050E-8
SD	0.00485	CV	1.455
k hat (MLE)	0.116	k star (bias corrected MLE)	0.133
Theta hat (MLE)	0.0288	Theta star (bias corrected MLE)	0.025
nu hat (MLE)	4.166	nu star (bias corrected)	4.805
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.80, α)	1.063	Adjusted Chi Square Value (4.80, β)	0.907
95% Gamma Approximate UCL (use when n>=50)	0.0151	95% Gamma Adjusted UCL (use when n<50)	0.0177

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.4988E-8	SD (KM)	3.3170E-8
Variance (KM)	1.100E-15	SE of Mean (KM)	8.1897E-9
k hat (KM)	2.748	k star (KM)	2.327

nu hat (KM)	98.93	nu star (KM)	83.78
theta hat (KM)	2.0009E-8	theta star (KM)	2.3629E-8
80% gamma percentile (KM)	8.0856E-8	90% gamma percentile (KM)	1.0325E-7
95% gamma percentile (KM)	1.2442E-7	99% gamma percentile (KM)	1.7097E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (83.78, α)	63.68	Adjusted Chi Square Value (83.78, β)	62
95% Gamma Approximate KM-UCL (use when n>=50)	7.2340E-8	95% Gamma Adjusted KM-UCL (use when n<50)	7.4301E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.169	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.3803E-8	Mean in Log Scale	-16.92
SD in Original Scale	3.5138E-8	SD in Log Scale	0.607
95% t UCL (assumes normality of ROS data)	6.8210E-8	95% Percentile Bootstrap UCL	6.7520E-8
95% BCA Bootstrap UCL	7.0968E-8	95% Bootstrap t UCL	7.3842E-8
95% H-UCL (Log ROS)	7.4033E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.87	KM Geo Mean	4.7092E-8
KM SD (logged)	0.542	95% Critical H Value (KM-Log)	2.063
KM Standard Error of Mean (logged)	0.135	95% H-UCL (KM -Log)	7.1528E-8
KM SD (logged)	0.542	95% Critical H Value (KM-Log)	2.063
KM Standard Error of Mean (logged)	0.135		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.1817E-8	Mean in Log Scale	-17.02
SD in Original Scale	3.7069E-8	SD in Log Scale	0.743
95% t UCL (Assumes normality)	6.7016E-8	95% H-Stat UCL	8.0663E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 6.9235E-8

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.7700E-8	Mean	1.1386E-7
Maximum	2.8400E-7	Median	8.5200E-8
SD	5.8360E-8	Std. Error of Mean	1.3756E-8
Coefficient of Variation	N/A	Skewness	1.663

Normal GOF Test

Shapiro Wilk Test Statistic	0.822	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.223	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3779E-7	95% Adjusted-CLT UCL (Chen-1995)	1.4225E-7
		95% Modified-t UCL (Johnson-1978)	1.3869E-7

Gamma GOF Test

A-D Test Statistic	0.724	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.212	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.13	k star (bias corrected MLE)	4.312
Theta hat (MLE)	2.2193E-8	Theta star (bias corrected MLE)	2.6403E-8
nu hat (MLE)	184.7	nu star (bias corrected)	155.2
MLE Mean (bias corrected)	1.1386E-7	MLE Sd (bias corrected)	5.4830E-8
		Approximate Chi Square Value (0.05)	127.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	125

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.3870E-7	95% Adjusted Gamma UCL (use when n<50)	1.4138E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.67	Mean of logged Data	-16.09
Maximum of Logged Data	-15.07	SD of logged Data	0.442

Assuming Lognormal Distribution

95% H-UCL	1.4022E-7	90% Chebyshev (MVUE) UCL	1.4914E-7
95% Chebyshev (MVUE) UCL	1.6557E-7	97.5% Chebyshev (MVUE) UCL	1.8837E-7
99% Chebyshev (MVUE) UCL	2.3316E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3649E-7	95% Jackknife UCL	1.3779E-7
95% Standard Bootstrap UCL	1.3559E-7	95% Bootstrap-t UCL	1.4785E-7

95% Hall's Bootstrap UCL	1.4823E-7	95% Percentile Bootstrap UCL	1.3738E-7
95% BCA Bootstrap UCL	1.4100E-7		
90% Chebyshev(Mean, Sd) UCL	1.5513E-7	95% Chebyshev(Mean, Sd) UCL	1.7382E-7
97.5% Chebyshev(Mean, Sd) UCL	1.9977E-7	99% Chebyshev(Mean, Sd) UCL	2.5073E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 1.4138E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0400E-7	Mean	2.2189E-7
Maximum	4.2800E-7	Median	1.9400E-7
SD	8.6359E-8	Std. Error of Mean	2.0355E-8
Coefficient of Variation	N/A	Skewness	0.836

Normal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.194	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.5730E-7	95% Adjusted-CLT UCL (Chen-1995)	2.5966E-7
		95% Modified-t UCL (Johnson-1978)	2.5797E-7

Gamma GOF Test

A-D Test Statistic	0.272	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.175	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.4	k star (bias corrected MLE)	6.204
Theta hat (MLE)	2.9985E-8	Theta star (bias corrected MLE)	3.5767E-8
nu hat (MLE)	266.4	nu star (bias corrected)	223.3
MLE Mean (bias corrected)	2.2189E-7	MLE Sd (bias corrected)	8.9086E-8
		Approximate Chi Square Value (0.05)	189.7
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	186.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.6117E-7	95% Adjusted Gamma UCL (use when n<50)	2.6532E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.08	Mean of logged Data	-15.39
Maximum of Logged Data	-14.66	SD of logged Data	0.382

Assuming Lognormal Distribution

95% H-UCL	2.6611E-7	90% Chebyshev (MVUE) UCL	2.8304E-7
95% Chebyshev (MVUE) UCL	3.1077E-7	97.5% Chebyshev (MVUE) UCL	3.4926E-7
99% Chebyshev (MVUE) UCL	4.2486E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.5537E-7	95% Jackknife UCL	2.5730E-7
95% Standard Bootstrap UCL	2.5341E-7	95% Bootstrap-t UCL	2.6431E-7

95% Hall's Bootstrap UCL	2.6220E-7	95% Percentile Bootstrap UCL	2.5650E-7
95% BCA Bootstrap UCL	2.5978E-7		
90% Chebyshev(Mean, Sd) UCL	2.8295E-7	95% Chebyshev(Mean, Sd) UCL	3.1061E-7
97.5% Chebyshev(Mean, Sd) UCL	3.4901E-7	99% Chebyshev(Mean, Sd) UCL	4.2442E-7

Suggested UCL to Use

95% Student's-t UCL 2.5730E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	14	Number of Distinct Non-Detects	4
Minimum Detect	6.5300E-8	Minimum Non-Detect	7.4000E-8
Maximum Detect	9.0300E-7	Maximum Non-Detect	1.2000E-7
Variance Detects	4.723E-14	Percent Non-Detects	22.22%
Mean Detects	3.5359E-7	SD Detects	2.1733E-7
Median Detects	3.0450E-7	CV Detects	N/A
Skewness Detects	1.287	Kurtosis Detects	2.036
Mean of Logged Detects	-15.04	SD of Logged Detects	0.656

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.204	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.8953E-7	KM Standard Error of Mean	5.3856E-8
KM SD	2.2018E-7	95% KM (BCA) UCL	3.8876E-7
95% KM (t) UCL	3.8322E-7	95% KM (Percentile Bootstrap) UCL	3.7986E-7
95% KM (z) UCL	3.7811E-7	95% KM Bootstrap t UCL	4.0532E-7
90% KM Chebyshev UCL	4.5109E-7	95% KM Chebyshev UCL	5.2428E-7
97.5% KM Chebyshev UCL	6.2586E-7	99% KM Chebyshev UCL	8.2538E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.182	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.126	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.231	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.929	k star (bias corrected MLE)	2.349
Theta hat (MLE)	1.2074E-7	Theta star (bias corrected MLE)	1.5055E-7
nu hat (MLE)	82	nu star (bias corrected)	65.76
Mean (detects)	3.5359E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.5300E-8	Mean	0.00222
Maximum	0.01	Median	3.5700E-7
SD	0.00428	CV	1.925
k hat (MLE)	0.12	k star (bias corrected MLE)	0.137
Theta hat (MLE)	0.0185	Theta star (bias corrected MLE)	0.0162
nu hat (MLE)	4.32	nu star (bias corrected)	4.933
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.93, α)	1.122	Adjusted Chi Square Value (4.93, β)	0.96
95% Gamma Approximate UCL (use when n>=50)	0.00978	95% Gamma Adjusted UCL (use when n<50)	0.0114

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.8953E-7	SD (KM)	2.2018E-7
Variance (KM)	4.848E-14	SE of Mean (KM)	5.3856E-8
k hat (KM)	1.729	k star (KM)	1.478

nu hat (KM)	62.25	nu star (KM)	53.21
theta hat (KM)	1.6744E-7	theta star (KM)	1.9589E-7
80% gamma percentile (KM)	4.4868E-7	90% gamma percentile (KM)	6.0550E-7
95% gamma percentile (KM)	7.5794E-7	99% gamma percentile (KM)	1.1025E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (53.21, α)	37.45	Adjusted Chi Square Value (53.21, β)	36.18
95% Gamma Approximate KM-UCL (use when n>=50)	4.1135E-7	95% Gamma Adjusted KM-UCL (use when n<50)	4.2576E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.13	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.9381E-7	Mean in Log Scale	-15.31
SD in Original Scale	2.2218E-7	SD in Log Scale	0.784
95% t UCL (assumes normality of ROS data)	3.8491E-7	95% Percentile Bootstrap UCL	3.8023E-7
95% BCA Bootstrap UCL	3.9827E-7	95% Bootstrap t UCL	4.1681E-7
95% H-UCL (Log ROS)	4.7494E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.37	KM Geo Mean	2.1114E-7
KM SD (logged)	0.839	95% Critical H Value (KM-Log)	2.413
KM Standard Error of Mean (logged)	0.205	95% H-UCL (KM -Log)	4.9078E-7
KM SD (logged)	0.839	95% Critical H Value (KM-Log)	2.413
KM Standard Error of Mean (logged)	0.205		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.8604E-7	Mean in Log Scale	-15.44
SD in Original Scale	2.3032E-7	SD in Log Scale	0.964
95% t UCL (Assumes normality)	3.8048E-7	95% H-Stat UCL	5.7630E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.8322E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.4600E-7	Mean	5.1350E-7
Maximum	1.7200E-6	Median	4.5100E-7
SD	3.6702E-7	Std. Error of Mean	8.6506E-8
Coefficient of Variation	N/A	Skewness	2.169

Normal GOF Test

Shapiro Wilk Test Statistic	0.789	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.6399E-7	95% Adjusted-CLT UCL (Chen-1995)	7.0304E-7
		95% Modified-t UCL (Johnson-1978)	6.7136E-7

Gamma GOF Test

A-D Test Statistic	0.33	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.126	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.691	k star (bias corrected MLE)	2.279
Theta hat (MLE)	1.9083E-7	Theta star (bias corrected MLE)	2.2528E-7
nu hat (MLE)	96.87	nu star (bias corrected)	82.06
MLE Mean (bias corrected)	5.1350E-7	MLE Sd (bias corrected)	3.4012E-7
		Approximate Chi Square Value (0.05)	62.18
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	60.52

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.7763E-7	95% Adjusted Gamma UCL (use when n<50)	6.9621E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.74	Mean of logged Data	-14.68
Maximum of Logged Data	-13.27	SD of logged Data	0.64

Assuming Lognormal Distribution

95% H-UCL	7.2458E-7	90% Chebyshev (MVUE) UCL	7.5414E-7
95% Chebyshev (MVUE) UCL	8.6444E-7	97.5% Chebyshev (MVUE) UCL	1.0175E-6
99% Chebyshev (MVUE) UCL	1.3183E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.5579E-7	95% Jackknife UCL	6.6399E-7
95% Standard Bootstrap UCL	6.5249E-7	95% Bootstrap-t UCL	7.4946E-7

95% Hall's Bootstrap UCL	1.3068E-6	95% Percentile Bootstrap UCL	6.5833E-7
95% BCA Bootstrap UCL	7.0883E-7		
90% Chebyshev(Mean, Sd) UCL	7.7302E-7	95% Chebyshev(Mean, Sd) UCL	8.9057E-7
97.5% Chebyshev(Mean, Sd) UCL	1.0537E-6	99% Chebyshev(Mean, Sd) UCL	1.3742E-6

Suggested UCL to Use

95% Student's-t UCL 6.6399E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.2500E-7	Mean	6.3028E-7
Maximum	1.1800E-6	Median	5.7800E-7
SD	2.9525E-7	Std. Error of Mean	6.9590E-8
Coefficient of Variation	N/A	Skewness	0.568

Normal GOF Test

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.172	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.5134E-7	95% Adjusted-CLT UCL (Chen-1995)	7.5471E-7
		95% Modified-t UCL (Johnson-1978)	7.5289E-7

Gamma GOF Test

A-D Test Statistic	0.391	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.152	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.296	k star (bias corrected MLE)	3.617
Theta hat (MLE)	1.4671E-7	Theta star (bias corrected MLE)	1.7425E-7
nu hat (MLE)	154.7	nu star (bias corrected)	130.2
MLE Mean (bias corrected)	6.3028E-7	MLE Sd (bias corrected)	3.3140E-7
		Approximate Chi Square Value (0.05)	104.9
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	102.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.8271E-7	95% Adjusted Gamma UCL (use when n<50)	7.9935E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.914	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.89	Mean of logged Data	-14.4
Maximum of Logged Data	-13.65	SD of logged Data	0.545

Assuming Lognormal Distribution

95% H-UCL	8.5169E-7	90% Chebyshev (MVUE) UCL	8.9961E-7
95% Chebyshev (MVUE) UCL	1.0163E-6	97.5% Chebyshev (MVUE) UCL	1.1782E-6
99% Chebyshev (MVUE) UCL	1.4963E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.4474E-7	95% Jackknife UCL	7.5134E-7
95% Standard Bootstrap UCL	7.3818E-7	95% Bootstrap-t UCL	7.7092E-7

95% Hall's Bootstrap UCL	7.6569E-7	95% Percentile Bootstrap UCL	7.4678E-7
95% BCA Bootstrap UCL	7.4622E-7		
90% Chebyshev(Mean, Sd) UCL	8.3905E-7	95% Chebyshev(Mean, Sd) UCL	9.3362E-7
97.5% Chebyshev(Mean, Sd) UCL	1.0649E-6	99% Chebyshev(Mean, Sd) UCL	1.3227E-6

Suggested UCL to Use

95% Student's-t UCL 7.5134E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	14	Number of Distinct Non-Detects	4
Minimum Detect	3.0600E-8	Minimum Non-Detect	3.7700E-8
Maximum Detect	2.0800E-7	Maximum Non-Detect	4.7000E-8
Variance Detects	1.985E-15	Percent Non-Detects	22.22%
Mean Detects	8.7100E-8	SD Detects	4.4557E-8
Median Detects	8.2000E-8	CV Detects	N/A
Skewness Detects	1.416	Kurtosis Detects	3.602
Mean of Logged Detects	-16.37	SD of Logged Detects	0.518

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.193	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.5218E-8	KM Standard Error of Mean	1.0785E-8
KM SD	4.3980E-8	95% KM (BCA) UCL	9.4083E-8
95% KM (t) UCL	9.3981E-8	95% KM (Percentile Bootstrap) UCL	9.2711E-8
95% KM (z) UCL	9.2959E-8	95% KM Bootstrap t UCL	9.8000E-8
90% KM Chebyshev UCL	1.0757E-7	95% KM Chebyshev UCL	1.2223E-7
97.5% KM Chebyshev UCL	1.4257E-7	99% KM Chebyshev UCL	1.8253E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.412	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.182	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.23	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.375	k star (bias corrected MLE)	3.485
Theta hat (MLE)	1.9907E-8	Theta star (bias corrected MLE)	2.4990E-8
nu hat (MLE)	122.5	nu star (bias corrected)	97.59
Mean (detects)	8.7100E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.0600E-8	Mean	0.00222
Maximum	0.01	Median	9.3700E-8
SD	0.00428	CV	1.925
k hat (MLE)	0.105	k star (bias corrected MLE)	0.125
Theta hat (MLE)	0.0211	Theta star (bias corrected MLE)	0.0178
nu hat (MLE)	3.796	nu star (bias corrected)	4.497
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.50, α)	0.927	Adjusted Chi Square Value (4.50, β)	0.785
95% Gamma Approximate UCL (use when n>=50)	0.0108	95% Gamma Adjusted UCL (use when n<50)	0.0127

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.5218E-8	SD (KM)	4.3980E-8
Variance (KM)	1.934E-15	SE of Mean (KM)	1.0785E-8
k hat (KM)	2.925	k star (KM)	2.475

nu hat (KM)	105.3	nu star (KM)	89.09
theta hat (KM)	2.5715E-8	theta star (KM)	3.0396E-8
80% gamma percentile (KM)	1.0979E-7	90% gamma percentile (KM)	1.3927E-7
95% gamma percentile (KM)	1.6705E-7	99% gamma percentile (KM)	2.2792E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (89.09, α)	68.32	Adjusted Chi Square Value (89.09, β)	66.58
95% Gamma Approximate KM-UCL (use when n>=50)	9.8074E-8	95% Gamma Adjusted KM-UCL (use when n<50)	1.0064E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.215	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.5927E-8	Mean in Log Scale	-16.54
SD in Original Scale	4.4516E-8	SD in Log Scale	0.554
95% t UCL (assumes normality of ROS data)	9.4180E-8	95% Percentile Bootstrap UCL	9.2632E-8
95% BCA Bootstrap UCL	9.6239E-8	95% Bootstrap t UCL	1.0093E-7
95% H-UCL (Log ROS)	1.0109E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.56	KM Geo Mean	6.4132E-8
KM SD (logged)	0.567	95% Critical H Value (KM-Log)	2.089
KM Standard Error of Mean (logged)	0.14	95% H-UCL (KM -Log)	1.0039E-7
KM SD (logged)	0.567	95% Critical H Value (KM-Log)	2.089
KM Standard Error of Mean (logged)	0.14		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.2642E-8	Mean in Log Scale	-16.65
SD in Original Scale	4.7893E-8	SD in Log Scale	0.706
95% t UCL (Assumes normality)	9.2279E-8	95% H-Stat UCL	1.1011E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 9.3981E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.1000E-8	Mean	1.7933E-7
Maximum	5.0000E-7	Median	1.5400E-7
SD	1.2008E-7	Std. Error of Mean	2.8303E-8
Coefficient of Variation	N/A	Skewness	1.112

Normal GOF Test

Shapiro Wilk Test Statistic	0.896	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.2857E-7	95% Adjusted-CLT UCL (Chen-1995)	2.3382E-7
		95% Modified-t UCL (Johnson-1978)	2.2981E-7

Gamma GOF Test

A-D Test Statistic	0.365	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.153	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.443	k star (bias corrected MLE)	2.072
Theta hat (MLE)	7.3421E-8	Theta star (bias corrected MLE)	8.6530E-8
nu hat (MLE)	87.93	nu star (bias corrected)	74.61
MLE Mean (bias corrected)	1.7933E-7	MLE Sd (bias corrected)	1.2457E-7
		Approximate Chi Square Value (0.05)	55.72
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	54.15

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.4014E-7	95% Adjusted Gamma UCL (use when n<50)	2.4709E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.01	Mean of logged Data	-15.75
Maximum of Logged Data	-14.51	SD of logged Data	0.699

Assuming Lognormal Distribution

95% H-UCL	2.6904E-7	90% Chebyshev (MVUE) UCL	2.7625E-7
95% Chebyshev (MVUE) UCL	3.1935E-7	97.5% Chebyshev (MVUE) UCL	3.7918E-7
99% Chebyshev (MVUE) UCL	4.9669E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.2589E-7	95% Jackknife UCL	2.2857E-7
95% Standard Bootstrap UCL	2.2473E-7	95% Bootstrap-t UCL	2.4036E-7

95% Hall's Bootstrap UCL	2.4382E-7	95% Percentile Bootstrap UCL	2.2503E-7
95% BCA Bootstrap UCL	2.3014E-7		
90% Chebyshev(Mean, Sd) UCL	2.6424E-7	95% Chebyshev(Mean, Sd) UCL	3.0270E-7
97.5% Chebyshev(Mean, Sd) UCL	3.5609E-7	99% Chebyshev(Mean, Sd) UCL	4.6095E-7

Suggested UCL to Use

95% Student's-t UCL 2.2857E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	4.9200E-8	Minimum Non-Detect	4.2300E-8
Maximum Detect	1.0000E-7	Maximum Non-Detect	4.3800E-8
Variance Detects	2.127E-16	Percent Non-Detects	11.11%
Mean Detects	8.1931E-8	SD Detects	1.4586E-8
Median Detects	8.1750E-8	CV Detects	N/A
Skewness Detects	-0.597	Kurtosis Detects	0.0289
Mean of Logged Detects	-16.33	SD of Logged Detects	0.194

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.136	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.7528E-8	KM Standard Error of Mean	4.4383E-9
KM SD	1.8232E-8	95% KM (BCA) UCL	8.4089E-8
95% KM (t) UCL	8.5249E-8	95% KM (Percentile Bootstrap) UCL	8.4578E-8
95% KM (z) UCL	8.4828E-8	95% KM Bootstrap t UCL	8.4394E-8
90% KM Chebyshev UCL	9.0843E-8	95% KM Chebyshev UCL	9.6874E-8
97.5% KM Chebyshev UCL	1.0524E-7	99% KM Chebyshev UCL	1.2169E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.467	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	30.37	k star (bias corrected MLE)	24.72
Theta hat (MLE)	2.6977E-9	Theta star (bias corrected MLE)	3.3147E-9
nu hat (MLE)	971.8	nu star (bias corrected)	791
Mean (detects)	8.1931E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.9200E-8	Mean	0.00111
Maximum	0.01	Median	8.7200E-8
SD	0.00323	CV	2.91
k hat (MLE)	0.0988	k star (bias corrected MLE)	0.119
Theta hat (MLE)	0.0112	Theta star (bias corrected MLE)	0.00931
nu hat (MLE)	3.558	nu star (bias corrected)	4.299
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.30, α)	0.843	Adjusted Chi Square Value (4.30, β)	0.71
95% Gamma Approximate UCL (use when n>=50)	0.00567	95% Gamma Adjusted UCL (use when n<50)	0.00672

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.7528E-8	SD (KM)	1.8232E-8
Variance (KM)	3.324E-16	SE of Mean (KM)	4.4383E-9
k hat (KM)	18.08	k star (KM)	15.11

nu hat (KM)	651	nu star (KM)	543.8
theta hat (KM)	4.2876E-9	theta star (KM)	5.1325E-9
80% gamma percentile (KM)	9.3627E-8	90% gamma percentile (KM)	1.0394E-7
95% gamma percentile (KM)	1.1299E-7	99% gamma percentile (KM)	1.3130E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (543.79, α)	490.7	Adjusted Chi Square Value (543.79, β)	485.9
95% Gamma Approximate KM-UCL (use when n>=50)	8.5915E-8	95% Gamma Adjusted KM-UCL (use when n<50)	8.6770E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.8694E-8	Mean in Log Scale	-16.38
SD in Original Scale	1.6627E-8	SD in Log Scale	0.228
95% t UCL (assumes normality of ROS data)	8.5512E-8	95% Percentile Bootstrap UCL	8.4889E-8
95% BCA Bootstrap UCL	8.4628E-8	95% Bootstrap t UCL	8.5556E-8
95% H-UCL (Log ROS)	8.7169E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.41	KM Geo Mean	7.5017E-8
KM SD (logged)	0.269	95% Critical H Value (KM-Log)	1.831
KM Standard Error of Mean (logged)	0.0655	95% H-UCL (KM -Log)	8.7644E-8
KM SD (logged)	0.269	95% Critical H Value (KM-Log)	1.831
KM Standard Error of Mean (logged)	0.0655		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.5219E-8	Mean in Log Scale	-16.48
SD in Original Scale	2.3860E-8	SD in Log Scale	0.464
95% t UCL (Assumes normality)	8.5003E-8	95% H-Stat UCL	9.6938E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 8.5249E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	11	Number of Non-Detects	7
Number of Distinct Detects	11	Number of Distinct Non-Detects	7
Minimum Detect	2.4100E-8	Minimum Non-Detect	3.4300E-8
Maximum Detect	1.2500E-7	Maximum Non-Detect	4.5700E-8
Variance Detects	8.515E-16	Percent Non-Detects	38.89%
Mean Detects	5.4891E-8	SD Detects	2.9181E-8
Median Detects	4.7500E-8	CV Detects	N/A
Skewness Detects	1.466	Kurtosis Detects	2.501
Mean of Logged Detects	-16.83	SD of Logged Detects	0.488

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.185	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.4982E-8	KM Standard Error of Mean	6.3010E-9
KM SD	2.5188E-8	95% KM (BCA) UCL	5.5702E-8
95% KM (t) UCL	5.5944E-8	95% KM (Percentile Bootstrap) UCL	5.6586E-8
95% KM (z) UCL	5.5346E-8	95% KM Bootstrap t UCL	6.3025E-8
90% KM Chebyshev UCL	6.3885E-8	95% KM Chebyshev UCL	7.2448E-8
97.5% KM Chebyshev UCL	8.4332E-8	99% KM Chebyshev UCL	1.0768E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.23	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.256	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.604	k star (bias corrected MLE)	3.409
Theta hat (MLE)	1.1923E-8	Theta star (bias corrected MLE)	1.6103E-8
nu hat (MLE)	101.3	nu star (bias corrected)	74.99
Mean (detects)	5.4891E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.4100E-8	Mean	0.00389
Maximum	0.01	Median	7.6350E-8
SD	0.00502	CV	1.29
k hat (MLE)	0.121	k star (bias corrected MLE)	0.138
Theta hat (MLE)	0.0321	Theta star (bias corrected MLE)	0.0282
nu hat (MLE)	4.368	nu star (bias corrected)	4.973
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.97, α)	1.14	Adjusted Chi Square Value (4.97, β)	0.976
95% Gamma Approximate UCL (use when n>=50)	0.017	95% Gamma Adjusted UCL (use when n<50)	0.0198

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.4982E-8	SD (KM)	2.5188E-8
Variance (KM)	6.344E-16	SE of Mean (KM)	6.3010E-9
k hat (KM)	3.189	k star (KM)	2.695

nu hat (KM)	114.8	nu star (KM)	97.02
theta hat (KM)	1.4104E-8	theta star (KM)	1.6692E-8
80% gamma percentile (KM)	6.4990E-8	90% gamma percentile (KM)	8.1708E-8
95% gamma percentile (KM)	9.7393E-8	99% gamma percentile (KM)	1.3159E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (97.02, α)	75.3	Adjusted Chi Square Value (97.02, β)	73.46
95% Gamma Approximate KM-UCL (use when n>=50)	5.7958E-8	95% Gamma Adjusted KM-UCL (use when n<50)	5.9406E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0976	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.4767E-8	Mean in Log Scale	-17.04
SD in Original Scale	2.5925E-8	SD in Log Scale	0.46
95% t UCL (assumes normality of ROS data)	5.5397E-8	95% Percentile Bootstrap UCL	5.5271E-8
95% BCA Bootstrap UCL	5.7676E-8	95% Bootstrap t UCL	6.2126E-8
95% H-UCL (Log ROS)	5.5339E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-17.03	KM Geo Mean	4.0043E-8
KM SD (logged)	0.452	95% Critical H Value (KM-Log)	1.977
KM Standard Error of Mean (logged)	0.117	95% H-UCL (KM -Log)	5.5104E-8
KM SD (logged)	0.452	95% Critical H Value (KM-Log)	1.977
KM Standard Error of Mean (logged)	0.117		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.1253E-8	Mean in Log Scale	-17.18
SD in Original Scale	2.8494E-8	SD in Log Scale	0.594
95% t UCL (Assumes normality)	5.2936E-8	95% H-Stat UCL	5.5691E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.5944E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.0400E-7	Mean	5.3744E-7
Maximum	1.1300E-6	Median	4.3300E-7
SD	2.9672E-7	Std. Error of Mean	6.9939E-8
Coefficient of Variation	N/A	Skewness	0.731

Normal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.5911E-7	95% Adjusted-CLT UCL (Chen-1995)	6.6536E-7
		95% Modified-t UCL (Johnson-1978)	6.6112E-7

Gamma GOF Test

A-D Test Statistic	0.305	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.126	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.363	k star (bias corrected MLE)	2.839
Theta hat (MLE)	1.5983E-7	Theta star (bias corrected MLE)	1.8930E-7
nu hat (MLE)	121.1	nu star (bias corrected)	102.2
MLE Mean (bias corrected)	5.3744E-7	MLE Sd (bias corrected)	3.1896E-7
		Approximate Chi Square Value (0.05)	79.88
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	77.99

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.8766E-7	95% Adjusted Gamma UCL (use when n<50)	7.0435E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.126	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.08	Mean of logged Data	-14.59
Maximum of Logged Data	-13.69	SD of logged Data	0.603

Assuming Lognormal Distribution

95% H-UCL	7.5252E-7	90% Chebyshev (MVUE) UCL	7.8855E-7
95% Chebyshev (MVUE) UCL	8.9885E-7	97.5% Chebyshev (MVUE) UCL	1.0519E-6
99% Chebyshev (MVUE) UCL	1.3527E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.5248E-7	95% Jackknife UCL	6.5911E-7
95% Standard Bootstrap UCL	6.4832E-7	95% Bootstrap-t UCL	6.8155E-7

95% Hall's Bootstrap UCL	6.5862E-7	95% Percentile Bootstrap UCL	6.4561E-7
95% BCA Bootstrap UCL	6.6744E-7		
90% Chebyshev(Mean, Sd) UCL	7.4726E-7	95% Chebyshev(Mean, Sd) UCL	8.4230E-7
97.5% Chebyshev(Mean, Sd) UCL	9.7421E-7	99% Chebyshev(Mean, Sd) UCL	1.2333E-6

Suggested UCL to Use

95% Student's-t UCL 6.5911E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	7	Number of Non-Detects	11
Number of Distinct Detects	7	Number of Distinct Non-Detects	11
Minimum Detect	6.1000E-8	Minimum Non-Detect	4.4400E-8
Maximum Detect	1.2100E-7	Maximum Non-Detect	1.0100E-7
Variance Detects	4.631E-16	Percent Non-Detects	61.11%
Mean Detects	9.1429E-8	SD Detects	2.1519E-8
Median Detects	9.5000E-8	CV Detects	N/A
Skewness Detects	-0.0662	Kurtosis Detects	-1.299
Mean of Logged Detects	-16.23	SD of Logged Detects	0.245

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.4052E-8	KM Standard Error of Mean	6.7445E-9
KM SD	2.5803E-8	95% KM (BCA) UCL	7.5303E-8
95% KM (t) UCL	7.5785E-8	95% KM (Percentile Bootstrap) UCL	7.5400E-8
95% KM (z) UCL	7.5146E-8	95% KM Bootstrap t UCL	7.4666E-8
90% KM Chebyshev UCL	8.4285E-8	95% KM Chebyshev UCL	9.3451E-8
97.5% KM Chebyshev UCL	1.0617E-7	99% KM Chebyshev UCL	1.3116E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.256	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.707	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.191	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.311	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	20.19	k star (bias corrected MLE)	11.63
Theta hat (MLE)	4.5278E-9	Theta star (bias corrected MLE)	7.8587E-9
nu hat (MLE)	282.7	nu star (bias corrected)	162.9
Mean (detects)	9.1429E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.1000E-8	Mean	0.00611
Maximum	0.01	Median	0.01
SD	0.00502	CV	0.821
k hat (MLE)	0.185	k star (bias corrected MLE)	0.191
Theta hat (MLE)	0.0331	Theta star (bias corrected MLE)	0.032
nu hat (MLE)	6.656	nu star (bias corrected)	6.88
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (6.88, α)	2.105	Adjusted Chi Square Value (6.88, β)	1.861
95% Gamma Approximate UCL (use when n>=50)	0.02	95% Gamma Adjusted UCL (use when n<50)	0.0226

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.4052E-8	SD (KM)	2.5803E-8
Variance (KM)	6.658E-16	SE of Mean (KM)	6.7445E-9
k hat (KM)	6.162	k star (KM)	5.172

nu hat (KM)	221.8	nu star (KM)	186.2
theta hat (KM)	1.0394E-8	theta star (KM)	1.2384E-8
80% gamma percentile (KM)	8.5775E-8	90% gamma percentile (KM)	1.0175E-7
95% gamma percentile (KM)	1.1629E-7	99% gamma percentile (KM)	1.4696E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (186.20, α)	155.6	Adjusted Chi Square Value (186.20, β)	153
95% Gamma Approximate KM-UCL (use when n>=50)	7.6631E-8	95% Gamma Adjusted KM-UCL (use when n<50)	7.7974E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.4272E-8	Mean in Log Scale	-16.63
SD in Original Scale	2.5800E-8	SD in Log Scale	0.357
95% t UCL (assumes normality of ROS data)	7.4851E-8	95% Percentile Bootstrap UCL	7.4582E-8
95% BCA Bootstrap UCL	7.5574E-8	95% Bootstrap t UCL	7.8891E-8
95% H-UCL (Log ROS)	7.5611E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.63	KM Geo Mean	5.9653E-8
KM SD (logged)	0.365	95% Critical H Value (KM-Log)	1.902
KM Standard Error of Mean (logged)	0.0965	95% H-UCL (KM -Log)	7.5425E-8
KM SD (logged)	0.365	95% Critical H Value (KM-Log)	1.902
KM Standard Error of Mean (logged)	0.0965		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.4361E-8	Mean in Log Scale	-16.9
SD in Original Scale	3.3732E-8	SD in Log Scale	0.608
95% t UCL (Assumes normality)	6.8192E-8	95% H-Stat UCL	7.5010E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 7.5785E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	15	Number of Distinct Non-Detects	2
Minimum Detect	4.6800E-8	Minimum Non-Detect	3.4000E-8
Maximum Detect	2.4900E-7	Maximum Non-Detect	3.5700E-8
Variance Detects	4.155E-15	Percent Non-Detects	11.11%
Mean Detects	1.1166E-7	SD Detects	6.4457E-8
Median Detects	8.0100E-8	CV Detects	N/A
Skewness Detects	1.201	Kurtosis Detects	0.105
Mean of Logged Detects	-16.14	SD of Logged Detects	0.514

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.805	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.259	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.0303E-7	KM Standard Error of Mean	1.5507E-8
KM SD	6.3702E-8	95% KM (BCA) UCL	1.2953E-7
95% KM (t) UCL	1.3001E-7	95% KM (Percentile Bootstrap) UCL	1.2945E-7
95% KM (z) UCL	1.2854E-7	95% KM Bootstrap t UCL	1.3763E-7
90% KM Chebyshev UCL	1.4956E-7	95% KM Chebyshev UCL	1.7063E-7
97.5% KM Chebyshev UCL	1.9988E-7	99% KM Chebyshev UCL	2.5733E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.985	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.742	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.223	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.216	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.901	k star (bias corrected MLE)	3.211
Theta hat (MLE)	2.8623E-8	Theta star (bias corrected MLE)	3.4772E-8
nu hat (MLE)	124.8	nu star (bias corrected)	102.8
Mean (detects)	1.1166E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.6800E-8	Mean	0.00111
Maximum	0.01	Median	8.8050E-8
SD	0.00323	CV	2.91
k hat (MLE)	0.101	k star (bias corrected MLE)	0.121
Theta hat (MLE)	0.011	Theta star (bias corrected MLE)	0.00919
nu hat (MLE)	3.625	nu star (bias corrected)	4.354
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.35, α)	0.867	Adjusted Chi Square Value (4.35, β)	0.731
95% Gamma Approximate UCL (use when n>=50)	0.00558	95% Gamma Adjusted UCL (use when n<50)	0.00662

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.0303E-7	SD (KM)	6.3702E-8
Variance (KM)	4.058E-15	SE of Mean (KM)	1.5507E-8
k hat (KM)	2.616	k star (KM)	2.217

nu hat (KM)	94.18	nu star (KM)	79.81
theta hat (KM)	3.9385E-8	theta star (KM)	4.6473E-8
80% gamma percentile (KM)	1.5238E-7	90% gamma percentile (KM)	1.9563E-7
95% gamma percentile (KM)	2.3664E-7	99% gamma percentile (KM)	3.2704E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (79.81, α)	60.23	Adjusted Chi Square Value (79.81, β)	58.6
95% Gamma Approximate KM-UCL (use when n>=50)	1.3654E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.4034E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.895	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.208	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.0259E-7	Mean in Log Scale	-16.27
SD in Original Scale	6.6052E-8	SD in Log Scale	0.615
95% t UCL (assumes normality of ROS data)	1.2968E-7	95% Percentile Bootstrap UCL	1.2771E-7
95% BCA Bootstrap UCL	1.3302E-7	95% Bootstrap t UCL	1.3767E-7
95% H-UCL (Log ROS)	1.4254E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.26	KM Geo Mean	8.6886E-8
KM SD (logged)	0.575	95% Critical H Value (KM-Log)	2.097
KM Standard Error of Mean (logged)	0.14	95% H-UCL (KM -Log)	1.3726E-7
KM SD (logged)	0.575	95% Critical H Value (KM-Log)	2.097
KM Standard Error of Mean (logged)	0.14		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0119E-7	Mean in Log Scale	-16.33
SD in Original Scale	6.7784E-8	SD in Log Scale	0.738
95% t UCL (Assumes normality)	1.2899E-7	95% H-Stat UCL	1.5931E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.3726E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.4100E-5	Mean	6.8567E-5
Maximum	2.6400E-4	Median	5.2250E-5
SD	6.0108E-5	Std. Error of Mean	1.4168E-5
Coefficient of Variation	N/A	Skewness	2.39

Normal GOF Test

Shapiro Wilk Test Statistic	0.73	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.3213E-5	95% Adjusted-CLT UCL (Chen-1995)	1.0040E-4
		95% Modified-t UCL (Johnson-1978)	9.4543E-5

Gamma GOF Test

A-D Test Statistic	0.473	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.161	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.034	k star (bias corrected MLE)	1.732
Theta hat (MLE)	3.3708E-5	Theta star (bias corrected MLE)	3.9585E-5
nu hat (MLE)	73.23	nu star (bias corrected)	62.36
MLE Mean (bias corrected)	6.8567E-5	MLE Sd (bias corrected)	5.2098E-5
		Approximate Chi Square Value (0.05)	45.19
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	43.79

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	9.4607E-5	95% Adjusted Gamma UCL (use when n<50)	9.7636E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.17	Mean of logged Data	-9.853
Maximum of Logged Data	-8.24	SD of logged Data	0.729

Assuming Lognormal Distribution

95% H-UCL	1.0249E-4	90% Chebyshev (MVUE) UCL	1.0440E-4
95% Chebyshev (MVUE) UCL	1.2118E-4	97.5% Chebyshev (MVUE) UCL	1.4447E-4
99% Chebyshev (MVUE) UCL	1.9021E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.1870E-5	95% Jackknife UCL	9.3213E-5
95% Standard Bootstrap UCL	9.1842E-5	95% Bootstrap-t UCL	1.2009E-4

95% Hall's Bootstrap UCL	2.1956E-4	95% Percentile Bootstrap UCL	9.3322E-5
95% BCA Bootstrap UCL	1.0092E-4		
90% Chebyshev(Mean, Sd) UCL	1.1107E-4	95% Chebyshev(Mean, Sd) UCL	1.3032E-4
97.5% Chebyshev(Mean, Sd) UCL	1.5704E-4	99% Chebyshev(Mean, Sd) UCL	2.0953E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 9.7636E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	13	Number of Distinct Observations	12
		Number of Missing Observations	5
Number of Detects	6	Number of Non-Detects	7
Number of Distinct Detects	6	Number of Distinct Non-Detects	6
Minimum Detect	2.1900E-6	Minimum Non-Detect	1.7200E-6
Maximum Detect	7.3000E-6	Maximum Non-Detect	1.7900E-6
Variance Detects	3.110E-12	Percent Non-Detects	53.85%
Mean Detects	3.9300E-6	SD Detects	1.7636E-6
Median Detects	3.3550E-6	CV Detects	N/A
Skewness Detects	1.767	Kurtosis Detects	3.777
Mean of Logged Detects	-12.52	SD of Logged Detects	0.396

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.806	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.288	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.7400E-6	KM Standard Error of Mean	4.7167E-7
KM SD	1.5525E-6	95% KM (BCA) UCL	3.5277E-6
95% KM (t) UCL	3.5807E-6	95% KM (Percentile Bootstrap) UCL	3.4785E-6
95% KM (z) UCL	3.5158E-6	95% KM Bootstrap t UCL	3.8138E-6
90% KM Chebyshev UCL	4.1550E-6	95% KM Chebyshev UCL	4.7960E-6
97.5% KM Chebyshev UCL	5.6856E-6	99% KM Chebyshev UCL	7.4331E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.502	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.268	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.333	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.265	k star (bias corrected MLE)	3.744
Theta hat (MLE)	5.4096E-7	Theta star (bias corrected MLE)	1.0498E-6
nu hat (MLE)	87.18	nu star (bias corrected)	44.92
Mean (detects)	3.9300E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.1900E-6	Mean	0.00539
Maximum	0.01	Median	0.01
SD	0.00519	CV	0.963
k hat (MLE)	0.236	k star (bias corrected MLE)	0.233
Theta hat (MLE)	0.0228	Theta star (bias corrected MLE)	0.0231
nu hat (MLE)	6.144	nu star (bias corrected)	6.06
Adjusted Level of Significance (β)	0.0301		
Approximate Chi Square Value (6.06, α)	1.67	Adjusted Chi Square Value (6.06, β)	1.365
95% Gamma Approximate UCL (use when n>=50)	0.0195	95% Gamma Adjusted UCL (use when n<50)	0.0239

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.7400E-6	SD (KM)	1.5525E-6
Variance (KM)	2.410E-12	SE of Mean (KM)	4.7167E-7

k hat (KM)	3.115	k star (KM)	2.447
nu hat (KM)	80.99	nu star (KM)	63.63
theta hat (KM)	8.7961E-7	theta star (KM)	1.1195E-6
80% gamma percentile (KM)	4.0047E-6	90% gamma percentile (KM)	5.0859E-6
95% gamma percentile (KM)	6.1056E-6	99% gamma percentile (KM)	8.3408E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (63.63, α)	46.28	Adjusted Chi Square Value (63.63, β)	44.18
95% Gamma Approximate KM-UCL (use when n>=50)	3.7672E-6	95% Gamma Adjusted KM-UCL (use when n<50)	3.9466E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.4329E-6	Mean in Log Scale	-13.15
SD in Original Scale	1.8408E-6	SD in Log Scale	0.663
95% t UCL (assumes normality of ROS data)	3.3428E-6	95% Percentile Bootstrap UCL	3.3111E-6
95% BCA Bootstrap UCL	3.4645E-6	95% Bootstrap t UCL	3.8179E-6
95% H-UCL (Log ROS)	3.7990E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.92	KM Geo Mean	2.4381E-6
KM SD (logged)	0.45	95% Critical H Value (KM-Log)	2.055
KM Standard Error of Mean (logged)	0.137	95% H-UCL (KM -Log)	3.5230E-6
KM SD (logged)	0.45	95% Critical H Value (KM-Log)	2.055
KM Standard Error of Mean (logged)	0.137		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.2873E-6	Mean in Log Scale	-13.29
SD in Original Scale	1.9498E-6	SD in Log Scale	0.783
95% t UCL (Assumes normality)	3.2511E-6	95% H-Stat UCL	4.0587E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.5807E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.6600E-4	Mean	0.00103
Maximum	0.00224	Median	9.8850E-4
SD	5.3574E-4	Std. Error of Mean	1.2627E-4
Coefficient of Variation	0.521	Skewness	1.014

Normal GOF Test

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.151	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00125	95% Adjusted-CLT UCL (Chen-1995)	0.00127
		95% Modified-t UCL (Johnson-1978)	0.00125

Gamma GOF Test

A-D Test Statistic	0.276	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.108	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.16	k star (bias corrected MLE)	3.504
Theta hat (MLE)	2.4727E-4	Theta star (bias corrected MLE)	2.9359E-4
nu hat (MLE)	149.8	nu star (bias corrected)	126.1
MLE Mean (bias corrected)	0.00103	MLE Sd (bias corrected)	5.4956E-4
		Approximate Chi Square Value (0.05)	101.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	99.06

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00128	95% Adjusted Gamma UCL (use when n<50)	0.00131

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.104	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.913	Mean of logged Data	-7.004
Maximum of Logged Data	-6.101	SD of logged Data	0.519

Assuming Lognormal Distribution

95% H-UCL	0.00134	90% Chebyshev (MVUE) UCL	0.00142
95% Chebyshev (MVUE) UCL	0.0016	97.5% Chebyshev (MVUE) UCL	0.00185
99% Chebyshev (MVUE) UCL	0.00233		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00124	95% Jackknife UCL	0.00125
95% Standard Bootstrap UCL	0.00124	95% Bootstrap-t UCL	0.00132

95% Hall's Bootstrap UCL	0.00135	95% Percentile Bootstrap UCL	0.00124
95% BCA Bootstrap UCL	0.00126		
90% Chebyshev(Mean, Sd) UCL	0.00141	95% Chebyshev(Mean, Sd) UCL	0.00158
97.5% Chebyshev(Mean, Sd) UCL	0.00182	99% Chebyshev(Mean, Sd) UCL	0.00229

Suggested UCL to Use

95% Student's-t UCL	0.00125

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.3100E-5	Mean	6.1483E-5
Maximum	1.4400E-4	Median	5.5850E-5
SD	3.5348E-5	Std. Error of Mean	8.3316E-6
Coefficient of Variation	N/A	Skewness	1.249

Normal GOF Test

Shapiro Wilk Test Statistic	0.858	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.166	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.5977E-5	95% Adjusted-CLT UCL (Chen-1995)	7.7808E-5
		95% Modified-t UCL (Johnson-1978)	7.6386E-5

Gamma GOF Test

A-D Test Statistic	0.415	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.125	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.613	k star (bias corrected MLE)	3.048
Theta hat (MLE)	1.7017E-5	Theta star (bias corrected MLE)	2.0172E-5
nu hat (MLE)	130.1	nu star (bias corrected)	109.7
MLE Mean (bias corrected)	6.1483E-5	MLE Sd (bias corrected)	3.5217E-5
		Approximate Chi Square Value (0.05)	86.55
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	84.57

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.7949E-5	95% Adjusted Gamma UCL (use when n<50)	7.9769E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.68	Mean of logged Data	-9.841
Maximum of Logged Data	-8.846	SD of logged Data	0.552

Assuming Lognormal Distribution

95% H-UCL	8.1804E-5	90% Chebyshev (MVUE) UCL	8.6337E-5
95% Chebyshev (MVUE) UCL	9.7644E-5	97.5% Chebyshev (MVUE) UCL	1.1334E-4
99% Chebyshev (MVUE) UCL	1.4416E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.5188E-5	95% Jackknife UCL	7.5977E-5
95% Standard Bootstrap UCL	7.4852E-5	95% Bootstrap-t UCL	8.1660E-5

95% Hall's Bootstrap UCL	9.0445E-5	95% Percentile Bootstrap UCL	7.5833E-5
95% BCA Bootstrap UCL	7.7817E-5		
90% Chebyshev(Mean, Sd) UCL	8.6478E-5	95% Chebyshev(Mean, Sd) UCL	9.7800E-5
97.5% Chebyshev(Mean, Sd) UCL	1.1351E-4	99% Chebyshev(Mean, Sd) UCL	1.4438E-4

Suggested UCL to Use

95% Student's-t UCL 7.5977E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00143	Mean	0.0043
Maximum	0.00938	Median	0.00402
SD	0.00228	Std. Error of Mean	5.3851E-4
Coefficient of Variation	0.531	Skewness	0.998

Normal GOF Test

Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00524	95% Adjusted-CLT UCL (Chen-1995)	0.00532
		95% Modified-t UCL (Johnson-1978)	0.00526

Gamma GOF Test

A-D Test Statistic	0.241	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.105	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.997	k star (bias corrected MLE)	3.368
Theta hat (MLE)	0.00108	Theta star (bias corrected MLE)	0.00128
nu hat (MLE)	143.9	nu star (bias corrected)	121.2
MLE Mean (bias corrected)	0.0043	MLE Sd (bias corrected)	0.00234
		Approximate Chi Square Value (0.05)	96.81
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	94.72

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00539	95% Adjusted Gamma UCL (use when n<50)	0.00551

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0968	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.55	Mean of logged Data	-5.579
Maximum of Logged Data	-4.669	SD of logged Data	0.53

Assuming Lognormal Distribution

95% H-UCL	0.00566	90% Chebyshev (MVUE) UCL	0.00599
95% Chebyshev (MVUE) UCL	0.00675	97.5% Chebyshev (MVUE) UCL	0.0078
99% Chebyshev (MVUE) UCL	0.00988		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00519	95% Jackknife UCL	0.00524
95% Standard Bootstrap UCL	0.00518	95% Bootstrap-t UCL	0.00546

95% Hall's Bootstrap UCL	0.00562	95% Percentile Bootstrap UCL	0.00519
95% BCA Bootstrap UCL	0.00526		
90% Chebyshev(Mean, Sd) UCL	0.00592	95% Chebyshev(Mean, Sd) UCL	0.00665
97.5% Chebyshev(Mean, Sd) UCL	0.00767	99% Chebyshev(Mean, Sd) UCL	0.00966

Suggested UCL to Use

95% Student's-t UCL	0.00524

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.9700E-5	Mean	6.0456E-5
Maximum	1.4800E-4	Median	5.4850E-5
SD	3.3652E-5	Std. Error of Mean	7.9319E-6
Coefficient of Variation	N/A	Skewness	1.007

Normal GOF Test

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.4254E-5	95% Adjusted-CLT UCL (Chen-1995)	7.5514E-5
		95% Modified-t UCL (Johnson-1978)	7.4568E-5

Gamma GOF Test

A-D Test Statistic	0.362	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.161	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.543	k star (bias corrected MLE)	2.989
Theta hat (MLE)	1.7065E-5	Theta star (bias corrected MLE)	2.0225E-5
nu hat (MLE)	127.5	nu star (bias corrected)	107.6
MLE Mean (bias corrected)	6.0456E-5	MLE Sd (bias corrected)	3.4967E-5
		Approximate Chi Square Value (0.05)	84.67
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	82.72

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.6836E-5	95% Adjusted Gamma UCL (use when n<50)	7.8650E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.153	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.83	Mean of logged Data	-9.861
Maximum of Logged Data	-8.818	SD of logged Data	0.57

Assuming Lognormal Distribution

95% H-UCL	8.1906E-5	90% Chebyshev (MVUE) UCL	8.6253E-5
95% Chebyshev (MVUE) UCL	9.7819E-5	97.5% Chebyshev (MVUE) UCL	1.1387E-4
99% Chebyshev (MVUE) UCL	1.4540E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.3502E-5	95% Jackknife UCL	7.4254E-5
95% Standard Bootstrap UCL	7.3282E-5	95% Bootstrap-t UCL	7.6812E-5

95% Hall's Bootstrap UCL	7.9837E-5	95% Percentile Bootstrap UCL	7.3744E-5
95% BCA Bootstrap UCL	7.5017E-5		
90% Chebyshev(Mean, Sd) UCL	8.4251E-5	95% Chebyshev(Mean, Sd) UCL	9.5030E-5
97.5% Chebyshev(Mean, Sd) UCL	1.0999E-4	99% Chebyshev(Mean, Sd) UCL	1.3938E-4

Suggested UCL to Use

95% Student's-t UCL 7.4254E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	10	Number of Non-Detects	8
Number of Distinct Detects	10	Number of Distinct Non-Detects	5
Minimum Detect	4.5300E-6	Minimum Non-Detect	1.5400E-6
Maximum Detect	8.0300E-5	Maximum Non-Detect	1.6000E-6
Variance Detects	7.901E-10	Percent Non-Detects	44.44%
Mean Detects	2.3611E-5	SD Detects	2.8109E-5
Median Detects	1.1600E-5	CV Detects	N/A
Skewness Detects	1.741	Kurtosis Detects	1.421
Mean of Logged Detects	-11.12	SD of Logged Detects	0.933

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.63	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.416	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.3802E-5	KM Standard Error of Mean	5.6400E-6
KM SD	2.2701E-5	95% KM (BCA) UCL	2.3087E-5
95% KM (t) UCL	2.3613E-5	95% KM (Percentile Bootstrap) UCL	2.3099E-5
95% KM (z) UCL	2.3079E-5	95% KM Bootstrap t UCL	5.2470E-5
90% KM Chebyshev UCL	3.0722E-5	95% KM Chebyshev UCL	3.8386E-5
97.5% KM Chebyshev UCL	4.9024E-5	99% KM Chebyshev UCL	6.9919E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.227	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.745	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.351	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.273	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.202	k star (bias corrected MLE)	0.908
Theta hat (MLE)	1.9638E-5	Theta star (bias corrected MLE)	2.5995E-5
nu hat (MLE)	24.05	nu star (bias corrected)	18.17
Mean (detects)	2.3611E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.5300E-6	Mean	0.00446
Maximum	0.01	Median	7.6500E-5
SD	0.0051	CV	1.144
k hat (MLE)	0.252	k star (bias corrected MLE)	0.247
Theta hat (MLE)	0.0177	Theta star (bias corrected MLE)	0.018
nu hat (MLE)	9.076	nu star (bias corrected)	8.896
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (8.90, α)	3.264	Adjusted Chi Square Value (8.90, β)	2.945
95% Gamma Approximate UCL (use when n>=50)	0.0121	95% Gamma Adjusted UCL (use when n<50)	0.0135

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.3802E-5	SD (KM)	2.2701E-5
Variance (KM)	5.153E-10	SE of Mean (KM)	5.6400E-6
k hat (KM)	0.37	k star (KM)	0.345

nu hat (KM)	13.31	nu star (KM)	12.42
theta hat (KM)	3.7338E-5	theta star (KM)	3.9996E-5
80% gamma percentile (KM)	2.1800E-5	90% gamma percentile (KM)	3.9941E-5
95% gamma percentile (KM)	6.0302E-5	99% gamma percentile (KM)	1.1234E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (12.42, α)	5.507	Adjusted Chi Square Value (12.42, β)	5.07
95% Gamma Approximate KM-UCL (use when n>=50)	3.1136E-5	95% Gamma Adjusted KM-UCL (use when n<50)	3.3816E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.838	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.284	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.3751E-5	Mean in Log Scale	-12.19
SD in Original Scale	2.3389E-5	SD in Log Scale	1.425
95% t UCL (assumes normality of ROS data)	2.3342E-5	95% Percentile Bootstrap UCL	2.2669E-5
95% BCA Bootstrap UCL	2.6908E-5	95% Bootstrap t UCL	5.1820E-5
95% H-UCL (Log ROS)	4.3927E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.13	KM Geo Mean	5.4038E-6
KM SD (logged)	1.302	95% Critical H Value (KM-Log)	3.105
KM Standard Error of Mean (logged)	0.324	95% H-UCL (KM -Log)	3.3646E-5
KM SD (logged)	1.302	95% Critical H Value (KM-Log)	3.105
KM Standard Error of Mean (logged)	0.324		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.3468E-5	Mean in Log Scale	-12.43
SD in Original Scale	2.3547E-5	SD in Log Scale	1.644
95% t UCL (Assumes normality)	2.3123E-5	95% H-Stat UCL	6.7217E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 3.8386E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.6600E-4	Mean	4.7722E-4
Maximum	0.00101	Median	4.4900E-4
SD	2.1778E-4	Std. Error of Mean	5.1332E-5
Coefficient of Variation	0.456	Skewness	0.842

Normal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.6652E-4	95% Adjusted-CLT UCL (Chen-1995)	5.7254E-4
		95% Modified-t UCL (Johnson-1978)	5.6822E-4

Gamma GOF Test

A-D Test Statistic	0.132	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0803	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.201	k star (bias corrected MLE)	4.371
Theta hat (MLE)	9.1763E-5	Theta star (bias corrected MLE)	1.0918E-4
nu hat (MLE)	187.2	nu star (bias corrected)	157.4
MLE Mean (bias corrected)	4.7722E-4	MLE Sd (bias corrected)	2.2826E-4
		Approximate Chi Square Value (0.05)	129.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	126.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.8052E-4	95% Adjusted Gamma UCL (use when n<50)	5.9166E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.989	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0768	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.704	Mean of logged Data	-7.747
Maximum of Logged Data	-6.898	SD of logged Data	0.466

Assuming Lognormal Distribution

95% H-UCL	6.0346E-4	90% Chebyshev (MVUE) UCL	6.4132E-4
95% Chebyshev (MVUE) UCL	7.1501E-4	97.5% Chebyshev (MVUE) UCL	8.1727E-4
99% Chebyshev (MVUE) UCL	0.00102		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.6166E-4	95% Jackknife UCL	5.6652E-4
95% Standard Bootstrap UCL	5.5944E-4	95% Bootstrap-t UCL	5.8216E-4

95% Hall's Bootstrap UCL	5.8081E-4	95% Percentile Bootstrap UCL	5.5722E-4
95% BCA Bootstrap UCL	5.7044E-4		
90% Chebyshev(Mean, Sd) UCL	6.3122E-4	95% Chebyshev(Mean, Sd) UCL	7.0097E-4
97.5% Chebyshev(Mean, Sd) UCL	7.9779E-4	99% Chebyshev(Mean, Sd) UCL	9.8797E-4

Suggested UCL to Use

95% Student's-t UCL 5.6652E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	2
Minimum	8.5800E-5	Mean	2.4443E-4
Maximum	4.6100E-4	Median	2.2350E-4
SD	1.0400E-4	Std. Error of Mean	2.6000E-5
Coefficient of Variation	0.425	Skewness	0.614

Normal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.139	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.9001E-4	95% Adjusted-CLT UCL (Chen-1995)	2.9146E-4
		95% Modified-t UCL (Johnson-1978)	2.9067E-4

Gamma GOF Test

A-D Test Statistic	0.233	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.846	k star (bias corrected MLE)	4.792
Theta hat (MLE)	4.1809E-5	Theta star (bias corrected MLE)	5.1010E-5
nu hat (MLE)	187.1	nu star (bias corrected)	153.3
MLE Mean (bias corrected)	2.4443E-4	MLE Sd (bias corrected)	1.1166E-4
		Approximate Chi Square Value (0.05)	125.7
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	122.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.9813E-4	95% Adjusted Gamma UCL (use when n<50)	3.0504E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.363	Mean of logged Data	-8.405
Maximum of Logged Data	-7.682	SD of logged Data	0.443

Assuming Lognormal Distribution

95% H-UCL	3.1007E-4	90% Chebyshev (MVUE) UCL	3.2875E-4
95% Chebyshev (MVUE) UCL	3.6656E-4	97.5% Chebyshev (MVUE) UCL	4.1905E-4
99% Chebyshev (MVUE) UCL	5.2215E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.8719E-4	95% Jackknife UCL	2.9001E-4
95% Standard Bootstrap UCL	2.8465E-4	95% Bootstrap-t UCL	2.9412E-4

95% Hall's Bootstrap UCL	2.9258E-4	95% Percentile Bootstrap UCL	2.8668E-4
95% BCA Bootstrap UCL	2.8956E-4		
90% Chebyshev(Mean, Sd) UCL	3.2243E-4	95% Chebyshev(Mean, Sd) UCL	3.5776E-4
97.5% Chebyshev(Mean, Sd) UCL	4.0680E-4	99% Chebyshev(Mean, Sd) UCL	5.0313E-4

Suggested UCL to Use

95% Student's-t UCL 2.9001E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	18	Number of Distinct Observations	11
Number of Detects	4	Number of Non-Detects	14
Number of Distinct Detects	4	Number of Distinct Non-Detects	7
Minimum Detect	1.7200E-6	Minimum Non-Detect	1.4400E-6
Maximum Detect	2.5000E-6	Maximum Non-Detect	1.5000E-6
Variance Detects	1.209E-13	Percent Non-Detects	77.78%
Mean Detects	2.2300E-6	SD Detects	3.4766E-7
Median Detects	2.3500E-6	CV Detects	N/A
Skewness Detects	-1.733	Kurtosis Detects	3.259
Mean of Logged Detects	-13.02	SD of Logged Detects	0.169

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.812	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.363	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.6156E-6	KM Standard Error of Mean	9.7378E-8
KM SD	3.5779E-7	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.7850E-6	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.7757E-6	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.9077E-6	95% KM Chebyshev UCL	2.0400E-6
97.5% KM Chebyshev UCL	2.2237E-6	99% KM Chebyshev UCL	2.5845E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.595	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.656	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.39	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.394	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	49.39	k star (bias corrected MLE)	12.51
Theta hat (MLE)	4.5154E-8	Theta star (bias corrected MLE)	1.7821E-7
nu hat (MLE)	395.1	nu star (bias corrected)	100.1
Mean (detects)	2.2300E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.7200E-6	Mean	0.00778
Maximum	0.01	Median	0.01
SD	0.00428	CV	0.55
k hat (MLE)	0.405	k star (bias corrected MLE)	0.375
Theta hat (MLE)	0.0192	Theta star (bias corrected MLE)	0.0207
nu hat (MLE)	14.6	nu star (bias corrected)	13.5
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (13.50, α)	6.228	Adjusted Chi Square Value (13.50, β)	5.759
95% Gamma Approximate UCL (use when n>=50)	0.0169	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.6156E-6	SD (KM)	3.5779E-7
Variance (KM)	1.280E-13	SE of Mean (KM)	9.7378E-8
k hat (KM)	20.39	k star (KM)	17.03

nu hat (KM)	734	nu star (KM)	613
theta hat (KM)	7.9238E-8	theta star (KM)	9.4879E-8
80% gamma percentile (KM)	1.9325E-6	90% gamma percentile (KM)	2.1332E-6
95% gamma percentile (KM)	2.3088E-6	99% gamma percentile (KM)	2.6629E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (612.99, α)	556.6	Adjusted Chi Square Value (612.99, β)	551.4
95% Gamma Approximate KM-UCL (use when n>=50)	1.7794E-6	95% Gamma Adjusted KM-UCL (use when n<50)	1.7960E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.788	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.375	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.4119E-6	Mean in Log Scale	-13.52
SD in Original Scale	4.9846E-7	SD in Log Scale	0.313
95% t UCL (assumes normality of ROS data)	1.6163E-6	95% Percentile Bootstrap UCL	1.6126E-6
95% BCA Bootstrap UCL	1.6333E-6	95% Bootstrap t UCL	1.6929E-6
95% H-UCL (Log ROS)	1.6245E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-13.36	KM Geo Mean	1.5834E-6
KM SD (logged)	0.191	95% Critical H Value (KM-Log)	1.781
KM Standard Error of Mean (logged)	0.0519	95% H-UCL (KM -Log)	1.7508E-6
KM SD (logged)	0.191	95% Critical H Value (KM-Log)	1.781
KM Standard Error of Mean (logged)	0.0519		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0694E-6	Mean in Log Scale	-13.88
SD in Original Scale	6.5487E-7	SD in Log Scale	0.474
95% t UCL (Assumes normality)	1.3380E-6	95% H-Stat UCL	1.3253E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.7850E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-189

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.8900E-5	Mean	4.8856E-5
Maximum	8.3800E-5	Median	4.6400E-5
SD	1.8589E-5	Std. Error of Mean	4.3814E-6
Coefficient of Variation	N/A	Skewness	0.473

Normal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.6477E-5	95% Adjusted-CLT UCL (Chen-1995)	5.6585E-5
		95% Modified-t UCL (Johnson-1978)	5.6559E-5

Gamma GOF Test

A-D Test Statistic	0.203	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.105	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.067	k star (bias corrected MLE)	5.926
Theta hat (MLE)	6.9131E-6	Theta star (bias corrected MLE)	8.2439E-6
nu hat (MLE)	254.4	nu star (bias corrected)	213.3
MLE Mean (bias corrected)	4.8856E-5	MLE Sd (bias corrected)	2.0069E-5
		Approximate Chi Square Value (0.05)	180.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	177.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.7732E-5	95% Adjusted Gamma UCL (use when n<50)	5.8673E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.105	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.88	Mean of logged Data	-9.999
Maximum of Logged Data	-9.387	SD of logged Data	0.402

Assuming Lognormal Distribution

95% H-UCL	5.9490E-5	90% Chebyshev (MVUE) UCL	6.3295E-5
95% Chebyshev (MVUE) UCL	6.9755E-5	97.5% Chebyshev (MVUE) UCL	7.8721E-5
99% Chebyshev (MVUE) UCL	9.6333E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.6062E-5	95% Jackknife UCL	5.6477E-5
95% Standard Bootstrap UCL	5.5735E-5	95% Bootstrap-t UCL	5.7075E-5

95% Hall's Bootstrap UCL	5.7071E-5	95% Percentile Bootstrap UCL	5.5833E-5
95% BCA Bootstrap UCL	5.6217E-5		
90% Chebyshev(Mean, Sd) UCL	6.2000E-5	95% Chebyshev(Mean, Sd) UCL	6.7954E-5
97.5% Chebyshev(Mean, Sd) UCL	7.6217E-5	99% Chebyshev(Mean, Sd) UCL	9.2450E-5

Suggested UCL to Use

95% Student's-t UCL 5.6477E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 10:11:01 AM
From File	Bluefish_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.0791E-7	Mean	1.4693E-6
Maximum	3.4778E-6	Median	1.1173E-6
SD	9.5873E-7	Std. Error of Mean	2.2598E-7
Coefficient of Variation	N/A	Skewness	0.883

Normal GOF Test

Shapiro Wilk Test Statistic	0.886	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.218	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.8625E-6	95% Adjusted-CLT UCL (Chen-1995)	1.8913E-6
		95% Modified-t UCL (Johnson-1978)	1.8703E-6

Gamma GOF Test

A-D Test Statistic	0.37	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.138	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.542	k star (bias corrected MLE)	2.155
Theta hat (MLE)	5.7814E-7	Theta star (bias corrected MLE)	6.8184E-7
nu hat (MLE)	91.49	nu star (bias corrected)	77.58
MLE Mean (bias corrected)	1.4693E-6	MLE Sd (bias corrected)	1.0009E-6
		Approximate Chi Square Value (0.05)	58.29
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	56.68

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.9556E-6	95% Adjusted Gamma UCL (use when n<50)	2.0110E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.99	Mean of logged Data	-13.64
Maximum of Logged Data	-12.57	SD of logged Data	0.688

Assuming Lognormal Distribution

95% H-UCL	2.1868E-6	90% Chebyshev (MVUE) UCL	2.2521E-6
95% Chebyshev (MVUE) UCL	2.5992E-6	97.5% Chebyshev (MVUE) UCL	3.0809E-6
99% Chebyshev (MVUE) UCL	4.0271E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.8410E-6	95% Jackknife UCL	1.8625E-6
95% Standard Bootstrap UCL	1.8214E-6	95% Bootstrap-t UCL	1.9411E-6
95% Hall's Bootstrap UCL	1.8635E-6	95% Percentile Bootstrap UCL	1.8277E-6
95% BCA Bootstrap UCL	1.8760E-6		
90% Chebyshev(Mean, Sd) UCL	2.1473E-6	95% Chebyshev(Mean, Sd) UCL	2.4543E-6
97.5% Chebyshev(Mean, Sd) UCL	2.8806E-6	99% Chebyshev(Mean, Sd) UCL	3.7178E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 2.0110E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.4506E-7	Mean	1.5694E-6
Maximum	8.3030E-6	Median	7.3325E-7
SD	2.4009E-6	Std. Error of Mean	5.6590E-7
Coefficient of Variation	N/A	Skewness	2.501

Normal GOF Test

Shapiro Wilk Test Statistic	0.555	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.378	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.5539E-6	95% Adjusted-CLT UCL (Chen-1995)	2.8567E-6
		95% Modified-t UCL (Johnson-1978)	2.6095E-6

Gamma GOF Test

A-D Test Statistic	1.495	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.772	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.234	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.21	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.873	k star (bias corrected MLE)	0.764
Theta hat (MLE)	1.7987E-6	Theta star (bias corrected MLE)	2.0539E-6
nu hat (MLE)	31.41	nu star (bias corrected)	27.51
MLE Mean (bias corrected)	1.5694E-6	MLE Sd (bias corrected)	1.7954E-6
		Approximate Chi Square Value (0.05)	16.55
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	15.73

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.6092E-6	95% Adjusted Gamma UCL (use when n<50)	2.7442E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.871	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.17	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.22	Mean of logged Data	-14.04
Maximum of Logged Data	-11.7	SD of logged Data	1.078

Assuming Lognormal Distribution

95% H-UCL	2.9430E-6	90% Chebyshev (MVUE) UCL	2.5352E-6
95% Chebyshev (MVUE) UCL	3.0646E-6	97.5% Chebyshev (MVUE) UCL	3.7994E-6
99% Chebyshev (MVUE) UCL	5.2428E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.5002E-6	95% Jackknife UCL	2.5539E-6
95% Standard Bootstrap UCL	2.4791E-6	95% Bootstrap-t UCL	5.5690E-6

95% Hall's Bootstrap UCL	7.9900E-6	95% Percentile Bootstrap UCL	2.5139E-6
95% BCA Bootstrap UCL	2.9140E-6		
90% Chebyshev(Mean, Sd) UCL	3.2671E-6	95% Chebyshev(Mean, Sd) UCL	4.0361E-6
97.5% Chebyshev(Mean, Sd) UCL	5.1035E-6	99% Chebyshev(Mean, Sd) UCL	7.2000E-6

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 4.0361E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:47:22 PM
From File	fsh10_ndl_PCB_sum_wide2_flag_sep1_BF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0402	Mean	0.099
Maximum	0.245	Median	0.0861
SD	0.0497	Std. Error of Mean	0.0117
Coefficient of Variation	0.502	Skewness	1.502

Normal GOF Test

Shapiro Wilk Test Statistic	0.878	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.148	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.119	95% Adjusted-CLT UCL (Chen-1995)	0.123
		95% Modified-t UCL (Johnson-1978)	0.12

Gamma GOF Test

A-D Test Statistic	0.257	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.871	k star (bias corrected MLE)	4.096
Theta hat (MLE)	0.0203	Theta star (bias corrected MLE)	0.0242
nu hat (MLE)	175.4	nu star (bias corrected)	147.5
MLE Mean (bias corrected)	0.099	MLE Sd (bias corrected)	0.0489
		Approximate Chi Square Value (0.05)	120.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	118.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.121	95% Adjusted Gamma UCL (use when n<50)	0.124

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.215	Mean of logged Data	-2.419
Maximum of Logged Data	-1.407	SD of logged Data	0.47

Assuming Lognormal Distribution

95% H-UCL	0.125	90% Chebyshev (MVUE) UCL	0.133
95% Chebyshev (MVUE) UCL	0.148	97.5% Chebyshev (MVUE) UCL	0.169
99% Chebyshev (MVUE) UCL	0.211		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.118	95% Jackknife UCL	0.119
95% Standard Bootstrap UCL	0.118	95% Bootstrap-t UCL	0.126
95% Hall's Bootstrap UCL	0.138	95% Percentile Bootstrap UCL	0.118
95% BCA Bootstrap UCL	0.122		
90% Chebyshev(Mean, Sd) UCL	0.134	95% Chebyshev(Mean, Sd) UCL	0.15
97.5% Chebyshev(Mean, Sd) UCL	0.172	99% Chebyshev(Mean, Sd) UCL	0.216

Suggested UCL to Use

95% Student's-t UCL 0.119

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:39:26 PM
From File	fsh5_PAH_wide2_flag_sep1_BF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)anthracene was not processed!

Benzo(a)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)pyrene was not processed!

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(b)fluoranthene was not processed!

Chrysene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chrysene was not processed!

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Dibenzo(a,h)anthracene was not processed!

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Indeno(1,2,3-cd)pyrene was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:42:14 PM
From File	fsh7_pest_wide2_flag_sep1_BF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.7400E-5	Mean	3.7155E-4
Maximum	0.00119	Median	2.9900E-4
SD	3.3555E-4	Std. Error of Mean	7.9090E-5
Coefficient of Variation	0.903	Skewness	1.474

Normal GOF Test

Shapiro Wilk Test Statistic	0.813	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.247	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.0914E-4	95% Adjusted-CLT UCL (Chen-1995)	5.3100E-4
		95% Modified-t UCL (Johnson-1978)	5.1371E-4

Gamma GOF Test

A-D Test Statistic	0.365	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.757	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.482	k star (bias corrected MLE)	1.272
Theta hat (MLE)	2.5071E-4	Theta star (bias corrected MLE)	2.9209E-4
nu hat (MLE)	53.35	nu star (bias corrected)	45.79
MLE Mean (bias corrected)	3.7155E-4	MLE Sd (bias corrected)	3.2943E-4
		Approximate Chi Square Value (0.05)	31.27
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	30.12

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	5.4415E-4	95% Adjusted Gamma UCL (use when n<50)	5.6495E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.765	Mean of logged Data	-8.272
Maximum of Logged Data	-6.734	SD of logged Data	0.915

Assuming Lognormal Distribution

95% H-UCL	6.7912E-4	90% Chebyshev (MVUE) UCL	6.4376E-4
95% Chebyshev (MVUE) UCL	7.6476E-4	97.5% Chebyshev (MVUE) UCL	9.3270E-4
99% Chebyshev (MVUE) UCL	0.00126		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.0164E-4	95% Jackknife UCL	5.0914E-4
95% Standard Bootstrap UCL	4.9459E-4	95% Bootstrap-t UCL	5.8799E-4
95% Hall's Bootstrap UCL	5.7336E-4	95% Percentile Bootstrap UCL	4.9881E-4
95% BCA Bootstrap UCL	5.3277E-4		
90% Chebyshev(Mean, Sd) UCL	6.0882E-4	95% Chebyshev(Mean, Sd) UCL	7.1629E-4
97.5% Chebyshev(Mean, Sd) UCL	8.6547E-4	99% Chebyshev(Mean, Sd) UCL	0.00116

Suggested UCL to Use

95% Adjusted Gamma UCL 5.6495E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.5000E-4	Mean	7.4672E-4
Maximum	0.00305	Median	5.4700E-4
SD	6.8010E-4	Std. Error of Mean	1.6030E-4
Coefficient of Variation	0.911	Skewness	2.522

Normal GOF Test

Shapiro Wilk Test Statistic	0.733	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.19	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00103	95% Adjusted-CLT UCL (Chen-1995)	0.00111
		95% Modified-t UCL (Johnson-1978)	0.00104

Gamma GOF Test

A-D Test Statistic	0.36	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.128	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.915	k star (bias corrected MLE)	1.633
Theta hat (MLE)	3.8999E-4	Theta star (bias corrected MLE)	4.5737E-4
nu hat (MLE)	68.93	nu star (bias corrected)	58.77
MLE Mean (bias corrected)	7.4672E-4	MLE Sd (bias corrected)	5.8441E-4
		Approximate Chi Square Value (0.05)	42.15
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	40.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00104	95% Adjusted Gamma UCL (use when n<50)	0.00108

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0969	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.805	Mean of logged Data	-7.483
Maximum of Logged Data	-5.793	SD of logged Data	0.752

Assuming Lognormal Distribution

95% H-UCL	0.00113	90% Chebyshev (MVUE) UCL	0.00115
95% Chebyshev (MVUE) UCL	0.00134	97.5% Chebyshev (MVUE) UCL	0.0016
99% Chebyshev (MVUE) UCL	0.00211		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00101	95% Jackknife UCL	0.00103
95% Standard Bootstrap UCL	9.9967E-4	95% Bootstrap-t UCL	0.00124

95% Hall's Bootstrap UCL	0.0022	95% Percentile Bootstrap UCL	0.00105
95% BCA Bootstrap UCL	0.00116		
90% Chebyshev(Mean, Sd) UCL	0.00123	95% Chebyshev(Mean, Sd) UCL	0.00145
97.5% Chebyshev(Mean, Sd) UCL	0.00175	99% Chebyshev(Mean, Sd) UCL	0.00234

Suggested UCL to Use

95% Student's-t UCL 0.00103

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	1
Minimum Detect	3.4100E-5	Minimum Non-Detect	1.0800E-5
Maximum Detect	6.3700E-4	Maximum Non-Detect	1.0800E-5
Variance Detects	2.1224E-8	Percent Non-Detects	11.11%
Mean Detects	1.3191E-4	SD Detects	1.4568E-4
Median Detects	8.5950E-5	CV Detects	1.104
Skewness Detects	3.103	Kurtosis Detects	10.78
Mean of Logged Detects	-9.256	SD of Logged Detects	0.751

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.611	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.263	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.1846E-4	KM Standard Error of Mean	3.3674E-5
KM SD	1.3833E-4	95% KM (BCA) UCL	1.8098E-4
95% KM (t) UCL	1.7703E-4	95% KM (Percentile Bootstrap) UCL	1.8161E-4
95% KM (z) UCL	1.7384E-4	95% KM Bootstrap t UCL	2.5508E-4
90% KM Chebyshev UCL	2.1948E-4	95% KM Chebyshev UCL	2.6524E-4
97.5% KM Chebyshev UCL	3.2875E-4	99% KM Chebyshev UCL	4.5351E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.717	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.147	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.218	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.7	k star (bias corrected MLE)	1.423
Theta hat (MLE)	7.7612E-5	Theta star (bias corrected MLE)	9.2725E-5
nu hat (MLE)	54.39	nu star (bias corrected)	45.52
Mean (detects)	1.3191E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.4100E-5	Mean	0.00123
Maximum	0.01	Median	9.8250E-5
SD	0.00319	CV	2.6
k hat (MLE)	0.333	k star (bias corrected MLE)	0.314
Theta hat (MLE)	0.00369	Theta star (bias corrected MLE)	0.00391
nu hat (MLE)	11.98	nu star (bias corrected)	11.32
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (11.32, α)	4.782	Adjusted Chi Square Value (11.32, β)	4.38
95% Gamma Approximate UCL (use when n>=50)	0.00291	95% Gamma Adjusted UCL (use when n<50)	0.00317

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.1846E-4	SD (KM)	1.3833E-4
Variance (KM)	1.9135E-8	SE of Mean (KM)	3.3674E-5
k hat (KM)	0.733	k star (KM)	0.648

nu hat (KM)	26.4	nu star (KM)	23.33
theta hat (KM)	1.6154E-4	theta star (KM)	1.8277E-4
80% gamma percentile (KM)	1.9510E-4	90% gamma percentile (KM)	3.0272E-4
95% gamma percentile (KM)	4.1455E-4	99% gamma percentile (KM)	6.8323E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (23.33, α)	13.34	Adjusted Chi Square Value (23.33, β)	12.62
95% Gamma Approximate KM-UCL (use when n>=50)	2.0715E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.1901E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0986	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.1910E-4	Mean in Log Scale	-9.452
SD in Original Scale	1.4184E-4	SD in Log Scale	0.909
95% t UCL (assumes normality of ROS data)	1.7726E-4	95% Percentile Bootstrap UCL	1.8014E-4
95% BCA Bootstrap UCL	2.0957E-4	95% Bootstrap t UCL	2.4697E-4
95% H-UCL (Log ROS)	2.0659E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.498	KM Geo Mean	7.5017E-5
KM SD (logged)	0.969	95% Critical H Value (KM-Log)	2.594
KM Standard Error of Mean (logged)	0.236	95% H-UCL (KM -Log)	2.2084E-4
KM SD (logged)	0.969	95% Critical H Value (KM-Log)	2.594
KM Standard Error of Mean (logged)	0.236		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.1786E-4	Mean in Log Scale	-9.575
SD in Original Scale	1.4283E-4	SD in Log Scale	1.167
95% t UCL (Assumes normality)	1.7642E-4	95% H-Stat UCL	3.1075E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	2.1901E-4	95% GROS Adjusted Gamma UCL	0.00317

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	6.0700E-4	Mean	0.00416
Maximum	0.0224	Median	0.00299
SD	0.005	Std. Error of Mean	0.00118
Coefficient of Variation	1.201	Skewness	3.145

Normal GOF Test

Shapiro Wilk Test Statistic	0.623	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.278	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00621	95% Adjusted-CLT UCL (Chen-1995)	0.00703
		95% Modified-t UCL (Johnson-1978)	0.00636

Gamma GOF Test

A-D Test Statistic	0.493	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.76	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.334	k star (bias corrected MLE)	1.149
Theta hat (MLE)	0.00312	Theta star (bias corrected MLE)	0.00362
nu hat (MLE)	48.03	nu star (bias corrected)	41.36
MLE Mean (bias corrected)	0.00416	MLE Sd (bias corrected)	0.00388
		Approximate Chi Square Value (0.05)	27.62
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	26.54

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00623	95% Adjusted Gamma UCL (use when n<50)	0.00649

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.099	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.407	Mean of logged Data	-5.901
Maximum of Logged Data	-3.799	SD of logged Data	0.902

Assuming Lognormal Distribution

95% H-UCL	0.0071	90% Chebyshev (MVUE) UCL	0.00677
95% Chebyshev (MVUE) UCL	0.00803	97.5% Chebyshev (MVUE) UCL	0.00978
99% Chebyshev (MVUE) UCL	0.0132		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0061	95% Jackknife UCL	0.00621
95% Standard Bootstrap UCL	0.00603	95% Bootstrap-t UCL	0.00884

95% Hall's Bootstrap UCL	0.0136	95% Percentile Bootstrap UCL	0.00619
95% BCA Bootstrap UCL	0.00704		
90% Chebyshev(Mean, Sd) UCL	0.0077	95% Chebyshev(Mean, Sd) UCL	0.0093
97.5% Chebyshev(Mean, Sd) UCL	0.0115	99% Chebyshev(Mean, Sd) UCL	0.0159

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00649

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0037	Mean	0.015
Maximum	0.0695	Median	0.0116
SD	0.0148	Std. Error of Mean	0.00348
Coefficient of Variation	0.983	Skewness	3.299

Normal GOF Test

Shapiro Wilk Test Statistic	0.577	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.356	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0211	95% Adjusted-CLT UCL (Chen-1995)	0.0236
		95% Modified-t UCL (Johnson-1978)	0.0215

Gamma GOF Test

A-D Test Statistic	1.249	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.276	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.193	k star (bias corrected MLE)	1.865
Theta hat (MLE)	0.00685	Theta star (bias corrected MLE)	0.00806
nu hat (MLE)	78.95	nu star (bias corrected)	67.13
MLE Mean (bias corrected)	0.015	MLE Sd (bias corrected)	0.011
		Approximate Chi Square Value (0.05)	49.27
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	47.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0205	95% Adjusted Gamma UCL (use when n<50)	0.0211

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.599	Mean of logged Data	-4.443
Maximum of Logged Data	-2.666	SD of logged Data	0.651

Assuming Lognormal Distribution

95% H-UCL	0.0205	90% Chebyshev (MVUE) UCL	0.0213
95% Chebyshev (MVUE) UCL	0.0245	97.5% Chebyshev (MVUE) UCL	0.0288
99% Chebyshev (MVUE) UCL	0.0374		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0208	95% Jackknife UCL	0.0211
95% Standard Bootstrap UCL	0.0207	95% Bootstrap-t UCL	0.034

95% Hall's Bootstrap UCL	0.0473	95% Percentile Bootstrap UCL	0.0212
95% BCA Bootstrap UCL	0.0244		
90% Chebyshev(Mean, Sd) UCL	0.0255	95% Chebyshev(Mean, Sd) UCL	0.0302
97.5% Chebyshev(Mean, Sd) UCL	0.0368	99% Chebyshev(Mean, Sd) UCL	0.0497

Suggested UCL to Use

95% H-UCL 0.0205

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

4,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	9.4400E-5	Mean	0.00427
Maximum	0.0688	Median	4.3150E-4
SD	0.0161	Std. Error of Mean	0.0038
Coefficient of Variation	3.769	Skewness	4.24

Normal GOF Test

Shapiro Wilk Test Statistic	0.267	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.517	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0109	95% Adjusted-CLT UCL (Chen-1995)	0.0146
		95% Modified-t UCL (Johnson-1978)	0.0115

Gamma GOF Test

A-D Test Statistic	4.422	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.837	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.432	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.22	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.325	k star (bias corrected MLE)	0.308
Theta hat (MLE)	0.0131	Theta star (bias corrected MLE)	0.0139
nu hat (MLE)	11.72	nu star (bias corrected)	11.1
MLE Mean (bias corrected)	0.00427	MLE Sd (bias corrected)	0.0077
		Approximate Chi Square Value (0.05)	4.639
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	4.244

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0102	95% Adjusted Gamma UCL (use when n<50)	0.0112

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.707	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.243	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.268	Mean of logged Data	-7.546
Maximum of Logged Data	-2.677	SD of logged Data	1.367

Assuming Lognormal Distribution

95% H-UCL	0.0039	90% Chebyshev (MVUE) UCL	0.00261
95% Chebyshev (MVUE) UCL	0.00324	97.5% Chebyshev (MVUE) UCL	0.00411
99% Chebyshev (MVUE) UCL	0.00582		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0105	95% Jackknife UCL	0.0109
95% Standard Bootstrap UCL	0.0103	95% Bootstrap-t UCL	0.301

95% Hall's Bootstrap UCL	0.125	95% Percentile Bootstrap UCL	0.0118
95% BCA Bootstrap UCL	0.0157		
90% Chebyshev(Mean, Sd) UCL	0.0157	95% Chebyshev(Mean, Sd) UCL	0.0208
97.5% Chebyshev(Mean, Sd) UCL	0.028	99% Chebyshev(Mean, Sd) UCL	0.042

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0208

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.6900E-4	Mean	0.00255
Maximum	0.0143	Median	0.00163
SD	0.00322	Std. Error of Mean	7.5994E-4
Coefficient of Variation	1.265	Skewness	3.191

Normal GOF Test

Shapiro Wilk Test Statistic	0.588	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.352	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00387	95% Adjusted-CLT UCL (Chen-1995)	0.00441
		95% Modified-t UCL (Johnson-1978)	0.00397

Gamma GOF Test

A-D Test Statistic	0.885	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.76	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.245	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.337	k star (bias corrected MLE)	1.151
Theta hat (MLE)	0.00191	Theta star (bias corrected MLE)	0.00221
nu hat (MLE)	48.13	nu star (bias corrected)	41.44
MLE Mean (bias corrected)	0.00255	MLE Sd (bias corrected)	0.00238
		Approximate Chi Square Value (0.05)	27.69
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	26.61

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00382	95% Adjusted Gamma UCL (use when n<50)	0.00397

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.173	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.905	Mean of logged Data	-6.39
Maximum of Logged Data	-4.247	SD of logged Data	0.864

Assuming Lognormal Distribution

95% H-UCL	0.00407	90% Chebyshev (MVUE) UCL	0.00395
95% Chebyshev (MVUE) UCL	0.00466	97.5% Chebyshev (MVUE) UCL	0.00566
99% Chebyshev (MVUE) UCL	0.00761		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0038	95% Jackknife UCL	0.00387
95% Standard Bootstrap UCL	0.00379	95% Bootstrap-t UCL	0.00616

95% Hall's Bootstrap UCL	0.00833	95% Percentile Bootstrap UCL	0.00393
95% BCA Bootstrap UCL	0.00471		
90% Chebyshev(Mean, Sd) UCL	0.00483	95% Chebyshev(Mean, Sd) UCL	0.00586
97.5% Chebyshev(Mean, Sd) UCL	0.0073	99% Chebyshev(Mean, Sd) UCL	0.0101

Suggested UCL to Use

95% H-UCL 0.00407

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Dieldrin

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.9300E-4	Mean	0.00184
Maximum	0.0117	Median	9.9650E-4
SD	0.00261	Std. Error of Mean	6.1475E-4
Coefficient of Variation	1.416	Skewness	3.543

Normal GOF Test

Shapiro Wilk Test Statistic	0.518	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.334	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00291	95% Adjusted-CLT UCL (Chen-1995)	0.0034
		95% Modified-t UCL (Johnson-1978)	0.003

Gamma GOF Test

A-D Test Statistic	1.272	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.761	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.217	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.291	k star (bias corrected MLE)	1.113
Theta hat (MLE)	0.00143	Theta star (bias corrected MLE)	0.00165
nu hat (MLE)	46.48	nu star (bias corrected)	40.07
MLE Mean (bias corrected)	0.00184	MLE Sd (bias corrected)	0.00175
		Approximate Chi Square Value (0.05)	26.57
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	25.51

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00278	95% Adjusted Gamma UCL (use when n<50)	0.00289

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.842	Mean of logged Data	-6.732
Maximum of Logged Data	-4.448	SD of logged Data	0.827

Assuming Lognormal Distribution

95% H-UCL	0.00271	90% Chebyshev (MVUE) UCL	0.00267
95% Chebyshev (MVUE) UCL	0.00314	97.5% Chebyshev (MVUE) UCL	0.00379
99% Chebyshev (MVUE) UCL	0.00507		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00285	95% Jackknife UCL	0.00291
95% Standard Bootstrap UCL	0.00284	95% Bootstrap-t UCL	0.00511

95% Hall's Bootstrap UCL	0.00655	95% Percentile Bootstrap UCL	0.00301
95% BCA Bootstrap UCL	0.00361		
90% Chebyshev(Mean, Sd) UCL	0.00369	95% Chebyshev(Mean, Sd) UCL	0.00452
97.5% Chebyshev(Mean, Sd) UCL	0.00568	99% Chebyshev(Mean, Sd) UCL	0.00796

Suggested UCL to Use

95% H-UCL 0.00271

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	8.9800E-5	Mean	4.9166E-4
Maximum	0.00314	Median	2.7050E-4
SD	6.9882E-4	Std. Error of Mean	1.6471E-4
Coefficient of Variation	1.421	Skewness	3.559

Normal GOF Test

Shapiro Wilk Test Statistic	0.527	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.339	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.7819E-4	95% Adjusted-CLT UCL (Chen-1995)	9.1022E-4
		95% Modified-t UCL (Johnson-1978)	8.0122E-4

Gamma GOF Test

A-D Test Statistic	0.991	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.762	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.222	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.234	k star (bias corrected MLE)	1.065
Theta hat (MLE)	3.9855E-4	Theta star (bias corrected MLE)	4.6163E-4
nu hat (MLE)	44.41	nu star (bias corrected)	38.34
MLE Mean (bias corrected)	4.9166E-4	MLE Sd (bias corrected)	4.7640E-4
		Approximate Chi Square Value (0.05)	25.16
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	24.14

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.4921E-4	95% Adjusted Gamma UCL (use when n<50)	7.8098E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.318	Mean of logged Data	-8.075
Maximum of Logged Data	-5.764	SD of logged Data	0.873

Assuming Lognormal Distribution

95% H-UCL	7.6620E-4	90% Chebyshev (MVUE) UCL	7.4081E-4
95% Chebyshev (MVUE) UCL	8.7570E-4	97.5% Chebyshev (MVUE) UCL	0.00106
99% Chebyshev (MVUE) UCL	0.00143		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.6259E-4	95% Jackknife UCL	7.7819E-4
95% Standard Bootstrap UCL	7.5526E-4	95% Bootstrap-t UCL	0.0014

95% Hall's Bootstrap UCL	0.0018	95% Percentile Bootstrap UCL	7.9483E-4
95% BCA Bootstrap UCL	9.4599E-4		
90% Chebyshev(Mean, Sd) UCL	9.8580E-4	95% Chebyshev(Mean, Sd) UCL	0.00121
97.5% Chebyshev(Mean, Sd) UCL	0.00152	99% Chebyshev(Mean, Sd) UCL	0.00213

Suggested UCL to Use

95% H-UCL 7.6620E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Hexachlorobenzene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.2700E-4	Mean	4.3278E-4
Maximum	0.00112	Median	3.6500E-4
SD	2.5346E-4	Std. Error of Mean	5.9741E-5
Coefficient of Variation	0.586	Skewness	1.277

Normal GOF Test

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.153	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.3670E-4	95% Adjusted-CLT UCL (Chen-1995)	5.5026E-4
		95% Modified-t UCL (Johnson-1978)	5.3970E-4

Gamma GOF Test

A-D Test Statistic	0.18	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0939	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.383	k star (bias corrected MLE)	2.856
Theta hat (MLE)	1.2794E-4	Theta star (bias corrected MLE)	1.5153E-4
nu hat (MLE)	121.8	nu star (bias corrected)	102.8
MLE Mean (bias corrected)	4.3278E-4	MLE Sd (bias corrected)	2.5609E-4
		Approximate Chi Square Value (0.05)	80.42
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	78.52

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.5331E-4	95% Adjusted Gamma UCL (use when n<50)	5.6670E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0825	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.971	Mean of logged Data	-7.9
Maximum of Logged Data	-6.794	SD of logged Data	0.581

Assuming Lognormal Distribution

95% H-UCL	5.9051E-4	90% Chebyshev (MVUE) UCL	6.2083E-4
95% Chebyshev (MVUE) UCL	7.0536E-4	97.5% Chebyshev (MVUE) UCL	8.2269E-4
99% Chebyshev (MVUE) UCL	0.00105		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.3104E-4	95% Jackknife UCL	5.3670E-4
95% Standard Bootstrap UCL	5.2726E-4	95% Bootstrap-t UCL	5.6549E-4

95% Hall's Bootstrap UCL	5.8235E-4	95% Percentile Bootstrap UCL	5.3433E-4
95% BCA Bootstrap UCL	5.4556E-4		
90% Chebyshev(Mean, Sd) UCL	6.1200E-4	95% Chebyshev(Mean, Sd) UCL	6.9318E-4
97.5% Chebyshev(Mean, Sd) UCL	8.0586E-4	99% Chebyshev(Mean, Sd) UCL	0.00103

Suggested UCL to Use

95% Student's-t UCL 5.3670E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	16	Number of Distinct Non-Detects	1
Minimum Detect	6.4400E-5	Minimum Non-Detect	9.3300E-6
Maximum Detect	2.1500E-4	Maximum Non-Detect	9.3300E-6
Variance Detects	1.9399E-9	Percent Non-Detects	5.556%
Mean Detects	1.1273E-4	SD Detects	4.4045E-5
Median Detects	8.9300E-5	CV Detects	0.391
Skewness Detects	1.032	Kurtosis Detects	0.288
Mean of Logged Detects	-9.156	SD of Logged Detects	0.364

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.884	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.232	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.0699E-4	KM Standard Error of Mean	1.1615E-5
KM SD	4.7806E-5	95% KM (BCA) UCL	1.2644E-4
95% KM (t) UCL	1.2719E-4	95% KM (Percentile Bootstrap) UCL	1.2508E-4
95% KM (z) UCL	1.2609E-4	95% KM Bootstrap t UCL	1.2879E-4
90% KM Chebyshev UCL	1.4183E-4	95% KM Chebyshev UCL	1.5761E-4
97.5% KM Chebyshev UCL	1.7952E-4	99% KM Chebyshev UCL	2.2255E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.577	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.223	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.209	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.838	k star (bias corrected MLE)	6.494
Theta hat (MLE)	1.4382E-5	Theta star (bias corrected MLE)	1.7358E-5
nu hat (MLE)	266.5	nu star (bias corrected)	220.8
Mean (detects)	1.1273E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.4400E-5	Mean	6.6202E-4
Maximum	0.01	Median	1.0265E-4
SD	0.00233	CV	3.521
k hat (MLE)	0.414	k star (bias corrected MLE)	0.382
Theta hat (MLE)	0.0016	Theta star (bias corrected MLE)	0.00173
nu hat (MLE)	14.89	nu star (bias corrected)	13.74
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (13.74, α)	6.394	Adjusted Chi Square Value (13.74, β)	5.918
95% Gamma Approximate UCL (use when n>=50)	0.00142	95% Gamma Adjusted UCL (use when n<50)	0.00154

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.0699E-4	SD (KM)	4.7806E-5
Variance (KM)	2.2854E-9	SE of Mean (KM)	1.1615E-5
k hat (KM)	5.008	k star (KM)	4.211

nu hat (KM)	180.3	nu star (KM)	151.6
theta hat (KM)	2.1362E-5	theta star (KM)	2.5408E-5
80% gamma percentile (KM)	1.4664E-4	90% gamma percentile (KM)	1.7685E-4
95% gamma percentile (KM)	2.0460E-4	99% gamma percentile (KM)	2.6372E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (151.58, α)	124.1	Adjusted Chi Square Value (151.58, β)	121.7
95% Gamma Approximate KM-UCL (use when n>=50)	1.3065E-4	95% Gamma Adjusted KM-UCL (use when n<50)	1.3321E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.0887E-4	Mean in Log Scale	-9.205
SD in Original Scale	4.5763E-5	SD in Log Scale	0.412
95% t UCL (assumes normality of ROS data)	1.2763E-4	95% Percentile Bootstrap UCL	1.2707E-4
95% BCA Bootstrap UCL	1.2876E-4	95% Bootstrap t UCL	1.3191E-4
95% H-UCL (Log ROS)	1.3277E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.29	KM Geo Mean	9.2299E-5
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	2.184
KM Standard Error of Mean (logged)	0.159	95% H-UCL (KM -Log)	1.6152E-4
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	2.184
KM Standard Error of Mean (logged)	0.159		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0673E-4	Mean in Log Scale	-9.329
SD in Original Scale	4.9745E-5	SD in Log Scale	0.816
95% t UCL (Assumes normality)	1.2712E-4	95% H-Stat UCL	1.9852E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	1.3321E-4	95% GROS Adjusted Gamma UCL	0.00154

Warning: Recommended UCL exceeds the maximum observation

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.4500E-4	Mean	0.00224
Maximum	0.00858	Median	0.0019
SD	0.0018	Std. Error of Mean	4.2376E-4
Coefficient of Variation	0.803	Skewness	2.796

Normal GOF Test

Shapiro Wilk Test Statistic	0.696	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.264	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00298	95% Adjusted-CLT UCL (Chen-1995)	0.00323
		95% Modified-t UCL (Johnson-1978)	0.00302

Gamma GOF Test

A-D Test Statistic	0.577	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.193	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.544	k star (bias corrected MLE)	2.157
Theta hat (MLE)	8.8039E-4	Theta star (bias corrected MLE)	0.00104
nu hat (MLE)	91.58	nu star (bias corrected)	77.65
MLE Mean (bias corrected)	0.00224	MLE Sd (bias corrected)	0.00152
		Approximate Chi Square Value (0.05)	58.35
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	56.75

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00298	95% Adjusted Gamma UCL (use when n<50)	0.00306

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.148	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.717	Mean of logged Data	-6.311
Maximum of Logged Data	-4.758	SD of logged Data	0.645

Assuming Lognormal Distribution

95% H-UCL	0.00314	90% Chebyshev (MVUE) UCL	0.00327
95% Chebyshev (MVUE) UCL	0.00375	97.5% Chebyshev (MVUE) UCL	0.00442
99% Chebyshev (MVUE) UCL	0.00573		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00294	95% Jackknife UCL	0.00298
95% Standard Bootstrap UCL	0.00293	95% Bootstrap-t UCL	0.0036

95% Hall's Bootstrap UCL	0.0059	95% Percentile Bootstrap UCL	0.00299
95% BCA Bootstrap UCL	0.00321		
90% Chebyshev(Mean, Sd) UCL	0.00351	95% Chebyshev(Mean, Sd) UCL	0.00409
97.5% Chebyshev(Mean, Sd) UCL	0.00489	99% Chebyshev(Mean, Sd) UCL	0.00646

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00306

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	1.0500E-4	Minimum Non-Detect	1.0000E-5
Maximum Detect	7.8900E-4	Maximum Non-Detect	1.0000E-5
Variance Detects	2.7390E-8	Percent Non-Detects	5.556%
Mean Detects	2.6265E-4	SD Detects	1.6550E-4
Median Detects	2.1200E-4	CV Detects	0.63
Skewness Detects	2.212	Kurtosis Detects	6.028
Mean of Logged Detects	-8.383	SD of Logged Detects	0.516

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.773	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.4861E-4	KM Standard Error of Mean	4.0433E-5
KM SD	1.6642E-4	95% KM (BCA) UCL	3.2761E-4
95% KM (t) UCL	3.1895E-4	95% KM (Percentile Bootstrap) UCL	3.1789E-4
95% KM (z) UCL	3.1512E-4	95% KM Bootstrap t UCL	3.5156E-4
90% KM Chebyshev UCL	3.6991E-4	95% KM Chebyshev UCL	4.2485E-4
97.5% KM Chebyshev UCL	5.0112E-4	99% KM Chebyshev UCL	6.5091E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.522	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.207	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.21	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.767	k star (bias corrected MLE)	3.141
Theta hat (MLE)	6.9732E-5	Theta star (bias corrected MLE)	8.3617E-5
nu hat (MLE)	128.1	nu star (bias corrected)	106.8
Mean (detects)	2.6265E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.0500E-4	Mean	8.0361E-4
Maximum	0.01	Median	2.1550E-4
SD	0.0023	CV	2.863
k hat (MLE)	0.591	k star (bias corrected MLE)	0.53
Theta hat (MLE)	0.00136	Theta star (bias corrected MLE)	0.00152
nu hat (MLE)	21.29	nu star (bias corrected)	19.08
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (19.08, α)	10.17	Adjusted Chi Square Value (19.08, β)	9.552
95% Gamma Approximate UCL (use when n>=50)	0.00151	95% Gamma Adjusted UCL (use when n<50)	0.0016

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.4861E-4	SD (KM)	1.6642E-4
Variance (KM)	2.7696E-8	SE of Mean (KM)	4.0433E-5
k hat (KM)	2.232	k star (KM)	1.897

nu hat (KM)	80.34	nu star (KM)	68.28
theta hat (KM)	1.1140E-4	theta star (KM)	1.3107E-4
80% gamma percentile (KM)	3.7453E-4	90% gamma percentile (KM)	4.8960E-4
95% gamma percentile (KM)	5.9972E-4	99% gamma percentile (KM)	8.4473E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (68.28, α)	50.26	Adjusted Chi Square Value (68.28, β)	48.78
95% Gamma Approximate KM-UCL (use when n>=50)	3.3774E-4	95% Gamma Adjusted KM-UCL (use when n<50)	3.4801E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.5166E-4	Mean in Log Scale	-8.453
SD in Original Scale	1.6719E-4	SD in Log Scale	0.582
95% t UCL (assumes normality of ROS data)	3.2021E-4	95% Percentile Bootstrap UCL	3.1817E-4
95% BCA Bootstrap UCL	3.4661E-4	95% Bootstrap t UCL	3.5844E-4
95% H-UCL (Log ROS)	3.3983E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.557	KM Geo Mean	1.9217E-4
KM SD (logged)	0.866	95% Critical H Value (KM-Log)	2.45
KM Standard Error of Mean (logged)	0.21	95% H-UCL (KM -Log)	4.6785E-4
KM SD (logged)	0.866	95% Critical H Value (KM-Log)	2.45
KM Standard Error of Mean (logged)	0.21		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.4833E-4	Mean in Log Scale	-8.596
SD in Original Scale	1.7166E-4	SD in Log Scale	1.031
95% t UCL (Assumes normality)	3.1872E-4	95% H-Stat UCL	6.1494E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	3.4801E-4	95% GROS Adjusted Gamma UCL	0.0016

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.9200E-4	Mean	9.1144E-4
Maximum	0.00344	Median	7.0300E-4
SD	7.3743E-4	Std. Error of Mean	1.7381E-4
Coefficient of Variation	0.809	Skewness	2.671

Normal GOF Test

Shapiro Wilk Test Statistic	0.699	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.292	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00121	95% Adjusted-CLT UCL (Chen-1995)	0.00131
		95% Modified-t UCL (Johnson-1978)	0.00123

Gamma GOF Test

A-D Test Statistic	0.758	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.232	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.528	k star (bias corrected MLE)	2.144
Theta hat (MLE)	3.6049E-4	Theta star (bias corrected MLE)	4.2512E-4
nu hat (MLE)	91.02	nu star (bias corrected)	77.18
MLE Mean (bias corrected)	9.1144E-4	MLE Sd (bias corrected)	6.2247E-4
		Approximate Chi Square Value (0.05)	57.95
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	56.35

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00121	95% Adjusted Gamma UCL (use when n<50)	0.00125

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.558	Mean of logged Data	-7.211
Maximum of Logged Data	-5.672	SD of logged Data	0.641

Assuming Lognormal Distribution

95% H-UCL	0.00127	90% Chebyshev (MVUE) UCL	0.00132
95% Chebyshev (MVUE) UCL	0.00152	97.5% Chebyshev (MVUE) UCL	0.00178
99% Chebyshev (MVUE) UCL	0.00231		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0012	95% Jackknife UCL	0.00121
95% Standard Bootstrap UCL	0.0012	95% Bootstrap-t UCL	0.00157

95% Hall's Bootstrap UCL	0.00258	95% Percentile Bootstrap UCL	0.00121
95% BCA Bootstrap UCL	0.00133		
90% Chebyshev(Mean, Sd) UCL	0.00143	95% Chebyshev(Mean, Sd) UCL	0.00167
97.5% Chebyshev(Mean, Sd) UCL	0.002	99% Chebyshev(Mean, Sd) UCL	0.00264

Suggested UCL to Use

95% H-UCL 0.00127

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

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General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.8600E-4	Mean	0.00102
Maximum	0.00526	Median	6.7100E-4
SD	0.00121	Std. Error of Mean	2.8476E-4
Coefficient of Variation	1.188	Skewness	2.913

Normal GOF Test

Shapiro Wilk Test Statistic	0.616	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00151	95% Adjusted-CLT UCL (Chen-1995)	0.00169
		95% Modified-t UCL (Johnson-1978)	0.00154

Gamma GOF Test

A-D Test Statistic	0.982	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.758	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.237	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.419	k star (bias corrected MLE)	1.22
Theta hat (MLE)	7.1665E-4	Theta star (bias corrected MLE)	8.3386E-4
nu hat (MLE)	51.09	nu star (bias corrected)	43.9
MLE Mean (bias corrected)	0.00102	MLE Sd (bias corrected)	9.2086E-4
		Approximate Chi Square Value (0.05)	29.71
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	28.59

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0015	95% Adjusted Gamma UCL (use when n<50)	0.00156

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.167	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.59	Mean of logged Data	-7.283
Maximum of Logged Data	-5.248	SD of logged Data	0.838

Assuming Lognormal Distribution

95% H-UCL	0.00159	90% Chebyshev (MVUE) UCL	0.00156
95% Chebyshev (MVUE) UCL	0.00184	97.5% Chebyshev (MVUE) UCL	0.00222
99% Chebyshev (MVUE) UCL	0.00298		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00149	95% Jackknife UCL	0.00151
95% Standard Bootstrap UCL	0.00147	95% Bootstrap-t UCL	0.00212

95% Hall's Bootstrap UCL	0.00313	95% Percentile Bootstrap UCL	0.0015
95% BCA Bootstrap UCL	0.00176		
90% Chebyshev(Mean, Sd) UCL	0.00187	95% Chebyshev(Mean, Sd) UCL	0.00226
97.5% Chebyshev(Mean, Sd) UCL	0.0028	99% Chebyshev(Mean, Sd) UCL	0.00385

Suggested UCL to Use

95% H-UCL 0.00159

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

trans-Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable trans-Heptachlor Epoxide was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/25/18 2:19:55 PM
From File	fsh4_met_wide2_flag_sep1_BF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	18	Number of Distinct Observations	14
Number of Detects	6	Number of Non-Detects	12
Number of Distinct Detects	6	Number of Distinct Non-Detects	8
Minimum Detect	4.09	Minimum Non-Detect	3.86
Maximum Detect	12.3	Maximum Non-Detect	5.6
Variance Detects	8.24	Percent Non-Detects	66.67%
Mean Detects	6.843	SD Detects	2.871
Median Detects	6.155	CV Detects	0.419
Skewness Detects	1.729	Kurtosis Detects	3.559
Mean of Logged Detects	1.861	SD of Logged Detects	0.371

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.829	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.31	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.007	KM Standard Error of Mean	0.544
KM SD	2.03	95% KM (BCA) UCL	6.076
95% KM (t) UCL	5.953	95% KM (Percentile Bootstrap) UCL	5.993
95% KM (z) UCL	5.902	95% KM Bootstrap t UCL	6.255
90% KM Chebyshev UCL	6.639	95% KM Chebyshev UCL	7.378
97.5% KM Chebyshev UCL	8.403	99% KM Chebyshev UCL	10.42

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.402	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.26	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.333	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	8.249	k star (bias corrected MLE)	4.236
Theta hat (MLE)	0.83	Theta star (bias corrected MLE)	1.616
nu hat (MLE)	98.99	nu star (bias corrected)	50.83
Mean (detects)	6.843		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.157	Mean	3.341
Maximum	12.3	Median	2.059
SD	3.143	CV	0.941
k hat (MLE)	1.014	k star (bias corrected MLE)	0.882
Theta hat (MLE)	3.297	Theta star (bias corrected MLE)	3.79

nu hat (MLE)	36.49	nu star (bias corrected)	31.74
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (31.74, α)	19.87	Adjusted Chi Square Value (31.74, β)	18.97
95% Gamma Approximate UCL (use when n>=50)	5.338	95% Gamma Adjusted UCL (use when n<50)	5.592

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.007	SD (KM)	2.03
Variance (KM)	4.123	SE of Mean (KM)	0.544
k hat (KM)	6.082	k star (KM)	5.105
nu hat (KM)	219	nu star (KM)	183.8
theta hat (KM)	0.823	theta star (KM)	0.981
80% gamma percentile (KM)	6.715	90% gamma percentile (KM)	7.974
95% gamma percentile (KM)	9.12	99% gamma percentile (KM)	11.54

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (183.80, α)	153.4	Adjusted Chi Square Value (183.80, β)	150.8
95% Gamma Approximate KM-UCL (use when n>=50)	5.998	95% Gamma Adjusted KM-UCL (use when n<50)	6.104

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.242	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.236	Mean in Log Scale	1.322
SD in Original Scale	2.512	SD in Log Scale	0.475
95% t UCL (assumes normality of ROS data)	5.266	95% Percentile Bootstrap UCL	5.249
95% BCA Bootstrap UCL	5.588	95% Bootstrap t UCL	5.951
95% H-UCL (Log ROS)	5.289		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.556	KM Geo Mean	4.738
KM SD (logged)	0.303	95% Critical H Value (KM-Log)	1.856
KM Standard Error of Mean (logged)	0.0846	95% H-UCL (KM -Log)	5.687
KM SD (logged)	0.303	95% Critical H Value (KM-Log)	1.856
KM Standard Error of Mean (logged)	0.0846		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.984	Mean in Log Scale	1.241
SD in Original Scale	2.61	SD in Log Scale	0.506
95% t UCL (Assumes normality)	5.055	95% H-Stat UCL	5.039

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.953

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.262	Mean	0.586
Maximum	1.27	Median	0.519
SD	0.275	Std. Error of Mean	0.0649
Coefficient of Variation	0.47	Skewness	1.479

Normal GOF Test

Shapiro Wilk Test Statistic	0.84	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.21	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.699	95% Adjusted-CLT UCL (Chen-1995)	0.717
		95% Modified-t UCL (Johnson-1978)	0.702

Gamma GOF Test

A-D Test Statistic	0.474	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.68	k star (bias corrected MLE)	4.77
Theta hat (MLE)	0.103	Theta star (bias corrected MLE)	0.123
nu hat (MLE)	204.5	nu star (bias corrected)	171.7
MLE Mean (bias corrected)	0.586	MLE Sd (bias corrected)	0.268
		Approximate Chi Square Value (0.05)	142.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	139.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.706	95% Adjusted Gamma UCL (use when n<50)	0.719

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.339	Mean of logged Data	-0.625
Maximum of Logged Data	0.239	SD of logged Data	0.43

Assuming Lognormal Distribution

95% H-UCL	0.72	90% Chebyshev (MVUE) UCL	0.766
95% Chebyshev (MVUE) UCL	0.848	97.5% Chebyshev (MVUE) UCL	0.963
99% Chebyshev (MVUE) UCL	1.188		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.693	95% Jackknife UCL	0.699
95% Standard Bootstrap UCL	0.691	95% Bootstrap-t UCL	0.761

95% Hall's Bootstrap UCL	0.942	95% Percentile Bootstrap UCL	0.694
95% BCA Bootstrap UCL	0.709		
90% Chebyshev(Mean, Sd) UCL	0.781	95% Chebyshev(Mean, Sd) UCL	0.869
97.5% Chebyshev(Mean, Sd) UCL	0.991	99% Chebyshev(Mean, Sd) UCL	1.232

Suggested UCL to Use

95% Adjusted Gamma UCL	0.719

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic - inorganic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0262	Mean	0.0586
Maximum	0.127	Median	0.0519
SD	0.0275	Std. Error of Mean	0.00649
Coefficient of Variation	0.47	Skewness	1.479

Normal GOF Test

Shapiro Wilk Test Statistic	0.84	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.21	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0699	95% Adjusted-CLT UCL (Chen-1995)	0.0717
		95% Modified-t UCL (Johnson-1978)	0.0702

Gamma GOF Test

A-D Test Statistic	0.474	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.68	k star (bias corrected MLE)	4.77
Theta hat (MLE)	0.0103	Theta star (bias corrected MLE)	0.0123
nu hat (MLE)	204.5	nu star (bias corrected)	171.7
MLE Mean (bias corrected)	0.0586	MLE Sd (bias corrected)	0.0268
		Approximate Chi Square Value (0.05)	142.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	139.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0706	95% Adjusted Gamma UCL (use when n<50)	0.0719

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.642	Mean of logged Data	-2.928
Maximum of Logged Data	-2.064	SD of logged Data	0.43

Assuming Lognormal Distribution

95% H-UCL	0.072	90% Chebyshev (MVUE) UCL	0.0766
95% Chebyshev (MVUE) UCL	0.0848	97.5% Chebyshev (MVUE) UCL	0.0963
99% Chebyshev (MVUE) UCL	0.119		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0693	95% Jackknife UCL	0.0699
95% Standard Bootstrap UCL	0.0691	95% Bootstrap-t UCL	0.0754

95% Hall's Bootstrap UCL	0.089	95% Percentile Bootstrap UCL	0.0694
95% BCA Bootstrap UCL	0.0717		
90% Chebyshev(Mean, Sd) UCL	0.0781	95% Chebyshev(Mean, Sd) UCL	0.0869
97.5% Chebyshev(Mean, Sd) UCL	0.0991	99% Chebyshev(Mean, Sd) UCL	0.123

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0719

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic - organic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.236	Mean	0.527
Maximum	1.143	Median	0.467
SD	0.248	Std. Error of Mean	0.0584
Coefficient of Variation	0.47	Skewness	1.479

Normal GOF Test

Shapiro Wilk Test Statistic	0.84	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.21	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.629	95% Adjusted-CLT UCL (Chen-1995)	0.645
		95% Modified-t UCL (Johnson-1978)	0.632

Gamma GOF Test

A-D Test Statistic	0.474	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.68	k star (bias corrected MLE)	4.77
Theta hat (MLE)	0.0928	Theta star (bias corrected MLE)	0.111
nu hat (MLE)	204.5	nu star (bias corrected)	171.7
MLE Mean (bias corrected)	0.527	MLE Sd (bias corrected)	0.241
		Approximate Chi Square Value (0.05)	142.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	139.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.636	95% Adjusted Gamma UCL (use when n<50)	0.647

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.445	Mean of logged Data	-0.731
Maximum of Logged Data	0.134	SD of logged Data	0.43

Assuming Lognormal Distribution

95% H-UCL	0.648	90% Chebyshev (MVUE) UCL	0.689
95% Chebyshev (MVUE) UCL	0.763	97.5% Chebyshev (MVUE) UCL	0.866
99% Chebyshev (MVUE) UCL	1.069		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.623	95% Jackknife UCL	0.629
95% Standard Bootstrap UCL	0.618	95% Bootstrap-t UCL	0.681

95% Hall's Bootstrap UCL	0.824	95% Percentile Bootstrap UCL	0.631
95% BCA Bootstrap UCL	0.644		
90% Chebyshev(Mean, Sd) UCL	0.703	95% Chebyshev(Mean, Sd) UCL	0.782
97.5% Chebyshev(Mean, Sd) UCL	0.892	99% Chebyshev(Mean, Sd) UCL	1.109

Suggested UCL to Use

95% Adjusted Gamma UCL	0.647

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	15

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cadmium was not processed!

Chromium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	14
Minimum Detect	0.107	Minimum Non-Detect	0.0667
Maximum Detect	0.167	Maximum Non-Detect	0.1
Variance Detects	0.0018	Percent Non-Detects	88.89%
Mean Detects	0.137	SD Detects	0.0424
Median Detects	0.137	CV Detects	0.31
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-2.012	SD of Logged Detects	0.315

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0745	KM Standard Error of Mean	0.00808
KM SD	0.0243	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0886	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0878	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0988	95% KM Chebyshev UCL	0.11
97.5% KM Chebyshev UCL	0.125	99% KM Chebyshev UCL	0.155

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	20.52	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.00668	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	82.06	nu star (bias corrected)	N/A
Mean (detects)	0.137		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0745	SD (KM)	0.0243
Variance (KM)	5.8811E-4	SE of Mean (KM)	0.00808
k hat (KM)	9.44	k star (KM)	7.904
nu hat (KM)	339.9	nu star (KM)	284.5
theta hat (KM)	0.00789	theta star (KM)	0.00943
80% gamma percentile (KM)	0.0954	90% gamma percentile (KM)	0.11
95% gamma percentile (KM)	0.123	99% gamma percentile (KM)	0.15

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (284.54, α)	246.5	Adjusted Chi Square Value (284.54, β)	243.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.086	95% Gamma Adjusted KM-UCL (use when n<50)	0.0872

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0276	Mean in Log Scale	-4.059
SD in Original Scale	0.0413	SD in Log Scale	0.795
95% t UCL (assumes normality of ROS data)	0.0445	95% Percentile Bootstrap UCL	0.0446
95% BCA Bootstrap UCL	0.0542	95% Bootstrap t UCL	0.169
95% H-UCL (Log ROS)	0.0373		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.63	KM Geo Mean	0.0721
KM SD (logged)	0.231	95% Critical H Value (KM-Log)	1.806
KM Standard Error of Mean (logged)	0.0769	95% H-UCL (KM -Log)	0.0819
KM SD (logged)	0.231	95% Critical H Value (KM-Log)	1.806
KM Standard Error of Mean (logged)	0.0769		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0535	Mean in Log Scale	-3.03
SD in Original Scale	0.0327	SD in Log Scale	0.406
95% t UCL (Assumes normality)	0.0668	95% H-Stat UCL	0.0635

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0886	KM H-UCL	0.0819
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	15

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cobalt was not processed!

Copper

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.575	Mean	0.744
Maximum	1.06	Median	0.721
SD	0.112	Std. Error of Mean	0.0263
Coefficient of Variation	0.15	Skewness	1.261

Normal GOF Test

Shapiro Wilk Test Statistic	0.914	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.79	95% Adjusted-CLT UCL (Chen-1995)	0.796
		95% Modified-t UCL (Johnson-1978)	0.791

Gamma GOF Test

A-D Test Statistic	0.357	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.144	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	50.77	k star (bias corrected MLE)	42.35
Theta hat (MLE)	0.0147	Theta star (bias corrected MLE)	0.0176
nu hat (MLE)	1828	nu star (bias corrected)	1524
MLE Mean (bias corrected)	0.744	MLE Sd (bias corrected)	0.114
		Approximate Chi Square Value (0.05)	1435
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	1426

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.791	95% Adjusted Gamma UCL (use when n<50)	0.795

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.553	Mean of logged Data	-0.305
Maximum of Logged Data	0.0583	SD of logged Data	0.142

Assuming Lognormal Distribution

95% H-UCL	0.791	90% Chebyshev (MVUE) UCL	0.819
95% Chebyshev (MVUE) UCL	0.853	97.5% Chebyshev (MVUE) UCL	0.9
99% Chebyshev (MVUE) UCL	0.993		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.788	95% Jackknife UCL	0.79
95% Standard Bootstrap UCL	0.788	95% Bootstrap-t UCL	0.804
95% Hall's Bootstrap UCL	0.82	95% Percentile Bootstrap UCL	0.788
95% BCA Bootstrap UCL	0.795		
90% Chebyshev(Mean, Sd) UCL	0.823	95% Chebyshev(Mean, Sd) UCL	0.859
97.5% Chebyshev(Mean, Sd) UCL	0.909	99% Chebyshev(Mean, Sd) UCL	1.006

Suggested UCL to Use

95% Student's-t UCL	0.79

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	6.06	Minimum Non-Detect	4.62
Maximum Detect	13.2	Maximum Non-Detect	4.62
Variance Detects	3.952	Percent Non-Detects	5.556%
Mean Detects	9.248	SD Detects	1.988
Median Detects	9.33	CV Detects	0.215
Skewness Detects	0.36	Kurtosis Detects	-0.721
Mean of Logged Detects	2.203	SD of Logged Detects	0.215

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.15	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.991	KM Standard Error of Mean	0.523
KM SD	2.153	95% KM (BCA) UCL	9.821
95% KM (t) UCL	9.901	95% KM (Percentile Bootstrap) UCL	9.808
95% KM (z) UCL	9.851	95% KM Bootstrap t UCL	9.881
90% KM Chebyshev UCL	10.56	95% KM Chebyshev UCL	11.27
97.5% KM Chebyshev UCL	12.26	99% KM Chebyshev UCL	14.2

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.281	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.137	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.209	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	23.19	k star (bias corrected MLE)	19.14
Theta hat (MLE)	0.399	Theta star (bias corrected MLE)	0.483
nu hat (MLE)	788.4	nu star (bias corrected)	650.6
Mean (detects)	9.248		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.933	Mean	9.008
Maximum	13.2	Median	8.825
SD	2.18	CV	0.242
k hat (MLE)	17.31	k star (bias corrected MLE)	14.46
Theta hat (MLE)	0.52	Theta star (bias corrected MLE)	0.623
nu hat (MLE)	623.2	nu star (bias corrected)	520.7
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (520.69, α)	468.8	Adjusted Chi Square Value (520.69, β)	464
95% Gamma Approximate UCL (use when n>=50)	10.01	95% Gamma Adjusted UCL (use when n<50)	10.11

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.991	SD (KM)	2.153
Variance (KM)	4.636	SE of Mean (KM)	0.523
k hat (KM)	17.43	k star (KM)	14.56

nu hat (KM)	627.6	nu star (KM)	524.3
theta hat (KM)	0.516	theta star (KM)	0.617
80% gamma percentile (KM)	10.89	90% gamma percentile (KM)	12.11
95% gamma percentile (KM)	13.18	99% gamma percentile (KM)	15.36

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (524.34, α)	472.2	Adjusted Chi Square Value (524.34, β)	467.5
95% Gamma Approximate KM-UCL (use when n>=50)	9.983	95% Gamma Adjusted KM-UCL (use when n<50)	10.08

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.029	Mean in Log Scale	2.173
SD in Original Scale	2.14	SD in Log Scale	0.243
95% t UCL (assumes normality of ROS data)	9.907	95% Percentile Bootstrap UCL	9.812
95% BCA Bootstrap UCL	9.862	95% Bootstrap t UCL	9.938
95% H-UCL (Log ROS)	10.07		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.165	KM Geo Mean	8.717
KM SD (logged)	0.255	95% Critical H Value (KM-Log)	1.822
KM Standard Error of Mean (logged)	0.0619	95% H-UCL (KM -Log)	10.08
KM SD (logged)	0.255	95% Critical H Value (KM-Log)	1.822
KM Standard Error of Mean (logged)	0.0619		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.862	Mean in Log Scale	2.127
SD in Original Scale	2.529	SD in Log Scale	0.384
95% t UCL (Assumes normality)	9.899	95% H-Stat UCL	10.79

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	9.901

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	3	Number of Non-Detects	15
Number of Distinct Detects	3	Number of Distinct Non-Detects	12
Minimum Detect	0.0175	Minimum Non-Detect	0.0177
Maximum Detect	0.152	Maximum Non-Detect	0.026
Variance Detects	0.00508	Percent Non-Detects	83.33%
Mean Detects	0.0711	SD Detects	0.0713
Median Detects	0.0439	CV Detects	1.002
Skewness Detects	1.469	Kurtosis Detects	N/A
Mean of Logged Detects	-3.018	SD of Logged Detects	1.085

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.89	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.315	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0264	KM Standard Error of Mean	0.00896
KM SD	0.031	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.042	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0412	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0533	95% KM Chebyshev UCL	0.0655
97.5% KM Chebyshev UCL	0.0824	99% KM Chebyshev UCL	0.116

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.477	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0482	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	8.862	nu star (bias corrected)	N/A
Mean (detects)	0.0711		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0218
Maximum	0.152	Median	0.01
SD	0.0337	CV	1.545
k hat (MLE)	1.341	k star (bias corrected MLE)	1.154
Theta hat (MLE)	0.0163	Theta star (bias corrected MLE)	0.0189
nu hat (MLE)	48.26	nu star (bias corrected)	41.55
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (41.55, α)	27.78	Adjusted Chi Square Value (41.55, β)	26.7
95% Gamma Approximate UCL (use when n>=50)	0.0326	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0264	SD (KM)	0.031
Variance (KM)	9.6383E-4	SE of Mean (KM)	0.00896
k hat (KM)	0.725	k star (KM)	0.641

nu hat (KM)	26.11	nu star (KM)	23.09
theta hat (KM)	0.0365	theta star (KM)	0.0412
80% gamma percentile (KM)	0.0436	90% gamma percentile (KM)	0.0677
95% gamma percentile (KM)	0.0929	99% gamma percentile (KM)	0.153

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (23.09, α)	13.16	Adjusted Chi Square Value (23.09, β)	12.44
95% Gamma Approximate KM-UCL (use when n>=50)	0.0464	95% Gamma Adjusted KM-UCL (use when n<50)	0.0491

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.993	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0255	Mean in Log Scale	-3.952
SD in Original Scale	0.0324	SD in Log Scale	0.614
95% t UCL (assumes normality of ROS data)	0.0388	95% Percentile Bootstrap UCL	0.0396
95% BCA Bootstrap UCL	0.0472	95% Bootstrap t UCL	0.108
95% H-UCL (Log ROS)	0.0319		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.874	KM Geo Mean	0.0208
KM SD (logged)	0.527	95% Critical H Value (KM-Log)	2.047
KM Standard Error of Mean (logged)	0.152	95% H-UCL (KM -Log)	0.031
KM SD (logged)	0.527	95% Critical H Value (KM-Log)	2.047
KM Standard Error of Mean (logged)	0.152		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0214	Mean in Log Scale	-4.238
SD in Original Scale	0.0335	SD in Log Scale	0.687
95% t UCL (Assumes normality)	0.0351	95% H-Stat UCL	0.0265

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.042

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Manganese

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	7	Number of Non-Detects	11
Number of Distinct Detects	7	Number of Distinct Non-Detects	11
Minimum Detect	0.175	Minimum Non-Detect	0.112
Maximum Detect	0.323	Maximum Non-Detect	0.163
Variance Detects	0.00325	Percent Non-Detects	61.11%
Mean Detects	0.221	SD Detects	0.057
Median Detects	0.192	CV Detects	0.258
Skewness Detects	1.168	Kurtosis Detects	0.217
Mean of Logged Detects	-1.537	SD of Logged Detects	0.24

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.829	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.264	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.154	KM Standard Error of Mean	0.0159
KM SD	0.0624	95% KM (BCA) UCL	0.185
95% KM (t) UCL	0.182	95% KM (Percentile Bootstrap) UCL	0.181
95% KM (z) UCL	0.18	95% KM Bootstrap t UCL	0.183
90% KM Chebyshev UCL	0.202	95% KM Chebyshev UCL	0.224
97.5% KM Chebyshev UCL	0.253	99% KM Chebyshev UCL	0.312

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.576	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.707	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.271	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.311	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	19.41	k star (bias corrected MLE)	11.18
Theta hat (MLE)	0.0114	Theta star (bias corrected MLE)	0.0197
nu hat (MLE)	271.7	nu star (bias corrected)	156.6
Mean (detects)	0.221		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.057	Mean	0.121
Maximum	0.323	Median	0.057
SD	0.0888	CV	0.736
k hat (MLE)	2.293	k star (bias corrected MLE)	1.948
Theta hat (MLE)	0.0526	Theta star (bias corrected MLE)	0.062
nu hat (MLE)	82.54	nu star (bias corrected)	70.12
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (70.12, α)	51.84	Adjusted Chi Square Value (70.12, β)	50.33
95% Gamma Approximate UCL (use when n>=50)	0.163	95% Gamma Adjusted UCL (use when n<50)	0.168

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.154	SD (KM)	0.0624
Variance (KM)	0.00389	SE of Mean (KM)	0.0159
k hat (KM)	6.115	k star (KM)	5.132

nu hat (KM)	220.1	nu star (KM)	184.8
theta hat (KM)	0.0252	theta star (KM)	0.0301
80% gamma percentile (KM)	0.207	90% gamma percentile (KM)	0.245
95% gamma percentile (KM)	0.281	99% gamma percentile (KM)	0.355

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (184.77, α)	154.3	Adjusted Chi Square Value (184.77, β)	151.7
95% Gamma Approximate KM-UCL (use when n>=50)	0.185	95% Gamma Adjusted KM-UCL (use when n<50)	0.188

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.85	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.253	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.147	Mean in Log Scale	-2.008
SD in Original Scale	0.0696	SD in Log Scale	0.412
95% t UCL (assumes normality of ROS data)	0.175	95% Percentile Bootstrap UCL	0.174
95% BCA Bootstrap UCL	0.179	95% Bootstrap t UCL	0.183
95% H-UCL (Log ROS)	0.177		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.936	KM Geo Mean	0.144
KM SD (logged)	0.347	95% Critical H Value (KM-Log)	1.888
KM Standard Error of Mean (logged)	0.0883	95% H-UCL (KM -Log)	0.18
KM SD (logged)	0.347	95% Critical H Value (KM-Log)	1.888
KM Standard Error of Mean (logged)	0.0883		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.129	Mean in Log Scale	-2.229
SD in Original Scale	0.0832	SD in Log Scale	0.597
95% t UCL (Assumes normality)	0.163	95% H-Stat UCL	0.175

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.182

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	0.101	Mean	0.294
Maximum	0.396	Median	0.294
SD	0.0791	Std. Error of Mean	0.0186
Coefficient of Variation	0.269	Skewness	-0.97

Normal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.326	95% Adjusted-CLT UCL (Chen-1995)	0.32
		95% Modified-t UCL (Johnson-1978)	0.325

Gamma GOF Test

A-D Test Statistic	0.917	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.233	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.86	k star (bias corrected MLE)	9.085
Theta hat (MLE)	0.0271	Theta star (bias corrected MLE)	0.0323
nu hat (MLE)	390.9	nu star (bias corrected)	327.1
MLE Mean (bias corrected)	0.294	MLE Sd (bias corrected)	0.0975
		Approximate Chi Square Value (0.05)	286.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	282.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.336	95% Adjusted Gamma UCL (use when n<50)	0.34

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.811	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.255	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.293	Mean of logged Data	-1.272
Maximum of Logged Data	-0.926	SD of logged Data	0.344

Assuming Lognormal Distribution

95% H-UCL	0.348	90% Chebyshev (MVUE) UCL	0.37
95% Chebyshev (MVUE) UCL	0.403	97.5% Chebyshev (MVUE) UCL	0.449
99% Chebyshev (MVUE) UCL	0.54		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.324	95% Jackknife UCL	0.326
95% Standard Bootstrap UCL	0.324	95% Bootstrap-t UCL	0.322

95% Hall's Bootstrap UCL	0.321	95% Percentile Bootstrap UCL	0.322
95% BCA Bootstrap UCL	0.321		
90% Chebyshev(Mean, Sd) UCL	0.35	95% Chebyshev(Mean, Sd) UCL	0.375
97.5% Chebyshev(Mean, Sd) UCL	0.41	99% Chebyshev(Mean, Sd) UCL	0.479

Suggested UCL to Use

95% Student's-t UCL 0.326

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Methyl Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.122	Mean	0.348
Maximum	0.467	Median	0.367
SD	0.097	Std. Error of Mean	0.0229
Coefficient of Variation	0.278	Skewness	-0.792

Normal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.172	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.388	95% Adjusted-CLT UCL (Chen-1995)	0.381
		95% Modified-t UCL (Johnson-1978)	0.387

Gamma GOF Test

A-D Test Statistic	0.745	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.217	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.52	k star (bias corrected MLE)	8.805
Theta hat (MLE)	0.0331	Theta star (bias corrected MLE)	0.0396
nu hat (MLE)	378.8	nu star (bias corrected)	317
MLE Mean (bias corrected)	0.348	MLE Sd (bias corrected)	0.117
		Approximate Chi Square Value (0.05)	276.7
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	273.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.399	95% Adjusted Gamma UCL (use when n<50)	0.404

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.841	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.236	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.104	Mean of logged Data	-1.103
Maximum of Logged Data	-0.761	SD of logged Data	0.346

Assuming Lognormal Distribution

95% H-UCL	0.413	90% Chebyshev (MVUE) UCL	0.439
95% Chebyshev (MVUE) UCL	0.478	97.5% Chebyshev (MVUE) UCL	0.533
99% Chebyshev (MVUE) UCL	0.641		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.386	95% Jackknife UCL	0.388
95% Standard Bootstrap UCL	0.385	95% Bootstrap-t UCL	0.383

95% Hall's Bootstrap UCL	0.382	95% Percentile Bootstrap UCL	0.382
95% BCA Bootstrap UCL	0.379		
90% Chebyshev(Mean, Sd) UCL	0.417	95% Chebyshev(Mean, Sd) UCL	0.448
97.5% Chebyshev(Mean, Sd) UCL	0.491	99% Chebyshev(Mean, Sd) UCL	0.576

Suggested UCL to Use

95% Student's-t UCL	0.388

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Selenium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.333	Mean	0.505
Maximum	0.678	Median	0.489
SD	0.0847	Std. Error of Mean	0.02
Coefficient of Variation	0.168	Skewness	0.444

Normal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.161	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.539	95% Adjusted-CLT UCL (Chen-1995)	0.54
		95% Modified-t UCL (Johnson-1978)	0.54

Gamma GOF Test

A-D Test Statistic	0.418	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	37.78	k star (bias corrected MLE)	31.52
Theta hat (MLE)	0.0134	Theta star (bias corrected MLE)	0.016
nu hat (MLE)	1360	nu star (bias corrected)	1135
MLE Mean (bias corrected)	0.505	MLE Sd (bias corrected)	0.0899
		Approximate Chi Square Value (0.05)	1058
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	1050

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.542	95% Adjusted Gamma UCL (use when n<50)	0.545

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.1	Mean of logged Data	-0.697
Maximum of Logged Data	-0.389	SD of logged Data	0.168

Assuming Lognormal Distribution

95% H-UCL	0.543	90% Chebyshev (MVUE) UCL	0.565
95% Chebyshev (MVUE) UCL	0.592	97.5% Chebyshev (MVUE) UCL	0.63
99% Chebyshev (MVUE) UCL	0.705		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.538	95% Jackknife UCL	0.539
95% Standard Bootstrap UCL	0.536	95% Bootstrap-t UCL	0.544

95% Hall's Bootstrap UCL	0.544	95% Percentile Bootstrap UCL	0.537
95% BCA Bootstrap UCL	0.537		
90% Chebyshev(Mean, Sd) UCL	0.565	95% Chebyshev(Mean, Sd) UCL	0.592
97.5% Chebyshev(Mean, Sd) UCL	0.629	99% Chebyshev(Mean, Sd) UCL	0.703

Suggested UCL to Use

95% Student's-t UCL	0.539

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Silver

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	15

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Silver was not processed!

Vanadium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	13
Minimum Detect	0.0219	Minimum Non-Detect	0.0204
Maximum Detect	0.0319	Maximum Non-Detect	0.03
Variance Detects	5.0000E-5	Percent Non-Detects	88.89%
Mean Detects	0.0269	SD Detects	0.00707
Median Detects	0.0269	CV Detects	0.263
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-3.633	SD of Logged Detects	0.266

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0213	KM Standard Error of Mean	9.2723E-4
KM SD	0.00263	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0229	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0228	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0241	95% KM Chebyshev UCL	0.0254
97.5% KM Chebyshev UCL	0.0271	99% KM Chebyshev UCL	0.0305

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	28.61	k star (bias corrected MLE)	N/A
Theta hat (MLE)	9.4032E-4	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	114.4	nu star (bias corrected)	N/A
Mean (detects)	0.0269		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0213	SD (KM)	0.00263
Variance (KM)	6.9217E-6	SE of Mean (KM)	9.2723E-4
k hat (KM)	65.68	k star (KM)	54.77
nu hat (KM)	2365	nu star (KM)	1972
theta hat (KM)	3.2463E-4	theta star (KM)	3.8929E-4
80% gamma percentile (KM)	0.0237	90% gamma percentile (KM)	0.0251
95% gamma percentile (KM)	0.0263	99% gamma percentile (KM)	0.0286

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (N/A, α)	1870	Adjusted Chi Square Value (N/A, β)	1860
95% Gamma Approximate KM-UCL (use when n>=50)	0.0225	95% Gamma Adjusted KM-UCL (use when n<50)	0.0226

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0149	Mean in Log Scale	-4.246
SD in Original Scale	0.00498	SD in Log Scale	0.261
95% t UCL (assumes normality of ROS data)	0.0169	95% Percentile Bootstrap UCL	0.0169
95% BCA Bootstrap UCL	0.0176	95% Bootstrap t UCL	0.0203
95% H-UCL (Log ROS)	0.0166		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.854	KM Geo Mean	0.0212
KM SD (logged)	0.103	95% Critical H Value (KM-Log)	1.734
KM Standard Error of Mean (logged)	0.0371	95% H-UCL (KM -Log)	0.0223
KM SD (logged)	0.103	95% Critical H Value (KM-Log)	1.734
KM Standard Error of Mean (logged)	0.0371		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0148	Mean in Log Scale	-4.253
SD in Original Scale	0.00503	SD in Log Scale	0.274
95% t UCL (Assumes normality)	0.0169	95% H-Stat UCL	0.0167

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0229	KM H-UCL	0.0223
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Zinc

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	13.1	Mean	16.49
Maximum	21.4	Median	16.6
SD	2.226	Std. Error of Mean	0.525
Coefficient of Variation	0.135	Skewness	0.429

Normal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.115	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	17.4	95% Adjusted-CLT UCL (Chen-1995)	17.41
		95% Modified-t UCL (Johnson-1978)	17.41

Gamma GOF Test

A-D Test Statistic	0.246	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.125	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	59.14	k star (bias corrected MLE)	49.32
Theta hat (MLE)	0.279	Theta star (bias corrected MLE)	0.334
nu hat (MLE)	2129	nu star (bias corrected)	1776
MLE Mean (bias corrected)	16.49	MLE Sd (bias corrected)	2.348
		Approximate Chi Square Value (0.05)	1679
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	1670

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	17.44	95% Adjusted Gamma UCL (use when n<50)	17.53

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.573	Mean of logged Data	2.794
Maximum of Logged Data	3.063	SD of logged Data	0.134

Assuming Lognormal Distribution

95% H-UCL	17.46	90% Chebyshev (MVUE) UCL	18.05
95% Chebyshev (MVUE) UCL	18.76	97.5% Chebyshev (MVUE) UCL	19.74
99% Chebyshev (MVUE) UCL	21.67		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	17.35	95% Jackknife UCL	17.4
95% Standard Bootstrap UCL	17.34	95% Bootstrap-t UCL	17.53

95% Hall's Bootstrap UCL	17.4	95% Percentile Bootstrap UCL	17.28
95% BCA Bootstrap UCL	17.37		
90% Chebyshev(Mean, Sd) UCL	18.06	95% Chebyshev(Mean, Sd) UCL	18.78
97.5% Chebyshev(Mean, Sd) UCL	19.77	99% Chebyshev(Mean, Sd) UCL	21.71

Suggested UCL to Use

95% Student's-t UCL 17.4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 3:44:28 PM
From File	fsh8_SVOC_wide2_flag_sep1_BF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzaldehyde was not processed!

Pyridine

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Pyridine was not processed!

Striped Bass

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 4:50:32 PM
From File	fsh1_dlc_wide2_flag_sep1_SB.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.2600E-7	Mean	2.9959E-6
Maximum	2.4450E-5	Median	6.4300E-7
SD	6.2026E-6	Std. Error of Mean	1.4620E-6
Coefficient of Variation	N/A	Skewness	3.025

Normal GOF Test

Shapiro Wilk Test Statistic	0.496	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.384	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.5391E-6	95% Adjusted-CLT UCL (Chen-1995)	6.5143E-6
		95% Modified-t UCL (Johnson-1978)	5.7128E-6

Gamma GOF Test

A-D Test Statistic	1.726	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.796	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.236	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.214	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.55	k star (bias corrected MLE)	0.495
Theta hat (MLE)	5.4456E-6	Theta star (bias corrected MLE)	6.0462E-6
nu hat (MLE)	19.81	nu star (bias corrected)	17.84
MLE Mean (bias corrected)	2.9959E-6	MLE Sd (bias corrected)	4.2560E-6
		Approximate Chi Square Value (0.05)	9.274
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	8.685

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.7625E-6	95% Adjusted Gamma UCL (use when n<50)	6.1533E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.884	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.3	Mean of logged Data	-13.86
Maximum of Logged Data	-10.62	SD of logged Data	1.368

Assuming Lognormal Distribution

95% H-UCL	7.1043E-6	90% Chebyshev (MVUE) UCL	4.7550E-6
95% Chebyshev (MVUE) UCL	5.8947E-6	97.5% Chebyshev (MVUE) UCL	7.4765E-6
99% Chebyshev (MVUE) UCL	1.0584E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.4006E-6	95% Jackknife UCL	5.5391E-6
95% Standard Bootstrap UCL	5.3268E-6	95% Bootstrap-t UCL	1.7546E-5
95% Hall's Bootstrap UCL	1.6000E-5	95% Percentile Bootstrap UCL	5.6016E-6
95% BCA Bootstrap UCL	6.8186E-6		
90% Chebyshev(Mean, Sd) UCL	7.3818E-6	95% Chebyshev(Mean, Sd) UCL	9.3685E-6
97.5% Chebyshev(Mean, Sd) UCL	1.2126E-5	99% Chebyshev(Mean, Sd) UCL	1.7542E-5

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	9.3685E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	11	Number of Non-Detects	7
Number of Distinct Detects	11	Number of Distinct Non-Detects	7
Minimum Detect	1.7400E-7	Minimum Non-Detect	7.6400E-8
Maximum Detect	1.1500E-6	Maximum Non-Detect	1.2400E-7
Variance Detects	1.057E-13	Percent Non-Detects	38.89%
Mean Detects	5.9714E-7	SD Detects	3.2506E-7
Median Detects	4.2700E-7	CV Detects	N/A
Skewness Detects	0.407	Kurtosis Detects	-1.28
Mean of Logged Detects	-14.48	SD of Logged Detects	0.599

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.9463E-7	KM Standard Error of Mean	8.6750E-8
KM SD	3.5092E-7	95% KM (BCA) UCL	5.3398E-7
95% KM (t) UCL	5.4554E-7	95% KM (Percentile Bootstrap) UCL	5.3818E-7
95% KM (z) UCL	5.3732E-7	95% KM Bootstrap t UCL	5.6950E-7
90% KM Chebyshev UCL	6.5488E-7	95% KM Chebyshev UCL	7.7276E-7
97.5% KM Chebyshev UCL	9.3638E-7	99% KM Chebyshev UCL	1.2578E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.375	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.733	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.203	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.257	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.457	k star (bias corrected MLE)	2.575
Theta hat (MLE)	1.7275E-7	Theta star (bias corrected MLE)	2.3194E-7
nu hat (MLE)	76.05	nu star (bias corrected)	56.64
Mean (detects)	5.9714E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.7400E-7	Mean	0.00389
Maximum	0.01	Median	9.3975E-7
SD	0.00502	CV	1.29
k hat (MLE)	0.151	k star (bias corrected MLE)	0.163
Theta hat (MLE)	0.0258	Theta star (bias corrected MLE)	0.0239
nu hat (MLE)	5.43	nu star (bias corrected)	5.858
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.86, α)	1.568	Adjusted Chi Square Value (5.86, β)	1.366
95% Gamma Approximate UCL (use when n>=50)	0.0145	95% Gamma Adjusted UCL (use when n<50)	0.0167

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.9463E-7	SD (KM)	3.5092E-7
Variance (KM)	1.231E-13	SE of Mean (KM)	8.6750E-8
k hat (KM)	1.265	k star (KM)	1.091

nu hat (KM)	45.53	nu star (KM)	39.27
theta hat (KM)	3.1206E-7	theta star (KM)	3.6175E-7
80% gamma percentile (KM)	6.3043E-7	90% gamma percentile (KM)	8.8937E-7
95% gamma percentile (KM)	1.1466E-6	99% gamma percentile (KM)	1.7400E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (39.27, α)	25.92	Adjusted Chi Square Value (39.27, β)	24.88
95% Gamma Approximate KM-UCL (use when n>=50)	5.9799E-7	95% Gamma Adjusted KM-UCL (use when n<50)	6.2299E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.1067E-7	Mean in Log Scale	-15.06
SD in Original Scale	3.4642E-7	SD in Log Scale	0.87
95% t UCL (assumes normality of ROS data)	5.5272E-7	95% Percentile Bootstrap UCL	5.3959E-7
95% BCA Bootstrap UCL	5.6637E-7	95% Bootstrap t UCL	5.8035E-7
95% H-UCL (Log ROS)	7.0944E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.22	KM Geo Mean	2.4467E-7
KM SD (logged)	1.03	95% Critical H Value (KM-Log)	2.682
KM Standard Error of Mean (logged)	0.255	95% H-UCL (KM -Log)	8.1328E-7
KM SD (logged)	1.03	95% Critical H Value (KM-Log)	2.682
KM Standard Error of Mean (logged)	0.255		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.8571E-7	Mean in Log Scale	-15.37
SD in Original Scale	3.6954E-7	SD in Log Scale	1.234
95% t UCL (Assumes normality)	5.3723E-7	95% H-Stat UCL	1.1123E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.4554E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	14	Number of Distinct Non-Detects	2
Minimum Detect	2.8400E-8	Minimum Non-Detect	2.5900E-8
Maximum Detect	4.4800E-7	Maximum Non-Detect	4.7100E-8
Variance Detects	1.167E-14	Percent Non-Detects	11.11%
Mean Detects	1.7390E-7	SD Detects	1.0801E-7
Median Detects	1.8658E-7	CV Detects	N/A
Skewness Detects	0.773	Kurtosis Detects	1.559
Mean of Logged Detects	-15.82	SD of Logged Detects	0.829

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.5767E-7	KM Standard Error of Mean	2.6478E-8
KM SD	1.0877E-7	95% KM (BCA) UCL	2.0112E-7
95% KM (t) UCL	2.0373E-7	95% KM (Percentile Bootstrap) UCL	1.9969E-7
95% KM (z) UCL	2.0122E-7	95% KM Bootstrap t UCL	2.1312E-7
90% KM Chebyshev UCL	2.3711E-7	95% KM Chebyshev UCL	2.7309E-7
97.5% KM Chebyshev UCL	3.2303E-7	99% KM Chebyshev UCL	4.2113E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.669	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.181	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.218	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.145	k star (bias corrected MLE)	1.784
Theta hat (MLE)	8.1083E-8	Theta star (bias corrected MLE)	9.7464E-8
nu hat (MLE)	68.63	nu star (bias corrected)	57.1
Mean (detects)	1.7390E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.8400E-8	Mean	0.00111
Maximum	0.01	Median	1.9858E-7
SD	0.00323	CV	2.91
k hat (MLE)	0.104	k star (bias corrected MLE)	0.124
Theta hat (MLE)	0.0107	Theta star (bias corrected MLE)	0.00898
nu hat (MLE)	3.745	nu star (bias corrected)	4.454
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.45, α)	0.909	Adjusted Chi Square Value (4.45, β)	0.769
95% Gamma Approximate UCL (use when n>=50)	0.00545	95% Gamma Adjusted UCL (use when n<50)	0.00644

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.5767E-7	SD (KM)	1.0877E-7
Variance (KM)	1.183E-14	SE of Mean (KM)	2.6478E-8
k hat (KM)	2.101	k star (KM)	1.788

nu hat (KM)	75.65	nu star (KM)	64.38
theta hat (KM)	7.5031E-8	theta star (KM)	8.8172E-8
80% gamma percentile (KM)	2.3916E-7	90% gamma percentile (KM)	3.1490E-7
95% gamma percentile (KM)	3.8763E-7	99% gamma percentile (KM)	5.5004E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (64.38, α)	46.92	Adjusted Chi Square Value (64.38, β)	45.49
95% Gamma Approximate KM-UCL (use when n>=50)	2.1635E-7	95% Gamma Adjusted KM-UCL (use when n<50)	2.2315E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.864	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.5788E-7	Mean in Log Scale	-15.99
SD in Original Scale	1.1171E-7	SD in Log Scale	0.939
95% t UCL (assumes normality of ROS data)	2.0369E-7	95% Percentile Bootstrap UCL	2.0296E-7
95% BCA Bootstrap UCL	2.0255E-7	95% Bootstrap t UCL	2.0945E-7
95% H-UCL (Log ROS)	3.1528E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.99	KM Geo Mean	1.1344E-7
KM SD (logged)	0.907	95% Critical H Value (KM-Log)	2.505
KM Standard Error of Mean (logged)	0.221	95% H-UCL (KM -Log)	2.9692E-7
KM SD (logged)	0.907	95% Critical H Value (KM-Log)	2.505
KM Standard Error of Mean (logged)	0.221		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.5661E-7	Mean in Log Scale	-16.04
SD in Original Scale	1.1327E-7	SD in Log Scale	1.027
95% t UCL (Assumes normality)	2.0305E-7	95% H-Stat UCL	3.5585E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.0373E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.3600E-8	Mean	1.4889E-7
Maximum	4.2750E-7	Median	1.0150E-7
SD	1.1606E-7	Std. Error of Mean	2.7355E-8
Coefficient of Variation	N/A	Skewness	1.568

Normal GOF Test

Shapiro Wilk Test Statistic	0.779	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.258	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.9648E-7	95% Adjusted-CLT UCL (Chen-1995)	2.0469E-7
		95% Modified-t UCL (Johnson-1978)	1.9816E-7

Gamma GOF Test

A-D Test Statistic	0.744	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.217	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.263	k star (bias corrected MLE)	1.923
Theta hat (MLE)	6.5798E-8	Theta star (bias corrected MLE)	7.7436E-8
nu hat (MLE)	81.46	nu star (bias corrected)	69.22
MLE Mean (bias corrected)	1.4889E-7	MLE Sd (bias corrected)	1.0738E-7
		Approximate Chi Square Value (0.05)	51.07
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	49.57

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2.0181E-7	95% Adjusted Gamma UCL (use when n<50)	2.0790E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.176	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.21	Mean of logged Data	-15.96
Maximum of Logged Data	-14.67	SD of logged Data	0.689

Assuming Lognormal Distribution

95% H-UCL	2.1617E-7	90% Chebyshev (MVUE) UCL	2.2252E-7
95% Chebyshev (MVUE) UCL	2.5688E-7	97.5% Chebyshev (MVUE) UCL	3.0457E-7
99% Chebyshev (MVUE) UCL	3.9825E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.9388E-7	95% Jackknife UCL	1.9648E-7
95% Standard Bootstrap UCL	1.9299E-7	95% Bootstrap-t UCL	2.1425E-7

95% Hall's Bootstrap UCL	2.0511E-7	95% Percentile Bootstrap UCL	1.9333E-7
95% BCA Bootstrap UCL	2.0151E-7		
90% Chebyshev(Mean, Sd) UCL	2.3095E-7	95% Chebyshev(Mean, Sd) UCL	2.6813E-7
97.5% Chebyshev(Mean, Sd) UCL	3.1972E-7	99% Chebyshev(Mean, Sd) UCL	4.2107E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 2.0790E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	11	Number of Non-Detects	7
Number of Distinct Detects	11	Number of Distinct Non-Detects	7
Minimum Detect	2.4500E-8	Minimum Non-Detect	2.7100E-8
Maximum Detect	1.6000E-7	Maximum Non-Detect	1.0800E-7
Variance Detects	2.744E-15	Percent Non-Detects	38.89%
Mean Detects	7.5123E-8	SD Detects	5.2385E-8
Median Detects	4.9500E-8	CV Detects	N/A
Skewness Detects	0.979	Kurtosis Detects	-0.843
Mean of Logged Detects	-16.61	SD of Logged Detects	0.668

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.786	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.294	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.7193E-8	KM Standard Error of Mean	1.1291E-8
KM SD	4.5388E-8	95% KM (BCA) UCL	7.7157E-8
95% KM (t) UCL	7.6835E-8	95% KM (Percentile Bootstrap) UCL	7.6483E-8
95% KM (z) UCL	7.5765E-8	95% KM Bootstrap t UCL	8.2280E-8
90% KM Chebyshev UCL	9.1065E-8	95% KM Chebyshev UCL	1.0641E-7
97.5% KM Chebyshev UCL	1.2770E-7	99% KM Chebyshev UCL	1.6953E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.723	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.251	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.258	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.557	k star (bias corrected MLE)	1.92
Theta hat (MLE)	2.9384E-8	Theta star (bias corrected MLE)	3.9127E-8
nu hat (MLE)	56.25	nu star (bias corrected)	42.24
Mean (detects)	7.5123E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.4500E-8	Mean	0.00389
Maximum	0.01	Median	1.5070E-7
SD	0.00502	CV	1.29
k hat (MLE)	0.124	k star (bias corrected MLE)	0.14
Theta hat (MLE)	0.0315	Theta star (bias corrected MLE)	0.0278
nu hat (MLE)	4.448	nu star (bias corrected)	5.04
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.04, α)	1.171	Adjusted Chi Square Value (5.04, β)	1.004
95% Gamma Approximate UCL (use when n>=50)	0.0167	95% Gamma Adjusted UCL (use when n<50)	0.0195

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.7193E-8	SD (KM)	4.5388E-8
Variance (KM)	2.060E-15	SE of Mean (KM)	1.1291E-8
k hat (KM)	1.588	k star (KM)	1.36

nu hat (KM)	57.16	nu star (KM)	48.97
theta hat (KM)	3.6019E-8	theta star (KM)	4.2046E-8
80% gamma percentile (KM)	8.9422E-8	90% gamma percentile (KM)	1.2207E-7
95% gamma percentile (KM)	1.5398E-7	99% gamma percentile (KM)	2.2650E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (48.97, α)	33.9	Adjusted Chi Square Value (48.97, β)	32.7
95% Gamma Approximate KM-UCL (use when n>=50)	8.2606E-8	95% Gamma Adjusted KM-UCL (use when n<50)	8.5642E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.894	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.211	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.6486E-8	Mean in Log Scale	-16.93
SD in Original Scale	4.6939E-8	SD in Log Scale	0.668
95% t UCL (assumes normality of ROS data)	7.5733E-8	95% Percentile Bootstrap UCL	7.5619E-8
95% BCA Bootstrap UCL	7.8282E-8	95% Bootstrap t UCL	8.3404E-8
95% H-UCL (Log ROS)	7.9060E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.91	KM Geo Mean	4.5119E-8
KM SD (logged)	0.642	95% Critical H Value (KM-Log)	2.171
KM Standard Error of Mean (logged)	0.162	95% H-UCL (KM -Log)	7.7744E-8
KM SD (logged)	0.642	95% Critical H Value (KM-Log)	2.171
KM Standard Error of Mean (logged)	0.162		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.5694E-8	Mean in Log Scale	-17
SD in Original Scale	4.8065E-8	SD in Log Scale	0.763
95% t UCL (Assumes normality)	7.5403E-8	95% H-Stat UCL	8.5359E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	8.5642E-8	95% GROS Adjusted Gamma UCL	0.0195

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.9400E-8	Mean	3.5932E-7
Maximum	4.5400E-6	Median	8.3750E-8
SD	1.0460E-6	Std. Error of Mean	2.4655E-7
Coefficient of Variation	N/A	Skewness	4.207

Normal GOF Test

Shapiro Wilk Test Statistic	0.306	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.454	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.8822E-7	95% Adjusted-CLT UCL (Chen-1995)	1.0261E-6
		95% Modified-t UCL (Johnson-1978)	8.2897E-7

Gamma GOF Test

A-D Test Statistic	3.416	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.795	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.358	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.214	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.563	k star (bias corrected MLE)	0.506
Theta hat (MLE)	6.3833E-7	Theta star (bias corrected MLE)	7.0994E-7
nu hat (MLE)	20.26	nu star (bias corrected)	18.22
MLE Mean (bias corrected)	3.5932E-7	MLE Sd (bias corrected)	5.0507E-7
		Approximate Chi Square Value (0.05)	9.55
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	8.952

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.8552E-7	95% Adjusted Gamma UCL (use when n<50)	7.3139E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.744	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.218	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.05	Mean of logged Data	-15.95
Maximum of Logged Data	-12.3	SD of logged Data	1.067

Assuming Lognormal Distribution

95% H-UCL	4.2518E-7	90% Chebyshev (MVUE) UCL	3.6918E-7
95% Chebyshev (MVUE) UCL	4.4575E-7	97.5% Chebyshev (MVUE) UCL	5.5204E-7
99% Chebyshev (MVUE) UCL	7.6081E-7		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	7.6486E-7	95% Jackknife UCL	7.8822E-7
95% Standard Bootstrap UCL	7.6018E-7	95% Bootstrap-t UCL	5.8329E-6

95% Hall's Bootstrap UCL	3.1266E-6	95% Percentile Bootstrap UCL	8.5203E-7
95% BCA Bootstrap UCL	1.1139E-6		
90% Chebyshev(Mean, Sd) UCL	1.0990E-6	95% Chebyshev(Mean, Sd) UCL	1.4340E-6
97.5% Chebyshev(Mean, Sd) UCL	1.8990E-6	99% Chebyshev(Mean, Sd) UCL	2.8125E-6

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1.4340E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0400E-7	Mean	3.1610E-6
Maximum	5.3400E-5	Median	1.8825E-7
SD	1.2538E-5	Std. Error of Mean	2.9553E-6
Coefficient of Variation	N/A	Skewness	4.242

Normal GOF Test

Shapiro Wilk Test Statistic	0.258	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.531	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.3020E-6	95% Adjusted-CLT UCL (Chen-1995)	1.1180E-5
		95% Modified-t UCL (Johnson-1978)	8.7945E-6

Gamma GOF Test

A-D Test Statistic	5.633	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.851	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.507	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.222	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.28	k star (bias corrected MLE)	0.271
Theta hat (MLE)	1.1270E-5	Theta star (bias corrected MLE)	1.1674E-5
nu hat (MLE)	10.1	nu star (bias corrected)	9.748
MLE Mean (bias corrected)	3.1610E-6	MLE Sd (bias corrected)	6.0746E-6
		Approximate Chi Square Value (0.05)	3.785
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	3.435

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.1411E-6	95% Adjusted Gamma UCL (use when n<50)	8.9700E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.494	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.312	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.08	Mean of logged Data	-15.15
Maximum of Logged Data	-9.838	SD of logged Data	1.373

Assuming Lognormal Distribution

95% H-UCL	1.9731E-6	90% Chebyshev (MVUE) UCL	1.3138E-6
95% Chebyshev (MVUE) UCL	1.6293E-6	97.5% Chebyshev (MVUE) UCL	2.0672E-6
99% Chebyshev (MVUE) UCL	2.9274E-6		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	8.0220E-6	95% Jackknife UCL	8.3020E-6
95% Standard Bootstrap UCL	7.9284E-6	95% Bootstrap-t UCL	6.4648E-4

95% Hall's Bootstrap UCL	2.7779E-4	95% Percentile Bootstrap UCL	9.0725E-6
95% BCA Bootstrap UCL	1.2024E-5		
90% Chebyshev(Mean, Sd) UCL	1.2027E-5	95% Chebyshev(Mean, Sd) UCL	1.6043E-5
97.5% Chebyshev(Mean, Sd) UCL	2.1617E-5	99% Chebyshev(Mean, Sd) UCL	3.2566E-5

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1.6043E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.6600E-7	Mean	1.9599E-6
Maximum	7.4700E-6	Median	1.5475E-6
SD	1.7901E-6	Std. Error of Mean	4.2194E-7
Coefficient of Variation	N/A	Skewness	2.339

Normal GOF Test

Shapiro Wilk Test Statistic	0.696	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.318	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.6939E-6	95% Adjusted-CLT UCL (Chen-1995)	2.9025E-6
		95% Modified-t UCL (Johnson-1978)	2.7327E-6

Gamma GOF Test

A-D Test Statistic	0.806	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.219	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.913	k star (bias corrected MLE)	1.631
Theta hat (MLE)	1.0244E-6	Theta star (bias corrected MLE)	1.2014E-6
nu hat (MLE)	68.88	nu star (bias corrected)	58.73
MLE Mean (bias corrected)	1.9599E-6	MLE Sd (bias corrected)	1.5344E-6
		Approximate Chi Square Value (0.05)	42.11
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	40.76

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.7334E-6	95% Adjusted Gamma UCL (use when n<50)	2.8239E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.14	Mean of logged Data	-13.43
Maximum of Logged Data	-11.8	SD of logged Data	0.76

Assuming Lognormal Distribution

95% H-UCL	3.0152E-6	90% Chebyshev (MVUE) UCL	3.0428E-6
95% Chebyshev (MVUE) UCL	3.5464E-6	97.5% Chebyshev (MVUE) UCL	4.2454E-6
99% Chebyshev (MVUE) UCL	5.6183E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.6539E-6	95% Jackknife UCL	2.6939E-6
95% Standard Bootstrap UCL	2.6485E-6	95% Bootstrap-t UCL	3.7101E-6

95% Hall's Bootstrap UCL	6.8162E-6	95% Percentile Bootstrap UCL	2.7344E-6
95% BCA Bootstrap UCL	2.9375E-6		
90% Chebyshev(Mean, Sd) UCL	3.2257E-6	95% Chebyshev(Mean, Sd) UCL	3.7991E-6
97.5% Chebyshev(Mean, Sd) UCL	4.5949E-6	99% Chebyshev(Mean, Sd) UCL	6.1582E-6

Suggested UCL to Use

95% H-UCL 3.0152E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.1800E-7	Mean	1.8157E-6
Maximum	3.8400E-6	Median	1.5500E-6
SD	9.4659E-7	Std. Error of Mean	2.2311E-7
Coefficient of Variation	N/A	Skewness	1.051

Normal GOF Test

Shapiro Wilk Test Statistic	0.878	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.2039E-6	95% Adjusted-CLT UCL (Chen-1995)	2.2418E-6
		95% Modified-t UCL (Johnson-1978)	2.2131E-6

Gamma GOF Test

A-D Test Statistic	0.554	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.181	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.871	k star (bias corrected MLE)	3.263
Theta hat (MLE)	4.6902E-7	Theta star (bias corrected MLE)	5.5644E-7
nu hat (MLE)	139.4	nu star (bias corrected)	117.5
MLE Mean (bias corrected)	1.8157E-6	MLE Sd (bias corrected)	1.0052E-6
		Approximate Chi Square Value (0.05)	93.45
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	91.39

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.2825E-6	95% Adjusted Gamma UCL (use when n<50)	2.3339E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.896	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.209	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.96	Mean of logged Data	-13.35
Maximum of Logged Data	-12.47	SD of logged Data	0.567

Assuming Lognormal Distribution

95% H-UCL	2.4850E-6	90% Chebyshev (MVUE) UCL	2.6178E-6
95% Chebyshev (MVUE) UCL	2.9677E-6	97.5% Chebyshev (MVUE) UCL	3.4533E-6
99% Chebyshev (MVUE) UCL	4.4073E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.1827E-6	95% Jackknife UCL	2.2039E-6
95% Standard Bootstrap UCL	2.1687E-6	95% Bootstrap-t UCL	2.2976E-6

95% Hall's Bootstrap UCL	2.2663E-6	95% Percentile Bootstrap UCL	2.1886E-6
95% BCA Bootstrap UCL	2.2297E-6		
90% Chebyshev(Mean, Sd) UCL	2.4851E-6	95% Chebyshev(Mean, Sd) UCL	2.7882E-6
97.5% Chebyshev(Mean, Sd) UCL	3.2091E-6	99% Chebyshev(Mean, Sd) UCL	4.0357E-6

Suggested UCL to Use

95% Student's-t UCL 2.2039E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.0900E-7	Mean	1.4849E-6
Maximum	7.2650E-6	Median	8.6650E-7
SD	1.7302E-6	Std. Error of Mean	4.0782E-7
Coefficient of Variation	N/A	Skewness	2.743

Normal GOF Test

Shapiro Wilk Test Statistic	0.615	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.321	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1943E-6	95% Adjusted-CLT UCL (Chen-1995)	2.4374E-6
		95% Modified-t UCL (Johnson-1978)	2.2383E-6

Gamma GOF Test

A-D Test Statistic	1.065	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.757	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.208	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.487	k star (bias corrected MLE)	1.276
Theta hat (MLE)	9.9849E-7	Theta star (bias corrected MLE)	1.1634E-6
nu hat (MLE)	53.54	nu star (bias corrected)	45.95
MLE Mean (bias corrected)	1.4849E-6	MLE Sd (bias corrected)	1.3144E-6
		Approximate Chi Square Value (0.05)	31.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	30.24

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1731E-6	95% Adjusted Gamma UCL (use when n<50)	2.2560E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.139	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.99	Mean of logged Data	-13.79
Maximum of Logged Data	-11.83	SD of logged Data	0.803

Assuming Lognormal Distribution

95% H-UCL	2.2393E-6	90% Chebyshev (MVUE) UCL	2.2266E-6
95% Chebyshev (MVUE) UCL	2.6097E-6	97.5% Chebyshev (MVUE) UCL	3.1415E-6
99% Chebyshev (MVUE) UCL	4.1859E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.1557E-6	95% Jackknife UCL	2.1943E-6
95% Standard Bootstrap UCL	2.1418E-6	95% Bootstrap-t UCL	3.7568E-6

95% Hall's Bootstrap UCL	5.5864E-6	95% Percentile Bootstrap UCL	2.2127E-6
95% BCA Bootstrap UCL	2.4589E-6		
90% Chebyshev(Mean, Sd) UCL	2.7084E-6	95% Chebyshev(Mean, Sd) UCL	3.2625E-6
97.5% Chebyshev(Mean, Sd) UCL	4.0317E-6	99% Chebyshev(Mean, Sd) UCL	5.5427E-6

Suggested UCL to Use

95% H-UCL 2.2393E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	14	Number of Distinct Non-Detects	4
Minimum Detect	2.5500E-8	Minimum Non-Detect	2.9400E-8
Maximum Detect	9.7150E-7	Maximum Non-Detect	3.9500E-8
Variance Detects	6.966E-14	Percent Non-Detects	22.22%
Mean Detects	2.0035E-7	SD Detects	2.6393E-7
Median Detects	9.8300E-8	CV Detects	N/A
Skewness Detects	2.417	Kurtosis Detects	5.713
Mean of Logged Detects	-15.95	SD of Logged Detects	0.988

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.639	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.348	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.6150E-7	KM Standard Error of Mean	5.7673E-8
KM SD	2.3578E-7	95% KM (BCA) UCL	2.6564E-7
95% KM (t) UCL	2.6182E-7	95% KM (Percentile Bootstrap) UCL	2.6662E-7
95% KM (z) UCL	2.5636E-7	95% KM Bootstrap t UCL	4.7949E-7
90% KM Chebyshev UCL	3.3451E-7	95% KM Chebyshev UCL	4.1289E-7
97.5% KM Chebyshev UCL	5.2166E-7	99% KM Chebyshev UCL	7.3533E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.912	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.247	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.235	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.082	k star (bias corrected MLE)	0.897
Theta hat (MLE)	1.8525E-7	Theta star (bias corrected MLE)	2.2326E-7
nu hat (MLE)	30.28	nu star (bias corrected)	25.13
Mean (detects)	2.0035E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.5500E-8	Mean	0.00222
Maximum	0.01	Median	1.3050E-7
SD	0.00428	CV	1.925
k hat (MLE)	0.11	k star (bias corrected MLE)	0.128
Theta hat (MLE)	0.0203	Theta star (bias corrected MLE)	0.0173
nu hat (MLE)	3.946	nu star (bias corrected)	4.622
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.62, α)	0.982	Adjusted Chi Square Value (4.62, β)	0.834
95% Gamma Approximate UCL (use when n>=50)	0.0105	95% Gamma Adjusted UCL (use when n<50)	0.0123

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.6150E-7	SD (KM)	2.3578E-7
Variance (KM)	5.559E-14	SE of Mean (KM)	5.7673E-8
k hat (KM)	0.469	k star (KM)	0.428

nu hat (KM)	16.89	nu star (KM)	15.41
theta hat (KM)	3.4424E-7	theta star (KM)	3.7734E-7
80% gamma percentile (KM)	2.6249E-7	90% gamma percentile (KM)	4.5058E-7
95% gamma percentile (KM)	6.5541E-7	99% gamma percentile (KM)	1.1669E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (15.41, α)	7.546	Adjusted Chi Square Value (15.41, β)	7.022
95% Gamma Approximate KM-UCL (use when n>=50)	3.2975E-7	95% Gamma Adjusted KM-UCL (use when n<50)	3.5435E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.167	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.5991E-7	Mean in Log Scale	-16.37
SD in Original Scale	2.4358E-7	SD in Log Scale	1.174
95% t UCL (assumes normality of ROS data)	2.5979E-7	95% Percentile Bootstrap UCL	2.6149E-7
95% BCA Bootstrap UCL	2.9668E-7	95% Bootstrap t UCL	4.6022E-7
95% H-UCL (Log ROS)	3.5560E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.29	KM Geo Mean	8.3982E-8
KM SD (logged)	1.054	95% Critical H Value (KM-Log)	2.717
KM Standard Error of Mean (logged)	0.258	95% H-UCL (KM -Log)	2.9305E-7
KM SD (logged)	1.054	95% Critical H Value (KM-Log)	2.717
KM Standard Error of Mean (logged)	0.258		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.5947E-7	Mean in Log Scale	-16.39
SD in Original Scale	2.4385E-7	SD in Log Scale	1.212
95% t UCL (Assumes normality)	2.5946E-7	95% H-Stat UCL	3.7795E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 2.9305E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.2100E-8	Mean	5.0796E-7
Maximum	2.9150E-6	Median	3.1750E-7
SD	6.9341E-7	Std. Error of Mean	1.6344E-7
Coefficient of Variation	N/A	Skewness	2.859

Normal GOF Test

Shapiro Wilk Test Statistic	0.617	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.9228E-7	95% Adjusted-CLT UCL (Chen-1995)	8.9449E-7
		95% Modified-t UCL (Johnson-1978)	8.1063E-7

Gamma GOF Test

A-D Test Statistic	0.773	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.766	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.243	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.022	k star (bias corrected MLE)	0.889
Theta hat (MLE)	4.9680E-7	Theta star (bias corrected MLE)	5.7132E-7
nu hat (MLE)	36.81	nu star (bias corrected)	32.01
MLE Mean (bias corrected)	5.0796E-7	MLE Sd (bias corrected)	5.3871E-7
		Approximate Chi Square Value (0.05)	20.08
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	19.17

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.0976E-7	95% Adjusted Gamma UCL (use when n<50)	8.4799E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.164	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.98	Mean of logged Data	-15.06
Maximum of Logged Data	-12.75	SD of logged Data	1.051

Assuming Lognormal Distribution

95% H-UCL	1.0043E-6	90% Chebyshev (MVUE) UCL	8.8076E-7
95% Chebyshev (MVUE) UCL	1.0618E-6	97.5% Chebyshev (MVUE) UCL	1.3131E-6
99% Chebyshev (MVUE) UCL	1.8068E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.7679E-7	95% Jackknife UCL	7.9228E-7
95% Standard Bootstrap UCL	7.7045E-7	95% Bootstrap-t UCL	1.2162E-6

95% Hall's Bootstrap UCL	1.8305E-6	95% Percentile Bootstrap UCL	7.8718E-7
95% BCA Bootstrap UCL	9.0883E-7		
90% Chebyshev(Mean, Sd) UCL	9.9827E-7	95% Chebyshev(Mean, Sd) UCL	1.2204E-6
97.5% Chebyshev(Mean, Sd) UCL	1.5286E-6	99% Chebyshev(Mean, Sd) UCL	2.1342E-6

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1.2204E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.5800E-8	Mean	9.3678E-8
Maximum	2.3800E-7	Median	8.2600E-8
SD	5.3606E-8	Std. Error of Mean	1.2635E-8
Coefficient of Variation	N/A	Skewness	1.35

Normal GOF Test

Shapiro Wilk Test Statistic	0.866	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.238	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.1566E-7	95% Adjusted-CLT UCL (Chen-1995)	1.1876E-7
		95% Modified-t UCL (Johnson-1978)	1.1633E-7

Gamma GOF Test

A-D Test Statistic	0.386	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.167	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.768	k star (bias corrected MLE)	3.177
Theta hat (MLE)	2.4864E-8	Theta star (bias corrected MLE)	2.9489E-8
nu hat (MLE)	135.6	nu star (bias corrected)	114.4
MLE Mean (bias corrected)	9.3678E-8	MLE Sd (bias corrected)	5.2559E-8
		Approximate Chi Square Value (0.05)	90.67
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	88.65

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.1815E-7	95% Adjusted Gamma UCL (use when n<50)	1.2085E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.137	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.15	Mean of logged Data	-16.32
Maximum of Logged Data	-15.25	SD of logged Data	0.536

Assuming Lognormal Distribution

95% H-UCL	1.2298E-7	90% Chebyshev (MVUE) UCL	1.3004E-7
95% Chebyshev (MVUE) UCL	1.4667E-7	97.5% Chebyshev (MVUE) UCL	1.6976E-7
99% Chebyshev (MVUE) UCL	2.1512E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.1446E-7	95% Jackknife UCL	1.1566E-7
95% Standard Bootstrap UCL	1.1417E-7	95% Bootstrap-t UCL	1.2218E-7

95% Hall's Bootstrap UCL	1.2386E-7	95% Percentile Bootstrap UCL	1.1478E-7
95% BCA Bootstrap UCL	1.1813E-7		
90% Chebyshev(Mean, Sd) UCL	1.3158E-7	95% Chebyshev(Mean, Sd) UCL	1.4875E-7
97.5% Chebyshev(Mean, Sd) UCL	1.7258E-7	99% Chebyshev(Mean, Sd) UCL	2.1940E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 1.2085E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	11	Number of Non-Detects	7
Number of Distinct Detects	11	Number of Distinct Non-Detects	7
Minimum Detect	2.5500E-8	Minimum Non-Detect	2.6300E-8
Maximum Detect	2.7000E-7	Maximum Non-Detect	3.9700E-8
Variance Detects	6.042E-15	Percent Non-Detects	38.89%
Mean Detects	9.6677E-8	SD Detects	7.7732E-8
Median Detects	5.6200E-8	CV Detects	N/A
Skewness Detects	1.305	Kurtosis Detects	1.091
Mean of Logged Detects	-16.43	SD of Logged Detects	0.771

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.843	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.244	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.9206E-8	KM Standard Error of Mean	1.6669E-8
KM SD	6.7414E-8	95% KM (BCA) UCL	9.8483E-8
95% KM (t) UCL	9.8203E-8	95% KM (Percentile Bootstrap) UCL	9.6219E-8
95% KM (z) UCL	9.6624E-8	95% KM Bootstrap t UCL	1.1253E-7
90% KM Chebyshev UCL	1.1921E-7	95% KM Chebyshev UCL	1.4186E-7
97.5% KM Chebyshev UCL	1.7330E-7	99% KM Chebyshev UCL	2.3506E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.414	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.219	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.259	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.97	k star (bias corrected MLE)	1.493
Theta hat (MLE)	4.9087E-8	Theta star (bias corrected MLE)	6.4755E-8
nu hat (MLE)	43.33	nu star (bias corrected)	32.85
Mean (detects)	9.6677E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.5500E-8	Mean	0.00389
Maximum	0.01	Median	1.7075E-7
SD	0.00502	CV	1.29
k hat (MLE)	0.126	k star (bias corrected MLE)	0.142
Theta hat (MLE)	0.031	Theta star (bias corrected MLE)	0.0275
nu hat (MLE)	4.518	nu star (bias corrected)	5.099
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.10, α)	1.198	Adjusted Chi Square Value (5.10, β)	1.029
95% Gamma Approximate UCL (use when n>=50)	0.0166	95% Gamma Adjusted UCL (use when n<50)	0.0193

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.9206E-8	SD (KM)	6.7414E-8
Variance (KM)	4.545E-15	SE of Mean (KM)	1.6669E-8
k hat (KM)	1.054	k star (KM)	0.915

nu hat (KM)	37.94	nu star (KM)	32.95
theta hat (KM)	6.5668E-8	theta star (KM)	7.5613E-8
80% gamma percentile (KM)	1.1214E-7	90% gamma percentile (KM)	1.6286E-7
95% gamma percentile (KM)	2.1394E-7	99% gamma percentile (KM)	3.3333E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (32.95, α)	20.83	Adjusted Chi Square Value (32.95, β)	19.9
95% Gamma Approximate KM-UCL (use when n>=50)	1.0949E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.1457E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.6185E-8	Mean in Log Scale	-16.97
SD in Original Scale	7.1431E-8	SD in Log Scale	0.918
95% t UCL (assumes normality of ROS data)	9.5473E-8	95% Percentile Bootstrap UCL	9.5194E-8
95% BCA Bootstrap UCL	1.0261E-7	95% Bootstrap t UCL	1.0998E-7
95% H-UCL (Log ROS)	1.1405E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.83	KM Geo Mean	4.9012E-8
KM SD (logged)	0.768	95% Critical H Value (KM-Log)	2.321
KM Standard Error of Mean (logged)	0.19	95% H-UCL (KM -Log)	1.0143E-7
KM SD (logged)	0.768	95% Critical H Value (KM-Log)	2.321
KM Standard Error of Mean (logged)	0.19		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	6.5219E-8	Mean in Log Scale	-17.03
SD in Original Scale	7.2132E-8	SD in Log Scale	0.98
95% t UCL (Assumes normality)	9.4796E-8	95% H-Stat UCL	1.2099E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 9.8203E-8

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.9200E-7	Mean	1.3557E-6
Maximum	8.6000E-6	Median	8.3750E-7
SD	1.9019E-6	Std. Error of Mean	4.4829E-7
Coefficient of Variation	N/A	Skewness	3.622

Normal GOF Test

Shapiro Wilk Test Statistic	0.512	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.315	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1355E-6	95% Adjusted-CLT UCL (Chen-1995)	2.5020E-6
		95% Modified-t UCL (Johnson-1978)	2.1993E-6

Gamma GOF Test

A-D Test Statistic	1.172	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.76	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.221	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.306	k star (bias corrected MLE)	1.126
Theta hat (MLE)	1.0378E-6	Theta star (bias corrected MLE)	1.2044E-6
nu hat (MLE)	47.03	nu star (bias corrected)	40.52
MLE Mean (bias corrected)	1.3557E-6	MLE Sd (bias corrected)	1.2778E-6
		Approximate Chi Square Value (0.05)	26.94
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	25.87

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.0395E-6	95% Adjusted Gamma UCL (use when n<50)	2.1232E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.938	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.152	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.47	Mean of logged Data	-13.94
Maximum of Logged Data	-11.66	SD of logged Data	0.844

Assuming Lognormal Distribution

95% H-UCL	2.0689E-6	90% Chebyshev (MVUE) UCL	2.0246E-6
95% Chebyshev (MVUE) UCL	2.3851E-6	97.5% Chebyshev (MVUE) UCL	2.8855E-6
99% Chebyshev (MVUE) UCL	3.8684E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0930E-6	95% Jackknife UCL	2.1355E-6
95% Standard Bootstrap UCL	2.0875E-6	95% Bootstrap-t UCL	4.1227E-6

95% Hall's Bootstrap UCL	5.0160E-6	95% Percentile Bootstrap UCL	2.1766E-6
95% BCA Bootstrap UCL	2.6758E-6		
90% Chebyshev(Mean, Sd) UCL	2.7005E-6	95% Chebyshev(Mean, Sd) UCL	3.3097E-6
97.5% Chebyshev(Mean, Sd) UCL	4.1553E-6	99% Chebyshev(Mean, Sd) UCL	5.8161E-6

Suggested UCL to Use

95% H-UCL 2.0689E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	11	Number of Non-Detects	7
Number of Distinct Detects	11	Number of Distinct Non-Detects	7
Minimum Detect	6.1000E-8	Minimum Non-Detect	4.0000E-8
Maximum Detect	1.6200E-7	Maximum Non-Detect	2.1500E-7
Variance Detects	1.101E-15	Percent Non-Detects	38.89%
Mean Detects	1.0868E-7	SD Detects	3.3185E-8
Median Detects	1.0100E-7	CV Detects	N/A
Skewness Detects	0.382	Kurtosis Detects	-0.803
Mean of Logged Detects	-16.08	SD of Logged Detects	0.312

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.0851E-8	KM Standard Error of Mean	1.0121E-8
KM SD	3.7849E-8	95% KM (BCA) UCL	1.0851E-7
95% KM (t) UCL	1.0846E-7	95% KM (Percentile Bootstrap) UCL	1.0610E-7
95% KM (z) UCL	1.0750E-7	95% KM Bootstrap t UCL	1.0783E-7
90% KM Chebyshev UCL	1.2121E-7	95% KM Chebyshev UCL	1.3497E-7
97.5% KM Chebyshev UCL	1.5406E-7	99% KM Chebyshev UCL	1.9155E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.278	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.729	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.183	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.255	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	11.71	k star (bias corrected MLE)	8.58
Theta hat (MLE)	9.2777E-9	Theta star (bias corrected MLE)	1.2667E-8
nu hat (MLE)	257.7	nu star (bias corrected)	188.8
Mean (detects)	1.0868E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.1000E-8	Mean	0.00389
Maximum	0.01	Median	1.4630E-7
SD	0.00502	CV	1.29
k hat (MLE)	0.129	k star (bias corrected MLE)	0.145
Theta hat (MLE)	0.0301	Theta star (bias corrected MLE)	0.0268
nu hat (MLE)	4.658	nu star (bias corrected)	5.215
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (5.21, α)	1.253	Adjusted Chi Square Value (5.21, β)	1.078
95% Gamma Approximate UCL (use when n>=50)	0.0162	95% Gamma Adjusted UCL (use when n<50)	0.0188

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.0851E-8	SD (KM)	3.7849E-8
Variance (KM)	1.433E-15	SE of Mean (KM)	1.0121E-8
k hat (KM)	5.762	k star (KM)	4.838

nu hat (KM)	207.4	nu star (KM)	174.2
theta hat (KM)	1.5768E-8	theta star (KM)	1.8777E-8
80% gamma percentile (KM)	1.2257E-7	90% gamma percentile (KM)	1.4616E-7
95% gamma percentile (KM)	1.6769E-7	99% gamma percentile (KM)	2.1325E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (174.18, α)	144.7	Adjusted Chi Square Value (174.18, β)	142.1
95% Gamma Approximate KM-UCL (use when n>=50)	1.0939E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.1138E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.2733E-8	Mean in Log Scale	-16.25
SD in Original Scale	3.3855E-8	SD in Log Scale	0.355
95% t UCL (assumes normality of ROS data)	1.0661E-7	95% Percentile Bootstrap UCL	1.0598E-7
95% BCA Bootstrap UCL	1.0748E-7	95% Bootstrap t UCL	1.0805E-7
95% H-UCL (Log ROS)	1.0946E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.31	KM Geo Mean	8.2529E-8
KM SD (logged)	0.454	95% Critical H Value (KM-Log)	1.978
KM Standard Error of Mean (logged)	0.125	95% H-UCL (KM -Log)	1.1370E-7
KM SD (logged)	0.454	95% Critical H Value (KM-Log)	1.978
KM Standard Error of Mean (logged)	0.125		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.6142E-8	Mean in Log Scale	-16.42
SD in Original Scale	4.2534E-8	SD in Log Scale	0.609
95% t UCL (Assumes normality)	1.0358E-7	95% H-Stat UCL	1.2258E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.0846E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.9900E-8	Mean	1.4041E-7
Maximum	4.8700E-7	Median	1.0950E-7
SD	1.0553E-7	Std. Error of Mean	2.4873E-8
Coefficient of Variation	N/A	Skewness	2.341

Normal GOF Test

Shapiro Wilk Test Statistic	0.75	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.221	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.8368E-7	95% Adjusted-CLT UCL (Chen-1995)	1.9599E-7
		95% Modified-t UCL (Johnson-1978)	1.8597E-7

Gamma GOF Test

A-D Test Statistic	0.507	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.157	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.801	k star (bias corrected MLE)	2.372
Theta hat (MLE)	5.0121E-8	Theta star (bias corrected MLE)	5.9206E-8
nu hat (MLE)	100.9	nu star (bias corrected)	85.38
MLE Mean (bias corrected)	1.4041E-7	MLE Sd (bias corrected)	9.1176E-8
		Approximate Chi Square Value (0.05)	65.08
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	63.38

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.8420E-7	95% Adjusted Gamma UCL (use when n<50)	1.8914E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.113	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.81	Mean of logged Data	-15.97
Maximum of Logged Data	-14.54	SD of logged Data	0.596

Assuming Lognormal Distribution

95% H-UCL	1.8863E-7	90% Chebyshev (MVUE) UCL	1.9787E-7
95% Chebyshev (MVUE) UCL	2.2532E-7	97.5% Chebyshev (MVUE) UCL	2.6342E-7
99% Chebyshev (MVUE) UCL	3.3826E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.8132E-7	95% Jackknife UCL	1.8368E-7
95% Standard Bootstrap UCL	1.8018E-7	95% Bootstrap-t UCL	2.1435E-7

95% Hall's Bootstrap UCL	3.6545E-7	95% Percentile Bootstrap UCL	1.8412E-7
95% BCA Bootstrap UCL	2.0028E-7		
90% Chebyshev(Mean, Sd) UCL	2.1503E-7	95% Chebyshev(Mean, Sd) UCL	2.4883E-7
97.5% Chebyshev(Mean, Sd) UCL	2.9574E-7	99% Chebyshev(Mean, Sd) UCL	3.8789E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 1.8914E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	7.9800E-5	Mean	4.1259E-4
Maximum	0.00296	Median	1.8900E-4
SD	7.0399E-4	Std. Error of Mean	1.6593E-4
Coefficient of Variation	1.706	Skewness	3.293

Normal GOF Test

Shapiro Wilk Test Statistic	0.452	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.445	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.0125E-4	95% Adjusted-CLT UCL (Chen-1995)	8.2315E-4
		95% Modified-t UCL (Johnson-1978)	7.2271E-4

Gamma GOF Test

A-D Test Statistic	2.841	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.766	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.375	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.012	k star (bias corrected MLE)	0.88
Theta hat (MLE)	4.0786E-4	Theta star (bias corrected MLE)	4.6883E-4
nu hat (MLE)	36.42	nu star (bias corrected)	31.68
MLE Mean (bias corrected)	4.1259E-4	MLE Sd (bias corrected)	4.3981E-4
		Approximate Chi Square Value (0.05)	19.82
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	18.92

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.5952E-4	95% Adjusted Gamma UCL (use when n<50)	6.9085E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.766	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.295	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.436	Mean of logged Data	-8.363
Maximum of Logged Data	-5.824	SD of logged Data	0.875

Assuming Lognormal Distribution

95% H-UCL	5.7701E-4	90% Chebyshev (MVUE) UCL	5.5727E-4
95% Chebyshev (MVUE) UCL	6.5894E-4	97.5% Chebyshev (MVUE) UCL	8.0005E-4
99% Chebyshev (MVUE) UCL	0.00108		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	6.8552E-4	95% Jackknife UCL	7.0125E-4
95% Standard Bootstrap UCL	6.8540E-4	95% Bootstrap-t UCL	0.00313

95% Hall's Bootstrap UCL	0.00251	95% Percentile Bootstrap UCL	7.1007E-4
95% BCA Bootstrap UCL	8.1686E-4		
90% Chebyshev(Mean, Sd) UCL	9.1039E-4	95% Chebyshev(Mean, Sd) UCL	0.00114
97.5% Chebyshev(Mean, Sd) UCL	0.00145	99% Chebyshev(Mean, Sd) UCL	0.00206

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 0.00114

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	17	Number of Distinct Observations	15
		Number of Missing Observations	1
Number of Detects	7	Number of Non-Detects	10
Number of Distinct Detects	7	Number of Distinct Non-Detects	8
Minimum Detect	5.1000E-6	Minimum Non-Detect	1.7300E-6
Maximum Detect	7.3200E-5	Maximum Non-Detect	8.8700E-6
Variance Detects	5.794E-10	Percent Non-Detects	58.82%
Mean Detects	1.9331E-5	SD Detects	2.4070E-5
Median Detects	1.1100E-5	CV Detects	N/A
Skewness Detects	2.503	Kurtosis Detects	6.423
Mean of Logged Detects	-11.26	SD of Logged Detects	0.866

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.606	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.42	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.2482E-6	KM Standard Error of Mean	4.3708E-6
KM SD	1.6643E-5	95% KM (BCA) UCL	1.7532E-5
95% KM (t) UCL	1.6879E-5	95% KM (Percentile Bootstrap) UCL	1.7184E-5
95% KM (z) UCL	1.6438E-5	95% KM Bootstrap t UCL	2.9405E-5
90% KM Chebyshev UCL	2.2361E-5	95% KM Chebyshev UCL	2.8300E-5
97.5% KM Chebyshev UCL	3.6544E-5	99% KM Chebyshev UCL	5.2737E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.788	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.723	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.339	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.318	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.361	k star (bias corrected MLE)	0.873
Theta hat (MLE)	1.4206E-5	Theta star (bias corrected MLE)	2.2148E-5
nu hat (MLE)	19.05	nu star (bias corrected)	12.22
Mean (detects)	1.9331E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.1000E-6	Mean	0.00589
Maximum	0.01	Median	0.01
SD	0.00506	CV	0.86
k hat (MLE)	0.31	k star (bias corrected MLE)	0.294
Theta hat (MLE)	0.019	Theta star (bias corrected MLE)	0.02
nu hat (MLE)	10.54	nu star (bias corrected)	10.01
Adjusted Level of Significance (β)	0.0346		
Approximate Chi Square Value (10.01, α)	3.95	Adjusted Chi Square Value (10.01, β)	3.559
95% Gamma Approximate UCL (use when n>=50)	0.0149	95% Gamma Adjusted UCL (use when n<50)	0.0166

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.2482E-6	SD (KM)	1.6643E-5
Variance (KM)	2.770E-10	SE of Mean (KM)	4.3708E-6

k hat (KM)	0.309	k star (KM)	0.293
nu hat (KM)	10.5	nu star (KM)	9.979
theta hat (KM)	2.9952E-5	theta star (KM)	3.1510E-5
80% gamma percentile (KM)	1.4105E-5	90% gamma percentile (KM)	2.7346E-5
95% gamma percentile (KM)	4.2603E-5	99% gamma percentile (KM)	8.2363E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (9.98, α)	3.929	Adjusted Chi Square Value (9.98, β)	3.539
95% Gamma Approximate KM-UCL (use when n>=50)	2.3491E-5	95% Gamma Adjusted KM-UCL (use when n<50)	2.6076E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.27	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.8702E-6	Mean in Log Scale	-12.55
SD in Original Scale	1.7286E-5	SD in Log Scale	1.264
95% t UCL (assumes normality of ROS data)	1.6190E-5	95% Percentile Bootstrap UCL	1.6801E-5
95% BCA Bootstrap UCL	2.1516E-5	95% Bootstrap t UCL	3.2344E-5
95% H-UCL (Log ROS)	2.0928E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.37	KM Geo Mean	4.2406E-6
KM SD (logged)	1.101	95% Critical H Value (KM-Log)	2.823
KM Standard Error of Mean (logged)	0.299	95% H-UCL (KM -Log)	1.6910E-5
KM SD (logged)	1.101	95% Critical H Value (KM-Log)	2.823
KM Standard Error of Mean (logged)	0.299		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9.0944E-6	Mean in Log Scale	-12.56
SD in Original Scale	1.7229E-5	SD in Log Scale	1.368
95% t UCL (Assumes normality)	1.6390E-5	95% H-Stat UCL	2.7246E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.6910E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	17	Number of Distinct Observations	16
		Number of Missing Observations	1
Minimum	0.0013	Mean	0.00307
Maximum	0.013	Median	0.00242
SD	0.00268	Std. Error of Mean	6.4899E-4
Coefficient of Variation	0.871	Skewness	3.56

Normal GOF Test

Shapiro Wilk Test Statistic	0.527	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.356	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0042	95% Adjusted-CLT UCL (Chen-1995)	0.00474
		95% Modified-t UCL (Johnson-1978)	0.0043

Gamma GOF Test

A-D Test Statistic	1.45	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.268	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.211	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.038	k star (bias corrected MLE)	2.541
Theta hat (MLE)	0.00101	Theta star (bias corrected MLE)	0.00121
nu hat (MLE)	103.3	nu star (bias corrected)	86.41
MLE Mean (bias corrected)	0.00307	MLE Sd (bias corrected)	0.00193
		Approximate Chi Square Value (0.05)	65.98
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	64.11

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00402	95% Adjusted Gamma UCL (use when n<50)	0.00414

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.837	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.212	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.207	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.645	Mean of logged Data	-5.959
Maximum of Logged Data	-4.343	SD of logged Data	0.52

Assuming Lognormal Distribution

95% H-UCL	0.00386	90% Chebyshev (MVUE) UCL	0.00408
95% Chebyshev (MVUE) UCL	0.0046	97.5% Chebyshev (MVUE) UCL	0.00532
99% Chebyshev (MVUE) UCL	0.00674		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00414	95% Jackknife UCL	0.0042
95% Standard Bootstrap UCL	0.0041	95% Bootstrap-t UCL	0.00668

95% Hall's Bootstrap UCL	0.00864	95% Percentile Bootstrap UCL	0.00426
95% BCA Bootstrap UCL	0.00505		
90% Chebyshev(Mean, Sd) UCL	0.00502	95% Chebyshev(Mean, Sd) UCL	0.0059
97.5% Chebyshev(Mean, Sd) UCL	0.00712	99% Chebyshev(Mean, Sd) UCL	0.00953

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0059

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	6.2600E-5	Mean	2.8725E-4
Maximum	0.00175	Median	1.4400E-4
SD	4.2302E-4	Std. Error of Mean	9.9707E-5
Coefficient of Variation	1.473	Skewness	3.024

Normal GOF Test

Shapiro Wilk Test Statistic	0.512	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.379	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.6070E-4	95% Adjusted-CLT UCL (Chen-1995)	5.2719E-4
		95% Modified-t UCL (Johnson-1978)	4.7254E-4

Gamma GOF Test

A-D Test Statistic	2.12	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.763	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.278	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.176	k star (bias corrected MLE)	1.017
Theta hat (MLE)	2.4429E-4	Theta star (bias corrected MLE)	2.8247E-4
nu hat (MLE)	42.33	nu star (bias corrected)	36.61
MLE Mean (bias corrected)	2.8725E-4	MLE Sd (bias corrected)	2.8485E-4
		Approximate Chi Square Value (0.05)	23.76
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	22.77

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.4260E-4	95% Adjusted Gamma UCL (use when n<50)	4.6189E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.21	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.679	Mean of logged Data	-8.637
Maximum of Logged Data	-6.348	SD of logged Data	0.841

Assuming Lognormal Distribution

95% H-UCL	4.1372E-4	90% Chebyshev (MVUE) UCL	4.0535E-4
95% Chebyshev (MVUE) UCL	4.7736E-4	97.5% Chebyshev (MVUE) UCL	5.7730E-4
99% Chebyshev (MVUE) UCL	7.7363E-4		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	4.5125E-4	95% Jackknife UCL	4.6070E-4
95% Standard Bootstrap UCL	4.5456E-4	95% Bootstrap-t UCL	0.00131

95% Hall's Bootstrap UCL	0.00126	95% Percentile Bootstrap UCL	4.5976E-4
95% BCA Bootstrap UCL	5.3377E-4		
90% Chebyshev(Mean, Sd) UCL	5.8637E-4	95% Chebyshev(Mean, Sd) UCL	7.2186E-4
97.5% Chebyshev(Mean, Sd) UCL	9.0992E-4	99% Chebyshev(Mean, Sd) UCL	0.00128

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 7.2186E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00698	Mean	0.0183
Maximum	0.076	Median	0.0119
SD	0.0184	Std. Error of Mean	0.00435
Coefficient of Variation	1.006	Skewness	2.572

Normal GOF Test

Shapiro Wilk Test Statistic	0.594	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0259	95% Adjusted-CLT UCL (Chen-1995)	0.0283
		95% Modified-t UCL (Johnson-1978)	0.0263

Gamma GOF Test

A-D Test Statistic	1.747	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.283	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.011	k star (bias corrected MLE)	1.713
Theta hat (MLE)	0.00912	Theta star (bias corrected MLE)	0.0107
nu hat (MLE)	72.41	nu star (bias corrected)	61.67
MLE Mean (bias corrected)	0.0183	MLE Sd (bias corrected)	0.014
		Approximate Chi Square Value (0.05)	44.61
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	43.22

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0254	95% Adjusted Gamma UCL (use when n<50)	0.0262

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.227	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.965	Mean of logged Data	-4.268
Maximum of Logged Data	-2.578	SD of logged Data	0.658

Assuming Lognormal Distribution

95% H-UCL	0.0247	90% Chebyshev (MVUE) UCL	0.0256
95% Chebyshev (MVUE) UCL	0.0294	97.5% Chebyshev (MVUE) UCL	0.0347
99% Chebyshev (MVUE) UCL	0.0451		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0255	95% Jackknife UCL	0.0259
95% Standard Bootstrap UCL	0.0251	95% Bootstrap-t UCL	0.0452

95% Hall's Bootstrap UCL	0.0611	95% Percentile Bootstrap UCL	0.0257
95% BCA Bootstrap UCL	0.0281		
90% Chebyshev(Mean, Sd) UCL	0.0314	95% Chebyshev(Mean, Sd) UCL	0.0373
97.5% Chebyshev(Mean, Sd) UCL	0.0455	99% Chebyshev(Mean, Sd) UCL	0.0616

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0373

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	15	Number of Non-Detects	3
Number of Distinct Detects	15	Number of Distinct Non-Detects	3
Minimum Detect	7.7900E-5	Minimum Non-Detect	1.6300E-6
Maximum Detect	0.00132	Maximum Non-Detect	8.2600E-6
Variance Detects	1.1065E-7	Percent Non-Detects	16.67%
Mean Detects	2.8171E-4	SD Detects	3.3264E-4
Median Detects	1.7100E-4	CV Detects	1.181
Skewness Detects	2.613	Kurtosis Detects	7.001
Mean of Logged Detects	-8.559	SD of Logged Detects	0.81

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.62	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.358	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.3503E-4	KM Standard Error of Mean	7.5967E-5
KM SD	3.1137E-4	95% KM (BCA) UCL	3.8231E-4
95% KM (t) UCL	3.6718E-4	95% KM (Percentile Bootstrap) UCL	3.6877E-4
95% KM (z) UCL	3.5998E-4	95% KM Bootstrap t UCL	5.8962E-4
90% KM Chebyshev UCL	4.6293E-4	95% KM Chebyshev UCL	5.6616E-4
97.5% KM Chebyshev UCL	7.0944E-4	99% KM Chebyshev UCL	9.9089E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.131	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.275	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.226	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.443	k star (bias corrected MLE)	1.199
Theta hat (MLE)	1.9518E-4	Theta star (bias corrected MLE)	2.3493E-4
nu hat (MLE)	43.3	nu star (bias corrected)	35.97
Mean (detects)	2.8171E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	7.7900E-5	Mean	0.0019
Maximum	0.01	Median	2.0625E-4
SD	0.00374	CV	1.966
k hat (MLE)	0.402	k star (bias corrected MLE)	0.372
Theta hat (MLE)	0.00473	Theta star (bias corrected MLE)	0.00511
nu hat (MLE)	14.47	nu star (bias corrected)	13.4
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (13.40, α)	6.16	Adjusted Chi Square Value (13.40, β)	5.694
95% Gamma Approximate UCL (use when n>=50)	0.00414	95% Gamma Adjusted UCL (use when n<50)	0.00447

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.3503E-4	SD (KM)	3.1137E-4
Variance (KM)	9.6954E-8	SE of Mean (KM)	7.5967E-5
k hat (KM)	0.57	k star (KM)	0.512

nu hat (KM)	20.51	nu star (KM)	18.43
theta hat (KM)	4.1252E-4	theta star (KM)	4.5920E-4
80% gamma percentile (KM)	3.8637E-4	90% gamma percentile (KM)	6.3279E-4
95% gamma percentile (KM)	8.9536E-4	99% gamma percentile (KM)	0.00154

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (18.43, α)	9.699	Adjusted Chi Square Value (18.43, β)	9.095
95% Gamma Approximate KM-UCL (use when n>=50)	4.4649E-4	95% Gamma Adjusted KM-UCL (use when n<50)	4.7615E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.3985E-4	Mean in Log Scale	-8.866
SD in Original Scale	3.1685E-4	SD in Log Scale	1.018
95% t UCL (assumes normality of ROS data)	3.6977E-4	95% Percentile Bootstrap UCL	3.7300E-4
95% BCA Bootstrap UCL	4.1100E-4	95% Bootstrap t UCL	5.9863E-4
95% H-UCL (Log ROS)	4.5784E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.354	KM Geo Mean	8.6615E-5
KM SD (logged)	1.915	95% Critical H Value (KM-Log)	4.161
KM Standard Error of Mean (logged)	0.467	95% H-UCL (KM -Log)	0.00374
KM SD (logged)	1.915	95% Critical H Value (KM-Log)	4.161
KM Standard Error of Mean (logged)	0.467		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.3526E-4	Mean in Log Scale	-9.289
SD in Original Scale	3.2022E-4	SD in Log Scale	1.861
95% t UCL (Assumes normality)	3.6656E-4	95% H-Stat UCL	0.00327

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	0.00374

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	1
Number of Detects	13	Number of Non-Detects	4
Number of Distinct Detects	13	Number of Distinct Non-Detects	4
Minimum Detect	1.1900E-5	Minimum Non-Detect	1.5400E-6
Maximum Detect	3.6700E-4	Maximum Non-Detect	7.8800E-6
Variance Detects	1.5238E-8	Percent Non-Detects	23.53%
Mean Detects	8.8069E-5	SD Detects	1.2344E-4
Median Detects	2.8300E-5	CV Detects	N/A
Skewness Detects	1.817	Kurtosis Detects	1.96
Mean of Logged Detects	-10.03	SD of Logged Detects	1.115

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.625	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.395	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.7709E-5	KM Standard Error of Mean	2.7772E-5
KM SD	1.1001E-4	95% KM (BCA) UCL	1.1321E-4
95% KM (t) UCL	1.1620E-4	95% KM (Percentile Bootstrap) UCL	1.1783E-4
95% KM (z) UCL	1.1339E-4	95% KM Bootstrap t UCL	1.8176E-4
90% KM Chebyshev UCL	1.5103E-4	95% KM Chebyshev UCL	1.8876E-4
97.5% KM Chebyshev UCL	2.4114E-4	99% KM Chebyshev UCL	3.4404E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.529	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.765	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.317	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.245	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.852	k star (bias corrected MLE)	0.707
Theta hat (MLE)	1.0336E-4	Theta star (bias corrected MLE)	1.2462E-4
nu hat (MLE)	22.15	nu star (bias corrected)	18.37
Mean (detects)	8.8069E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.1900E-5	Mean	0.00242
Maximum	0.01	Median	3.8000E-5
SD	0.00434	CV	1.791
k hat (MLE)	0.259	k star (bias corrected MLE)	0.252
Theta hat (MLE)	0.00935	Theta star (bias corrected MLE)	0.00959
nu hat (MLE)	8.802	nu star (bias corrected)	8.582
Adjusted Level of Significance (β)	0.0346		
Approximate Chi Square Value (8.58, α)	3.076	Adjusted Chi Square Value (8.58, β)	2.74
95% Gamma Approximate UCL (use when n>=50)	0.00675	95% Gamma Adjusted UCL (use when n<50)	0.00758

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.7709E-5	SD (KM)	1.1001E-4
Variance (KM)	1.2103E-8	SE of Mean (KM)	2.7772E-5

k hat (KM)	0.379	k star (KM)	0.351
nu hat (KM)	12.88	nu star (KM)	11.94
theta hat (KM)	1.7875E-4	theta star (KM)	1.9282E-4
80% gamma percentile (KM)	1.0727E-4	90% gamma percentile (KM)	1.9543E-4
95% gamma percentile (KM)	2.9410E-4	99% gamma percentile (KM)	5.4581E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (11.94, α)	5.187	Adjusted Chi Square Value (11.94, β)	4.728
95% Gamma Approximate KM-UCL (use when n>=50)	1.5585E-4	95% Gamma Adjusted KM-UCL (use when n<50)	1.7099E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.834	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.8189E-5	Mean in Log Scale	-10.62
SD in Original Scale	1.1311E-4	SD in Log Scale	1.463
95% t UCL (assumes normality of ROS data)	1.1608E-4	95% Percentile Bootstrap UCL	1.1604E-4
95% BCA Bootstrap UCL	1.3201E-4	95% Bootstrap t UCL	1.8549E-4
95% H-UCL (Log ROS)	2.4873E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.82	KM Geo Mean	2.0040E-5
KM SD (logged)	1.704	95% Critical H Value (KM-Log)	3.846
KM Standard Error of Mean (logged)	0.43	95% H-UCL (KM -Log)	4.4046E-4
KM SD (logged)	1.704	95% Critical H Value (KM-Log)	3.846
KM Standard Error of Mean (logged)	0.43		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	6.8013E-5	Mean in Log Scale	-10.72
SD in Original Scale	1.1322E-4	SD in Log Scale	1.635
95% t UCL (Assumes normality)	1.1595E-4	95% H-Stat UCL	3.8745E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 1.8876E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	6.4200E-4	Mean	0.0017
Maximum	0.00654	Median	0.00125
SD	0.00152	Std. Error of Mean	3.5882E-4
Coefficient of Variation	0.893	Skewness	2.498

Normal GOF Test

Shapiro Wilk Test Statistic	0.64	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.317	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00233	95% Adjusted-CLT UCL (Chen-1995)	0.00252
		95% Modified-t UCL (Johnson-1978)	0.00236

Gamma GOF Test

A-D Test Statistic	1.456	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.262	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.357	k star (bias corrected MLE)	2.001
Theta hat (MLE)	7.2319E-4	Theta star (bias corrected MLE)	8.5177E-4
nu hat (MLE)	84.84	nu star (bias corrected)	72.03
MLE Mean (bias corrected)	0.0017	MLE Sd (bias corrected)	0.0012
		Approximate Chi Square Value (0.05)	53.49
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	51.96

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0023	95% Adjusted Gamma UCL (use when n<50)	0.00236

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.351	Mean of logged Data	-6.602
Maximum of Logged Data	-5.03	SD of logged Data	0.618

Assuming Lognormal Distribution

95% H-UCL	0.00227	90% Chebyshev (MVUE) UCL	0.00237
95% Chebyshev (MVUE) UCL	0.00271	97.5% Chebyshev (MVUE) UCL	0.00318
99% Chebyshev (MVUE) UCL	0.0041		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00229	95% Jackknife UCL	0.00233
95% Standard Bootstrap UCL	0.00228	95% Bootstrap-t UCL	0.00343

95% Hall's Bootstrap UCL	0.0049	95% Percentile Bootstrap UCL	0.00236
95% BCA Bootstrap UCL	0.00255		
90% Chebyshev(Mean, Sd) UCL	0.00278	95% Chebyshev(Mean, Sd) UCL	0.00327
97.5% Chebyshev(Mean, Sd) UCL	0.00395	99% Chebyshev(Mean, Sd) UCL	0.00527

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.00327

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.2100E-4	Mean	8.4286E-4
Maximum	0.00259	Median	6.6550E-4
SD	5.9969E-4	Std. Error of Mean	1.4135E-4
Coefficient of Variation	0.711	Skewness	1.991

Normal GOF Test

Shapiro Wilk Test Statistic	0.733	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.323	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00109	95% Adjusted-CLT UCL (Chen-1995)	0.00115
		95% Modified-t UCL (Johnson-1978)	0.0011

Gamma GOF Test

A-D Test Statistic	1.104	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.281	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.078	k star (bias corrected MLE)	2.602
Theta hat (MLE)	2.7385E-4	Theta star (bias corrected MLE)	3.2395E-4
nu hat (MLE)	110.8	nu star (bias corrected)	93.67
MLE Mean (bias corrected)	8.4286E-4	MLE Sd (bias corrected)	5.2253E-4
		Approximate Chi Square Value (0.05)	72.35
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	70.55

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00109	95% Adjusted Gamma UCL (use when n<50)	0.00112

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.244	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.044	Mean of logged Data	-7.25
Maximum of Logged Data	-5.956	SD of logged Data	0.561

Assuming Lognormal Distribution

95% H-UCL	0.0011	90% Chebyshev (MVUE) UCL	0.00116
95% Chebyshev (MVUE) UCL	0.00132	97.5% Chebyshev (MVUE) UCL	0.00153
99% Chebyshev (MVUE) UCL	0.00195		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00108	95% Jackknife UCL	0.00109
95% Standard Bootstrap UCL	0.00107	95% Bootstrap-t UCL	0.00127

95% Hall's Bootstrap UCL	0.00119	95% Percentile Bootstrap UCL	0.00108
95% BCA Bootstrap UCL	0.00114		
90% Chebyshev(Mean, Sd) UCL	0.00127	95% Chebyshev(Mean, Sd) UCL	0.00146
97.5% Chebyshev(Mean, Sd) UCL	0.00173	99% Chebyshev(Mean, Sd) UCL	0.00225

Suggested UCL to Use

95% H-UCL 0.0011

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

PCB-169

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	5	Number of Non-Detects	13
Number of Distinct Detects	5	Number of Distinct Non-Detects	10
Minimum Detect	1.8800E-6	Minimum Non-Detect	1.4500E-6
Maximum Detect	7.8800E-6	Maximum Non-Detect	1.0705E-5
Variance Detects	6.039E-12	Percent Non-Detects	72.22%
Mean Detects	4.3960E-6	SD Detects	2.4574E-6
Median Detects	4.5100E-6	CV Detects	N/A
Skewness Detects	0.5	Kurtosis Detects	-0.82
Mean of Logged Detects	-12.47	SD of Logged Detects	0.603

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.937	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.208	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.4291E-6	KM Standard Error of Mean	5.2298E-7
KM SD	1.8359E-6	95% KM (BCA) UCL	3.2668E-6
95% KM (t) UCL	3.3389E-6	95% KM (Percentile Bootstrap) UCL	3.3279E-6
95% KM (z) UCL	3.2894E-6	95% KM Bootstrap t UCL	3.2477E-6
90% KM Chebyshev UCL	3.9981E-6	95% KM Chebyshev UCL	4.7088E-6
97.5% KM Chebyshev UCL	5.6952E-6	99% KM Chebyshev UCL	7.6328E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.288	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.682	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.237	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.359	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.779	k star (bias corrected MLE)	1.645
Theta hat (MLE)	1.1634E-6	Theta star (bias corrected MLE)	2.6727E-6
nu hat (MLE)	37.79	nu star (bias corrected)	16.45
Mean (detects)	4.3960E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.8800E-6	Mean	0.00722
Maximum	0.01	Median	0.01
SD	0.00461	CV	0.638
k hat (MLE)	0.36	k star (bias corrected MLE)	0.337
Theta hat (MLE)	0.0201	Theta star (bias corrected MLE)	0.0214
nu hat (MLE)	12.95	nu star (bias corrected)	12.13
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (12.13, α)	5.312	Adjusted Chi Square Value (12.13, β)	4.885
95% Gamma Approximate UCL (use when n>=50)	0.0165	95% Gamma Adjusted UCL (use when n<50)	0.0179

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.4291E-6	SD (KM)	1.8359E-6
Variance (KM)	3.371E-12	SE of Mean (KM)	5.2298E-7
k hat (KM)	1.751	k star (KM)	1.496

nu hat (KM)	63.03	nu star (KM)	53.85
theta hat (KM)	1.3875E-6	theta star (KM)	1.6238E-6
80% gamma percentile (KM)	3.7595E-6	90% gamma percentile (KM)	5.0652E-6
95% gamma percentile (KM)	6.3334E-6	99% gamma percentile (KM)	9.1977E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (53.85, α)	37.99	Adjusted Chi Square Value (53.85, β)	36.72
95% Gamma Approximate KM-UCL (use when n>=50)	3.4432E-6	95% Gamma Adjusted KM-UCL (use when n<50)	3.5630E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.209	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.8706E-6	Mean in Log Scale	-13.55
SD in Original Scale	2.0168E-6	SD in Log Scale	0.797
95% t UCL (assumes normality of ROS data)	2.6975E-6	95% Percentile Bootstrap UCL	2.6665E-6
95% BCA Bootstrap UCL	2.9181E-6	95% Bootstrap t UCL	3.3371E-6
95% H-UCL (Log ROS)	2.8205E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-13.12	KM Geo Mean	2.0139E-6
KM SD (logged)	0.548	95% Critical H Value (KM-Log)	2.068
KM Standard Error of Mean (logged)	0.159	95% H-UCL (KM -Log)	3.0795E-6
KM SD (logged)	0.548	95% Critical H Value (KM-Log)	2.068
KM Standard Error of Mean (logged)	0.159		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.4950E-6	Mean in Log Scale	-13.29
SD in Original Scale	2.2009E-6	SD in Log Scale	0.913
95% t UCL (Assumes normality)	3.3974E-6	95% H-Stat UCL	4.4881E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.3389E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.5700E-5	Mean	1.5400E-4
Maximum	5.1400E-4	Median	1.0848E-4
SD	1.2685E-4	Std. Error of Mean	2.9899E-5
Coefficient of Variation	0.824	Skewness	1.949

Normal GOF Test

Shapiro Wilk Test Statistic	0.716	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.294	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.0602E-4	95% Adjusted-CLT UCL (Chen-1995)	2.1786E-4
		95% Modified-t UCL (Johnson-1978)	2.0831E-4

Gamma GOF Test

A-D Test Statistic	1.144	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.231	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.368	k star (bias corrected MLE)	2.01
Theta hat (MLE)	6.5037E-5	Theta star (bias corrected MLE)	7.6606E-5
nu hat (MLE)	85.25	nu star (bias corrected)	72.37
MLE Mean (bias corrected)	1.5400E-4	MLE Sd (bias corrected)	1.0862E-4
		Approximate Chi Square Value (0.05)	53.78
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	52.25

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.0723E-4	95% Adjusted Gamma UCL (use when n<50)	2.1333E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.182	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.796	Mean of logged Data	-9.004
Maximum of Logged Data	-7.573	SD of logged Data	0.639

Assuming Lognormal Distribution

95% H-UCL	2.1079E-4	90% Chebyshev (MVUE) UCL	2.1945E-4
95% Chebyshev (MVUE) UCL	2.5149E-4	97.5% Chebyshev (MVUE) UCL	2.9597E-4
99% Chebyshev (MVUE) UCL	3.8334E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0318E-4	95% Jackknife UCL	2.0602E-4
95% Standard Bootstrap UCL	2.0246E-4	95% Bootstrap-t UCL	2.4476E-4

95% Hall's Bootstrap UCL	2.1333E-4	95% Percentile Bootstrap UCL	2.0504E-4
95% BCA Bootstrap UCL	2.1553E-4		
90% Chebyshev(Mean, Sd) UCL	2.4370E-4	95% Chebyshev(Mean, Sd) UCL	2.8433E-4
97.5% Chebyshev(Mean, Sd) UCL	3.4072E-4	99% Chebyshev(Mean, Sd) UCL	4.5150E-4

Suggested UCL to Use

95% H-UCL 2.1079E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 10:16:45 AM
From File	Striped_Bass_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	6.5004E-7	Mean	4.1979E-6
Maximum	2.8983E-5	Median	1.6277E-6
SD	7.2521E-6	Std. Error of Mean	1.7093E-6
Coefficient of Variation	N/A	Skewness	2.967

Normal GOF Test

Shapiro Wilk Test Statistic	0.509	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.381	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.1714E-6	95% Adjusted-CLT UCL (Chen-1995)	8.2866E-6
		95% Modified-t UCL (Johnson-1978)	7.3706E-6

Gamma GOF Test

A-D Test Statistic	1.99	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.774	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.299	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.211	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.844	k star (bias corrected MLE)	0.74
Theta hat (MLE)	4.9752E-6	Theta star (bias corrected MLE)	5.6715E-6
nu hat (MLE)	30.38	nu star (bias corrected)	26.65
MLE Mean (bias corrected)	4.1979E-6	MLE Sd (bias corrected)	4.8794E-6
		Approximate Chi Square Value (0.05)	15.88
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	15.08

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.0449E-6	95% Adjusted Gamma UCL (use when n<50)	7.4165E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.858	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.223	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.25	Mean of logged Data	-13.08
Maximum of Logged Data	-10.45	SD of logged Data	1.027

Assuming Lognormal Distribution

95% H-UCL	6.8901E-6	90% Chebyshev (MVUE) UCL	6.1375E-6
95% Chebyshev (MVUE) UCL	7.3807E-6	97.5% Chebyshev (MVUE) UCL	9.1061E-6
99% Chebyshev (MVUE) UCL	1.2496E-5		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	7.0095E-6	95% Jackknife UCL	7.1714E-6
95% Standard Bootstrap UCL	6.9281E-6	95% Bootstrap-t UCL	1.9661E-5
95% Hall's Bootstrap UCL	2.0019E-5	95% Percentile Bootstrap UCL	7.1777E-6
95% BCA Bootstrap UCL	8.5444E-6		
90% Chebyshev(Mean, Sd) UCL	9.3259E-6	95% Chebyshev(Mean, Sd) UCL	1.1649E-5
97.5% Chebyshev(Mean, Sd) UCL	1.4873E-5	99% Chebyshev(Mean, Sd) UCL	2.1205E-5

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1.1649E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.1425E-7	Mean	7.3028E-6
Maximum	3.9768E-5	Median	2.8873E-6
SD	1.1797E-5	Std. Error of Mean	2.7805E-6
Coefficient of Variation	N/A	Skewness	2.301

Normal GOF Test

Shapiro Wilk Test Statistic	0.574	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.373	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.2140E-5	95% Adjusted-CLT UCL (Chen-1995)	1.3488E-5
		95% Modified-t UCL (Johnson-1978)	1.2391E-5

Gamma GOF Test

A-D Test Statistic	1.481	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.78	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.271	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.212	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.726	k star (bias corrected MLE)	0.642
Theta hat (MLE)	1.0054E-5	Theta star (bias corrected MLE)	1.1369E-5
nu hat (MLE)	26.15	nu star (bias corrected)	23.12
MLE Mean (bias corrected)	7.3028E-6	MLE Sd (bias corrected)	9.1120E-6
		Approximate Chi Square Value (0.05)	13.18
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	12.47

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.2808E-5	95% Adjusted Gamma UCL (use when n<50)	1.3546E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.7	Mean of logged Data	-12.66
Maximum of Logged Data	-10.13	SD of logged Data	1.226

Assuming Lognormal Distribution

95% H-UCL	1.6430E-5	90% Chebyshev (MVUE) UCL	1.2614E-5
95% Chebyshev (MVUE) UCL	1.5458E-5	97.5% Chebyshev (MVUE) UCL	1.9406E-5
99% Chebyshev (MVUE) UCL	2.7161E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.1876E-5	95% Jackknife UCL	1.2140E-5
95% Standard Bootstrap UCL	1.1747E-5	95% Bootstrap-t UCL	1.9868E-5

95% Hall's Bootstrap UCL	1.4290E-5	95% Percentile Bootstrap UCL	1.2198E-5
95% BCA Bootstrap UCL	1.3757E-5		
90% Chebyshev(Mean, Sd) UCL	1.5644E-5	95% Chebyshev(Mean, Sd) UCL	1.9423E-5
97.5% Chebyshev(Mean, Sd) UCL	2.4667E-5	99% Chebyshev(Mean, Sd) UCL	3.4969E-5

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1.9423E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 5:10:03 PM
From File	fsh10_ndl_PCB_sum_wide2_flag_sep1_SB.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0836	Mean	0.317
Maximum	1.6	Median	0.184
SD	0.382	Std. Error of Mean	0.0901
Coefficient of Variation	1.207	Skewness	2.739

Normal GOF Test

Shapiro Wilk Test Statistic	0.59	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.382	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.474	95% Adjusted-CLT UCL (Chen-1995)	0.527
		95% Modified-t UCL (Johnson-1978)	0.483

Gamma GOF Test

A-D Test Statistic	1.648	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.757	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.296	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.464	k star (bias corrected MLE)	1.257
Theta hat (MLE)	0.216	Theta star (bias corrected MLE)	0.252
nu hat (MLE)	52.69	nu star (bias corrected)	45.25
MLE Mean (bias corrected)	0.317	MLE Sd (bias corrected)	0.283
		Approximate Chi Square Value (0.05)	30.82
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	29.67

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.465	95% Adjusted Gamma UCL (use when n<50)	0.483

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.866	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.223	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.481	Mean of logged Data	-1.528
Maximum of Logged Data	0.47	SD of logged Data	0.783

Assuming Lognormal Distribution

95% H-UCL	0.459	90% Chebyshev (MVUE) UCL	0.46
95% Chebyshev (MVUE) UCL	0.538	97.5% Chebyshev (MVUE) UCL	0.646
99% Chebyshev (MVUE) UCL	0.857		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.465	95% Jackknife UCL	0.474
95% Standard Bootstrap UCL	0.459	95% Bootstrap-t UCL	0.743
95% Hall's Bootstrap UCL	0.969	95% Percentile Bootstrap UCL	0.475
95% BCA Bootstrap UCL	0.546		
90% Chebyshev(Mean, Sd) UCL	0.587	95% Chebyshev(Mean, Sd) UCL	0.71
97.5% Chebyshev(Mean, Sd) UCL	0.88	99% Chebyshev(Mean, Sd) UCL	1.213

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.71

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 5:02:42 PM
From File	fsh5_PAH_wide2_flag_sep1_SB.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)anthracene was not processed!

Benzo(a)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)pyrene was not processed!

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(b)fluoranthene was not processed!

Chrysene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chrysene was not processed!

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Dibenzo(a,h)anthracene was not processed!

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Indeno(1,2,3-cd)pyrene was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 5:05:22 PM
From File	fsh7_pest_wide2_flag_sep1_SB.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.8600E-4	Mean	0.00824
Maximum	0.103	Median	0.00199
SD	0.0238	Std. Error of Mean	0.0056
Coefficient of Variation	2.882	Skewness	4.18

Normal GOF Test

Shapiro Wilk Test Statistic	0.321	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.439	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.018	95% Adjusted-CLT UCL (Chen-1995)	0.0233
		95% Modified-t UCL (Johnson-1978)	0.0189

Gamma GOF Test

A-D Test Statistic	2.815	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.798	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.348	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.215	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.529	k star (bias corrected MLE)	0.478
Theta hat (MLE)	0.0156	Theta star (bias corrected MLE)	0.0172
nu hat (MLE)	19.05	nu star (bias corrected)	17.21
MLE Mean (bias corrected)	0.00824	MLE Sd (bias corrected)	0.0119
		Approximate Chi Square Value (0.05)	8.823
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	8.25

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0161	95% Adjusted Gamma UCL (use when n<50)	0.0172

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.208	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.16	Mean of logged Data	-5.988
Maximum of Logged Data	-2.273	SD of logged Data	1.203

Assuming Lognormal Distribution

95% H-UCL	0.0122	90% Chebyshev (MVUE) UCL	0.00957
95% Chebyshev (MVUE) UCL	0.0117	97.5% Chebyshev (MVUE) UCL	0.0147
99% Chebyshev (MVUE) UCL	0.0205		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0175	95% Jackknife UCL	0.018
95% Standard Bootstrap UCL	0.017	95% Bootstrap-t UCL	0.137
95% Hall's Bootstrap UCL	0.0628	95% Percentile Bootstrap UCL	0.0193
95% BCA Bootstrap UCL	0.0251		
90% Chebyshev(Mean, Sd) UCL	0.025	95% Chebyshev(Mean, Sd) UCL	0.0327
97.5% Chebyshev(Mean, Sd) UCL	0.0432	99% Chebyshev(Mean, Sd) UCL	0.064

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0327

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.3000E-4	Mean	0.00345
Maximum	0.0397	Median	7.8800E-4
SD	0.00915	Std. Error of Mean	0.00216
Coefficient of Variation	2.649	Skewness	4.086

Normal GOF Test

Shapiro Wilk Test Statistic	0.356	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.414	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00721	95% Adjusted-CLT UCL (Chen-1995)	0.00922
		95% Modified-t UCL (Johnson-1978)	0.00755

Gamma GOF Test

A-D Test Statistic	2.399	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.795	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.324	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.214	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.553	k star (bias corrected MLE)	0.498
Theta hat (MLE)	0.00625	Theta star (bias corrected MLE)	0.00694
nu hat (MLE)	19.89	nu star (bias corrected)	17.91
MLE Mean (bias corrected)	0.00345	MLE Sd (bias corrected)	0.0049
		Approximate Chi Square Value (0.05)	9.327
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	8.736

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00663	95% Adjusted Gamma UCL (use when n<50)	0.00708

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.882	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.207	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.948	Mean of logged Data	-6.8
Maximum of Logged Data	-3.226	SD of logged Data	1.234

Assuming Lognormal Distribution

95% H-UCL	0.00585	90% Chebyshev (MVUE) UCL	0.00446
95% Chebyshev (MVUE) UCL	0.00547	97.5% Chebyshev (MVUE) UCL	0.00687
99% Chebyshev (MVUE) UCL	0.00962		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.007	95% Jackknife UCL	0.00721
95% Standard Bootstrap UCL	0.00702	95% Bootstrap-t UCL	0.0358

95% Hall's Bootstrap UCL	0.0211	95% Percentile Bootstrap UCL	0.00757
95% BCA Bootstrap UCL	0.0101		
90% Chebyshev(Mean, Sd) UCL	0.00993	95% Chebyshev(Mean, Sd) UCL	0.0129
97.5% Chebyshev(Mean, Sd) UCL	0.0169	99% Chebyshev(Mean, Sd) UCL	0.0249

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0129

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.6700E-5	Mean	6.9703E-4
Maximum	0.00838	Median	2.2250E-4
SD	0.00192	Std. Error of Mean	4.5326E-4
Coefficient of Variation	2.759	Skewness	4.202

Normal GOF Test

Shapiro Wilk Test Statistic	0.316	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.458	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00149	95% Adjusted-CLT UCL (Chen-1995)	0.00192
		95% Modified-t UCL (Johnson-1978)	0.00156

Gamma GOF Test

A-D Test Statistic	2.913	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.791	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.322	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.214	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.601	k star (bias corrected MLE)	0.538
Theta hat (MLE)	0.00116	Theta star (bias corrected MLE)	0.0013
nu hat (MLE)	21.63	nu star (bias corrected)	19.36
MLE Mean (bias corrected)	6.9703E-4	MLE Sd (bias corrected)	9.5051E-4
		Approximate Chi Square Value (0.05)	10.38
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	9.753

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0013	95% Adjusted Gamma UCL (use when n<50)	0.00138

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.21	Mean of logged Data	-8.297
Maximum of Logged Data	-4.782	SD of logged Data	1.097

Assuming Lognormal Distribution

95% H-UCL	9.5426E-4	90% Chebyshev (MVUE) UCL	8.1129E-4
95% Chebyshev (MVUE) UCL	9.8253E-4	97.5% Chebyshev (MVUE) UCL	0.00122
99% Chebyshev (MVUE) UCL	0.00169		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00144	95% Jackknife UCL	0.00149
95% Standard Bootstrap UCL	0.00144	95% Bootstrap-t UCL	0.009

95% Hall's Bootstrap UCL	0.0049	95% Percentile Bootstrap UCL	0.00159
95% BCA Bootstrap UCL	0.00208		
90% Chebyshev(Mean, Sd) UCL	0.00206	95% Chebyshev(Mean, Sd) UCL	0.00267
97.5% Chebyshev(Mean, Sd) UCL	0.00353	99% Chebyshev(Mean, Sd) UCL	0.00521

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.00267

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00236	Mean	0.0356
Maximum	0.418	Median	0.00789
SD	0.0974	Std. Error of Mean	0.023
Coefficient of Variation	2.74	Skewness	3.987

Normal GOF Test

Shapiro Wilk Test Statistic	0.356	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.447	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0755	95% Adjusted-CLT UCL (Chen-1995)	0.0964
		95% Modified-t UCL (Johnson-1978)	0.0791

Gamma GOF Test

A-D Test Statistic	2.989	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.799	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.35	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.215	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.51	k star (bias corrected MLE)	0.462
Theta hat (MLE)	0.0697	Theta star (bias corrected MLE)	0.077
nu hat (MLE)	18.36	nu star (bias corrected)	16.63
MLE Mean (bias corrected)	0.0356	MLE Sd (bias corrected)	0.0523
		Approximate Chi Square Value (0.05)	8.41
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	7.852

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0703	95% Adjusted Gamma UCL (use when n<50)	0.0753

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.807	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.238	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.049	Mean of logged Data	-4.578
Maximum of Logged Data	-0.872	SD of logged Data	1.227

Assuming Lognormal Distribution

95% H-UCL	0.053	90% Chebyshev (MVUE) UCL	0.0407
95% Chebyshev (MVUE) UCL	0.0498	97.5% Chebyshev (MVUE) UCL	0.0626
99% Chebyshev (MVUE) UCL	0.0876		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0733	95% Jackknife UCL	0.0755
95% Standard Bootstrap UCL	0.072	95% Bootstrap-t UCL	0.637

95% Hall's Bootstrap UCL	0.312	95% Percentile Bootstrap UCL	0.0806
95% BCA Bootstrap UCL	0.106		
90% Chebyshev(Mean, Sd) UCL	0.104	95% Chebyshev(Mean, Sd) UCL	0.136
97.5% Chebyshev(Mean, Sd) UCL	0.179	99% Chebyshev(Mean, Sd) UCL	0.264

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.136

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00887	Mean	0.0537
Maximum	0.423	Median	0.0202
SD	0.0988	Std. Error of Mean	0.0233
Coefficient of Variation	1.838	Skewness	3.495

Normal GOF Test

Shapiro Wilk Test Statistic	0.466	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.369	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0942	95% Adjusted-CLT UCL (Chen-1995)	0.113
		95% Modified-t UCL (Johnson-1978)	0.0974

Gamma GOF Test

A-D Test Statistic	2.264	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.773	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.317	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.21	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.868	k star (bias corrected MLE)	0.76
Theta hat (MLE)	0.0619	Theta star (bias corrected MLE)	0.0707
nu hat (MLE)	31.23	nu star (bias corrected)	27.36
MLE Mean (bias corrected)	0.0537	MLE Sd (bias corrected)	0.0616
		Approximate Chi Square Value (0.05)	16.43
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	15.62

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0895	95% Adjusted Gamma UCL (use when n<50)	0.0941

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.827	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.228	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.725	Mean of logged Data	-3.601
Maximum of Logged Data	-0.86	SD of logged Data	0.976

Assuming Lognormal Distribution

95% H-UCL	0.0814	90% Chebyshev (MVUE) UCL	0.0747
95% Chebyshev (MVUE) UCL	0.0894	97.5% Chebyshev (MVUE) UCL	0.11
99% Chebyshev (MVUE) UCL	0.15		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.092	95% Jackknife UCL	0.0942
95% Standard Bootstrap UCL	0.0917	95% Bootstrap-t UCL	0.267

95% Hall's Bootstrap UCL	0.237	95% Percentile Bootstrap UCL	0.0981
95% BCA Bootstrap UCL	0.12		
90% Chebyshev(Mean, Sd) UCL	0.124	95% Chebyshev(Mean, Sd) UCL	0.155
97.5% Chebyshev(Mean, Sd) UCL	0.199	99% Chebyshev(Mean, Sd) UCL	0.285

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.155

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.9300E-4	Mean	0.0036
Maximum	0.041	Median	0.0012
SD	0.00939	Std. Error of Mean	0.00221
Coefficient of Variation	2.612	Skewness	4.162

Normal GOF Test

Shapiro Wilk Test Statistic	0.332	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.435	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00745	95% Adjusted-CLT UCL (Chen-1995)	0.00956
		95% Modified-t UCL (Johnson-1978)	0.00781

Gamma GOF Test

A-D Test Statistic	2.781	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.788	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.357	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.213	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.64	k star (bias corrected MLE)	0.571
Theta hat (MLE)	0.00561	Theta star (bias corrected MLE)	0.0063
nu hat (MLE)	23.06	nu star (bias corrected)	20.55
MLE Mean (bias corrected)	0.0036	MLE Sd (bias corrected)	0.00476
		Approximate Chi Square Value (0.05)	11.26
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	10.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00656	95% Adjusted Gamma UCL (use when n<50)	0.00697

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.829	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.135	Mean of logged Data	-6.584
Maximum of Logged Data	-3.194	SD of logged Data	1.062

Assuming Lognormal Distribution

95% H-UCL	0.00491	90% Chebyshev (MVUE) UCL	0.00427
95% Chebyshev (MVUE) UCL	0.00516	97.5% Chebyshev (MVUE) UCL	0.00639
99% Chebyshev (MVUE) UCL	0.0088		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00724	95% Jackknife UCL	0.00745
95% Standard Bootstrap UCL	0.00712	95% Bootstrap-t UCL	0.0478

95% Hall's Bootstrap UCL	0.0237	95% Percentile Bootstrap UCL	0.00787
95% BCA Bootstrap UCL	0.0103		
90% Chebyshev(Mean, Sd) UCL	0.0102	95% Chebyshev(Mean, Sd) UCL	0.0132
97.5% Chebyshev(Mean, Sd) UCL	0.0174	99% Chebyshev(Mean, Sd) UCL	0.0256

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0132

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	8.3000E-4	Mean	0.00999
Maximum	0.106	Median	0.00245
SD	0.0247	Std. Error of Mean	0.00582
Coefficient of Variation	2.471	Skewness	3.906

Normal GOF Test

Shapiro Wilk Test Statistic	0.383	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.4	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0201	95% Adjusted-CLT UCL (Chen-1995)	0.0253
		95% Modified-t UCL (Johnson-1978)	0.021

Gamma GOF Test

A-D Test Statistic	2.691	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.792	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.355	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.214	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.591	k star (bias corrected MLE)	0.53
Theta hat (MLE)	0.0169	Theta star (bias corrected MLE)	0.0189
nu hat (MLE)	21.27	nu star (bias corrected)	19.06
MLE Mean (bias corrected)	0.00999	MLE Sd (bias corrected)	0.0137
		Approximate Chi Square Value (0.05)	10.16
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	9.543

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0187	95% Adjusted Gamma UCL (use when n<50)	0.0199

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.819	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.258	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.094	Mean of logged Data	-5.655
Maximum of Logged Data	-2.243	SD of logged Data	1.157

Assuming Lognormal Distribution

95% H-UCL	0.0153	90% Chebyshev (MVUE) UCL	0.0125
95% Chebyshev (MVUE) UCL	0.0152	97.5% Chebyshev (MVUE) UCL	0.0189
99% Chebyshev (MVUE) UCL	0.0263		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0196	95% Jackknife UCL	0.0201
95% Standard Bootstrap UCL	0.0193	95% Bootstrap-t UCL	0.105

95% Hall's Bootstrap UCL	0.0642	95% Percentile Bootstrap UCL	0.0209
95% BCA Bootstrap UCL	0.0272		
90% Chebyshev(Mean, Sd) UCL	0.0274	95% Chebyshev(Mean, Sd) UCL	0.0353
97.5% Chebyshev(Mean, Sd) UCL	0.0463	99% Chebyshev(Mean, Sd) UCL	0.0678

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0353

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.0100E-4	Mean	0.00396
Maximum	0.028	Median	0.0017
SD	0.00668	Std. Error of Mean	0.00157
Coefficient of Variation	1.687	Skewness	3.196

Normal GOF Test

Shapiro Wilk Test Statistic	0.527	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.33	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0067	95% Adjusted-CLT UCL (Chen-1995)	0.00781
		95% Modified-t UCL (Johnson-1978)	0.00689

Gamma GOF Test

A-D Test Statistic	1.393	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.773	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.267	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.211	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.858	k star (bias corrected MLE)	0.752
Theta hat (MLE)	0.00461	Theta star (bias corrected MLE)	0.00526
nu hat (MLE)	30.88	nu star (bias corrected)	27.07
MLE Mean (bias corrected)	0.00396	MLE Sd (bias corrected)	0.00456
		Approximate Chi Square Value (0.05)	16.21
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	15.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00661	95% Adjusted Gamma UCL (use when n<50)	0.00696

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.199	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.599	Mean of logged Data	-6.218
Maximum of Logged Data	-3.576	SD of logged Data	1.058

Assuming Lognormal Distribution

95% H-UCL	0.00701	90% Chebyshev (MVUE) UCL	0.00613
95% Chebyshev (MVUE) UCL	0.00739	97.5% Chebyshev (MVUE) UCL	0.00914
99% Chebyshev (MVUE) UCL	0.0126		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00655	95% Jackknife UCL	0.0067
95% Standard Bootstrap UCL	0.00649	95% Bootstrap-t UCL	0.0152

95% Hall's Bootstrap UCL	0.0175	95% Percentile Bootstrap UCL	0.00678
95% BCA Bootstrap UCL	0.0084		
90% Chebyshev(Mean, Sd) UCL	0.00868	95% Chebyshev(Mean, Sd) UCL	0.0108
97.5% Chebyshev(Mean, Sd) UCL	0.0138	99% Chebyshev(Mean, Sd) UCL	0.0196

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0108

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.3200E-4	Mean	7.6414E-4
Maximum	0.00431	Median	3.2200E-4
SD	0.00105	Std. Error of Mean	2.4756E-4
Coefficient of Variation	1.374	Skewness	2.662

Normal GOF Test

Shapiro Wilk Test Statistic	0.628	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.307	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00119	95% Adjusted-CLT UCL (Chen-1995)	0.00134
		95% Modified-t UCL (Johnson-1978)	0.00122

Gamma GOF Test

A-D Test Statistic	1.248	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.766	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.272	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.015	k star (bias corrected MLE)	0.883
Theta hat (MLE)	7.5266E-4	Theta star (bias corrected MLE)	8.6531E-4
nu hat (MLE)	36.55	nu star (bias corrected)	31.79
MLE Mean (bias corrected)	7.6414E-4	MLE Sd (bias corrected)	8.1315E-4
		Approximate Chi Square Value (0.05)	19.91
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	19.01

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00122	95% Adjusted Gamma UCL (use when n<50)	0.00128

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.211	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.933	Mean of logged Data	-7.744
Maximum of Logged Data	-5.447	SD of logged Data	1.002

Assuming Lognormal Distribution

95% H-UCL	0.00136	90% Chebyshev (MVUE) UCL	0.00123
95% Chebyshev (MVUE) UCL	0.00147	97.5% Chebyshev (MVUE) UCL	0.00181
99% Chebyshev (MVUE) UCL	0.00248		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00117	95% Jackknife UCL	0.00119
95% Standard Bootstrap UCL	0.00116	95% Bootstrap-t UCL	0.00171

95% Hall's Bootstrap UCL	0.00276	95% Percentile Bootstrap UCL	0.0012
95% BCA Bootstrap UCL	0.00133		
90% Chebyshev(Mean, Sd) UCL	0.00151	95% Chebyshev(Mean, Sd) UCL	0.00184
97.5% Chebyshev(Mean, Sd) UCL	0.00231	99% Chebyshev(Mean, Sd) UCL	0.00323

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.00184

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Hexachlorobenzene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.7800E-4	Mean	7.2028E-4
Maximum	0.00263	Median	6.5700E-4
SD	6.2759E-4	Std. Error of Mean	1.4792E-4
Coefficient of Variation	0.871	Skewness	2.133

Normal GOF Test

Shapiro Wilk Test Statistic	0.734	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.269	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.7761E-4	95% Adjusted-CLT UCL (Chen-1995)	0.00104
		95% Modified-t UCL (Johnson-1978)	9.9001E-4

Gamma GOF Test

A-D Test Statistic	0.758	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.17	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.91	k star (bias corrected MLE)	1.628
Theta hat (MLE)	3.7716E-4	Theta star (bias corrected MLE)	4.4230E-4
nu hat (MLE)	68.75	nu star (bias corrected)	58.62
MLE Mean (bias corrected)	7.2028E-4	MLE Sd (bias corrected)	5.6443E-4
		Approximate Chi Square Value (0.05)	42.02
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	40.67

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.001	95% Adjusted Gamma UCL (use when n<50)	0.00104

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.634	Mean of logged Data	-7.52
Maximum of Logged Data	-5.941	SD of logged Data	0.766

Assuming Lognormal Distribution

95% H-UCL	0.00112	90% Chebyshev (MVUE) UCL	0.00113
95% Chebyshev (MVUE) UCL	0.00131	97.5% Chebyshev (MVUE) UCL	0.00157
99% Chebyshev (MVUE) UCL	0.00208		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.6359E-4	95% Jackknife UCL	9.7761E-4
95% Standard Bootstrap UCL	9.5563E-4	95% Bootstrap-t UCL	0.00121

95% Hall's Bootstrap UCL	0.00243	95% Percentile Bootstrap UCL	9.7872E-4
95% BCA Bootstrap UCL	0.00105		
90% Chebyshev(Mean, Sd) UCL	0.00116	95% Chebyshev(Mean, Sd) UCL	0.00137
97.5% Chebyshev(Mean, Sd) UCL	0.00164	99% Chebyshev(Mean, Sd) UCL	0.00219

Suggested UCL to Use

95% Adjusted Gamma UCL 0.00104

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mirex

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	1
Minimum	4.7800E-5	Mean	1.5933E-4
Maximum	5.1000E-4	Median	1.3300E-4
SD	1.2980E-4	Std. Error of Mean	3.1481E-5
Coefficient of Variation	0.815	Skewness	2.089

Normal GOF Test

Shapiro Wilk Test Statistic	0.708	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.321	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1429E-4	95% Adjusted-CLT UCL (Chen-1995)	2.2815E-4
		95% Modified-t UCL (Johnson-1978)	2.1695E-4

Gamma GOF Test

A-D Test Statistic	0.81	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.235	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.211	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.373	k star (bias corrected MLE)	1.994
Theta hat (MLE)	6.7133E-5	Theta star (bias corrected MLE)	7.9916E-5
nu hat (MLE)	80.69	nu star (bias corrected)	67.79
MLE Mean (bias corrected)	1.5933E-4	MLE Sd (bias corrected)	1.1284E-4
		Approximate Chi Square Value (0.05)	49.84
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	48.23

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1671E-4	95% Adjusted Gamma UCL (use when n<50)	2.2396E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.187	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.948	Mean of logged Data	-8.97
Maximum of Logged Data	-7.581	SD of logged Data	0.656

Assuming Lognormal Distribution

95% H-UCL	2.2650E-4	90% Chebyshev (MVUE) UCL	2.3360E-4
95% Chebyshev (MVUE) UCL	2.6902E-4	97.5% Chebyshev (MVUE) UCL	3.1817E-4
99% Chebyshev (MVUE) UCL	4.1472E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.1111E-4	95% Jackknife UCL	2.1429E-4
95% Standard Bootstrap UCL	2.0969E-4	95% Bootstrap-t UCL	2.9340E-4

95% Hall's Bootstrap UCL	5.3288E-4	95% Percentile Bootstrap UCL	2.1431E-4
95% BCA Bootstrap UCL	2.2386E-4		
90% Chebyshev(Mean, Sd) UCL	2.5377E-4	95% Chebyshev(Mean, Sd) UCL	2.9655E-4
97.5% Chebyshev(Mean, Sd) UCL	3.5593E-4	99% Chebyshev(Mean, Sd) UCL	4.7256E-4

Suggested UCL to Use

95% H-UCL 2.2650E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Nonachlor, trans-

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00163	Mean	0.00959
Maximum	0.0708	Median	0.00471
SD	0.0164	Std. Error of Mean	0.00386
Coefficient of Variation	1.706	Skewness	3.496

Normal GOF Test

Shapiro Wilk Test Statistic	0.478	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.383	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0163	95% Adjusted-CLT UCL (Chen-1995)	0.0193
		95% Modified-t UCL (Johnson-1978)	0.0168

Gamma GOF Test

A-D Test Statistic	1.901	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.768	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.308	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.21	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.98	k star (bias corrected MLE)	0.854
Theta hat (MLE)	0.00978	Theta star (bias corrected MLE)	0.0112
nu hat (MLE)	35.28	nu star (bias corrected)	30.74
MLE Mean (bias corrected)	0.00959	MLE Sd (bias corrected)	0.0104
		Approximate Chi Square Value (0.05)	19.07
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	18.19

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0155	95% Adjusted Gamma UCL (use when n<50)	0.0162

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.867	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.224	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.419	Mean of logged Data	-5.238
Maximum of Logged Data	-2.649	SD of logged Data	0.927

Assuming Lognormal Distribution

95% H-UCL	0.0144	90% Chebyshev (MVUE) UCL	0.0136
95% Chebyshev (MVUE) UCL	0.0162	97.5% Chebyshev (MVUE) UCL	0.0198
99% Chebyshev (MVUE) UCL	0.0268		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0159	95% Jackknife UCL	0.0163
95% Standard Bootstrap UCL	0.0157	95% Bootstrap-t UCL	0.0402

95% Hall's Bootstrap UCL	0.0394	95% Percentile Bootstrap UCL	0.0165
95% BCA Bootstrap UCL	0.0214		
90% Chebyshev(Mean, Sd) UCL	0.0212	95% Chebyshev(Mean, Sd) UCL	0.0264
97.5% Chebyshev(Mean, Sd) UCL	0.0337	99% Chebyshev(Mean, Sd) UCL	0.0479

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0264

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Oxychlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.4400E-4	Mean	0.00134
Maximum	0.00823	Median	4.8875E-4
SD	0.0025	Std. Error of Mean	5.8817E-4
Coefficient of Variation	1.865	Skewness	2.658

Normal GOF Test

Shapiro Wilk Test Statistic	0.462	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.445	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00236	95% Adjusted-CLT UCL (Chen-1995)	0.0027
		95% Modified-t UCL (Johnson-1978)	0.00242

Gamma GOF Test

A-D Test Statistic	2.44	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.78	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.327	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.212	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.724	k star (bias corrected MLE)	0.641
Theta hat (MLE)	0.00185	Theta star (bias corrected MLE)	0.00209
nu hat (MLE)	26.07	nu star (bias corrected)	23.06
MLE Mean (bias corrected)	0.00134	MLE Sd (bias corrected)	0.00167
		Approximate Chi Square Value (0.05)	13.14
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	12.42

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00235	95% Adjusted Gamma UCL (use when n<50)	0.00248

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.835	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.206	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.846	Mean of logged Data	-7.447
Maximum of Logged Data	-4.8	SD of logged Data	1.103

Assuming Lognormal Distribution

95% H-UCL	0.00226	90% Chebyshev (MVUE) UCL	0.00192
95% Chebyshev (MVUE) UCL	0.00232	97.5% Chebyshev (MVUE) UCL	0.00288
99% Chebyshev (MVUE) UCL	0.00399		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00231	95% Jackknife UCL	0.00236
95% Standard Bootstrap UCL	0.00229	95% Bootstrap-t UCL	0.0102

95% Hall's Bootstrap UCL	0.00876	95% Percentile Bootstrap UCL	0.00229
95% BCA Bootstrap UCL	0.00271		
90% Chebyshev(Mean, Sd) UCL	0.0031	95% Chebyshev(Mean, Sd) UCL	0.0039
97.5% Chebyshev(Mean, Sd) UCL	0.00501	99% Chebyshev(Mean, Sd) UCL	0.00719

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0039

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

cis-Nonachlor

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	7.3500E-4	Mean	0.00397
Maximum	0.0288	Median	0.00188
SD	0.00681	Std. Error of Mean	0.00161
Coefficient of Variation	1.714	Skewness	3.302

Normal GOF Test

Shapiro Wilk Test Statistic	0.485	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.389	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00677	95% Adjusted-CLT UCL (Chen-1995)	0.00795
		95% Modified-t UCL (Johnson-1978)	0.00697

Gamma GOF Test

A-D Test Statistic	2.154	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.769	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.319	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.21	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.944	k star (bias corrected MLE)	0.824
Theta hat (MLE)	0.00421	Theta star (bias corrected MLE)	0.00482
nu hat (MLE)	34	nu star (bias corrected)	29.66
MLE Mean (bias corrected)	0.00397	MLE Sd (bias corrected)	0.00438
		Approximate Chi Square Value (0.05)	18.23
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	17.37

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00647	95% Adjusted Gamma UCL (use when n<50)	0.00679

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.833	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.216	Mean of logged Data	-6.144
Maximum of Logged Data	-3.549	SD of logged Data	0.939

Assuming Lognormal Distribution

95% H-UCL	0.00597	90% Chebyshev (MVUE) UCL	0.00559
95% Chebyshev (MVUE) UCL	0.00666	97.5% Chebyshev (MVUE) UCL	0.00814
99% Chebyshev (MVUE) UCL	0.0111		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00661	95% Jackknife UCL	0.00677
95% Standard Bootstrap UCL	0.00655	95% Bootstrap-t UCL	0.0193

95% Hall's Bootstrap UCL	0.0171	95% Percentile Bootstrap UCL	0.00687
95% BCA Bootstrap UCL	0.00843		
90% Chebyshev(Mean, Sd) UCL	0.00879	95% Chebyshev(Mean, Sd) UCL	0.011
97.5% Chebyshev(Mean, Sd) UCL	0.014	99% Chebyshev(Mean, Sd) UCL	0.0199

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.011

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.7200E-4	Mean	0.00184
Maximum	0.0186	Median	4.5025E-4
SD	0.00435	Std. Error of Mean	0.00102
Coefficient of Variation	2.367	Skewness	3.768

Normal GOF Test

Shapiro Wilk Test Statistic	0.41	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.417	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00362	95% Adjusted-CLT UCL (Chen-1995)	0.00449
		95% Modified-t UCL (Johnson-1978)	0.00377

Gamma GOF Test

A-D Test Statistic	2.31	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.793	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.274	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.214	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.586	k star (bias corrected MLE)	0.525
Theta hat (MLE)	0.00314	Theta star (bias corrected MLE)	0.0035
nu hat (MLE)	21.08	nu star (bias corrected)	18.9
MLE Mean (bias corrected)	0.00184	MLE Sd (bias corrected)	0.00253
		Approximate Chi Square Value (0.05)	10.05
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	9.431

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00346	95% Adjusted Gamma UCL (use when n<50)	0.00368

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.847	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.192	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.668	Mean of logged Data	-7.359
Maximum of Logged Data	-3.987	SD of logged Data	1.204

Assuming Lognormal Distribution

95% H-UCL	0.00311	90% Chebyshev (MVUE) UCL	0.00243
95% Chebyshev (MVUE) UCL	0.00298	97.5% Chebyshev (MVUE) UCL	0.00373
99% Chebyshev (MVUE) UCL	0.00521		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00352	95% Jackknife UCL	0.00362
95% Standard Bootstrap UCL	0.0034	95% Bootstrap-t UCL	0.0152

95% Hall's Bootstrap UCL	0.0107	95% Percentile Bootstrap UCL	0.00366
95% BCA Bootstrap UCL	0.00483		
90% Chebyshev(Mean, Sd) UCL	0.00491	95% Chebyshev(Mean, Sd) UCL	0.0063
97.5% Chebyshev(Mean, Sd) UCL	0.00823	99% Chebyshev(Mean, Sd) UCL	0.012

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 0.0063

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable trans-Heptachlor Epoxide was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/25/18 2:22:33 PM
From File	fsh4_met_wide2_flag_sep1_SB.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	10

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Aluminum was not processed!

Arsenic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.406	Mean	1.155
Maximum	1.6	Median	1.15
SD	0.279	Std. Error of Mean	0.0657
Coefficient of Variation	0.241	Skewness	-0.887

Normal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.16	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.27	95% Adjusted-CLT UCL (Chen-1995)	1.249
		95% Modified-t UCL (Johnson-1978)	1.267

Gamma GOF Test

A-D Test Statistic	0.783	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.205	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.7	k star (bias corrected MLE)	11.45
Theta hat (MLE)	0.0843	Theta star (bias corrected MLE)	0.101
nu hat (MLE)	493.2	nu star (bias corrected)	412.3
MLE Mean (bias corrected)	1.155	MLE Sd (bias corrected)	0.341
		Approximate Chi Square Value (0.05)	366.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	362.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.301	95% Adjusted Gamma UCL (use when n<50)	1.316

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.796	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.233	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.903	Mean of logged Data	0.107
Maximum of Logged Data	0.47	SD of logged Data	0.306

Assuming Lognormal Distribution

95% H-UCL	1.34	90% Chebyshev (MVUE) UCL	1.419
95% Chebyshev (MVUE) UCL	1.535	97.5% Chebyshev (MVUE) UCL	1.696
99% Chebyshev (MVUE) UCL	2.012		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.263	95% Jackknife UCL	1.27
95% Standard Bootstrap UCL	1.262	95% Bootstrap-t UCL	1.255
95% Hall's Bootstrap UCL	1.255	95% Percentile Bootstrap UCL	1.256
95% BCA Bootstrap UCL	1.25		
90% Chebyshev(Mean, Sd) UCL	1.352	95% Chebyshev(Mean, Sd) UCL	1.442
97.5% Chebyshev(Mean, Sd) UCL	1.566	99% Chebyshev(Mean, Sd) UCL	1.809

Suggested UCL to Use

95% Student's-t UCL 1.27

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Arsenic - inorganic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0406	Mean	0.116
Maximum	0.16	Median	0.115
SD	0.0279	Std. Error of Mean	0.00657
Coefficient of Variation	0.241	Skewness	-0.887

Normal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.16	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.127	95% Adjusted-CLT UCL (Chen-1995)	0.125
		95% Modified-t UCL (Johnson-1978)	0.127

Gamma GOF Test

A-D Test Statistic	0.783	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.205	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.7	k star (bias corrected MLE)	11.45
Theta hat (MLE)	0.00843	Theta star (bias corrected MLE)	0.0101
nu hat (MLE)	493.2	nu star (bias corrected)	412.3
MLE Mean (bias corrected)	0.116	MLE Sd (bias corrected)	0.0341
		Approximate Chi Square Value (0.05)	366.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	362.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.13	95% Adjusted Gamma UCL (use when n<50)	0.132

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.796	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.233	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.205	Mean of logged Data	-2.195
Maximum of Logged Data	-1.833	SD of logged Data	0.306

Assuming Lognormal Distribution

95% H-UCL	0.134	90% Chebyshev (MVUE) UCL	0.142
95% Chebyshev (MVUE) UCL	0.154	97.5% Chebyshev (MVUE) UCL	0.17
99% Chebyshev (MVUE) UCL	0.201		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.126	95% Jackknife UCL	0.127
95% Standard Bootstrap UCL	0.126	95% Bootstrap-t UCL	0.126

95% Hall's Bootstrap UCL	0.126	95% Percentile Bootstrap UCL	0.126
95% BCA Bootstrap UCL	0.125		
90% Chebyshev(Mean, Sd) UCL	0.135	95% Chebyshev(Mean, Sd) UCL	0.144
97.5% Chebyshev(Mean, Sd) UCL	0.157	99% Chebyshev(Mean, Sd) UCL	0.181

Suggested UCL to Use

95% Student's-t UCL	0.127

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Arsenic - organic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.365	Mean	1.04
Maximum	1.44	Median	1.035
SD	0.251	Std. Error of Mean	0.0591
Coefficient of Variation	0.241	Skewness	-0.887

Normal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.16	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.143	95% Adjusted-CLT UCL (Chen-1995)	1.124
		95% Modified-t UCL (Johnson-1978)	1.141

Gamma GOF Test

A-D Test Statistic	0.783	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.205	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.7	k star (bias corrected MLE)	11.45
Theta hat (MLE)	0.0759	Theta star (bias corrected MLE)	0.0908
nu hat (MLE)	493.2	nu star (bias corrected)	412.3
MLE Mean (bias corrected)	1.04	MLE Sd (bias corrected)	0.307
		Approximate Chi Square Value (0.05)	366.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	362.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.171	95% Adjusted Gamma UCL (use when n<50)	1.184

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.796	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.233	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.008	Mean of logged Data	0.00213
Maximum of Logged Data	0.365	SD of logged Data	0.306

Assuming Lognormal Distribution

95% H-UCL	1.206	90% Chebyshev (MVUE) UCL	1.278
95% Chebyshev (MVUE) UCL	1.382	97.5% Chebyshev (MVUE) UCL	1.526
99% Chebyshev (MVUE) UCL	1.81		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.137	95% Jackknife UCL	1.143
95% Standard Bootstrap UCL	1.135	95% Bootstrap-t UCL	1.131

95% Hall's Bootstrap UCL	1.129	95% Percentile Bootstrap UCL	1.126
95% BCA Bootstrap UCL	1.12		
90% Chebyshev(Mean, Sd) UCL	1.217	95% Chebyshev(Mean, Sd) UCL	1.298
97.5% Chebyshev(Mean, Sd) UCL	1.409	99% Chebyshev(Mean, Sd) UCL	1.628

Suggested UCL to Use

95% Student's-t UCL 1.143

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Cadmium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	10

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cadmium was not processed!

Chromium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	5	Number of Non-Detects	13
Number of Distinct Detects	5	Number of Distinct Non-Detects	10
Minimum Detect	0.125	Minimum Non-Detect	0.0685
Maximum Detect	0.228	Maximum Non-Detect	0.099
Variance Detects	0.00185	Percent Non-Detects	72.22%
Mean Detects	0.178	SD Detects	0.043
Median Detects	0.192	CV Detects	0.241
Skewness Detects	-0.289	Kurtosis Detects	-2.085
Mean of Logged Detects	-1.749	SD of Logged Detects	0.253

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.099	KM Standard Error of Mean	0.014
KM SD	0.0532	95% KM (BCA) UCL	0.128
95% KM (t) UCL	0.123	95% KM (Percentile Bootstrap) UCL	0.124
95% KM (z) UCL	0.122	95% KM Bootstrap t UCL	0.11
90% KM Chebyshev UCL	0.141	95% KM Chebyshev UCL	0.16
97.5% KM Chebyshev UCL	0.187	99% KM Chebyshev UCL	0.239

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.334	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.679	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.357	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	20.32	k star (bias corrected MLE)	8.263
Theta hat (MLE)	0.00878	Theta star (bias corrected MLE)	0.0216
nu hat (MLE)	203.2	nu star (bias corrected)	82.63
Mean (detects)	0.178		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0729
Maximum	0.228	Median	0.0307
SD	0.072	CV	0.987
k hat (MLE)	1.221	k star (bias corrected MLE)	1.054
Theta hat (MLE)	0.0597	Theta star (bias corrected MLE)	0.0691
nu hat (MLE)	43.94	nu star (bias corrected)	37.95
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (37.95, α)	24.84	Adjusted Chi Square Value (37.95, β)	23.83
95% Gamma Approximate UCL (use when n>=50)	0.111	95% Gamma Adjusted UCL (use when n<50)	0.116

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.099	SD (KM)	0.0532
Variance (KM)	0.00283	SE of Mean (KM)	0.014
k hat (KM)	3.46	k star (KM)	2.92
nu hat (KM)	124.6	nu star (KM)	105.1
theta hat (KM)	0.0286	theta star (KM)	0.0339
80% gamma percentile (KM)	0.142	90% gamma percentile (KM)	0.177
95% gamma percentile (KM)	0.209	99% gamma percentile (KM)	0.28

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (105.13, α)	82.47	Adjusted Chi Square Value (105.13, β)	80.54
95% Gamma Approximate KM-UCL (use when n>=50)	0.126	95% Gamma Adjusted KM-UCL (use when n<50)	0.129

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.251	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0982	Mean in Log Scale	-2.441
SD in Original Scale	0.0559	SD in Log Scale	0.475
95% t UCL (assumes normality of ROS data)	0.121	95% Percentile Bootstrap UCL	0.121
95% BCA Bootstrap UCL	0.126	95% Bootstrap t UCL	0.131
95% H-UCL (Log ROS)	0.123		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.422	KM Geo Mean	0.0888
KM SD (logged)	0.434	95% Critical H Value (KM-Log)	1.961
KM Standard Error of Mean (logged)	0.114	95% H-UCL (KM -Log)	0.12
KM SD (logged)	0.434	95% Critical H Value (KM-Log)	1.961
KM Standard Error of Mean (logged)	0.114		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0824	Mean in Log Scale	-2.724
SD in Original Scale	0.0649	SD in Log Scale	0.643
95% t UCL (Assumes normality)	0.109	95% H-Stat UCL	0.113

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.123

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	10

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cobalt was not processed!

Copper

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.305	Mean	0.507
Maximum	0.782	Median	0.489
SD	0.14	Std. Error of Mean	0.0329
Coefficient of Variation	0.275	Skewness	0.351

Normal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.564	95% Adjusted-CLT UCL (Chen-1995)	0.564
		95% Modified-t UCL (Johnson-1978)	0.564

Gamma GOF Test

A-D Test Statistic	0.208	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.101	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.92	k star (bias corrected MLE)	11.64
Theta hat (MLE)	0.0364	Theta star (bias corrected MLE)	0.0435
nu hat (MLE)	501.3	nu star (bias corrected)	419.1
MLE Mean (bias corrected)	0.507	MLE Sd (bias corrected)	0.149
		Approximate Chi Square Value (0.05)	372.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	368.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.57	95% Adjusted Gamma UCL (use when n<50)	0.576

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0966	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.187	Mean of logged Data	-0.716
Maximum of Logged Data	-0.246	SD of logged Data	0.279

Assuming Lognormal Distribution

95% H-UCL	0.575	90% Chebyshev (MVUE) UCL	0.608
95% Chebyshev (MVUE) UCL	0.654	97.5% Chebyshev (MVUE) UCL	0.718
99% Chebyshev (MVUE) UCL	0.843		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.561	95% Jackknife UCL	0.564
95% Standard Bootstrap UCL	0.559	95% Bootstrap-t UCL	0.567
95% Hall's Bootstrap UCL	0.566	95% Percentile Bootstrap UCL	0.56
95% BCA Bootstrap UCL	0.565		
90% Chebyshev(Mean, Sd) UCL	0.605	95% Chebyshev(Mean, Sd) UCL	0.65
97.5% Chebyshev(Mean, Sd) UCL	0.712	99% Chebyshev(Mean, Sd) UCL	0.834

Suggested UCL to Use

95% Student's-t UCL	0.564

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	14	Number of Distinct Non-Detects	3
Minimum Detect	4.34	Minimum Non-Detect	3.53
Maximum Detect	9.82	Maximum Non-Detect	4.62
Variance Detects	2.315	Percent Non-Detects	22.22%
Mean Detects	6.555	SD Detects	1.522
Median Detects	6.33	CV Detects	0.232
Skewness Detects	0.655	Kurtosis Detects	0.162
Mean of Logged Detects	1.856	SD of Logged Detects	0.228

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.182	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.95	KM Standard Error of Mean	0.427
KM SD	1.728	95% KM (BCA) UCL	6.698
95% KM (t) UCL	6.694	95% KM (Percentile Bootstrap) UCL	6.664
95% KM (z) UCL	6.653	95% KM Bootstrap t UCL	6.731
90% KM Chebyshev UCL	7.233	95% KM Chebyshev UCL	7.814
97.5% KM Chebyshev UCL	8.62	99% KM Chebyshev UCL	10.2

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.22	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.734	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.155	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.228	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	20.73	k star (bias corrected MLE)	16.34
Theta hat (MLE)	0.316	Theta star (bias corrected MLE)	0.401
nu hat (MLE)	580.4	nu star (bias corrected)	457.4
Mean (detects)	6.555		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.047	Mean	5.882
Maximum	9.82	Median	6.11
SD	1.867	CV	0.317
k hat (MLE)	10.23	k star (bias corrected MLE)	8.564
Theta hat (MLE)	0.575	Theta star (bias corrected MLE)	0.687
nu hat (MLE)	368.4	nu star (bias corrected)	308.3
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (308.32, α)	268.6	Adjusted Chi Square Value (308.32, β)	265.1
95% Gamma Approximate UCL (use when n>=50)	6.751	95% Gamma Adjusted UCL (use when n<50)	6.841

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.95	SD (KM)	1.728
Variance (KM)	2.986	SE of Mean (KM)	0.427
k hat (KM)	11.86	k star (KM)	9.917

nu hat (KM)	426.8	nu star (KM)	357
theta hat (KM)	0.502	theta star (KM)	0.6
80% gamma percentile (KM)	7.455	90% gamma percentile (KM)	8.464
95% gamma percentile (KM)	9.36	99% gamma percentile (KM)	11.2

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (357.03, α)	314.2	Adjusted Chi Square Value (357.03, β)	310.4
95% Gamma Approximate KM-UCL (use when n>=50)	6.76	95% Gamma Adjusted KM-UCL (use when n<50)	6.844

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.141	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.959	Mean in Log Scale	1.744
SD in Original Scale	1.762	SD in Log Scale	0.296
95% t UCL (assumes normality of ROS data)	6.682	95% Percentile Bootstrap UCL	6.617
95% BCA Bootstrap UCL	6.647	95% Bootstrap t UCL	6.722
95% H-UCL (Log ROS)	6.824		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.741	KM Geo Mean	5.703
KM SD (logged)	0.293	95% Critical H Value (KM-Log)	1.848
KM Standard Error of Mean (logged)	0.0736	95% H-UCL (KM -Log)	6.79
KM SD (logged)	0.293	95% Critical H Value (KM-Log)	1.848
KM Standard Error of Mean (logged)	0.0736		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.574	Mean in Log Scale	1.611
SD in Original Scale	2.312	SD in Log Scale	0.514
95% t UCL (Assumes normality)	6.522	95% H-Stat UCL	7.367

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	6.694

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	11

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Lead was not processed!

Manganese

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	4	Number of Non-Detects	14
Number of Distinct Detects	4	Number of Distinct Non-Detects	9
Minimum Detect	0.163	Minimum Non-Detect	0.115
Maximum Detect	0.636	Maximum Non-Detect	0.168
Variance Detects	0.0514	Percent Non-Detects	77.78%
Mean Detects	0.3	SD Detects	0.227
Median Detects	0.2	CV Detects	0.756
Skewness Detects	1.87	Kurtosis Detects	3.507
Mean of Logged Detects	-1.38	SD of Logged Detects	0.642

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.737	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.361	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.159	KM Standard Error of Mean	0.0328
KM SD	0.12	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.216	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.213	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.258	95% KM Chebyshev UCL	0.302
97.5% KM Chebyshev UCL	0.364	99% KM Chebyshev UCL	0.486

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.594	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.659	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.33	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.397	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.017	k star (bias corrected MLE)	0.921
Theta hat (MLE)	0.0994	Theta star (bias corrected MLE)	0.325
nu hat (MLE)	24.14	nu star (bias corrected)	7.367
Mean (detects)	0.3		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0744
Maximum	0.636	Median	0.01
SD	0.156	CV	2.101
k hat (MLE)	0.493	k star (bias corrected MLE)	0.448
Theta hat (MLE)	0.151	Theta star (bias corrected MLE)	0.166
nu hat (MLE)	17.76	nu star (bias corrected)	16.14
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (16.14, α)	8.058	Adjusted Chi Square Value (16.14, β)	7.515
95% Gamma Approximate UCL (use when n>=50)	0.149	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.159	SD (KM)	0.12
Variance (KM)	0.0144	SE of Mean (KM)	0.0328
k hat (KM)	1.768	k star (KM)	1.51
nu hat (KM)	63.65	nu star (KM)	54.38
theta hat (KM)	0.0901	theta star (KM)	0.105
80% gamma percentile (KM)	0.246	90% gamma percentile (KM)	0.331
95% gamma percentile (KM)	0.414	99% gamma percentile (KM)	0.6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (54.38, α)	38.43	Adjusted Chi Square Value (54.38, β)	37.15
95% Gamma Approximate KM-UCL (use when n>=50)	0.225	95% Gamma Adjusted KM-UCL (use when n<50)	0.233

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.804	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.29	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0993	Mean in Log Scale	-2.84
SD in Original Scale	0.147	SD in Log Scale	0.93
95% t UCL (assumes normality of ROS data)	0.159	95% Percentile Bootstrap UCL	0.164
95% BCA Bootstrap UCL	0.196	95% Bootstrap t UCL	0.257
95% H-UCL (Log ROS)	0.16		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.965	KM Geo Mean	0.14
KM SD (logged)	0.417	95% Critical H Value (KM-Log)	1.946
KM Standard Error of Mean (logged)	0.117	95% H-UCL (KM -Log)	0.186
KM SD (logged)	0.417	95% Critical H Value (KM-Log)	1.946
KM Standard Error of Mean (logged)	0.117		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.128	Mean in Log Scale	-2.286
SD in Original Scale	0.134	SD in Log Scale	0.575
95% t UCL (Assumes normality)	0.183	95% H-Stat UCL	0.161

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.216

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.104	Mean	0.25
Maximum	0.485	Median	0.237
SD	0.0784	Std. Error of Mean	0.0185
Coefficient of Variation	0.313	Skewness	1.352

Normal GOF Test

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.282	95% Adjusted-CLT UCL (Chen-1995)	0.287
		95% Modified-t UCL (Johnson-1978)	0.283

Gamma GOF Test

A-D Test Statistic	0.598	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.159	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.45	k star (bias corrected MLE)	9.579
Theta hat (MLE)	0.0219	Theta star (bias corrected MLE)	0.0261
nu hat (MLE)	412.2	nu star (bias corrected)	344.8
MLE Mean (bias corrected)	0.25	MLE Sd (bias corrected)	0.0809
		Approximate Chi Square Value (0.05)	302.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	299

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.285	95% Adjusted Gamma UCL (use when n<50)	0.289

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.172	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.263	Mean of logged Data	-1.429
Maximum of Logged Data	-0.724	SD of logged Data	0.31

Assuming Lognormal Distribution

95% H-UCL	0.289	90% Chebyshev (MVUE) UCL	0.306
95% Chebyshev (MVUE) UCL	0.332	97.5% Chebyshev (MVUE) UCL	0.367
99% Chebyshev (MVUE) UCL	0.435		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.281	95% Jackknife UCL	0.282
95% Standard Bootstrap UCL	0.28	95% Bootstrap-t UCL	0.294

95% Hall's Bootstrap UCL	0.318	95% Percentile Bootstrap UCL	0.281
95% BCA Bootstrap UCL	0.284		
90% Chebyshev(Mean, Sd) UCL	0.306	95% Chebyshev(Mean, Sd) UCL	0.331
97.5% Chebyshev(Mean, Sd) UCL	0.366	99% Chebyshev(Mean, Sd) UCL	0.434

Suggested UCL to Use

95% Student's-t UCL	0.282

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Methyl Mercury

General Statistics

Total Number of Observations	16	Number of Distinct Observations	15
		Number of Missing Observations	2
Minimum	0.129	Mean	0.294
Maximum	0.576	Median	0.276
SD	0.101	Std. Error of Mean	0.0252
Coefficient of Variation	0.342	Skewness	1.387

Normal GOF Test

Shapiro Wilk Test Statistic	0.892	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.177	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.338	95% Adjusted-CLT UCL (Chen-1995)	0.345
		95% Modified-t UCL (Johnson-1978)	0.34

Gamma GOF Test

A-D Test Statistic	0.391	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.133	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.02	k star (bias corrected MLE)	8.18
Theta hat (MLE)	0.0294	Theta star (bias corrected MLE)	0.0359
nu hat (MLE)	320.5	nu star (bias corrected)	261.8
MLE Mean (bias corrected)	0.294	MLE Sd (bias corrected)	0.103
		Approximate Chi Square Value (0.05)	225.3
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	221.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.342	95% Adjusted Gamma UCL (use when n<50)	0.348

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.048	Mean of logged Data	-1.275
Maximum of Logged Data	-0.552	SD of logged Data	0.329

Assuming Lognormal Distribution

95% H-UCL	0.347	90% Chebyshev (MVUE) UCL	0.368
95% Chebyshev (MVUE) UCL	0.401	97.5% Chebyshev (MVUE) UCL	0.447
99% Chebyshev (MVUE) UCL	0.538		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.335	95% Jackknife UCL	0.338
95% Standard Bootstrap UCL	0.334	95% Bootstrap-t UCL	0.355

95% Hall's Bootstrap UCL	0.386	95% Percentile Bootstrap UCL	0.337
95% BCA Bootstrap UCL	0.345		
90% Chebyshev(Mean, Sd) UCL	0.369	95% Chebyshev(Mean, Sd) UCL	0.404
97.5% Chebyshev(Mean, Sd) UCL	0.451	99% Chebyshev(Mean, Sd) UCL	0.544

Suggested UCL to Use

95% Student's-t UCL	0.338

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Selenium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.265	Mean	0.359
Maximum	0.444	Median	0.354
SD	0.0471	Std. Error of Mean	0.0111
Coefficient of Variation	0.131	Skewness	-0.0234

Normal GOF Test

Shapiro Wilk Test Statistic	0.988	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0958	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.379	95% Adjusted-CLT UCL (Chen-1995)	0.377
		95% Modified-t UCL (Johnson-1978)	0.379

Gamma GOF Test

A-D Test Statistic	0.134	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0785	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	60.35	k star (bias corrected MLE)	50.32
Theta hat (MLE)	0.00595	Theta star (bias corrected MLE)	0.00714
nu hat (MLE)	2172	nu star (bias corrected)	1812
MLE Mean (bias corrected)	0.359	MLE Sd (bias corrected)	0.0506
		Approximate Chi Square Value (0.05)	1714
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	1705

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.38	95% Adjusted Gamma UCL (use when n<50)	0.382

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0775	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.33	Mean of logged Data	-1.032
Maximum of Logged Data	-0.812	SD of logged Data	0.134

Assuming Lognormal Distribution

95% H-UCL	0.38	90% Chebyshev (MVUE) UCL	0.393
95% Chebyshev (MVUE) UCL	0.409	97.5% Chebyshev (MVUE) UCL	0.43
99% Chebyshev (MVUE) UCL	0.472		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.377	95% Jackknife UCL	0.379
95% Standard Bootstrap UCL	0.377	95% Bootstrap-t UCL	0.378

95% Hall's Bootstrap UCL	0.377	95% Percentile Bootstrap UCL	0.377
95% BCA Bootstrap UCL	0.377		
90% Chebyshev(Mean, Sd) UCL	0.393	95% Chebyshev(Mean, Sd) UCL	0.408
97.5% Chebyshev(Mean, Sd) UCL	0.429	99% Chebyshev(Mean, Sd) UCL	0.47

Suggested UCL to Use

95% Student's-t UCL	0.379

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Silver

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	10

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Silver was not processed!

Vanadium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	9

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Vanadium was not processed!

Zinc

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.76	Mean	6.724
Maximum	10.7	Median	6.505
SD	1.349	Std. Error of Mean	0.318
Coefficient of Variation	0.201	Skewness	1.599

Normal GOF Test

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.215	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.277	95% Adjusted-CLT UCL (Chen-1995)	7.375
		95% Modified-t UCL (Johnson-1978)	7.297

Gamma GOF Test

A-D Test Statistic	0.53	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.19	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	29.92	k star (bias corrected MLE)	24.97
Theta hat (MLE)	0.225	Theta star (bias corrected MLE)	0.269
nu hat (MLE)	1077	nu star (bias corrected)	898.9

MLE Mean (bias corrected)	6.724	MLE Sd (bias corrected)	1.346
		Approximate Chi Square Value (0.05)	830.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	824

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	7.28	95% Adjusted Gamma UCL (use when n<50)	7.335

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.178	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.56	Mean of logged Data	1.889
Maximum of Logged Data	2.37	SD of logged Data	0.184

Assuming Lognormal Distribution

95% H-UCL	7.279	90% Chebyshev (MVUE) UCL	7.596
95% Chebyshev (MVUE) UCL	7.993	97.5% Chebyshev (MVUE) UCL	8.545
99% Chebyshev (MVUE) UCL	9.628		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.247	95% Jackknife UCL	7.277
95% Standard Bootstrap UCL	7.23	95% Bootstrap-t UCL	7.543
95% Hall's Bootstrap UCL	7.918	95% Percentile Bootstrap UCL	7.281
95% BCA Bootstrap UCL	7.328		
90% Chebyshev(Mean, Sd) UCL	7.678	95% Chebyshev(Mean, Sd) UCL	8.11
97.5% Chebyshev(Mean, Sd) UCL	8.709	99% Chebyshev(Mean, Sd) UCL	9.887

Suggested UCL to Use

95% Adjusted Gamma UCL	7.335

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 5:07:30 PM
From File	fsh8_SVOC_wide2_flag_sep1_SB.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzaldehyde was not processed!

Pyridine

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Pyridine was not processed!

Summer Flounder

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 6:22:24 PM
From File	fsh1_dlc_wide2_flag_sep1_SF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	1.2600E-6	Minimum Non-Detect	1.2300E-7
Maximum Detect	1.0400E-5	Maximum Non-Detect	1.2300E-7
Variance Detects	6.504E-12	Percent Non-Detects	5.556%
Mean Detects	4.6059E-6	SD Detects	2.5502E-6
Median Detects	4.5300E-6	CV Detects	N/A
Skewness Detects	0.742	Kurtosis Detects	0.1
Mean of Logged Detects	-12.45	SD of Logged Detects	0.605

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.15	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.3568E-6	KM Standard Error of Mean	6.3520E-7
KM SD	2.6145E-6	95% KM (BCA) UCL	5.3938E-6
95% KM (t) UCL	5.4618E-6	95% KM (Percentile Bootstrap) UCL	5.3689E-6
95% KM (z) UCL	5.4016E-6	95% KM Bootstrap t UCL	5.4742E-6
90% KM Chebyshev UCL	6.2624E-6	95% KM Chebyshev UCL	7.1256E-6
97.5% KM Chebyshev UCL	8.3237E-6	99% KM Chebyshev UCL	1.0677E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.258	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.21	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.316	k star (bias corrected MLE)	2.77
Theta hat (MLE)	1.3888E-6	Theta star (bias corrected MLE)	1.6626E-6
nu hat (MLE)	112.8	nu star (bias corrected)	94.19
Mean (detects)	4.6059E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.2600E-6	Mean	5.5991E-4
Maximum	0.01	Median	4.5800E-6
SD	0.00236	CV	4.208
k hat (MLE)	0.167	k star (bias corrected MLE)	0.176
Theta hat (MLE)	0.00335	Theta star (bias corrected MLE)	0.00317

nu hat (MLE)	6.02	nu star (bias corrected)	6.35
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (6.35, α)	1.821	Adjusted Chi Square Value (6.35, β)	1.599
95% Gamma Approximate UCL (use when n>=50)	0.00195	95% Gamma Adjusted UCL (use when n<50)	0.00222

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.3568E-6	SD (KM)	2.6145E-6
Variance (KM)	6.835E-12	SE of Mean (KM)	6.3520E-7
k hat (KM)	2.777	k star (KM)	2.351
nu hat (KM)	99.97	nu star (KM)	84.64
theta hat (KM)	1.5689E-6	theta star (KM)	1.8530E-6
80% gamma percentile (KM)	6.3985E-6	90% gamma percentile (KM)	8.1613E-6
95% gamma percentile (KM)	9.8274E-6	99% gamma percentile (KM)	1.3488E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (84.64, α)	64.44	Adjusted Chi Square Value (84.64, β)	62.75
95% Gamma Approximate KM-UCL (use when n>=50)	5.7230E-6	95% Gamma Adjusted KM-UCL (use when n<50)	5.8773E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.3998E-6	Mean in Log Scale	-12.53
SD in Original Scale	2.6240E-6	SD in Log Scale	0.683
95% t UCL (assumes normality of ROS data)	5.4757E-6	95% Percentile Bootstrap UCL	5.3594E-6
95% BCA Bootstrap UCL	5.4943E-6	95% Bootstrap t UCL	5.6672E-6
95% H-UCL (Log ROS)	6.6025E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.64	KM Geo Mean	3.2433E-6
KM SD (logged)	0.978	95% Critical H Value (KM-Log)	2.605
KM Standard Error of Mean (logged)	0.238	95% H-UCL (KM -Log)	9.7003E-6
KM SD (logged)	0.978	95% Critical H Value (KM-Log)	2.605
KM Standard Error of Mean (logged)	0.238		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.3534E-6	Mean in Log Scale	-12.68
SD in Original Scale	2.6960E-6	SD in Log Scale	1.143
95% t UCL (Assumes normality)	5.4589E-6	95% H-Stat UCL	1.3209E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.4618E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	8	Number of Non-Detects	10
Number of Distinct Detects	8	Number of Distinct Non-Detects	10
Minimum Detect	2.4100E-7	Minimum Non-Detect	5.7100E-8
Maximum Detect	4.7200E-7	Maximum Non-Detect	1.6400E-7
Variance Detects	6.185E-15	Percent Non-Detects	55.56%
Mean Detects	3.3213E-7	SD Detects	7.8646E-8
Median Detects	3.0750E-7	CV Detects	N/A
Skewness Detects	0.747	Kurtosis Detects	-0.361
Mean of Logged Detects	-14.94	SD of Logged Detects	0.229

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.933	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.208	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.7933E-7	KM Standard Error of Mean	3.6586E-8
KM SD	1.4520E-7	95% KM (BCA) UCL	2.3859E-7
95% KM (t) UCL	2.4298E-7	95% KM (Percentile Bootstrap) UCL	2.3881E-7
95% KM (z) UCL	2.3951E-7	95% KM Bootstrap t UCL	2.4142E-7
90% KM Chebyshev UCL	2.8909E-7	95% KM Chebyshev UCL	3.3881E-7
97.5% KM Chebyshev UCL	4.0781E-7	99% KM Chebyshev UCL	5.4336E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.275	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.716	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.211	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	21.47	k star (bias corrected MLE)	13.5
Theta hat (MLE)	1.5471E-8	Theta star (bias corrected MLE)	2.4601E-8
nu hat (MLE)	343.5	nu star (bias corrected)	216
Mean (detects)	3.3213E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.4100E-7	Mean	0.00556
Maximum	0.01	Median	0.01
SD	0.00511	CV	0.92
k hat (MLE)	0.186	k star (bias corrected MLE)	0.192
Theta hat (MLE)	0.0299	Theta star (bias corrected MLE)	0.029
nu hat (MLE)	6.689	nu star (bias corrected)	6.908
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (6.91, α)	2.12	Adjusted Chi Square Value (6.91, β)	1.875
95% Gamma Approximate UCL (use when n>=50)	0.0181	95% Gamma Adjusted UCL (use when n<50)	0.0205

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.7933E-7	SD (KM)	1.4520E-7
Variance (KM)	2.108E-14	SE of Mean (KM)	3.6586E-8
k hat (KM)	1.526	k star (KM)	1.308

nu hat (KM)	54.92	nu star (KM)	47.1
theta hat (KM)	1.1756E-7	theta star (KM)	1.3707E-7
80% gamma percentile (KM)	2.8152E-7	90% gamma percentile (KM)	3.8643E-7
95% gamma percentile (KM)	4.8926E-7	99% gamma percentile (KM)	7.2357E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (47.10, α)	32.35	Adjusted Chi Square Value (47.10, β)	31.18
95% Gamma Approximate KM-UCL (use when n>=50)	2.6110E-7	95% Gamma Adjusted KM-UCL (use when n<50)	2.7091E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.193	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.3782E-7	Mean in Log Scale	-15.33
SD in Original Scale	1.0040E-7	SD in Log Scale	0.383
95% t UCL (assumes normality of ROS data)	2.7899E-7	95% Percentile Bootstrap UCL	2.7542E-7
95% BCA Bootstrap UCL	2.8161E-7	95% Bootstrap t UCL	2.8843E-7
95% H-UCL (Log ROS)	2.8406E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.91	KM Geo Mean	1.2358E-7
KM SD (logged)	0.875	95% Critical H Value (KM-Log)	2.462
KM Standard Error of Mean (logged)	0.22	95% H-UCL (KM -Log)	3.0555E-7
KM SD (logged)	0.875	95% Critical H Value (KM-Log)	2.462
KM Standard Error of Mean (logged)	0.22		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.7309E-7	Mean in Log Scale	-16.05
SD in Original Scale	1.5526E-7	SD in Log Scale	1.06
95% t UCL (Assumes normality)	2.3675E-7	95% H-Stat UCL	3.7671E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.4298E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	1.6000E-8	Minimum Non-Detect	2.1700E-8
Maximum Detect	1.6400E-7	Maximum Non-Detect	3.4100E-8
Variance Detects	1.374E-15	Percent Non-Detects	11.11%
Mean Detects	6.4463E-8	SD Detects	3.7068E-8
Median Detects	5.3750E-8	CV Detects	N/A
Skewness Detects	1.412	Kurtosis Detects	2.315
Mean of Logged Detects	-16.7	SD of Logged Detects	0.564

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.882	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.9309E-8	KM Standard Error of Mean	8.9854E-9
KM SD	3.6876E-8	95% KM (BCA) UCL	7.5972E-8
95% KM (t) UCL	7.4940E-8	95% KM (Percentile Bootstrap) UCL	7.4667E-8
95% KM (z) UCL	7.4089E-8	95% KM Bootstrap t UCL	7.8683E-8
90% KM Chebyshev UCL	8.6265E-8	95% KM Chebyshev UCL	9.8476E-8
97.5% KM Chebyshev UCL	1.1542E-7	99% KM Chebyshev UCL	1.4871E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.316	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.2	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.617	k star (bias corrected MLE)	2.98
Theta hat (MLE)	1.7823E-8	Theta star (bias corrected MLE)	2.1629E-8
nu hat (MLE)	115.7	nu star (bias corrected)	95.37
Mean (detects)	6.4463E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.6000E-8	Mean	0.00111
Maximum	0.01	Median	5.6250E-8
SD	0.00323	CV	2.91
k hat (MLE)	0.0955	k star (bias corrected MLE)	0.117
Theta hat (MLE)	0.0116	Theta star (bias corrected MLE)	0.00953
nu hat (MLE)	3.437	nu star (bias corrected)	4.198
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.20, α)	0.801	Adjusted Chi Square Value (4.20, β)	0.673
95% Gamma Approximate UCL (use when n>=50)	0.00582	95% Gamma Adjusted UCL (use when n<50)	0.00693

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.9309E-8	SD (KM)	3.6876E-8
Variance (KM)	1.360E-15	SE of Mean (KM)	8.9854E-9
k hat (KM)	2.587	k star (KM)	2.193

nu hat (KM)	93.12	nu star (KM)	78.93
theta hat (KM)	2.2928E-8	theta star (KM)	2.7049E-8
80% gamma percentile (KM)	8.7832E-8	90% gamma percentile (KM)	1.1290E-7
95% gamma percentile (KM)	1.3668E-7	99% gamma percentile (KM)	1.8915E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (78.93, α)	59.47	Adjusted Chi Square Value (78.93, β)	57.84
95% Gamma Approximate KM-UCL (use when n>=50)	7.8727E-8	95% Gamma Adjusted KM-UCL (use when n<50)	8.0934E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.9538E-8	Mean in Log Scale	-16.82
SD in Original Scale	3.7657E-8	SD in Log Scale	0.625
95% t UCL (assumes normality of ROS data)	7.4979E-8	95% Percentile Bootstrap UCL	7.5044E-8
95% BCA Bootstrap UCL	7.6361E-8	95% Bootstrap t UCL	8.0214E-8
95% H-UCL (Log ROS)	8.3841E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.83	KM Geo Mean	4.9079E-8
KM SD (logged)	0.633	95% Critical H Value (KM-Log)	2.161
KM Standard Error of Mean (logged)	0.155	95% H-UCL (KM -Log)	8.3587E-8
KM SD (logged)	0.633	95% Critical H Value (KM-Log)	2.161
KM Standard Error of Mean (logged)	0.155		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.8850E-8	Mean in Log Scale	-16.86
SD in Original Scale	3.8475E-8	SD in Log Scale	0.703
95% t UCL (Assumes normality)	7.4626E-8	95% H-Stat UCL	8.9515E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	8.0934E-8	95% GROS Adjusted Gamma UCL	0.00693

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	7.0900E-8	Mean	2.0797E-7
Maximum	4.3500E-7	Median	1.9050E-7
SD	1.1312E-7	Std. Error of Mean	2.6664E-8
Coefficient of Variation	N/A	Skewness	0.762

Normal GOF Test

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.5436E-7	95% Adjusted-CLT UCL (Chen-1995)	2.5694E-7
		95% Modified-t UCL (Johnson-1978)	2.5515E-7

Gamma GOF Test

A-D Test Statistic	0.417	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.683	k star (bias corrected MLE)	3.106
Theta hat (MLE)	5.6464E-8	Theta star (bias corrected MLE)	6.6949E-8
nu hat (MLE)	132.6	nu star (bias corrected)	111.8
MLE Mean (bias corrected)	2.0797E-7	MLE Sd (bias corrected)	1.1800E-7
		Approximate Chi Square Value (0.05)	88.42
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	86.42

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.6304E-7	95% Adjusted Gamma UCL (use when n<50)	2.6912E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.46	Mean of logged Data	-15.53
Maximum of Logged Data	-14.65	SD of logged Data	0.555

Assuming Lognormal Distribution

95% H-UCL	2.7849E-7	90% Chebyshev (MVUE) UCL	2.9381E-7
95% Chebyshev (MVUE) UCL	3.3244E-7	97.5% Chebyshev (MVUE) UCL	3.8606E-7
99% Chebyshev (MVUE) UCL	4.9139E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.5183E-7	95% Jackknife UCL	2.5436E-7
95% Standard Bootstrap UCL	2.5133E-7	95% Bootstrap-t UCL	2.6073E-7

95% Hall's Bootstrap UCL	2.5622E-7	95% Percentile Bootstrap UCL	2.5160E-7
95% BCA Bootstrap UCL	2.5550E-7		
90% Chebyshev(Mean, Sd) UCL	2.8796E-7	95% Chebyshev(Mean, Sd) UCL	3.2420E-7
97.5% Chebyshev(Mean, Sd) UCL	3.7449E-7	99% Chebyshev(Mean, Sd) UCL	4.7327E-7

Suggested UCL to Use

95% Student's-t UCL 2.5436E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	3.0800E-8	Minimum Non-Detect	2.2300E-8
Maximum Detect	1.7800E-7	Maximum Non-Detect	2.5300E-8
Variance Detects	1.874E-15	Percent Non-Detects	11.11%
Mean Detects	9.6413E-8	SD Detects	4.3293E-8
Median Detects	8.6000E-8	CV Detects	N/A
Skewness Detects	0.271	Kurtosis Detects	-0.856
Mean of Logged Detects	-16.26	SD of Logged Detects	0.507

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.8178E-8	KM Standard Error of Mean	1.1167E-8
KM SD	4.5874E-8	95% KM (BCA) UCL	1.0603E-7
95% KM (t) UCL	1.0760E-7	95% KM (Percentile Bootstrap) UCL	1.0589E-7
95% KM (z) UCL	1.0655E-7	95% KM Bootstrap t UCL	1.0869E-7
90% KM Chebyshev UCL	1.2168E-7	95% KM Chebyshev UCL	1.3685E-7
97.5% KM Chebyshev UCL	1.5792E-7	99% KM Chebyshev UCL	1.9929E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.247	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.737	k star (bias corrected MLE)	3.89
Theta hat (MLE)	2.0355E-8	Theta star (bias corrected MLE)	2.4784E-8
nu hat (MLE)	151.6	nu star (bias corrected)	124.5
Mean (detects)	9.6413E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.0800E-8	Mean	0.00111
Maximum	0.01	Median	1.0020E-7
SD	0.00323	CV	2.91
k hat (MLE)	0.0995	k star (bias corrected MLE)	0.12
Theta hat (MLE)	0.0112	Theta star (bias corrected MLE)	0.00926
nu hat (MLE)	3.582	nu star (bias corrected)	4.319
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.32, α)	0.851	Adjusted Chi Square Value (4.32, β)	0.718
95% Gamma Approximate UCL (use when n>=50)	0.00564	95% Gamma Adjusted UCL (use when n<50)	0.00668

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.8178E-8	SD (KM)	4.5874E-8
Variance (KM)	2.104E-15	SE of Mean (KM)	1.1167E-8
k hat (KM)	3.695	k star (KM)	3.116

nu hat (KM)	133	nu star (KM)	112.2
theta hat (KM)	2.3865E-8	theta star (KM)	2.8298E-8
80% gamma percentile (KM)	1.2520E-7	90% gamma percentile (KM)	1.5516E-7
95% gamma percentile (KM)	1.8306E-7	99% gamma percentile (KM)	2.4340E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (112.18, α)	88.73	Adjusted Chi Square Value (112.18, β)	86.73
95% Gamma Approximate KM-UCL (use when n>=50)	1.1148E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.1405E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.114	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.8717E-8	Mean in Log Scale	-16.39
SD in Original Scale	4.6427E-8	SD in Log Scale	0.606
95% t UCL (assumes normality of ROS data)	1.0775E-7	95% Percentile Bootstrap UCL	1.0699E-7
95% BCA Bootstrap UCL	1.0667E-7	95% Bootstrap t UCL	1.0834E-7
95% H-UCL (Log ROS)	1.2490E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.41	KM Geo Mean	7.4354E-8
KM SD (logged)	0.629	95% Critical H Value (KM-Log)	2.156
KM Standard Error of Mean (logged)	0.153	95% H-UCL (KM -Log)	1.2592E-7
KM SD (logged)	0.629	95% Critical H Value (KM-Log)	2.156
KM Standard Error of Mean (logged)	0.153		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.7022E-8	Mean in Log Scale	-16.48
SD in Original Scale	4.8998E-8	SD in Log Scale	0.8
95% t UCL (Assumes normality)	1.0711E-7	95% H-Stat UCL	1.5090E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.0760E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	8.1400E-8	Mean	2.5886E-7
Maximum	5.9700E-7	Median	2.2500E-7
SD	1.2483E-7	Std. Error of Mean	2.9422E-8
Coefficient of Variation	N/A	Skewness	1.178

Normal GOF Test

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.1004E-7	95% Adjusted-CLT UCL (Chen-1995)	3.1598E-7
		95% Modified-t UCL (Johnson-1978)	3.1140E-7

Gamma GOF Test

A-D Test Statistic	0.268	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.124	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.905	k star (bias corrected MLE)	4.125
Theta hat (MLE)	5.2770E-8	Theta star (bias corrected MLE)	6.2756E-8
nu hat (MLE)	176.6	nu star (bias corrected)	148.5
MLE Mean (bias corrected)	2.5886E-7	MLE Sd (bias corrected)	1.2745E-7
		Approximate Chi Square Value (0.05)	121.3
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	119

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.1681E-7	95% Adjusted Gamma UCL (use when n<50)	3.2308E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.134	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.32	Mean of logged Data	-15.27
Maximum of Logged Data	-14.33	SD of logged Data	0.478

Assuming Lognormal Distribution

95% H-UCL	3.2928E-7	90% Chebyshev (MVUE) UCL	3.4975E-7
95% Chebyshev (MVUE) UCL	3.9070E-7	97.5% Chebyshev (MVUE) UCL	4.4754E-7
99% Chebyshev (MVUE) UCL	5.5920E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.0725E-7	95% Jackknife UCL	3.1004E-7
95% Standard Bootstrap UCL	3.0552E-7	95% Bootstrap-t UCL	3.2361E-7

95% Hall's Bootstrap UCL	3.2960E-7	95% Percentile Bootstrap UCL	3.0661E-7
95% BCA Bootstrap UCL	3.1456E-7		
90% Chebyshev(Mean, Sd) UCL	3.4712E-7	95% Chebyshev(Mean, Sd) UCL	3.8710E-7
97.5% Chebyshev(Mean, Sd) UCL	4.4259E-7	99% Chebyshev(Mean, Sd) UCL	5.5160E-7

Suggested UCL to Use

95% Student's-t UCL 3.1004E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.1900E-7	Mean	3.9472E-7
Maximum	6.3300E-7	Median	3.8700E-7
SD	1.3548E-7	Std. Error of Mean	3.1932E-8
Coefficient of Variation	N/A	Skewness	-0.188

Normal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.117	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.5027E-7	95% Adjusted-CLT UCL (Chen-1995)	4.4573E-7
		95% Modified-t UCL (Johnson-1978)	4.5004E-7

Gamma GOF Test

A-D Test Statistic	0.466	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.155	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.189	k star (bias corrected MLE)	6.028
Theta hat (MLE)	5.4906E-8	Theta star (bias corrected MLE)	6.5482E-8
nu hat (MLE)	258.8	nu star (bias corrected)	217
MLE Mean (bias corrected)	3.9472E-7	MLE Sd (bias corrected)	1.6077E-7
		Approximate Chi Square Value (0.05)	183.9
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	181

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.6575E-7	95% Adjusted Gamma UCL (use when n<50)	4.7327E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.882	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.187	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.94	Mean of logged Data	-14.82
Maximum of Logged Data	-14.27	SD of logged Data	0.421

Assuming Lognormal Distribution

95% H-UCL	4.9007E-7	90% Chebyshev (MVUE) UCL	5.2142E-7
95% Chebyshev (MVUE) UCL	5.7663E-7	97.5% Chebyshev (MVUE) UCL	6.5325E-7
99% Chebyshev (MVUE) UCL	8.0377E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.4725E-7	95% Jackknife UCL	4.5027E-7
95% Standard Bootstrap UCL	4.4671E-7	95% Bootstrap-t UCL	4.4922E-7

95% Hall's Bootstrap UCL	4.4628E-7	95% Percentile Bootstrap UCL	4.4411E-7
95% BCA Bootstrap UCL	4.3817E-7		
90% Chebyshev(Mean, Sd) UCL	4.9052E-7	95% Chebyshev(Mean, Sd) UCL	5.3391E-7
97.5% Chebyshev(Mean, Sd) UCL	5.9414E-7	99% Chebyshev(Mean, Sd) UCL	7.1244E-7

Suggested UCL to Use

95% Student's-t UCL 4.5027E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	6.2000E-8	Minimum Non-Detect	7.8700E-8
Maximum Detect	5.9100E-7	Maximum Non-Detect	1.2200E-7
Variance Detects	2.615E-14	Percent Non-Detects	11.11%
Mean Detects	2.1796E-7	SD Detects	1.6171E-7
Median Detects	1.7750E-7	CV Detects	N/A
Skewness Detects	1.117	Kurtosis Detects	0.383
Mean of Logged Detects	-15.59	SD of Logged Detects	0.733

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.859	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.0220E-7	KM Standard Error of Mean	3.7577E-8
KM SD	1.5429E-7	95% KM (BCA) UCL	2.6284E-7
95% KM (t) UCL	2.6757E-7	95% KM (Percentile Bootstrap) UCL	2.6582E-7
95% KM (z) UCL	2.6401E-7	95% KM Bootstrap t UCL	2.8645E-7
90% KM Chebyshev UCL	3.1493E-7	95% KM Chebyshev UCL	3.6599E-7
97.5% KM Chebyshev UCL	4.3687E-7	99% KM Chebyshev UCL	5.7609E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.466	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.155	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.218	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.146	k star (bias corrected MLE)	1.785
Theta hat (MLE)	1.0158E-7	Theta star (bias corrected MLE)	1.2210E-7
nu hat (MLE)	68.66	nu star (bias corrected)	57.12
Mean (detects)	2.1796E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.2000E-8	Mean	0.00111
Maximum	0.01	Median	2.0000E-7
SD	0.00323	CV	2.91
k hat (MLE)	0.106	k star (bias corrected MLE)	0.126
Theta hat (MLE)	0.0104	Theta star (bias corrected MLE)	0.00884
nu hat (MLE)	3.833	nu star (bias corrected)	4.527
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.53, α)	0.94	Adjusted Chi Square Value (4.53, β)	0.797
95% Gamma Approximate UCL (use when n>=50)	0.00535	95% Gamma Adjusted UCL (use when n<50)	0.00631

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.0220E-7	SD (KM)	1.5429E-7
Variance (KM)	2.381E-14	SE of Mean (KM)	3.7577E-8
k hat (KM)	1.717	k star (KM)	1.468

nu hat (KM)	61.83	nu star (KM)	52.86
theta hat (KM)	1.1773E-7	theta star (KM)	1.3772E-7
80% gamma percentile (KM)	3.1357E-7	90% gamma percentile (KM)	4.2355E-7
95% gamma percentile (KM)	5.3050E-7	99% gamma percentile (KM)	7.7235E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (52.86, α)	37.15	Adjusted Chi Square Value (52.86, β)	35.89
95% Gamma Approximate KM-UCL (use when n>=50)	2.8764E-7	95% Gamma Adjusted KM-UCL (use when n<50)	2.9776E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.937	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.0209E-7	Mean in Log Scale	-15.68
SD in Original Scale	1.5884E-7	SD in Log Scale	0.742
95% t UCL (assumes normality of ROS data)	2.6722E-7	95% Percentile Bootstrap UCL	2.6446E-7
95% BCA Bootstrap UCL	2.7179E-7	95% Bootstrap t UCL	2.9154E-7
95% H-UCL (Log ROS)	3.0766E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.68	KM Geo Mean	1.5487E-7
KM SD (logged)	0.72	95% Critical H Value (KM-Log)	2.262
KM Standard Error of Mean (logged)	0.176	95% H-UCL (KM -Log)	2.9776E-7
KM SD (logged)	0.72	95% Critical H Value (KM-Log)	2.262
KM Standard Error of Mean (logged)	0.176		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.9931E-7	Mean in Log Scale	-15.73
SD in Original Scale	1.6135E-7	SD in Log Scale	0.801
95% t UCL (Assumes normality)	2.6547E-7	95% H-Stat UCL	3.2225E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.6757E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	6.2700E-8	Minimum Non-Detect	2.5400E-8
Maximum Detect	8.0100E-7	Maximum Non-Detect	2.5400E-8
Variance Detects	3.145E-14	Percent Non-Detects	5.556%
Mean Detects	2.8875E-7	SD Detects	1.7735E-7
Median Detects	2.3900E-7	CV Detects	N/A
Skewness Detects	1.547	Kurtosis Detects	3.317
Mean of Logged Detects	-15.23	SD of Logged Detects	0.612

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.876	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.7412E-7	KM Standard Error of Mean	4.3187E-8
KM SD	1.7776E-7	95% KM (BCA) UCL	3.5532E-7
95% KM (t) UCL	3.4925E-7	95% KM (Percentile Bootstrap) UCL	3.4295E-7
95% KM (z) UCL	3.4515E-7	95% KM Bootstrap t UCL	3.7158E-7
90% KM Chebyshev UCL	4.0368E-7	95% KM Chebyshev UCL	4.6237E-7
97.5% KM Chebyshev UCL	5.4382E-7	99% KM Chebyshev UCL	7.0382E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.213	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.211	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.14	k star (bias corrected MLE)	2.625
Theta hat (MLE)	9.1953E-8	Theta star (bias corrected MLE)	1.0999E-7
nu hat (MLE)	106.8	nu star (bias corrected)	89.26
Mean (detects)	2.8875E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.2700E-8	Mean	5.5583E-4
Maximum	0.01	Median	2.4500E-7
SD	0.00236	CV	4.24
k hat (MLE)	0.112	k star (bias corrected MLE)	0.13
Theta hat (MLE)	0.00496	Theta star (bias corrected MLE)	0.00426
nu hat (MLE)	4.035	nu star (bias corrected)	4.696
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.70, α)	1.014	Adjusted Chi Square Value (4.70, β)	0.863
95% Gamma Approximate UCL (use when n>=50)	0.00257	95% Gamma Adjusted UCL (use when n<50)	0.00302

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.7412E-7	SD (KM)	1.7776E-7
Variance (KM)	3.160E-14	SE of Mean (KM)	4.3187E-8
k hat (KM)	2.378	k star (KM)	2.019

nu hat (KM)	85.61	nu star (KM)	72.67
theta hat (KM)	1.1527E-7	theta star (KM)	1.3579E-7
80% gamma percentile (KM)	4.0994E-7	90% gamma percentile (KM)	5.3195E-7
95% gamma percentile (KM)	6.4827E-7	99% gamma percentile (KM)	9.0613E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (72.67, α)	54.04	Adjusted Chi Square Value (72.67, β)	52.5
95% Gamma Approximate KM-UCL (use when n>=50)	3.6861E-7	95% Gamma Adjusted KM-UCL (use when n<50)	3.7943E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.982	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.114	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.7576E-7	Mean in Log Scale	-15.31
SD in Original Scale	1.8066E-7	SD in Log Scale	0.69
95% t UCL (assumes normality of ROS data)	3.4984E-7	95% Percentile Bootstrap UCL	3.4811E-7
95% BCA Bootstrap UCL	3.6352E-7	95% Bootstrap t UCL	3.7620E-7
95% H-UCL (Log ROS)	4.1392E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.35	KM Geo Mean	2.1534E-7
KM SD (logged)	0.776	95% Critical H Value (KM-Log)	2.331
KM Standard Error of Mean (logged)	0.188	95% H-UCL (KM -Log)	4.5106E-7
KM SD (logged)	0.776	95% Critical H Value (KM-Log)	2.331
KM Standard Error of Mean (logged)	0.188		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.7341E-7	Mean in Log Scale	-15.39
SD in Original Scale	1.8395E-7	SD in Log Scale	0.915
95% t UCL (Assumes normality)	3.4884E-7	95% H-Stat UCL	5.5099E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.4925E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.7300E-7	Mean	7.3994E-7
Maximum	1.5500E-6	Median	6.8450E-7
SD	3.7633E-7	Std. Error of Mean	8.8702E-8
Coefficient of Variation	N/A	Skewness	0.635

Normal GOF Test

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.9425E-7	95% Adjusted-CLT UCL (Chen-1995)	9.0004E-7
		95% Modified-t UCL (Johnson-1978)	8.9647E-7

Gamma GOF Test

A-D Test Statistic	0.397	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.146	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.106	k star (bias corrected MLE)	3.459
Theta hat (MLE)	1.8020E-7	Theta star (bias corrected MLE)	2.1393E-7
nu hat (MLE)	147.8	nu star (bias corrected)	124.5
MLE Mean (bias corrected)	7.3994E-7	MLE Sd (bias corrected)	3.9786E-7
		Approximate Chi Square Value (0.05)	99.75
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	97.62

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.2370E-7	95% Adjusted Gamma UCL (use when n<50)	9.4383E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.158	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.11	Mean of logged Data	-14.24
Maximum of Logged Data	-13.38	SD of logged Data	0.526

Assuming Lognormal Distribution

95% H-UCL	9.7224E-7	90% Chebyshev (MVUE) UCL	1.0290E-6
95% Chebyshev (MVUE) UCL	1.1588E-6	97.5% Chebyshev (MVUE) UCL	1.3391E-6
99% Chebyshev (MVUE) UCL	1.6931E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.8585E-7	95% Jackknife UCL	8.9425E-7
95% Standard Bootstrap UCL	8.8097E-7	95% Bootstrap-t UCL	9.0963E-7

95% Hall's Bootstrap UCL	8.9474E-7	95% Percentile Bootstrap UCL	8.9072E-7
95% BCA Bootstrap UCL	8.9894E-7		
90% Chebyshev(Mean, Sd) UCL	1.0061E-6	95% Chebyshev(Mean, Sd) UCL	1.1266E-6
97.5% Chebyshev(Mean, Sd) UCL	1.2939E-6	99% Chebyshev(Mean, Sd) UCL	1.6225E-6

Suggested UCL to Use

95% Student's-t UCL 8.9425E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	9.7400E-8	Mean	3.7824E-7
Maximum	1.0000E-6	Median	2.7950E-7
SD	2.6514E-7	Std. Error of Mean	6.2493E-8
Coefficient of Variation	N/A	Skewness	1.486

Normal GOF Test

Shapiro Wilk Test Statistic	0.79	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.27	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.8696E-7	95% Adjusted-CLT UCL (Chen-1995)	5.0442E-7
		95% Modified-t UCL (Johnson-1978)	4.9061E-7

Gamma GOF Test

A-D Test Statistic	0.756	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.214	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.205	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.741	k star (bias corrected MLE)	2.322
Theta hat (MLE)	1.3797E-7	Theta star (bias corrected MLE)	1.6292E-7
nu hat (MLE)	98.69	nu star (bias corrected)	83.58
MLE Mean (bias corrected)	3.7824E-7	MLE Sd (bias corrected)	2.4824E-7
		Approximate Chi Square Value (0.05)	63.51
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	61.83

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.9778E-7	95% Adjusted Gamma UCL (use when n<50)	5.1129E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.172	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.14	Mean of logged Data	-14.98
Maximum of Logged Data	-13.82	SD of logged Data	0.623

Assuming Lognormal Distribution

95% H-UCL	5.2353E-7	90% Chebyshev (MVUE) UCL	5.4671E-7
95% Chebyshev (MVUE) UCL	6.2506E-7	97.5% Chebyshev (MVUE) UCL	7.3380E-7
99% Chebyshev (MVUE) UCL	9.4740E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.8104E-7	95% Jackknife UCL	4.8696E-7
95% Standard Bootstrap UCL	4.8079E-7	95% Bootstrap-t UCL	5.4426E-7

95% Hall's Bootstrap UCL	4.8928E-7	95% Percentile Bootstrap UCL	4.8627E-7
95% BCA Bootstrap UCL	5.0972E-7		
90% Chebyshev(Mean, Sd) UCL	5.6572E-7	95% Chebyshev(Mean, Sd) UCL	6.5065E-7
97.5% Chebyshev(Mean, Sd) UCL	7.6851E-7	99% Chebyshev(Mean, Sd) UCL	1.0000E-6

Suggested UCL to Use

95% H-UCL 5.2353E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	8.1300E-8	Mean	2.1896E-7
Maximum	4.2500E-7	Median	1.9650E-7
SD	1.1200E-7	Std. Error of Mean	2.6399E-8
Coefficient of Variation	N/A	Skewness	0.361

Normal GOF Test

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.6489E-7	95% Adjusted-CLT UCL (Chen-1995)	2.6478E-7
		95% Modified-t UCL (Johnson-1978)	2.6526E-7

Gamma GOF Test

A-D Test Statistic	0.71	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.211	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.861	k star (bias corrected MLE)	3.254
Theta hat (MLE)	5.6715E-8	Theta star (bias corrected MLE)	6.7283E-8
nu hat (MLE)	139	nu star (bias corrected)	117.2
MLE Mean (bias corrected)	2.1896E-7	MLE Sd (bias corrected)	1.2138E-7
		Approximate Chi Square Value (0.05)	93.16
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	91.11

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.7535E-7	95% Adjusted Gamma UCL (use when n<50)	2.8155E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.909	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.2	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.33	Mean of logged Data	-15.47
Maximum of Logged Data	-14.67	SD of logged Data	0.547

Assuming Lognormal Distribution

95% H-UCL	2.9241E-7	90% Chebyshev (MVUE) UCL	3.0880E-7
95% Chebyshev (MVUE) UCL	3.4896E-7	97.5% Chebyshev (MVUE) UCL	4.0469E-7
99% Chebyshev (MVUE) UCL	5.1418E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.6238E-7	95% Jackknife UCL	2.6489E-7
95% Standard Bootstrap UCL	2.6187E-7	95% Bootstrap-t UCL	2.6851E-7

95% Hall's Bootstrap UCL	2.6388E-7	95% Percentile Bootstrap UCL	2.6179E-7
95% BCA Bootstrap UCL	2.6413E-7		
90% Chebyshev(Mean, Sd) UCL	2.9816E-7	95% Chebyshev(Mean, Sd) UCL	3.3403E-7
97.5% Chebyshev(Mean, Sd) UCL	3.8382E-7	99% Chebyshev(Mean, Sd) UCL	4.8163E-7

Suggested UCL to Use

95% Student's-t UCL 2.6489E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	3.4800E-8	Mean	1.0968E-7
Maximum	2.7100E-7	Median	9.4300E-8
SD	6.5614E-8	Std. Error of Mean	1.5465E-8
Coefficient of Variation	N/A	Skewness	1.422

Normal GOF Test

Shapiro Wilk Test Statistic	0.848	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.226	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3659E-7	95% Adjusted-CLT UCL (Chen-1995)	1.4066E-7
		95% Modified-t UCL (Johnson-1978)	1.3745E-7

Gamma GOF Test

A-D Test Statistic	0.396	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.156	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.562	k star (bias corrected MLE)	3.006
Theta hat (MLE)	3.0790E-8	Theta star (bias corrected MLE)	3.6493E-8
nu hat (MLE)	128.2	nu star (bias corrected)	108.2
MLE Mean (bias corrected)	1.0968E-7	MLE Sd (bias corrected)	6.3267E-8
		Approximate Chi Square Value (0.05)	85.19
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	83.23

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.3930E-7	95% Adjusted Gamma UCL (use when n<50)	1.4258E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.17	Mean of logged Data	-16.17
Maximum of Logged Data	-15.12	SD of logged Data	0.549

Assuming Lognormal Distribution

95% H-UCL	1.4496E-7	90% Chebyshev (MVUE) UCL	1.5306E-7
95% Chebyshev (MVUE) UCL	1.7300E-7	97.5% Chebyshev (MVUE) UCL	2.0067E-7
99% Chebyshev (MVUE) UCL	2.5503E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3512E-7	95% Jackknife UCL	1.3659E-7
95% Standard Bootstrap UCL	1.3441E-7	95% Bootstrap-t UCL	1.4677E-7

95% Hall's Bootstrap UCL	1.4843E-7	95% Percentile Bootstrap UCL	1.3575E-7
95% BCA Bootstrap UCL	1.4066E-7		
90% Chebyshev(Mean, Sd) UCL	1.5608E-7	95% Chebyshev(Mean, Sd) UCL	1.7710E-7
97.5% Chebyshev(Mean, Sd) UCL	2.0626E-7	99% Chebyshev(Mean, Sd) UCL	2.6356E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 1.4258E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	2.2900E-8	Minimum Non-Detect	4.3100E-8
Maximum Detect	1.8600E-7	Maximum Non-Detect	4.3100E-8
Variance Detects	2.682E-15	Percent Non-Detects	5.556%
Mean Detects	9.0806E-8	SD Detects	5.1784E-8
Median Detects	8.5700E-8	CV Detects	N/A
Skewness Detects	0.417	Kurtosis Detects	-0.861
Mean of Logged Detects	-16.4	SD of Logged Detects	0.662

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.7620E-8	KM Standard Error of Mean	1.2303E-8
KM SD	5.0596E-8	95% KM (BCA) UCL	1.0734E-7
95% KM (t) UCL	1.0902E-7	95% KM (Percentile Bootstrap) UCL	1.0785E-7
95% KM (z) UCL	1.0786E-7	95% KM Bootstrap t UCL	1.1270E-7
90% KM Chebyshev UCL	1.2453E-7	95% KM Chebyshev UCL	1.4125E-7
97.5% KM Chebyshev UCL	1.6445E-7	99% KM Chebyshev UCL	2.1004E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.272	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.128	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.211	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.882	k star (bias corrected MLE)	2.413
Theta hat (MLE)	3.1506E-8	Theta star (bias corrected MLE)	3.7635E-8
nu hat (MLE)	98	nu star (bias corrected)	82.04
Mean (detects)	9.0806E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.2900E-8	Mean	5.5564E-4
Maximum	0.01	Median	8.9350E-8
SD	0.00236	CV	4.242
k hat (MLE)	0.0986	k star (bias corrected MLE)	0.119
Theta hat (MLE)	0.00563	Theta star (bias corrected MLE)	0.00466
nu hat (MLE)	3.551	nu star (bias corrected)	4.293
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.29, α)	0.841	Adjusted Chi Square Value (4.29, β)	0.708
95% Gamma Approximate UCL (use when n>=50)	0.00284	95% Gamma Adjusted UCL (use when n<50)	0.00337

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.7620E-8	SD (KM)	5.0596E-8
Variance (KM)	2.560E-15	SE of Mean (KM)	1.2303E-8
k hat (KM)	2.999	k star (KM)	2.536

nu hat (KM)	108	nu star (KM)	91.3
theta hat (KM)	2.9216E-8	theta star (KM)	3.4548E-8
80% gamma percentile (KM)	1.2752E-7	90% gamma percentile (KM)	1.6133E-7
95% gamma percentile (KM)	1.9316E-7	99% gamma percentile (KM)	2.6280E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (91.30, α)	70.27	Adjusted Chi Square Value (91.30, β)	68.5
95% Gamma Approximate KM-UCL (use when n>=50)	1.1385E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.1679E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.136	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.7751E-8	Mean in Log Scale	-16.44
SD in Original Scale	5.1883E-8	SD in Log Scale	0.666
95% t UCL (assumes normality of ROS data)	1.0902E-7	95% Percentile Bootstrap UCL	1.0778E-7
95% BCA Bootstrap UCL	1.0773E-7	95% Bootstrap t UCL	1.1216E-7
95% H-UCL (Log ROS)	1.2915E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.45	KM Geo Mean	7.2112E-8
KM SD (logged)	0.657	95% Critical H Value (KM-Log)	2.187
KM Standard Error of Mean (logged)	0.16	95% H-UCL (KM -Log)	1.2678E-7
KM SD (logged)	0.657	95% Critical H Value (KM-Log)	2.187
KM Standard Error of Mean (logged)	0.16		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.6958E-8	Mean in Log Scale	-16.47
SD in Original Scale	5.2824E-8	SD in Log Scale	0.707
95% t UCL (Assumes normality)	1.0862E-7	95% H-Stat UCL	1.3312E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.0902E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0100E-7	Mean	3.8950E-7
Maximum	8.2000E-7	Median	3.0100E-7
SD	2.5642E-7	Std. Error of Mean	6.0438E-8
Coefficient of Variation	N/A	Skewness	0.649

Normal GOF Test

Shapiro Wilk Test Statistic	0.86	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.176	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.9464E-7	95% Adjusted-CLT UCL (Chen-1995)	4.9879E-7
		95% Modified-t UCL (Johnson-1978)	4.9618E-7

Gamma GOF Test

A-D Test Statistic	0.589	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.456	k star (bias corrected MLE)	2.084
Theta hat (MLE)	1.5860E-7	Theta star (bias corrected MLE)	1.8694E-7
nu hat (MLE)	88.41	nu star (bias corrected)	75.01
MLE Mean (bias corrected)	3.8950E-7	MLE Sd (bias corrected)	2.6984E-7
		Approximate Chi Square Value (0.05)	56.06
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	54.49

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.2114E-7	95% Adjusted Gamma UCL (use when n<50)	5.3617E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.11	Mean of logged Data	-14.98
Maximum of Logged Data	-14.01	SD of logged Data	0.691

Assuming Lognormal Distribution

95% H-UCL	5.7768E-7	90% Chebyshev (MVUE) UCL	5.9450E-7
95% Chebyshev (MVUE) UCL	6.8640E-7	97.5% Chebyshev (MVUE) UCL	8.1396E-7
99% Chebyshev (MVUE) UCL	1.0645E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.8891E-7	95% Jackknife UCL	4.9464E-7
95% Standard Bootstrap UCL	4.8678E-7	95% Bootstrap-t UCL	5.0938E-7

95% Hall's Bootstrap UCL	4.9005E-7	95% Percentile Bootstrap UCL	4.8933E-7
95% BCA Bootstrap UCL	4.9133E-7		
90% Chebyshev(Mean, Sd) UCL	5.7082E-7	95% Chebyshev(Mean, Sd) UCL	6.5294E-7
97.5% Chebyshev(Mean, Sd) UCL	7.6694E-7	99% Chebyshev(Mean, Sd) UCL	9.9085E-7

Suggested UCL to Use

95% Student's-t UCL 4.9464E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	2.4100E-8	Minimum Non-Detect	5.3800E-8
Maximum Detect	2.1600E-7	Maximum Non-Detect	5.3800E-8
Variance Detects	2.939E-15	Percent Non-Detects	5.556%
Mean Detects	7.8600E-8	SD Detects	5.4216E-8
Median Detects	5.7400E-8	CV Detects	N/A
Skewness Detects	1.389	Kurtosis Detects	1.455
Mean of Logged Detects	-16.56	SD of Logged Detects	0.637

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.851	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.219	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.6266E-8	KM Standard Error of Mean	1.2655E-8
KM SD	5.2048E-8	95% KM (BCA) UCL	9.6850E-8
95% KM (t) UCL	9.8280E-8	95% KM (Percentile Bootstrap) UCL	9.7454E-8
95% KM (z) UCL	9.7081E-8	95% KM Bootstrap t UCL	1.0569E-7
90% KM Chebyshev UCL	1.1423E-7	95% KM Chebyshev UCL	1.3143E-7
97.5% KM Chebyshev UCL	1.5530E-7	99% KM Chebyshev UCL	2.0218E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.383	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.168	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.211	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.686	k star (bias corrected MLE)	2.251
Theta hat (MLE)	2.9260E-8	Theta star (bias corrected MLE)	3.4911E-8
nu hat (MLE)	91.33	nu star (bias corrected)	76.55
Mean (detects)	7.8600E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.4100E-8	Mean	5.5563E-4
Maximum	0.01	Median	5.8950E-8
SD	0.00236	CV	4.242
k hat (MLE)	0.0971	k star (bias corrected MLE)	0.118
Theta hat (MLE)	0.00572	Theta star (bias corrected MLE)	0.00471
nu hat (MLE)	3.495	nu star (bias corrected)	4.246
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.25, α)	0.821	Adjusted Chi Square Value (4.25, β)	0.691
95% Gamma Approximate UCL (use when n>=50)	0.00287	95% Gamma Adjusted UCL (use when n<50)	0.00341

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.6266E-8	SD (KM)	5.2048E-8
Variance (KM)	2.709E-15	SE of Mean (KM)	1.2655E-8
k hat (KM)	2.147	k star (KM)	1.826

nu hat (KM)	77.3	nu star (KM)	65.75
theta hat (KM)	3.5520E-8	theta star (KM)	4.1760E-8
80% gamma percentile (KM)	1.1540E-7	90% gamma percentile (KM)	1.5155E-7
95% gamma percentile (KM)	1.8622E-7	99% gamma percentile (KM)	2.6355E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (65.75, α)	48.09	Adjusted Chi Square Value (65.75, β)	46.64
95% Gamma Approximate KM-UCL (use when n>=50)	1.0427E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.0751E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.6269E-8	Mean in Log Scale	-16.59
SD in Original Scale	5.3519E-8	SD in Log Scale	0.632
95% t UCL (assumes normality of ROS data)	9.8214E-8	95% Percentile Bootstrap UCL	9.6172E-8
95% BCA Bootstrap UCL	1.0126E-7	95% Bootstrap t UCL	1.0759E-7
95% H-UCL (Log ROS)	1.0631E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.59	KM Geo Mean	6.2423E-8
KM SD (logged)	0.618	95% Critical H Value (KM-Log)	2.144
KM Standard Error of Mean (logged)	0.151	95% H-UCL (KM -Log)	1.0419E-7
KM SD (logged)	0.618	95% Critical H Value (KM-Log)	2.144
KM Standard Error of Mean (logged)	0.151		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.5728E-8	Mean in Log Scale	-16.61
SD in Original Scale	5.3991E-8	SD in Log Scale	0.651
95% t UCL (Assumes normality)	9.7866E-8	95% H-Stat UCL	1.0724E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	1.0751E-7	95% GROS Adjusted Gamma UCL	0.00341

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.1500E-8	Mean	1.6197E-7
Maximum	3.2400E-7	Median	1.5850E-7
SD	8.9464E-8	Std. Error of Mean	2.1087E-8
Coefficient of Variation	N/A	Skewness	0.31

Normal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.9866E-7	95% Adjusted-CLT UCL (Chen-1995)	1.9831E-7
		95% Modified-t UCL (Johnson-1978)	1.9891E-7

Gamma GOF Test

A-D Test Statistic	0.388	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.134	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.947	k star (bias corrected MLE)	2.493
Theta hat (MLE)	5.4966E-8	Theta star (bias corrected MLE)	6.4979E-8
nu hat (MLE)	106.1	nu star (bias corrected)	89.74
MLE Mean (bias corrected)	1.6197E-7	MLE Sd (bias corrected)	1.0259E-7
		Approximate Chi Square Value (0.05)	68.9
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	67.14

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1097E-7	95% Adjusted Gamma UCL (use when n<50)	2.1648E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.146	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17	Mean of logged Data	-15.82
Maximum of Logged Data	-14.94	SD of logged Data	0.659

Assuming Lognormal Distribution

95% H-UCL	2.3873E-7	90% Chebyshev (MVUE) UCL	2.4750E-7
95% Chebyshev (MVUE) UCL	2.8448E-7	97.5% Chebyshev (MVUE) UCL	3.3580E-7
99% Chebyshev (MVUE) UCL	4.3662E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.9666E-7	95% Jackknife UCL	1.9866E-7
95% Standard Bootstrap UCL	1.9552E-7	95% Bootstrap-t UCL	2.0095E-7

95% Hall's Bootstrap UCL	1.9753E-7	95% Percentile Bootstrap UCL	1.9665E-7
95% BCA Bootstrap UCL	1.9886E-7		
90% Chebyshev(Mean, Sd) UCL	2.2523E-7	95% Chebyshev(Mean, Sd) UCL	2.5389E-7
97.5% Chebyshev(Mean, Sd) UCL	2.9366E-7	99% Chebyshev(Mean, Sd) UCL	3.7178E-7

Suggested UCL to Use

95% Student's-t UCL 1.9866E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.6800E-5	Mean	9.8767E-5
Maximum	2.4400E-4	Median	6.6350E-5
SD	7.3943E-5	Std. Error of Mean	1.7428E-5
Coefficient of Variation	N/A	Skewness	0.805

Normal GOF Test

Shapiro Wilk Test Statistic	0.867	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.2909E-4	95% Adjusted-CLT UCL (Chen-1995)	1.3097E-4
		95% Modified-t UCL (Johnson-1978)	1.2964E-4

Gamma GOF Test

A-D Test Statistic	0.608	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.211	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.207	Data Not Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.885	k star (bias corrected MLE)	1.608
Theta hat (MLE)	5.2386E-5	Theta star (bias corrected MLE)	6.1415E-5
nu hat (MLE)	67.87	nu star (bias corrected)	57.89
MLE Mean (bias corrected)	9.8767E-5	MLE Sd (bias corrected)	7.7883E-5
		Approximate Chi Square Value (0.05)	41.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	40.07

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.3811E-4	95% Adjusted Gamma UCL (use when n<50)	1.4272E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.937	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.99	Mean of logged Data	-9.511
Maximum of Logged Data	-8.318	SD of logged Data	0.806

Assuming Lognormal Distribution

95% H-UCL	1.6296E-4	90% Chebyshev (MVUE) UCL	1.6183E-4
95% Chebyshev (MVUE) UCL	1.8976E-4	97.5% Chebyshev (MVUE) UCL	2.2852E-4
99% Chebyshev (MVUE) UCL	3.0465E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.2743E-4	95% Jackknife UCL	1.2909E-4
95% Standard Bootstrap UCL	1.2646E-4	95% Bootstrap-t UCL	1.3199E-4

95% Hall's Bootstrap UCL	1.2875E-4	95% Percentile Bootstrap UCL	1.2902E-4
95% BCA Bootstrap UCL	1.2958E-4		
90% Chebyshev(Mean, Sd) UCL	1.5105E-4	95% Chebyshev(Mean, Sd) UCL	1.7474E-4
97.5% Chebyshev(Mean, Sd) UCL	2.0761E-4	99% Chebyshev(Mean, Sd) UCL	2.7218E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 1.4272E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	1
Number of Detects	13	Number of Non-Detects	4
Number of Distinct Detects	13	Number of Distinct Non-Detects	4
Minimum Detect	2.7300E-6	Minimum Non-Detect	1.7200E-6
Maximum Detect	3.7200E-5	Maximum Non-Detect	1.7600E-6
Variance Detects	9.895E-11	Percent Non-Detects	23.53%
Mean Detects	9.8223E-6	SD Detects	9.9475E-6
Median Detects	6.2800E-6	CV Detects	N/A
Skewness Detects	2.018	Kurtosis Detects	4.371
Mean of Logged Detects	-11.91	SD of Logged Detects	0.868

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.747	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.254	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.9159E-6	KM Standard Error of Mean	2.2812E-6
KM SD	9.0366E-6	95% KM (BCA) UCL	1.1796E-5
95% KM (t) UCL	1.1899E-5	95% KM (Percentile Bootstrap) UCL	1.1701E-5
95% KM (z) UCL	1.1668E-5	95% KM Bootstrap t UCL	1.5512E-5
90% KM Chebyshev UCL	1.4759E-5	95% KM Chebyshev UCL	1.7859E-5
97.5% KM Chebyshev UCL	2.2162E-5	99% KM Chebyshev UCL	3.0614E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.608	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.175	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.241	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.479	k star (bias corrected MLE)	1.189
Theta hat (MLE)	6.6419E-6	Theta star (bias corrected MLE)	8.2620E-6
nu hat (MLE)	38.45	nu star (bias corrected)	30.91
Mean (detects)	9.8223E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.7300E-6	Mean	0.00236
Maximum	0.01	Median	1.0000E-5
SD	0.00437	CV	1.851
k hat (MLE)	0.181	k star (bias corrected MLE)	0.188
Theta hat (MLE)	0.0131	Theta star (bias corrected MLE)	0.0126
nu hat (MLE)	6.141	nu star (bias corrected)	6.391
Adjusted Level of Significance (β)	0.0346		
Approximate Chi Square Value (6.39, α)	1.843	Adjusted Chi Square Value (6.39, β)	1.599
95% Gamma Approximate UCL (use when n>=50)	0.00819	95% Gamma Adjusted UCL (use when n<50)	0.00943

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.9159E-6	SD (KM)	9.0366E-6
Variance (KM)	8.166E-11	SE of Mean (KM)	2.2812E-6

k hat (KM)	0.767	k star (KM)	0.671
nu hat (KM)	26.09	nu star (KM)	22.82
theta hat (KM)	1.0316E-5	theta star (KM)	1.1795E-5
80% gamma percentile (KM)	1.3028E-5	90% gamma percentile (KM)	2.0067E-5
95% gamma percentile (KM)	2.7356E-5	99% gamma percentile (KM)	4.4817E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (22.82, α)	12.95	Adjusted Chi Square Value (22.82, β)	12.18
95% Gamma Approximate KM-UCL (use when n>=50)	1.3944E-5	95% Gamma Adjusted KM-UCL (use when n<50)	1.4831E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.7177E-6	Mean in Log Scale	-12.39
SD in Original Scale	9.4609E-6	SD in Log Scale	1.166
95% t UCL (assumes normality of ROS data)	1.1724E-5	95% Percentile Bootstrap UCL	1.1665E-5
95% BCA Bootstrap UCL	1.2819E-5	95% Bootstrap t UCL	1.4466E-5
95% H-UCL (Log ROS)	1.9360E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.23	KM Geo Mean	4.8946E-6
KM SD (logged)	0.932	95% Critical H Value (KM-Log)	2.571
KM Standard Error of Mean (logged)	0.235	95% H-UCL (KM -Log)	1.3748E-5
KM SD (logged)	0.932	95% Critical H Value (KM-Log)	2.571
KM Standard Error of Mean (logged)	0.235		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.7159E-6	Mean in Log Scale	-12.39
SD in Original Scale	9.4623E-6	SD in Log Scale	1.169
95% t UCL (Assumes normality)	1.1723E-5	95% H-Stat UCL	1.9457E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	1.4831E-5	95% GROS Adjusted Gamma UCL	0.00943

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	1
Minimum	3.7500E-4	Mean	0.002
Maximum	0.00734	Median	0.00165
SD	0.00178	Std. Error of Mean	4.3289E-4
Coefficient of Variation	0.893	Skewness	1.882

Normal GOF Test

Shapiro Wilk Test Statistic	0.81	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.182	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00275	95% Adjusted-CLT UCL (Chen-1995)	0.00292
		95% Modified-t UCL (Johnson-1978)	0.00279

Gamma GOF Test

A-D Test Statistic	0.279	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.213	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.652	k star (bias corrected MLE)	1.399
Theta hat (MLE)	0.00121	Theta star (bias corrected MLE)	0.00143
nu hat (MLE)	56.16	nu star (bias corrected)	47.58
MLE Mean (bias corrected)	0.002	MLE Sd (bias corrected)	0.00169
		Approximate Chi Square Value (0.05)	32.75
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	31.46

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0029	95% Adjusted Gamma UCL (use when n<50)	0.00302

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0977	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.889	Mean of logged Data	-6.548
Maximum of Logged Data	-4.914	SD of logged Data	0.846

Assuming Lognormal Distribution

95% H-UCL	0.00342	90% Chebyshev (MVUE) UCL	0.00332
95% Chebyshev (MVUE) UCL	0.00393	97.5% Chebyshev (MVUE) UCL	0.00476
99% Chebyshev (MVUE) UCL	0.0064		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00271	95% Jackknife UCL	0.00275
95% Standard Bootstrap UCL	0.00268	95% Bootstrap-t UCL	0.00322

95% Hall's Bootstrap UCL	0.00557	95% Percentile Bootstrap UCL	0.00277
95% BCA Bootstrap UCL	0.003		
90% Chebyshev(Mean, Sd) UCL	0.0033	95% Chebyshev(Mean, Sd) UCL	0.00388
97.5% Chebyshev(Mean, Sd) UCL	0.0047	99% Chebyshev(Mean, Sd) UCL	0.0063

Suggested UCL to Use

95% Student's-t UCL 0.00275

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.5600E-5	Mean	1.7388E-4
Maximum	6.1500E-4	Median	1.2490E-4
SD	1.4959E-4	Std. Error of Mean	3.5258E-5
Coefficient of Variation	0.86	Skewness	1.764

Normal GOF Test

Shapiro Wilk Test Statistic	0.818	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	2.3521E-4	95% Adjusted-CLT UCL (Chen-1995)	2.4754E-4
		95% Modified-t UCL (Johnson-1978)	2.3766E-4

Gamma GOF Test

A-D Test Statistic	0.336	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.164	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.766	k star (bias corrected MLE)	1.509
Theta hat (MLE)	9.8456E-5	Theta star (bias corrected MLE)	1.1525E-4
nu hat (MLE)	63.58	nu star (bias corrected)	54.31
MLE Mean (bias corrected)	1.7388E-4	MLE Sd (bias corrected)	1.4156E-4
		Approximate Chi Square Value (0.05)	38.38
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	37.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.4606E-4	95% Adjusted Gamma UCL (use when n<50)	2.5458E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.24	Mean of logged Data	-8.966
Maximum of Logged Data	-7.394	SD of logged Data	0.81

Assuming Lognormal Distribution

95% H-UCL	2.8263E-4	90% Chebyshev (MVUE) UCL	2.8030E-4
95% Chebyshev (MVUE) UCL	3.2881E-4	97.5% Chebyshev (MVUE) UCL	3.9616E-4
99% Chebyshev (MVUE) UCL	5.2844E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.3187E-4	95% Jackknife UCL	2.3521E-4
95% Standard Bootstrap UCL	2.3009E-4	95% Bootstrap-t UCL	2.6779E-4

95% Hall's Bootstrap UCL	3.0779E-4	95% Percentile Bootstrap UCL	2.3488E-4
95% BCA Bootstrap UCL	2.5172E-4		
90% Chebyshev(Mean, Sd) UCL	2.7965E-4	95% Chebyshev(Mean, Sd) UCL	3.2756E-4
97.5% Chebyshev(Mean, Sd) UCL	3.9406E-4	99% Chebyshev(Mean, Sd) UCL	5.2469E-4

Suggested UCL to Use

95% Student's-t UCL 2.3521E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00165	Mean	0.00797
Maximum	0.0293	Median	0.0055
SD	0.00695	Std. Error of Mean	0.00164
Coefficient of Variation	0.873	Skewness	1.877

Normal GOF Test

Shapiro Wilk Test Statistic	0.805	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0108	95% Adjusted-CLT UCL (Chen-1995)	0.0114
		95% Modified-t UCL (Johnson-1978)	0.0109

Gamma GOF Test

A-D Test Statistic	0.409	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.19	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.723	k star (bias corrected MLE)	1.473
Theta hat (MLE)	0.00463	Theta star (bias corrected MLE)	0.00541
nu hat (MLE)	62.02	nu star (bias corrected)	53.01
MLE Mean (bias corrected)	0.00797	MLE Sd (bias corrected)	0.00657
		Approximate Chi Square Value (0.05)	37.29
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	36.02

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0113	95% Adjusted Gamma UCL (use when n<50)	0.0117

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.407	Mean of logged Data	-5.15
Maximum of Logged Data	-3.53	SD of logged Data	0.824

Assuming Lognormal Distribution

95% H-UCL	0.0131	90% Chebyshev (MVUE) UCL	0.013
95% Chebyshev (MVUE) UCL	0.0152	97.5% Chebyshev (MVUE) UCL	0.0184
99% Chebyshev (MVUE) UCL	0.0246		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0107	95% Jackknife UCL	0.0108
95% Standard Bootstrap UCL	0.0105	95% Bootstrap-t UCL	0.0124

95% Hall's Bootstrap UCL	0.0228	95% Percentile Bootstrap UCL	0.0107
95% BCA Bootstrap UCL	0.0115		
90% Chebyshev(Mean, Sd) UCL	0.0129	95% Chebyshev(Mean, Sd) UCL	0.0151
97.5% Chebyshev(Mean, Sd) UCL	0.0182	99% Chebyshev(Mean, Sd) UCL	0.0243

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0117

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	2.2300E-5	Minimum Non-Detect	1.6800E-6
Maximum Detect	5.1900E-4	Maximum Non-Detect	1.6800E-6
Variance Detects	1.5990E-8	Percent Non-Detects	5.556%
Mean Detects	1.3398E-4	SD Detects	1.2645E-4
Median Detects	9.5200E-5	CV Detects	0.944
Skewness Detects	2.022	Kurtosis Detects	4.714
Mean of Logged Detects	-9.272	SD of Logged Detects	0.871

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.787	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.2663E-4	KM Standard Error of Mean	2.9886E-5
KM SD	1.2301E-4	95% KM (BCA) UCL	1.7774E-4
95% KM (t) UCL	1.7862E-4	95% KM (Percentile Bootstrap) UCL	1.7798E-4
95% KM (z) UCL	1.7579E-4	95% KM Bootstrap t UCL	2.0786E-4
90% KM Chebyshev UCL	2.1629E-4	95% KM Chebyshev UCL	2.5690E-4
97.5% KM Chebyshev UCL	3.1327E-4	99% KM Chebyshev UCL	4.2400E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.266	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.213	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.555	k star (bias corrected MLE)	1.32
Theta hat (MLE)	8.6140E-5	Theta star (bias corrected MLE)	1.0149E-4
nu hat (MLE)	52.88	nu star (bias corrected)	44.88
Mean (detects)	1.3398E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.2300E-5	Mean	6.8209E-4
Maximum	0.01	Median	1.0110E-4
SD	0.00233	CV	3.414
k hat (MLE)	0.384	k star (bias corrected MLE)	0.357
Theta hat (MLE)	0.00177	Theta star (bias corrected MLE)	0.00191
nu hat (MLE)	13.84	nu star (bias corrected)	12.87
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (12.87, α)	5.802	Adjusted Chi Square Value (12.87, β)	5.352
95% Gamma Approximate UCL (use when n>=50)	0.00151	95% Gamma Adjusted UCL (use when n<50)	0.00164

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.2663E-4	SD (KM)	1.2301E-4
Variance (KM)	1.5132E-8	SE of Mean (KM)	2.9886E-5
k hat (KM)	1.06	k star (KM)	0.92

nu hat (KM)	38.15	nu star (KM)	33.13
theta hat (KM)	1.1949E-4	theta star (KM)	1.3762E-4
80% gamma percentile (KM)	2.0511E-4	90% gamma percentile (KM)	2.9761E-4
95% gamma percentile (KM)	3.9073E-4	99% gamma percentile (KM)	6.0827E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (33.13, α)	20.97	Adjusted Chi Square Value (33.13, β)	20.04
95% Gamma Approximate KM-UCL (use when n>=50)	2.0007E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.0932E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.2714E-4	Mean in Log Scale	-9.393
SD in Original Scale	1.2607E-4	SD in Log Scale	0.987
95% t UCL (assumes normality of ROS data)	1.7883E-4	95% Percentile Bootstrap UCL	1.7917E-4
95% BCA Bootstrap UCL	1.9072E-4	95% Bootstrap t UCL	2.0940E-4
95% H-UCL (Log ROS)	2.5379E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.496	KM Geo Mean	7.5147E-5
KM SD (logged)	1.234	95% Critical H Value (KM-Log)	2.996
KM Standard Error of Mean (logged)	0.3	95% H-UCL (KM -Log)	3.9465E-4
KM SD (logged)	1.234	95% Critical H Value (KM-Log)	2.996
KM Standard Error of Mean (logged)	0.3		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.2659E-4	Mean in Log Scale	-9.535
SD in Original Scale	1.2663E-4	SD in Log Scale	1.396
95% t UCL (Assumes normality)	1.7851E-4	95% H-Stat UCL	5.7797E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.7862E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	4
Number of Detects	11	Number of Non-Detects	3
Number of Distinct Detects	11	Number of Distinct Non-Detects	3
Minimum Detect	5.4900E-6	Minimum Non-Detect	1.5600E-6
Maximum Detect	1.1200E-4	Maximum Non-Detect	1.5800E-6
Variance Detects	9.333E-10	Percent Non-Detects	21.43%
Mean Detects	3.6308E-5	SD Detects	3.0549E-5
Median Detects	2.6400E-5	CV Detects	N/A
Skewness Detects	1.658	Kurtosis Detects	3.162
Mean of Logged Detects	-10.53	SD of Logged Detects	0.849

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.841	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.209	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.8862E-5	KM Standard Error of Mean	8.2674E-6
KM SD	2.9494E-5	95% KM (BCA) UCL	4.2506E-5
95% KM (t) UCL	4.3503E-5	95% KM (Percentile Bootstrap) UCL	4.3159E-5
95% KM (z) UCL	4.2461E-5	95% KM Bootstrap t UCL	5.1021E-5
90% KM Chebyshev UCL	5.3664E-5	95% KM Chebyshev UCL	6.4899E-5
97.5% KM Chebyshev UCL	8.0492E-5	99% KM Chebyshev UCL	1.1112E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.186	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.121	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.259	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.776	k star (bias corrected MLE)	1.352
Theta hat (MLE)	2.0446E-5	Theta star (bias corrected MLE)	2.6853E-5
nu hat (MLE)	39.07	nu star (bias corrected)	29.75
Mean (detects)	3.6308E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.4900E-6	Mean	0.00217
Maximum	0.01	Median	3.8150E-5
SD	0.00424	CV	1.954
k hat (MLE)	0.23	k star (bias corrected MLE)	0.228
Theta hat (MLE)	0.00944	Theta star (bias corrected MLE)	0.00951
nu hat (MLE)	6.442	nu star (bias corrected)	6.395
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (6.40, α)	1.845	Adjusted Chi Square Value (6.40, β)	1.54
95% Gamma Approximate UCL (use when n>=50)	0.00753	95% Gamma Adjusted UCL (use when n<50)	0.00902

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.8862E-5	SD (KM)	2.9494E-5
Variance (KM)	8.699E-10	SE of Mean (KM)	8.2674E-6

k hat (KM)	0.958	k star (KM)	0.8
nu hat (KM)	26.81	nu star (KM)	22.4
theta hat (KM)	3.0140E-5	theta star (KM)	3.6077E-5
80% gamma percentile (KM)	4.7167E-5	90% gamma percentile (KM)	7.0180E-5
95% gamma percentile (KM)	9.3626E-5	99% gamma percentile (KM)	1.4899E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (22.40, α)	12.64	Adjusted Chi Square Value (22.40, β)	11.68
95% Gamma Approximate KM-UCL (use when n>=50)	5.1153E-5	95% Gamma Adjusted KM-UCL (use when n<50)	5.5376E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.989	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0995	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.9303E-5	Mean in Log Scale	-10.96
SD in Original Scale	3.0194E-5	SD in Log Scale	1.131
95% t UCL (assumes normality of ROS data)	4.3594E-5	95% Percentile Bootstrap UCL	4.2271E-5
95% BCA Bootstrap UCL	4.4808E-5	95% Bootstrap t UCL	5.2264E-5
95% H-UCL (Log ROS)	8.4847E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-11.14	KM Geo Mean	1.4530E-5
KM SD (logged)	1.368	95% Critical H Value (KM-Log)	3.442
KM Standard Error of Mean (logged)	0.384	95% H-UCL (KM -Log)	1.3683E-4
KM SD (logged)	1.368	95% Critical H Value (KM-Log)	3.442
KM Standard Error of Mean (logged)	0.384		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.8696E-5	Mean in Log Scale	-11.29
SD in Original Scale	3.0768E-5	SD in Log Scale	1.676
95% t UCL (Assumes normality)	4.3259E-5	95% H-Stat UCL	3.3271E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 4.3503E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.7500E-4	Mean	8.4728E-4
Maximum	0.00314	Median	6.0350E-4
SD	7.3628E-4	Std. Error of Mean	1.7354E-4
Coefficient of Variation	0.869	Skewness	1.913

Normal GOF Test

Shapiro Wilk Test Statistic	0.803	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00115	95% Adjusted-CLT UCL (Chen-1995)	0.00122
		95% Modified-t UCL (Johnson-1978)	0.00116

Gamma GOF Test

A-D Test Statistic	0.413	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.722	k star (bias corrected MLE)	1.472
Theta hat (MLE)	4.9216E-4	Theta star (bias corrected MLE)	5.7573E-4
nu hat (MLE)	61.98	nu star (bias corrected)	52.98
MLE Mean (bias corrected)	8.4728E-4	MLE Sd (bias corrected)	6.9843E-4
		Approximate Chi Square Value (0.05)	37.26
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	35.99

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0012	95% Adjusted Gamma UCL (use when n<50)	0.00125

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.146	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.651	Mean of logged Data	-7.391
Maximum of Logged Data	-5.764	SD of logged Data	0.829

Assuming Lognormal Distribution

95% H-UCL	0.00141	90% Chebyshev (MVUE) UCL	0.00139
95% Chebyshev (MVUE) UCL	0.00163	97.5% Chebyshev (MVUE) UCL	0.00197
99% Chebyshev (MVUE) UCL	0.00263		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00113	95% Jackknife UCL	0.00115
95% Standard Bootstrap UCL	0.00112	95% Bootstrap-t UCL	0.00131

95% Hall's Bootstrap UCL	0.0015	95% Percentile Bootstrap UCL	0.00117
95% BCA Bootstrap UCL	0.0012		
90% Chebyshev(Mean, Sd) UCL	0.00137	95% Chebyshev(Mean, Sd) UCL	0.0016
97.5% Chebyshev(Mean, Sd) UCL	0.00193	99% Chebyshev(Mean, Sd) UCL	0.00257

Suggested UCL to Use

95% Student's-t UCL	0.00115

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	1
Minimum	7.2400E-5	Mean	3.4172E-4
Maximum	0.00127	Median	1.9250E-4
SD	3.1136E-4	Std. Error of Mean	7.7840E-5
Coefficient of Variation	0.911	Skewness	1.924

Normal GOF Test

Shapiro Wilk Test Statistic	0.787	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.237	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.7818E-4	95% Adjusted-CLT UCL (Chen-1995)	5.0976E-4
		95% Modified-t UCL (Johnson-1978)	4.8442E-4

Gamma GOF Test

A-D Test Statistic	0.505	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.199	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.219	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.63	k star (bias corrected MLE)	1.366
Theta hat (MLE)	2.0960E-4	Theta star (bias corrected MLE)	2.5010E-4
nu hat (MLE)	52.17	nu star (bias corrected)	43.72
MLE Mean (bias corrected)	3.4172E-4	MLE Sd (bias corrected)	2.9234E-4
		Approximate Chi Square Value (0.05)	29.56
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	28.24

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	5.0546E-4	95% Adjusted Gamma UCL (use when n<50)	5.2913E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.153	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.533	Mean of logged Data	-8.319
Maximum of Logged Data	-6.669	SD of logged Data	0.845

Assuming Lognormal Distribution

95% H-UCL	5.9864E-4	90% Chebyshev (MVUE) UCL	5.7040E-4
95% Chebyshev (MVUE) UCL	6.7527E-4	97.5% Chebyshev (MVUE) UCL	8.2082E-4
99% Chebyshev (MVUE) UCL	0.00111		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.6975E-4	95% Jackknife UCL	4.7818E-4
95% Standard Bootstrap UCL	4.6292E-4	95% Bootstrap-t UCL	5.4187E-4

95% Hall's Bootstrap UCL	9.8197E-4	95% Percentile Bootstrap UCL	4.6613E-4
95% BCA Bootstrap UCL	4.9655E-4		
90% Chebyshev(Mean, Sd) UCL	5.7524E-4	95% Chebyshev(Mean, Sd) UCL	6.8102E-4
97.5% Chebyshev(Mean, Sd) UCL	8.2783E-4	99% Chebyshev(Mean, Sd) UCL	0.00112

Suggested UCL to Use

95% Adjusted Gamma UCL 5.2913E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	18	Number of Distinct Observations	7
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	6

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable PCB-169 was not processed!

PCB-189

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0100E-5	Mean	5.6644E-5
Maximum	2.3800E-4	Median	4.0600E-5
SD	5.4171E-5	Std. Error of Mean	1.2768E-5
Coefficient of Variation	N/A	Skewness	2.37

Normal GOF Test

Shapiro Wilk Test Statistic	0.746	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.8856E-5	95% Adjusted-CLT UCL (Chen-1995)	8.5268E-5
		95% Modified-t UCL (Johnson-1978)	8.0045E-5

Gamma GOF Test

A-D Test Statistic	0.393	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.144	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.591	k star (bias corrected MLE)	1.363
Theta hat (MLE)	3.5598E-5	Theta star (bias corrected MLE)	4.1556E-5
nu hat (MLE)	57.28	nu star (bias corrected)	49.07
MLE Mean (bias corrected)	5.6644E-5	MLE Sd (bias corrected)	4.8517E-5
		Approximate Chi Square Value (0.05)	33.99
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	32.79

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.1778E-5	95% Adjusted Gamma UCL (use when n<50)	8.4781E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.5	Mean of logged Data	-10.12
Maximum of Logged Data	-8.343	SD of logged Data	0.853

Assuming Lognormal Distribution

95% H-UCL	9.5388E-5	90% Chebyshev (MVUE) UCL	9.3001E-5
95% Chebyshev (MVUE) UCL	1.0968E-4	97.5% Chebyshev (MVUE) UCL	1.3283E-4
99% Chebyshev (MVUE) UCL	1.7830E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.7646E-5	95% Jackknife UCL	7.8856E-5
95% Standard Bootstrap UCL	7.7129E-5	95% Bootstrap-t UCL	9.3469E-5
95% Hall's Bootstrap UCL	1.7139E-4	95% Percentile Bootstrap UCL	7.5839E-5
95% BCA Bootstrap UCL	8.3867E-5		
90% Chebyshev(Mean, Sd) UCL	9.4949E-5	95% Chebyshev(Mean, Sd) UCL	1.1230E-4
97.5% Chebyshev(Mean, Sd) UCL	1.3638E-4	99% Chebyshev(Mean, Sd) UCL	1.8369E-4

Suggested UCL to Use

95% Student's-t UCL 7.8856E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 10:18:24 AM
From File	Summer_Flounder_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.2049E-7	Mean	4.8761E-6
Maximum	1.1035E-5	Median	4.6297E-6
SD	2.8358E-6	Std. Error of Mean	6.6840E-7
Coefficient of Variation	N/A	Skewness	0.564

Normal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.15	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.0388E-6	95% Adjusted-CLT UCL (Chen-1995)	6.0704E-6
		95% Modified-t UCL (Johnson-1978)	6.0537E-6

Gamma GOF Test

A-D Test Statistic	0.315	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.539	k star (bias corrected MLE)	2.153
Theta hat (MLE)	1.9204E-6	Theta star (bias corrected MLE)	2.2649E-6
nu hat (MLE)	91.41	nu star (bias corrected)	77.5
MLE Mean (bias corrected)	4.8761E-6	MLE Sd (bias corrected)	3.3232E-6
		Approximate Chi Square Value (0.05)	58.22
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	56.62

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.4908E-6	95% Adjusted Gamma UCL (use when n<50)	6.6746E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.189	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.47	Mean of logged Data	-12.44
Maximum of Logged Data	-11.41	SD of logged Data	0.749

Assuming Lognormal Distribution

95% H-UCL	7.9432E-6	90% Chebyshev (MVUE) UCL	8.0432E-6
95% Chebyshev (MVUE) UCL	9.3609E-6	97.5% Chebyshev (MVUE) UCL	1.1190E-5
99% Chebyshev (MVUE) UCL	1.4782E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.9755E-6	95% Jackknife UCL	6.0388E-6
95% Standard Bootstrap UCL	5.9618E-6	95% Bootstrap-t UCL	6.2023E-6
95% Hall's Bootstrap UCL	6.1276E-6	95% Percentile Bootstrap UCL	5.9206E-6
95% BCA Bootstrap UCL	6.0467E-6		
90% Chebyshev(Mean, Sd) UCL	6.8813E-6	95% Chebyshev(Mean, Sd) UCL	7.7896E-6
97.5% Chebyshev(Mean, Sd) UCL	9.0502E-6	99% Chebyshev(Mean, Sd) UCL	1.1527E-5

Suggested UCL to Use

95% Student's-t UCL 6.0388E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ DF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	9.0651E-8	Mean	2.6019E-6
Maximum	1.1984E-5	Median	1.5198E-6
SD	3.1368E-6	Std. Error of Mean	7.3934E-7
Coefficient of Variation	N/A	Skewness	1.817

Normal GOF Test

Shapiro Wilk Test Statistic	0.778	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.8881E-6	95% Adjusted-CLT UCL (Chen-1995)	4.1563E-6
		95% Modified-t UCL (Johnson-1978)	3.9408E-6

Gamma GOF Test

A-D Test Statistic	0.311	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.779	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.212	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.735	k star (bias corrected MLE)	0.649
Theta hat (MLE)	3.5407E-6	Theta star (bias corrected MLE)	4.0066E-6
nu hat (MLE)	26.45	nu star (bias corrected)	23.38
MLE Mean (bias corrected)	2.6019E-6	MLE Sd (bias corrected)	3.2287E-6
		Approximate Chi Square Value (0.05)	13.38
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	12.65

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	4.5472E-6	95% Adjusted Gamma UCL (use when n<50)	4.8073E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.22	Mean of logged Data	-13.68
Maximum of Logged Data	-11.33	SD of logged Data	1.467

Assuming Lognormal Distribution

95% H-UCL	1.1210E-5	90% Chebyshev (MVUE) UCL	6.7065E-6
95% Chebyshev (MVUE) UCL	8.3738E-6	97.5% Chebyshev (MVUE) UCL	1.0688E-5
99% Chebyshev (MVUE) UCL	1.5234E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.8180E-6	95% Jackknife UCL	3.8881E-6
95% Standard Bootstrap UCL	3.8030E-6	95% Bootstrap-t UCL	4.5008E-6

95% Hall's Bootstrap UCL	4.6229E-6	95% Percentile Bootstrap UCL	3.8747E-6
95% BCA Bootstrap UCL	4.2130E-6		
90% Chebyshev(Mean, Sd) UCL	4.8199E-6	95% Chebyshev(Mean, Sd) UCL	5.8246E-6
97.5% Chebyshev(Mean, Sd) UCL	7.2191E-6	99% Chebyshev(Mean, Sd) UCL	9.9583E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 4.8073E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 6:35:53 PM
From File	fsh10_ndl_PCB_sum_wide2_flag_sep1_SF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0211	Mean	0.107
Maximum	0.452	Median	0.0849
SD	0.101	Std. Error of Mean	0.0238
Coefficient of Variation	0.95	Skewness	2.53

Normal GOF Test

Shapiro Wilk Test Statistic	0.728	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.148	95% Adjusted-CLT UCL (Chen-1995)	0.161
		95% Modified-t UCL (Johnson-1978)	0.15

Gamma GOF Test

A-D Test Statistic	0.42	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.169	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.704	k star (bias corrected MLE)	1.457
Theta hat (MLE)	0.0625	Theta star (bias corrected MLE)	0.0731
nu hat (MLE)	61.36	nu star (bias corrected)	52.46
MLE Mean (bias corrected)	0.107	MLE Sd (bias corrected)	0.0883
		Approximate Chi Square Value (0.05)	36.83
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	35.57

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.152	95% Adjusted Gamma UCL (use when n<50)	0.157

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.145	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.859	Mean of logged Data	-2.56
Maximum of Logged Data	-0.793	SD of logged Data	0.81

Assuming Lognormal Distribution

95% H-UCL	0.171	90% Chebyshev (MVUE) UCL	0.17
95% Chebyshev (MVUE) UCL	0.199	97.5% Chebyshev (MVUE) UCL	0.24
99% Chebyshev (MVUE) UCL	0.32		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.146	95% Jackknife UCL	0.148
95% Standard Bootstrap UCL	0.147	95% Bootstrap-t UCL	0.176
95% Hall's Bootstrap UCL	0.321	95% Percentile Bootstrap UCL	0.148
95% BCA Bootstrap UCL	0.171		
90% Chebyshev(Mean, Sd) UCL	0.178	95% Chebyshev(Mean, Sd) UCL	0.21
97.5% Chebyshev(Mean, Sd) UCL	0.255	99% Chebyshev(Mean, Sd) UCL	0.344

Suggested UCL to Use

95% Student's-t UCL 0.148

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 6:28:11 PM
From File	fsh5_PAH_wide2_flag_sep1_SF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)anthracene was not processed!

Benzo(a)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)pyrene was not processed!

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(b)fluoranthene was not processed!

Chrysene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chrysene was not processed!

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Dibenzo(a,h)anthracene was not processed!

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	2
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	2

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Indeno(1,2,3-cd)pyrene was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 6:30:47 PM
From File	fsh7_pest_wide2_flag_sep1_SF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.1700E-4	Mean	0.00121
Maximum	0.00918	Median	5.9900E-4
SD	0.00205	Std. Error of Mean	4.8425E-4
Coefficient of Variation	1.693	Skewness	3.815

Normal GOF Test

Shapiro Wilk Test Statistic	0.469	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.337	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00206	95% Adjusted-CLT UCL (Chen-1995)	0.00248
		95% Modified-t UCL (Johnson-1978)	0.00213

Gamma GOF Test

A-D Test Statistic	1.128	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.768	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.237	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.21	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.964	k star (bias corrected MLE)	0.84
Theta hat (MLE)	0.00126	Theta star (bias corrected MLE)	0.00144
nu hat (MLE)	34.69	nu star (bias corrected)	30.24
MLE Mean (bias corrected)	0.00121	MLE Sd (bias corrected)	0.00132
		Approximate Chi Square Value (0.05)	18.68
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	17.81

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00196	95% Adjusted Gamma UCL (use when n<50)	0.00206

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.937	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.053	Mean of logged Data	-7.316
Maximum of Logged Data	-4.691	SD of logged Data	1.024

Assuming Lognormal Distribution

95% H-UCL	0.00218	90% Chebyshev (MVUE) UCL	0.00195
95% Chebyshev (MVUE) UCL	0.00234	97.5% Chebyshev (MVUE) UCL	0.00289
99% Chebyshev (MVUE) UCL	0.00396		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00201	95% Jackknife UCL	0.00206
95% Standard Bootstrap UCL	0.00199	95% Bootstrap-t UCL	0.00419
95% Hall's Bootstrap UCL	0.00501	95% Percentile Bootstrap UCL	0.00213
95% BCA Bootstrap UCL	0.00266		
90% Chebyshev(Mean, Sd) UCL	0.00267	95% Chebyshev(Mean, Sd) UCL	0.00332
97.5% Chebyshev(Mean, Sd) UCL	0.00424	99% Chebyshev(Mean, Sd) UCL	0.00603

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.00332

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.6900E-4	Mean	0.00172
Maximum	0.00752	Median	0.00104
SD	0.00195	Std. Error of Mean	4.5863E-4
Coefficient of Variation	1.131	Skewness	2.162

Normal GOF Test

Shapiro Wilk Test Statistic	0.719	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.276	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00252	95% Adjusted-CLT UCL (Chen-1995)	0.00272
		95% Modified-t UCL (Johnson-1978)	0.00256

Gamma GOF Test

A-D Test Statistic	0.444	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.763	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.163	k star (bias corrected MLE)	1.007
Theta hat (MLE)	0.00148	Theta star (bias corrected MLE)	0.00171
nu hat (MLE)	41.88	nu star (bias corrected)	36.24
MLE Mean (bias corrected)	0.00172	MLE Sd (bias corrected)	0.00172
		Approximate Chi Square Value (0.05)	23.46
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	22.47

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00266	95% Adjusted Gamma UCL (use when n<50)	0.00277

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.686	Mean of logged Data	-6.853
Maximum of Logged Data	-4.89	SD of logged Data	1.029

Assuming Lognormal Distribution

95% H-UCL	0.0035	90% Chebyshev (MVUE) UCL	0.00311
95% Chebyshev (MVUE) UCL	0.00375	97.5% Chebyshev (MVUE) UCL	0.00462
99% Chebyshev (MVUE) UCL	0.00634		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00248	95% Jackknife UCL	0.00252
95% Standard Bootstrap UCL	0.00246	95% Bootstrap-t UCL	0.0035

95% Hall's Bootstrap UCL	0.00616	95% Percentile Bootstrap UCL	0.00252
95% BCA Bootstrap UCL	0.00275		
90% Chebyshev(Mean, Sd) UCL	0.0031	95% Chebyshev(Mean, Sd) UCL	0.00372
97.5% Chebyshev(Mean, Sd) UCL	0.00458	99% Chebyshev(Mean, Sd) UCL	0.00628

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00277

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	14	Number of Distinct Non-Detects	1
Minimum Detect	1.8000E-5	Minimum Non-Detect	1.0800E-5
Maximum Detect	6.1300E-4	Maximum Non-Detect	1.0800E-5
Variance Detects	2.6220E-8	Percent Non-Detects	22.22%
Mean Detects	1.2075E-4	SD Detects	1.6193E-4
Median Detects	4.5250E-5	CV Detects	1.341
Skewness Detects	2.49	Kurtosis Detects	6.851
Mean of Logged Detects	-9.637	SD of Logged Detects	1.1

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.667	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.263	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.6317E-5	KM Standard Error of Mean	3.5468E-5
KM SD	1.4500E-4	95% KM (BCA) UCL	1.6193E-4
95% KM (t) UCL	1.5802E-4	95% KM (Percentile Bootstrap) UCL	1.5973E-4
95% KM (z) UCL	1.5466E-4	95% KM Bootstrap t UCL	2.2667E-4
90% KM Chebyshev UCL	2.0272E-4	95% KM Chebyshev UCL	2.5092E-4
97.5% KM Chebyshev UCL	3.1781E-4	99% KM Chebyshev UCL	4.4922E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.785	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.762	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.219	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.236	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.944	k star (bias corrected MLE)	0.79
Theta hat (MLE)	1.2788E-4	Theta star (bias corrected MLE)	1.5294E-4
nu hat (MLE)	26.44	nu star (bias corrected)	22.11
Mean (detects)	1.2075E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.8000E-5	Mean	0.00232
Maximum	0.01	Median	1.1600E-4
SD	0.00423	CV	1.826
k hat (MLE)	0.284	k star (bias corrected MLE)	0.274
Theta hat (MLE)	0.00816	Theta star (bias corrected MLE)	0.00847
nu hat (MLE)	10.22	nu star (bias corrected)	9.849
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (9.85, α)	3.848	Adjusted Chi Square Value (9.85, β)	3.495
95% Gamma Approximate UCL (use when n>=50)	0.00593	95% Gamma Adjusted UCL (use when n<50)	0.00653

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.6317E-5	SD (KM)	1.4500E-4
Variance (KM)	2.1026E-8	SE of Mean (KM)	3.5468E-5
k hat (KM)	0.441	k star (KM)	0.405

nu hat (KM)	15.88	nu star (KM)	14.57
theta hat (KM)	2.1830E-4	theta star (KM)	2.3799E-4
80% gamma percentile (KM)	1.5566E-4	90% gamma percentile (KM)	2.7149E-4
95% gamma percentile (KM)	3.9857E-4	99% gamma percentile (KM)	7.1774E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (14.57, α)	6.963	Adjusted Chi Square Value (14.57, β)	6.463
95% Gamma Approximate KM-UCL (use when n>=50)	2.0153E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.1713E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.5060E-5	Mean in Log Scale	-10.22
SD in Original Scale	1.4999E-4	SD in Log Scale	1.503
95% t UCL (assumes normality of ROS data)	1.5656E-4	95% Percentile Bootstrap UCL	1.5800E-4
95% BCA Bootstrap UCL	1.8643E-4	95% Bootstrap t UCL	2.3299E-4
95% H-UCL (Log ROS)	3.9268E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.04	KM Geo Mean	4.3752E-5
KM SD (logged)	1.197	95% Critical H Value (KM-Log)	2.937
KM Standard Error of Mean (logged)	0.293	95% H-UCL (KM -Log)	2.1024E-4
KM SD (logged)	1.197	95% Critical H Value (KM-Log)	2.937
KM Standard Error of Mean (logged)	0.293		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9.5117E-5	Mean in Log Scale	-10.19
SD in Original Scale	1.4995E-4	SD in Log Scale	1.436
95% t UCL (Assumes normality)	1.5660E-4	95% H-Stat UCL	3.3491E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ımma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 2.1713E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.5400E-4	Mean	0.00795
Maximum	0.045	Median	0.00389
SD	0.0107	Std. Error of Mean	0.00251
Coefficient of Variation	1.341	Skewness	2.791

Normal GOF Test

Shapiro Wilk Test Statistic	0.642	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.291	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0123	95% Adjusted-CLT UCL (Chen-1995)	0.0138
		95% Modified-t UCL (Johnson-1978)	0.0126

Gamma GOF Test

A-D Test Statistic	0.781	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.767	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.229	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.996	k star (bias corrected MLE)	0.867
Theta hat (MLE)	0.00798	Theta star (bias corrected MLE)	0.00917
nu hat (MLE)	35.84	nu star (bias corrected)	31.2
MLE Mean (bias corrected)	0.00795	MLE Sd (bias corrected)	0.00854
		Approximate Chi Square Value (0.05)	19.44
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	18.55

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0128	95% Adjusted Gamma UCL (use when n<50)	0.0134

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.697	Mean of logged Data	-5.415
Maximum of Logged Data	-3.101	SD of logged Data	1.085

Assuming Lognormal Distribution

95% H-UCL	0.0166	90% Chebyshev (MVUE) UCL	0.0142
95% Chebyshev (MVUE) UCL	0.0172	97.5% Chebyshev (MVUE) UCL	0.0213
99% Chebyshev (MVUE) UCL	0.0295		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0121	95% Jackknife UCL	0.0123
95% Standard Bootstrap UCL	0.0119	95% Bootstrap-t UCL	0.0168

95% Hall's Bootstrap UCL	0.0271	95% Percentile Bootstrap UCL	0.0121
95% BCA Bootstrap UCL	0.0147		
90% Chebyshev(Mean, Sd) UCL	0.0155	95% Chebyshev(Mean, Sd) UCL	0.0189
97.5% Chebyshev(Mean, Sd) UCL	0.0236	99% Chebyshev(Mean, Sd) UCL	0.0329

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0189

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00117	Mean	0.0198
Maximum	0.0631	Median	0.00864
SD	0.0202	Std. Error of Mean	0.00475
Coefficient of Variation	1.016	Skewness	1.213

Normal GOF Test

Shapiro Wilk Test Statistic	0.765	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.331	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0281	95% Adjusted-CLT UCL (Chen-1995)	0.0291
		95% Modified-t UCL (Johnson-1978)	0.0283

Gamma GOF Test

A-D Test Statistic	1.16	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.764	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.256	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.146	k star (bias corrected MLE)	0.992
Theta hat (MLE)	0.0173	Theta star (bias corrected MLE)	0.02
nu hat (MLE)	41.27	nu star (bias corrected)	35.73
MLE Mean (bias corrected)	0.0198	MLE Sd (bias corrected)	0.0199
		Approximate Chi Square Value (0.05)	23.05
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	22.07

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0307	95% Adjusted Gamma UCL (use when n<50)	0.0321

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.192	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.751	Mean of logged Data	-4.416
Maximum of Logged Data	-2.763	SD of logged Data	1.057

Assuming Lognormal Distribution

95% H-UCL	0.0424	90% Chebyshev (MVUE) UCL	0.0371
95% Chebyshev (MVUE) UCL	0.0447	97.5% Chebyshev (MVUE) UCL	0.0553
99% Chebyshev (MVUE) UCL	0.0762		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0276	95% Jackknife UCL	0.0281
95% Standard Bootstrap UCL	0.0274	95% Bootstrap-t UCL	0.031

95% Hall's Bootstrap UCL	0.0282	95% Percentile Bootstrap UCL	0.0281
95% BCA Bootstrap UCL	0.029		
90% Chebyshev(Mean, Sd) UCL	0.0341	95% Chebyshev(Mean, Sd) UCL	0.0405
97.5% Chebyshev(Mean, Sd) UCL	0.0495	99% Chebyshev(Mean, Sd) UCL	0.0671

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.0405

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	2.1100E-5	Minimum Non-Detect	9.4000E-6
Maximum Detect	0.00254	Maximum Non-Detect	9.4000E-6
Variance Detects	6.9027E-7	Percent Non-Detects	5.556%
Mean Detects	6.4277E-4	SD Detects	8.3082E-4
Median Detects	1.9600E-4	CV Detects	1.293
Skewness Detects	1.552	Kurtosis Detects	1.014
Mean of Logged Detects	-8.116	SD of Logged Detects	1.304

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.699	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.313	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.0758E-4	KM Standard Error of Mean	1.9355E-4
KM SD	7.9663E-4	95% KM (BCA) UCL	9.2217E-4
95% KM (t) UCL	9.4428E-4	95% KM (Percentile Bootstrap) UCL	9.2823E-4
95% KM (z) UCL	9.2594E-4	95% KM Bootstrap t UCL	0.00107
90% KM Chebyshev UCL	0.00119	95% KM Chebyshev UCL	0.00145
97.5% KM Chebyshev UCL	0.00182	99% KM Chebyshev UCL	0.00253

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.093	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.775	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.237	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.217	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.777	k star (bias corrected MLE)	0.679
Theta hat (MLE)	8.2693E-4	Theta star (bias corrected MLE)	9.4617E-4
nu hat (MLE)	26.43	nu star (bias corrected)	23.1
Mean (detects)	6.4277E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.1100E-5	Mean	0.00116
Maximum	0.01	Median	2.1350E-4
SD	0.00235	CV	2.02
k hat (MLE)	0.539	k star (bias corrected MLE)	0.486
Theta hat (MLE)	0.00216	Theta star (bias corrected MLE)	0.00239
nu hat (MLE)	19.42	nu star (bias corrected)	17.51
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (17.51, α)	9.041	Adjusted Chi Square Value (17.51, β)	8.46
95% Gamma Approximate UCL (use when n>=50)	0.00225	95% Gamma Adjusted UCL (use when n<50)	0.00241

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.0758E-4	SD (KM)	7.9663E-4
Variance (KM)	6.3462E-7	SE of Mean (KM)	1.9355E-4
k hat (KM)	0.582	k star (KM)	0.522

nu hat (KM)	20.94	nu star (KM)	18.78
theta hat (KM)	0.00104	theta star (KM)	0.00116
80% gamma percentile (KM)	9.9948E-4	90% gamma percentile (KM)	0.00163
95% gamma percentile (KM)	0.0023	99% gamma percentile (KM)	0.00394

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (18.78, α)	9.96	Adjusted Chi Square Value (18.78, β)	9.347
95% Gamma Approximate KM-UCL (use when n>=50)	0.00115	95% Gamma Adjusted KM-UCL (use when n<50)	0.00122

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.918	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.166	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.0779E-4	Mean in Log Scale	-8.29
SD in Original Scale	8.1957E-4	SD in Log Scale	1.463
95% t UCL (assumes normality of ROS data)	9.4384E-4	95% Percentile Bootstrap UCL	9.3940E-4
95% BCA Bootstrap UCL	9.8572E-4	95% Bootstrap t UCL	0.00112
95% H-UCL (Log ROS)	0.00242		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.308	KM Geo Mean	2.4646E-4
KM SD (logged)	1.462	95% Critical H Value (KM-Log)	3.37
KM Standard Error of Mean (logged)	0.355	95% H-UCL (KM -Log)	0.00237
KM SD (logged)	1.462	95% Critical H Value (KM-Log)	3.37
KM Standard Error of Mean (logged)	0.355		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	6.0732E-4	Mean in Log Scale	-8.347
SD in Original Scale	8.1993E-4	SD in Log Scale	1.599
95% t UCL (Assumes normality)	9.4352E-4	95% H-Stat UCL	0.00345

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.00145

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.3400E-4	Mean	0.00162
Maximum	0.00462	Median	0.00138
SD	0.00114	Std. Error of Mean	2.6967E-4
Coefficient of Variation	0.706	Skewness	1.246

Normal GOF Test

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00209	95% Adjusted-CLT UCL (Chen-1995)	0.00215
		95% Modified-t UCL (Johnson-1978)	0.0021

Gamma GOF Test

A-D Test Statistic	0.191	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0942	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.116	k star (bias corrected MLE)	1.8
Theta hat (MLE)	7.6596E-4	Theta star (bias corrected MLE)	9.0024E-4
nu hat (MLE)	76.17	nu star (bias corrected)	64.81
MLE Mean (bias corrected)	0.00162	MLE Sd (bias corrected)	0.00121
		Approximate Chi Square Value (0.05)	47.29
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	45.85

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00222	95% Adjusted Gamma UCL (use when n<50)	0.00229

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.36	Mean of logged Data	-6.679
Maximum of Logged Data	-5.377	SD of logged Data	0.782

Assuming Lognormal Distribution

95% H-UCL	0.00266	90% Chebyshev (MVUE) UCL	0.00266
95% Chebyshev (MVUE) UCL	0.00311	97.5% Chebyshev (MVUE) UCL	0.00374
99% Chebyshev (MVUE) UCL	0.00497		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00206	95% Jackknife UCL	0.00209
95% Standard Bootstrap UCL	0.00206	95% Bootstrap-t UCL	0.00221

95% Hall's Bootstrap UCL	0.00241	95% Percentile Bootstrap UCL	0.00205
95% BCA Bootstrap UCL	0.00214		
90% Chebyshev(Mean, Sd) UCL	0.00243	95% Chebyshev(Mean, Sd) UCL	0.0028
97.5% Chebyshev(Mean, Sd) UCL	0.0033	99% Chebyshev(Mean, Sd) UCL	0.0043

Suggested UCL to Use

95% Student's-t UCL 0.00209

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.6400E-4	Mean	0.00116
Maximum	0.00253	Median	0.00112
SD	6.2443E-4	Std. Error of Mean	1.4718E-4
Coefficient of Variation	0.537	Skewness	0.397

Normal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00142	95% Adjusted-CLT UCL (Chen-1995)	0.00142
		95% Modified-t UCL (Johnson-1978)	0.00142

Gamma GOF Test

A-D Test Statistic	0.321	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.141	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.187	k star (bias corrected MLE)	2.693
Theta hat (MLE)	3.6519E-4	Theta star (bias corrected MLE)	4.3220E-4
nu hat (MLE)	114.7	nu star (bias corrected)	96.94
MLE Mean (bias corrected)	0.00116	MLE Sd (bias corrected)	7.0923E-4
		Approximate Chi Square Value (0.05)	75.23
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	73.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0015	95% Adjusted Gamma UCL (use when n<50)	0.00154

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.24	Mean of logged Data	-6.921
Maximum of Logged Data	-5.98	SD of logged Data	0.632

Assuming Lognormal Distribution

95% H-UCL	0.00168	90% Chebyshev (MVUE) UCL	0.00175
95% Chebyshev (MVUE) UCL	0.002	97.5% Chebyshev (MVUE) UCL	0.00235
99% Chebyshev (MVUE) UCL	0.00304		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00141	95% Jackknife UCL	0.00142
95% Standard Bootstrap UCL	0.0014	95% Bootstrap-t UCL	0.00143

95% Hall's Bootstrap UCL	0.00142	95% Percentile Bootstrap UCL	0.0014
95% BCA Bootstrap UCL	0.00141		
90% Chebyshev(Mean, Sd) UCL	0.00161	95% Chebyshev(Mean, Sd) UCL	0.00181
97.5% Chebyshev(Mean, Sd) UCL	0.00208	99% Chebyshev(Mean, Sd) UCL	0.00263

Suggested UCL to Use

95% Student's-t UCL	0.00142

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	5.8500E-5	Mean	2.7943E-4
Maximum	5.5100E-4	Median	2.9100E-4
SD	1.5218E-4	Std. Error of Mean	3.5868E-5
Coefficient of Variation	0.545	Skewness	0.184

Normal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.4182E-4	95% Adjusted-CLT UCL (Chen-1995)	3.4009E-4
		95% Modified-t UCL (Johnson-1978)	3.4208E-4

Gamma GOF Test

A-D Test Statistic	0.447	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.174	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.869	k star (bias corrected MLE)	2.427
Theta hat (MLE)	9.7412E-5	Theta star (bias corrected MLE)	1.1511E-4
nu hat (MLE)	103.3	nu star (bias corrected)	87.39
MLE Mean (bias corrected)	2.7943E-4	MLE Sd (bias corrected)	1.7935E-4
		Approximate Chi Square Value (0.05)	66.84
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	65.11

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.6534E-4	95% Adjusted Gamma UCL (use when n<50)	3.7502E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.914	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.205	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.746	Mean of logged Data	-8.367
Maximum of Logged Data	-7.504	SD of logged Data	0.681

Assuming Lognormal Distribution

95% H-UCL	4.2226E-4	90% Chebyshev (MVUE) UCL	4.3561E-4
95% Chebyshev (MVUE) UCL	5.0225E-4	97.5% Chebyshev (MVUE) UCL	5.9474E-4
99% Chebyshev (MVUE) UCL	7.7641E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.3843E-4	95% Jackknife UCL	3.4182E-4
95% Standard Bootstrap UCL	3.3566E-4	95% Bootstrap-t UCL	3.4299E-4

95% Hall's Bootstrap UCL	3.3819E-4	95% Percentile Bootstrap UCL	3.3698E-4
95% BCA Bootstrap UCL	3.3572E-4		
90% Chebyshev(Mean, Sd) UCL	3.8703E-4	95% Chebyshev(Mean, Sd) UCL	4.3577E-4
97.5% Chebyshev(Mean, Sd) UCL	5.0342E-4	99% Chebyshev(Mean, Sd) UCL	6.3631E-4

Suggested UCL to Use

95% Student's-t UCL 3.4182E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Hexachlorobenzene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0100E-4	Mean	4.0183E-4
Maximum	8.1200E-4	Median	4.0750E-4
SD	2.1244E-4	Std. Error of Mean	5.0073E-5
Coefficient of Variation	0.529	Skewness	0.382

Normal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.145	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.8894E-4	95% Adjusted-CLT UCL (Chen-1995)	4.8901E-4
		95% Modified-t UCL (Johnson-1978)	4.8969E-4

Gamma GOF Test

A-D Test Statistic	0.31	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.138	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.382	k star (bias corrected MLE)	2.855
Theta hat (MLE)	1.1881E-4	Theta star (bias corrected MLE)	1.4072E-4
nu hat (MLE)	121.8	nu star (bias corrected)	102.8
MLE Mean (bias corrected)	4.0183E-4	MLE Sd (bias corrected)	2.3780E-4
		Approximate Chi Square Value (0.05)	80.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	78.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.1376E-4	95% Adjusted Gamma UCL (use when n<50)	5.2619E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.2	Mean of logged Data	-7.975
Maximum of Logged Data	-7.116	SD of logged Data	0.604

Assuming Lognormal Distribution

95% H-UCL	5.6424E-4	90% Chebyshev (MVUE) UCL	5.9112E-4
95% Chebyshev (MVUE) UCL	6.7395E-4	97.5% Chebyshev (MVUE) UCL	7.8892E-4
99% Chebyshev (MVUE) UCL	0.00101		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.8420E-4	95% Jackknife UCL	4.8894E-4
95% Standard Bootstrap UCL	4.8578E-4	95% Bootstrap-t UCL	4.9651E-4

95% Hall's Bootstrap UCL	4.9344E-4	95% Percentile Bootstrap UCL	4.8589E-4
95% BCA Bootstrap UCL	4.8306E-4		
90% Chebyshev(Mean, Sd) UCL	5.5205E-4	95% Chebyshev(Mean, Sd) UCL	6.2010E-4
97.5% Chebyshev(Mean, Sd) UCL	7.1454E-4	99% Chebyshev(Mean, Sd) UCL	9.0006E-4

Suggested UCL to Use

95% Student's-t UCL 4.8894E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mirex

General Statistics

Total Number of Observations	15	Number of Distinct Observations	14
		Number of Missing Observations	3
Number of Detects	13	Number of Non-Detects	2
Number of Distinct Detects	13	Number of Distinct Non-Detects	1
Minimum Detect	2.6200E-5	Minimum Non-Detect	9.3300E-6
Maximum Detect	9.7400E-5	Maximum Non-Detect	9.3300E-6
Variance Detects	5.982E-10	Percent Non-Detects	13.33%
Mean Detects	5.0562E-5	SD Detects	2.4458E-5
Median Detects	3.8600E-5	CV Detects	N/A
Skewness Detects	0.888	Kurtosis Detects	-0.654
Mean of Logged Detects	-9.992	SD of Logged Detects	0.455

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.264	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.5064E-5	KM Standard Error of Mean	6.9821E-6
KM SD	2.5981E-5	95% KM (BCA) UCL	5.7202E-5
95% KM (t) UCL	5.7362E-5	95% KM (Percentile Bootstrap) UCL	5.6815E-5
95% KM (z) UCL	5.6549E-5	95% KM Bootstrap t UCL	5.8962E-5
90% KM Chebyshev UCL	6.6010E-5	95% KM Chebyshev UCL	7.5498E-5
97.5% KM Chebyshev UCL	8.8667E-5	99% KM Chebyshev UCL	1.1454E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.668	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.234	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.237	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.177	k star (bias corrected MLE)	4.034
Theta hat (MLE)	9.7668E-6	Theta star (bias corrected MLE)	1.2535E-5
nu hat (MLE)	134.6	nu star (bias corrected)	104.9
Mean (detects)	5.0562E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.6200E-5	Mean	0.00138
Maximum	0.01	Median	4.1200E-5
SD	0.0035	CV	2.542
k hat (MLE)	0.262	k star (bias corrected MLE)	0.254
Theta hat (MLE)	0.00525	Theta star (bias corrected MLE)	0.00541
nu hat (MLE)	7.871	nu star (bias corrected)	7.63
Adjusted Level of Significance (β)	0.0324		
Approximate Chi Square Value (7.63, α)	2.523	Adjusted Chi Square Value (7.63, β)	2.176
95% Gamma Approximate UCL (use when n>=50)	0.00417	95% Gamma Adjusted UCL (use when n<50)	0.00483

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.5064E-5	SD (KM)	2.5981E-5
Variance (KM)	6.750E-10	SE of Mean (KM)	6.9821E-6

k hat (KM)	3.009	k star (KM)	2.451
nu hat (KM)	90.26	nu star (KM)	73.54
theta hat (KM)	1.4979E-5	theta star (KM)	1.8384E-5
80% gamma percentile (KM)	6.5852E-5	90% gamma percentile (KM)	8.3617E-5
95% gamma percentile (KM)	1.0037E-4	99% gamma percentile (KM)	1.3709E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (73.54, α)	54.79	Adjusted Chi Square Value (73.54, β)	52.8
95% Gamma Approximate KM-UCL (use when n>=50)	6.0484E-5	95% Gamma Adjusted KM-UCL (use when n<50)	6.2763E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.5912E-5	Mean in Log Scale	-10.14
SD in Original Scale	2.5763E-5	SD in Log Scale	0.568
95% t UCL (assumes normality of ROS data)	5.7628E-5	95% Percentile Bootstrap UCL	5.7247E-5
95% BCA Bootstrap UCL	5.6972E-5	95% Bootstrap t UCL	5.9837E-5
95% H-UCL (Log ROS)	6.4517E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.2	KM Geo Mean	3.7021E-5
KM SD (logged)	0.677	95% Critical H Value (KM-Log)	2.276
KM Standard Error of Mean (logged)	0.182	95% H-UCL (KM -Log)	7.0257E-5
KM SD (logged)	0.677	95% Critical H Value (KM-Log)	2.276
KM Standard Error of Mean (logged)	0.182		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.4442E-5	Mean in Log Scale	-10.3
SD in Original Scale	2.7813E-5	SD in Log Scale	0.907
95% t UCL (Assumes normality)	5.7090E-5	95% H-Stat UCL	9.5691E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	6.2763E-5	95% GROS Adjusted Gamma UCL	0.00483

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Nonachlor, trans-

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.0300E-4	Mean	0.00209
Maximum	0.00672	Median	0.00167
SD	0.00174	Std. Error of Mean	4.1089E-4
Coefficient of Variation	0.835	Skewness	1.408

Normal GOF Test

Shapiro Wilk Test Statistic	0.863	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0028	95% Adjusted-CLT UCL (Chen-1995)	0.00291
		95% Modified-t UCL (Johnson-1978)	0.00282

Gamma GOF Test

A-D Test Statistic	0.147	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.615	k star (bias corrected MLE)	1.383
Theta hat (MLE)	0.00129	Theta star (bias corrected MLE)	0.00151
nu hat (MLE)	58.15	nu star (bias corrected)	49.79
MLE Mean (bias corrected)	0.00209	MLE Sd (bias corrected)	0.00177
		Approximate Chi Square Value (0.05)	34.59
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	33.38

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.003	95% Adjusted Gamma UCL (use when n<50)	0.00311

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0869	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.502	Mean of logged Data	-6.512
Maximum of Logged Data	-5.003	SD of logged Data	0.901

Assuming Lognormal Distribution

95% H-UCL	0.00384	90% Chebyshev (MVUE) UCL	0.00367
95% Chebyshev (MVUE) UCL	0.00435	97.5% Chebyshev (MVUE) UCL	0.0053
99% Chebyshev (MVUE) UCL	0.00716		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00276	95% Jackknife UCL	0.0028
95% Standard Bootstrap UCL	0.00274	95% Bootstrap-t UCL	0.00306

95% Hall's Bootstrap UCL	0.00306	95% Percentile Bootstrap UCL	0.00278
95% BCA Bootstrap UCL	0.00281		
90% Chebyshev(Mean, Sd) UCL	0.00332	95% Chebyshev(Mean, Sd) UCL	0.00388
97.5% Chebyshev(Mean, Sd) UCL	0.00465	99% Chebyshev(Mean, Sd) UCL	0.00618

Suggested UCL to Use

95% Student's-t UCL 0.0028

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Oxychlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.0500E-4	Mean	9.0128E-4
Maximum	0.0027	Median	7.7750E-4
SD	6.5430E-4	Std. Error of Mean	1.5422E-4
Coefficient of Variation	0.726	Skewness	1.564

Normal GOF Test

Shapiro Wilk Test Statistic	0.843	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.287	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00117	95% Adjusted-CLT UCL (Chen-1995)	0.00122
		95% Modified-t UCL (Johnson-1978)	0.00118

Gamma GOF Test

A-D Test Statistic	0.419	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.197	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.143	k star (bias corrected MLE)	1.823
Theta hat (MLE)	4.2053E-4	Theta star (bias corrected MLE)	4.9439E-4
nu hat (MLE)	77.15	nu star (bias corrected)	65.63
MLE Mean (bias corrected)	9.0128E-4	MLE Sd (bias corrected)	6.6752E-4
		Approximate Chi Square Value (0.05)	47.99
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	46.54

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00123	95% Adjusted Gamma UCL (use when n<50)	0.00127

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.168	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.162	Mean of logged Data	-7.263
Maximum of Logged Data	-5.915	SD of logged Data	0.781

Assuming Lognormal Distribution

95% H-UCL	0.00148	90% Chebyshev (MVUE) UCL	0.00148
95% Chebyshev (MVUE) UCL	0.00173	97.5% Chebyshev (MVUE) UCL	0.00208
99% Chebyshev (MVUE) UCL	0.00276		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00115	95% Jackknife UCL	0.00117
95% Standard Bootstrap UCL	0.00115	95% Bootstrap-t UCL	0.0013

95% Hall's Bootstrap UCL	0.00138	95% Percentile Bootstrap UCL	0.00118
95% BCA Bootstrap UCL	0.00118		
90% Chebyshev(Mean, Sd) UCL	0.00136	95% Chebyshev(Mean, Sd) UCL	0.00157
97.5% Chebyshev(Mean, Sd) UCL	0.00186	99% Chebyshev(Mean, Sd) UCL	0.00244

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00127

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

cis-Nonachlor

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	9.1500E-5	Mean	8.5197E-4
Maximum	0.00245	Median	7.1450E-4
SD	6.5910E-4	Std. Error of Mean	1.5535E-4
Coefficient of Variation	0.774	Skewness	1.233

Normal GOF Test

Shapiro Wilk Test Statistic	0.879	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00112	95% Adjusted-CLT UCL (Chen-1995)	0.00116
		95% Modified-t UCL (Johnson-1978)	0.00113

Gamma GOF Test

A-D Test Statistic	0.169	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.112	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.81	k star (bias corrected MLE)	1.546
Theta hat (MLE)	4.7059E-4	Theta star (bias corrected MLE)	5.5118E-4
nu hat (MLE)	65.18	nu star (bias corrected)	55.65
MLE Mean (bias corrected)	8.5197E-4	MLE Sd (bias corrected)	6.8527E-4
		Approximate Chi Square Value (0.05)	39.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	38.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0012	95% Adjusted Gamma UCL (use when n<50)	0.00124

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.299	Mean of logged Data	-7.369
Maximum of Logged Data	-6.012	SD of logged Data	0.851

Assuming Lognormal Distribution

95% H-UCL	0.0015	90% Chebyshev (MVUE) UCL	0.00146
95% Chebyshev (MVUE) UCL	0.00172	97.5% Chebyshev (MVUE) UCL	0.00208
99% Chebyshev (MVUE) UCL	0.0028		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00111	95% Jackknife UCL	0.00112
95% Standard Bootstrap UCL	0.0011	95% Bootstrap-t UCL	0.0012

95% Hall's Bootstrap UCL	0.00121	95% Percentile Bootstrap UCL	0.0011
95% BCA Bootstrap UCL	0.00114		
90% Chebyshev(Mean, Sd) UCL	0.00132	95% Chebyshev(Mean, Sd) UCL	0.00153
97.5% Chebyshev(Mean, Sd) UCL	0.00182	99% Chebyshev(Mean, Sd) UCL	0.0024

Suggested UCL to Use

95% Student's-t UCL 0.00112

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.2400E-4	Mean	5.5267E-4
Maximum	0.00121	Median	5.1500E-4
SD	3.3015E-4	Std. Error of Mean	7.7816E-5
Coefficient of Variation	0.597	Skewness	0.549

Normal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.8804E-4	95% Adjusted-CLT UCL (Chen-1995)	6.9142E-4
		95% Modified-t UCL (Johnson-1978)	6.8971E-4

Gamma GOF Test

A-D Test Statistic	0.285	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.136	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.701	k star (bias corrected MLE)	2.288
Theta hat (MLE)	2.0463E-4	Theta star (bias corrected MLE)	2.4158E-4
nu hat (MLE)	97.23	nu star (bias corrected)	82.36
MLE Mean (bias corrected)	5.5267E-4	MLE Sd (bias corrected)	3.6539E-4
		Approximate Chi Square Value (0.05)	62.44
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	60.78

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.2891E-4	95% Adjusted Gamma UCL (use when n<50)	7.4887E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.143	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.995	Mean of logged Data	-7.697
Maximum of Logged Data	-6.717	SD of logged Data	0.68

Assuming Lognormal Distribution

95% H-UCL	8.2503E-4	90% Chebyshev (MVUE) UCL	8.5113E-4
95% Chebyshev (MVUE) UCL	9.8131E-4	97.5% Chebyshev (MVUE) UCL	0.00116
99% Chebyshev (MVUE) UCL	0.00152		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.8066E-4	95% Jackknife UCL	6.8804E-4
95% Standard Bootstrap UCL	6.7696E-4	95% Bootstrap-t UCL	7.0693E-4

95% Hall's Bootstrap UCL	6.9011E-4	95% Percentile Bootstrap UCL	6.7989E-4
95% BCA Bootstrap UCL	7.0256E-4		
90% Chebyshev(Mean, Sd) UCL	7.8612E-4	95% Chebyshev(Mean, Sd) UCL	8.9186E-4
97.5% Chebyshev(Mean, Sd) UCL	0.00104	99% Chebyshev(Mean, Sd) UCL	0.00133

Suggested UCL to Use

95% Student's-t UCL 6.8804E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable trans-Heptachlor Epoxide was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/18 6:33:12 PM
From File	fsh8_SVOC_wide2_flag_sep1_SF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzaldehyde was not processed!

Pyridine

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Pyridine was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/25/18 2:24:48 PM
From File	fsh4_met_wide2_flag_sep1_SF.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	18	Number of Distinct Observations	8
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	8

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Aluminum was not processed!

Arsenic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.597	Mean	1.522
Maximum	3.6	Median	1.38
SD	0.654	Std. Error of Mean	0.154
Coefficient of Variation	0.43	Skewness	1.96

Normal GOF Test

Shapiro Wilk Test Statistic	0.83	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.79	95% Adjusted-CLT UCL (Chen-1995)	1.851
		95% Modified-t UCL (Johnson-1978)	1.802

Gamma GOF Test

A-D Test Statistic	0.466	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.146	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.065	k star (bias corrected MLE)	5.925
Theta hat (MLE)	0.215	Theta star (bias corrected MLE)	0.257
nu hat (MLE)	254.3	nu star (bias corrected)	213.3
MLE Mean (bias corrected)	1.522	MLE Sd (bias corrected)	0.625
		Approximate Chi Square Value (0.05)	180.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	177.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.798	95% Adjusted Gamma UCL (use when n<50)	1.827

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.516	Mean of logged Data	0.347
Maximum of Logged Data	1.281	SD of logged Data	0.384

Assuming Lognormal Distribution

95% H-UCL	1.821	90% Chebyshev (MVUE) UCL	1.936
95% Chebyshev (MVUE) UCL	2.127	97.5% Chebyshev (MVUE) UCL	2.391
99% Chebyshev (MVUE) UCL	2.909		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.775	95% Jackknife UCL	1.79
95% Standard Bootstrap UCL	1.761	95% Bootstrap-t UCL	1.922
95% Hall's Bootstrap UCL	2.969	95% Percentile Bootstrap UCL	1.781
95% BCA Bootstrap UCL	1.867		
90% Chebyshev(Mean, Sd) UCL	1.984	95% Chebyshev(Mean, Sd) UCL	2.194
97.5% Chebyshev(Mean, Sd) UCL	2.484	99% Chebyshev(Mean, Sd) UCL	3.056

Suggested UCL to Use

95% Adjusted Gamma UCL 1.827

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic - inorganic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.0597	Mean	0.152
Maximum	0.36	Median	0.138
SD	0.0654	Std. Error of Mean	0.0154
Coefficient of Variation	0.43	Skewness	1.96

Normal GOF Test

Shapiro Wilk Test Statistic	0.83	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.179	95% Adjusted-CLT UCL (Chen-1995)	0.185
		95% Modified-t UCL (Johnson-1978)	0.18

Gamma GOF Test

A-D Test Statistic	0.466	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.146	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.065	k star (bias corrected MLE)	5.925
Theta hat (MLE)	0.0215	Theta star (bias corrected MLE)	0.0257
nu hat (MLE)	254.3	nu star (bias corrected)	213.3
MLE Mean (bias corrected)	0.152	MLE Sd (bias corrected)	0.0625
		Approximate Chi Square Value (0.05)	180.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	177.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.18	95% Adjusted Gamma UCL (use when n<50)	0.183

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.818	Mean of logged Data	-1.955
Maximum of Logged Data	-1.022	SD of logged Data	0.384

Assuming Lognormal Distribution

95% H-UCL	0.182	90% Chebyshev (MVUE) UCL	0.194
95% Chebyshev (MVUE) UCL	0.213	97.5% Chebyshev (MVUE) UCL	0.239
99% Chebyshev (MVUE) UCL	0.291		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.178	95% Jackknife UCL	0.179
95% Standard Bootstrap UCL	0.177	95% Bootstrap-t UCL	0.193

95% Hall's Bootstrap UCL	0.306	95% Percentile Bootstrap UCL	0.178
95% BCA Bootstrap UCL	0.187		
90% Chebyshev(Mean, Sd) UCL	0.198	95% Chebyshev(Mean, Sd) UCL	0.219
97.5% Chebyshev(Mean, Sd) UCL	0.248	99% Chebyshev(Mean, Sd) UCL	0.306

Suggested UCL to Use

95% Adjusted Gamma UCL	0.183

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic - organic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.537	Mean	1.369
Maximum	3.24	Median	1.242
SD	0.589	Std. Error of Mean	0.139
Coefficient of Variation	0.43	Skewness	1.96

Normal GOF Test

Shapiro Wilk Test Statistic	0.83	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.611	95% Adjusted-CLT UCL (Chen-1995)	1.666
		95% Modified-t UCL (Johnson-1978)	1.621

Gamma GOF Test

A-D Test Statistic	0.466	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.146	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.065	k star (bias corrected MLE)	5.925
Theta hat (MLE)	0.194	Theta star (bias corrected MLE)	0.231
nu hat (MLE)	254.3	nu star (bias corrected)	213.3
MLE Mean (bias corrected)	1.369	MLE Sd (bias corrected)	0.563
		Approximate Chi Square Value (0.05)	180.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	177.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.618	95% Adjusted Gamma UCL (use when n<50)	1.645

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.621	Mean of logged Data	0.242
Maximum of Logged Data	1.176	SD of logged Data	0.384

Assuming Lognormal Distribution

95% H-UCL	1.639	90% Chebyshev (MVUE) UCL	1.743
95% Chebyshev (MVUE) UCL	1.914	97.5% Chebyshev (MVUE) UCL	2.152
99% Chebyshev (MVUE) UCL	2.618		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.598	95% Jackknife UCL	1.611
95% Standard Bootstrap UCL	1.594	95% Bootstrap-t UCL	1.738

95% Hall's Bootstrap UCL	2.833	95% Percentile Bootstrap UCL	1.609
95% BCA Bootstrap UCL	1.662		
90% Chebyshev(Mean, Sd) UCL	1.786	95% Chebyshev(Mean, Sd) UCL	1.974
97.5% Chebyshev(Mean, Sd) UCL	2.236	99% Chebyshev(Mean, Sd) UCL	2.75

Suggested UCL to Use

95% Adjusted Gamma UCL	1.645

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	9
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	9

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cadmium was not processed!

Chromium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	13
Number of Detects	4	Number of Non-Detects	14
Number of Distinct Detects	4	Number of Distinct Non-Detects	9
Minimum Detect	0.106	Minimum Non-Detect	0.0725
Maximum Detect	1.23	Maximum Non-Detect	0.1
Variance Detects	0.297	Percent Non-Detects	77.78%
Mean Detects	0.414	SD Detects	0.545
Median Detects	0.159	CV Detects	1.318
Skewness Detects	1.983	Kurtosis Detects	3.942
Mean of Logged Detects	-1.432	SD of Logged Detects	1.113

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.68	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.417	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.148	KM Standard Error of Mean	0.0718
KM SD	0.264	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.273	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.266	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.364	95% KM Chebyshev UCL	0.461
97.5% KM Chebyshev UCL	0.597	99% KM Chebyshev UCL	0.863

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.678	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.666	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.409	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.402	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.046	k star (bias corrected MLE)	0.428
Theta hat (MLE)	0.395	Theta star (bias corrected MLE)	0.966
nu hat (MLE)	8.364	nu star (bias corrected)	3.424
Mean (detects)	0.414		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0997
Maximum	1.23	Median	0.01
SD	0.287	CV	2.877
k hat (MLE)	0.411	k star (bias corrected MLE)	0.38
Theta hat (MLE)	0.243	Theta star (bias corrected MLE)	0.263
nu hat (MLE)	14.8	nu star (bias corrected)	13.66
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (13.66, α)	6.341	Adjusted Chi Square Value (13.66, β)	5.867
95% Gamma Approximate UCL (use when n>=50)	0.215	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.148	SD (KM)	0.264
Variance (KM)	0.0696	SE of Mean (KM)	0.0718
k hat (KM)	0.316	k star (KM)	0.3
nu hat (KM)	11.37	nu star (KM)	10.81
theta hat (KM)	0.47	theta star (KM)	0.494
80% gamma percentile (KM)	0.227	90% gamma percentile (KM)	0.437
95% gamma percentile (KM)	0.678	99% gamma percentile (KM)	1.304

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.81, α)	4.452	Adjusted Chi Square Value (10.81, β)	4.067
95% Gamma Approximate KM-UCL (use when n>=50)	0.36	95% Gamma Adjusted KM-UCL (use when n<50)	0.394

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.8	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.354	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0941	Mean in Log Scale	-5.231
SD in Original Scale	0.289	SD in Log Scale	2.319
95% t UCL (assumes normality of ROS data)	0.212	95% Percentile Bootstrap UCL	0.224
95% BCA Bootstrap UCL	0.305	95% Bootstrap t UCL	0.78
95% H-UCL (Log ROS)	1.239		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.359	KM Geo Mean	0.0945
KM SD (logged)	0.672	95% Critical H Value (KM-Log)	2.205
KM Standard Error of Mean (logged)	0.183	95% H-UCL (KM -Log)	0.17
KM SD (logged)	0.672	95% Critical H Value (KM-Log)	2.205
KM Standard Error of Mean (logged)	0.183		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.128	Mean in Log Scale	-2.706
SD in Original Scale	0.278	SD in Log Scale	0.847
95% t UCL (Assumes normality)	0.242	95% H-Stat UCL	0.158

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.461

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	18	Number of Distinct Observations	11
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	9
Minimum Detect	0.184	Minimum Non-Detect	0.0145
Maximum Detect	2.16	Maximum Non-Detect	0.02
Variance Detects	1.952	Percent Non-Detects	88.89%
Mean Detects	1.172	SD Detects	1.397
Median Detects	1.172	CV Detects	1.192
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-0.461	SD of Logged Detects	1.742

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.143	KM Standard Error of Mean	0.164
KM SD	0.491	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.428	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.412	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.634	95% KM Chebyshev UCL	0.856
97.5% KM Chebyshev UCL	1.165	99% KM Chebyshev UCL	1.771

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	0.938	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.249	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	3.752	nu star (bias corrected)	N/A
Mean (detects)	1.172		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.143	SD (KM)	0.491
Variance (KM)	0.241	SE of Mean (KM)	0.164
k hat (KM)	0.0851	k star (KM)	0.108
nu hat (KM)	3.062	nu star (KM)	3.885
theta hat (KM)	1.683	theta star (KM)	1.326
80% gamma percentile (KM)	0.11	90% gamma percentile (KM)	0.392
95% gamma percentile (KM)	0.826	99% gamma percentile (KM)	2.188

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (3.89, α)	0.677	Adjusted Chi Square Value (3.89, β)	0.564
95% Gamma Approximate KM-UCL (use when n>=50)	0.821	95% Gamma Adjusted KM-UCL (use when n<50)	0.986

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.13	Mean in Log Scale	-11.84
SD in Original Scale	0.508	SD in Log Scale	5.007
95% t UCL (assumes normality of ROS data)	0.339	95% Percentile Bootstrap UCL	0.37
95% BCA Bootstrap UCL	0.49	95% Bootstrap t UCL	966.4
95% H-UCL (Log ROS)	398893		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.814	KM Geo Mean	0.022
KM SD (logged)	1.255	95% Critical H Value (KM-Log)	3.028
KM Standard Error of Mean (logged)	0.418	95% H-UCL (KM -Log)	0.122
KM SD (logged)	1.255	95% Critical H Value (KM-Log)	3.028
KM Standard Error of Mean (logged)	0.418		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.139	Mean in Log Scale	-4.204
SD in Original Scale	0.506	SD in Log Scale	1.429
95% t UCL (Assumes normality)	0.346	95% H-Stat UCL	0.131

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

975% KM (Chebyshev) UCL	1.165

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Copper

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.132	Mean	0.186
Maximum	0.391	Median	0.176
SD	0.0569	Std. Error of Mean	0.0134
Coefficient of Variation	0.306	Skewness	2.974

Normal GOF Test

Shapiro Wilk Test Statistic	0.676	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.209	95% Adjusted-CLT UCL (Chen-1995)	0.218
		95% Modified-t UCL (Johnson-1978)	0.211

Gamma GOF Test

A-D Test Statistic	1.1	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.194	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	15.92	k star (bias corrected MLE)	13.31
Theta hat (MLE)	0.0117	Theta star (bias corrected MLE)	0.014
nu hat (MLE)	573.3	nu star (bias corrected)	479.1
MLE Mean (bias corrected)	0.186	MLE Sd (bias corrected)	0.051
		Approximate Chi Square Value (0.05)	429.3
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	424.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.207	95% Adjusted Gamma UCL (use when n<50)	0.21

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.833	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.025	Mean of logged Data	-1.714
Maximum of Logged Data	-0.939	SD of logged Data	0.241

Assuming Lognormal Distribution

95% H-UCL	0.206	90% Chebyshev (MVUE) UCL	0.217
95% Chebyshev (MVUE) UCL	0.231	97.5% Chebyshev (MVUE) UCL	0.251
99% Chebyshev (MVUE) UCL	0.291		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.208	95% Jackknife UCL	0.209
95% Standard Bootstrap UCL	0.207	95% Bootstrap-t UCL	0.233

95% Hall's Bootstrap UCL	0.309	95% Percentile Bootstrap UCL	0.209
95% BCA Bootstrap UCL	0.218		
90% Chebyshev(Mean, Sd) UCL	0.226	95% Chebyshev(Mean, Sd) UCL	0.244
97.5% Chebyshev(Mean, Sd) UCL	0.27	99% Chebyshev(Mean, Sd) UCL	0.319

Suggested UCL to Use

95% Adjusted Gamma UCL	0.21

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	18	Number of Distinct Observations	10
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	9

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Iron was not processed!

Lead

General Statistics

Total Number of Observations	18	Number of Distinct Observations	9
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	9

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Lead was not processed!

Manganese

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	15	Number of Distinct Non-Detects	2
Minimum Detect	0.181	Minimum Non-Detect	0.162
Maximum Detect	0.419	Maximum Non-Detect	0.166
Variance Detects	0.00578	Percent Non-Detects	11.11%
Mean Detects	0.298	SD Detects	0.076
Median Detects	0.289	CV Detects	0.255
Skewness Detects	0.00797	Kurtosis Detects	-0.976
Mean of Logged Detects	-1.244	SD of Logged Detects	0.268

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.283	KM Standard Error of Mean	0.0198
KM SD	0.0815	95% KM (BCA) UCL	0.315
95% KM (t) UCL	0.317	95% KM (Percentile Bootstrap) UCL	0.315
95% KM (z) UCL	0.315	95% KM Bootstrap t UCL	0.318
90% KM Chebyshev UCL	0.342	95% KM Chebyshev UCL	0.369
97.5% KM Chebyshev UCL	0.407	99% KM Chebyshev UCL	0.48

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.261	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.128	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	15.53	k star (bias corrected MLE)	12.66
Theta hat (MLE)	0.0192	Theta star (bias corrected MLE)	0.0235
nu hat (MLE)	497	nu star (bias corrected)	405.2
Mean (detects)	0.298		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.144	Mean	0.281
Maximum	0.419	Median	0.28
SD	0.087	CV	0.31
k hat (MLE)	10.08	k star (bias corrected MLE)	8.433
Theta hat (MLE)	0.0279	Theta star (bias corrected MLE)	0.0333
nu hat (MLE)	362.7	nu star (bias corrected)	303.6
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (303.61, α)	264.2	Adjusted Chi Square Value (303.61, β)	260.7
95% Gamma Approximate UCL (use when n>=50)	0.323	95% Gamma Adjusted UCL (use when n<50)	0.327

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.283	SD (KM)	0.0815
Variance (KM)	0.00664	SE of Mean (KM)	0.0198
k hat (KM)	12.04	k star (KM)	10.07

nu hat (KM)	433.3	nu star (KM)	362.4
theta hat (KM)	0.0235	theta star (KM)	0.0281
80% gamma percentile (KM)	0.354	90% gamma percentile (KM)	0.401
95% gamma percentile (KM)	0.443	99% gamma percentile (KM)	0.53

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (362.41, α)	319.3	Adjusted Chi Square Value (362.41, β)	315.4
95% Gamma Approximate KM-UCL (use when n>=50)	0.321	95% Gamma Adjusted KM-UCL (use when n<50)	0.325

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.282	Mean in Log Scale	-1.313
SD in Original Scale	0.085	SD in Log Scale	0.322
95% t UCL (assumes normality of ROS data)	0.317	95% Percentile Bootstrap UCL	0.312
95% BCA Bootstrap UCL	0.316	95% Bootstrap t UCL	0.314
95% H-UCL (Log ROS)	0.328		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.308	KM Geo Mean	0.27
KM SD (logged)	0.305	95% Critical H Value (KM-Log)	1.856
KM Standard Error of Mean (logged)	0.0741	95% H-UCL (KM -Log)	0.325
KM SD (logged)	0.305	95% Critical H Value (KM-Log)	1.856
KM Standard Error of Mean (logged)	0.0741		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.274	Mean in Log Scale	-1.384
SD in Original Scale	0.0998	SD in Log Scale	0.478
95% t UCL (Assumes normality)	0.315	95% H-Stat UCL	0.354

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.317

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0671	Mean	0.15
Maximum	0.348	Median	0.125
SD	0.0668	Std. Error of Mean	0.0157
Coefficient of Variation	0.446	Skewness	1.641

Normal GOF Test

Shapiro Wilk Test Statistic	0.842	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.209	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.177	95% Adjusted-CLT UCL (Chen-1995)	0.182
		95% Modified-t UCL (Johnson-1978)	0.178

Gamma GOF Test

A-D Test Statistic	0.61	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.175	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.492	k star (bias corrected MLE)	5.447
Theta hat (MLE)	0.023	Theta star (bias corrected MLE)	0.0275
nu hat (MLE)	233.7	nu star (bias corrected)	196.1
MLE Mean (bias corrected)	0.15	MLE Sd (bias corrected)	0.0641
		Approximate Chi Square Value (0.05)	164.7
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	161.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.178	95% Adjusted Gamma UCL (use when n<50)	0.181

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.15	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.702	Mean of logged Data	-1.979
Maximum of Logged Data	-1.056	SD of logged Data	0.397

Assuming Lognormal Distribution

95% H-UCL	0.18	90% Chebyshev (MVUE) UCL	0.191
95% Chebyshev (MVUE) UCL	0.211	97.5% Chebyshev (MVUE) UCL	0.238
99% Chebyshev (MVUE) UCL	0.29		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.175	95% Jackknife UCL	0.177
95% Standard Bootstrap UCL	0.174	95% Bootstrap-t UCL	0.185

95% Hall's Bootstrap UCL	0.197	95% Percentile Bootstrap UCL	0.176
95% BCA Bootstrap UCL	0.181		
90% Chebyshev(Mean, Sd) UCL	0.197	95% Chebyshev(Mean, Sd) UCL	0.218
97.5% Chebyshev(Mean, Sd) UCL	0.248	99% Chebyshev(Mean, Sd) UCL	0.306

Suggested UCL to Use

95% Adjusted Gamma UCL	0.181

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Methyl Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0659	Mean	0.18
Maximum	0.4	Median	0.158
SD	0.0792	Std. Error of Mean	0.0187
Coefficient of Variation	0.439	Skewness	1.264

Normal GOF Test

Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.193	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.213	95% Adjusted-CLT UCL (Chen-1995)	0.217
		95% Modified-t UCL (Johnson-1978)	0.214

Gamma GOF Test

A-D Test Statistic	0.312	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.141	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.072	k star (bias corrected MLE)	5.097
Theta hat (MLE)	0.0297	Theta star (bias corrected MLE)	0.0354
nu hat (MLE)	218.6	nu star (bias corrected)	183.5
MLE Mean (bias corrected)	0.18	MLE Sd (bias corrected)	0.0798
		Approximate Chi Square Value (0.05)	153.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	150.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.216	95% Adjusted Gamma UCL (use when n<50)	0.22

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.115	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.72	Mean of logged Data	-1.798
Maximum of Logged Data	-0.916	SD of logged Data	0.424

Assuming Lognormal Distribution

95% H-UCL	0.221	90% Chebyshev (MVUE) UCL	0.236
95% Chebyshev (MVUE) UCL	0.261	97.5% Chebyshev (MVUE) UCL	0.295
99% Chebyshev (MVUE) UCL	0.364		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.211	95% Jackknife UCL	0.213
95% Standard Bootstrap UCL	0.209	95% Bootstrap-t UCL	0.22

95% Hall's Bootstrap UCL	0.226	95% Percentile Bootstrap UCL	0.21
95% BCA Bootstrap UCL	0.216		
90% Chebyshev(Mean, Sd) UCL	0.236	95% Chebyshev(Mean, Sd) UCL	0.262
97.5% Chebyshev(Mean, Sd) UCL	0.297	99% Chebyshev(Mean, Sd) UCL	0.366

Suggested UCL to Use

95% Student's-t UCL	0.213

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Selenium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.431	Mean	0.599
Maximum	0.819	Median	0.576
SD	0.108	Std. Error of Mean	0.0254
Coefficient of Variation	0.18	Skewness	0.202

Normal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.164	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.643	95% Adjusted-CLT UCL (Chen-1995)	0.642
		95% Modified-t UCL (Johnson-1978)	0.643

Gamma GOF Test

A-D Test Statistic	0.422	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.178	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	32.64	k star (bias corrected MLE)	27.23
Theta hat (MLE)	0.0183	Theta star (bias corrected MLE)	0.022
nu hat (MLE)	1175	nu star (bias corrected)	980.4
MLE Mean (bias corrected)	0.599	MLE Sd (bias corrected)	0.115
		Approximate Chi Square Value (0.05)	908.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	902.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.646	95% Adjusted Gamma UCL (use when n<50)	0.651

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.174	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.842	Mean of logged Data	-0.529
Maximum of Logged Data	-0.2	SD of logged Data	0.181

Assuming Lognormal Distribution

95% H-UCL	0.648	90% Chebyshev (MVUE) UCL	0.676
95% Chebyshev (MVUE) UCL	0.711	97.5% Chebyshev (MVUE) UCL	0.759
99% Chebyshev (MVUE) UCL	0.854		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.64	95% Jackknife UCL	0.643
95% Standard Bootstrap UCL	0.639	95% Bootstrap-t UCL	0.643

95% Hall's Bootstrap UCL	0.643	95% Percentile Bootstrap UCL	0.641
95% BCA Bootstrap UCL	0.644		
90% Chebyshev(Mean, Sd) UCL	0.675	95% Chebyshev(Mean, Sd) UCL	0.709
97.5% Chebyshev(Mean, Sd) UCL	0.757	99% Chebyshev(Mean, Sd) UCL	0.851

Suggested UCL to Use

95% Student's-t UCL	0.643

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Silver

General Statistics

Total Number of Observations	18	Number of Distinct Observations	9
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	9

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Silver was not processed!

Vanadium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	9
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	9

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Vanadium was not processed!

Zinc

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.47	Mean	6.392
Maximum	7.93	Median	6.68
SD	1.098	Std. Error of Mean	0.259
Coefficient of Variation	0.172	Skewness	-0.297

Normal GOF Test

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.167	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.842	95% Adjusted-CLT UCL (Chen-1995)	6.798
		95% Modified-t UCL (Johnson-1978)	6.839

Gamma GOF Test

A-D Test Statistic	0.604	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.18	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	34.12	k star (bias corrected MLE)	28.47
Theta hat (MLE)	0.187	Theta star (bias corrected MLE)	0.224
nu hat (MLE)	1228	nu star (bias corrected)	1025
MLE Mean (bias corrected)	6.392	MLE Sd (bias corrected)	1.198
		Approximate Chi Square Value (0.05)	951.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	945

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.885	95% Adjusted Gamma UCL (use when n<50)	6.934

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.177	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.497	Mean of logged Data	1.84
Maximum of Logged Data	2.071	SD of logged Data	0.179

Assuming Lognormal Distribution

95% H-UCL	6.914	90% Chebyshev (MVUE) UCL	7.209
95% Chebyshev (MVUE) UCL	7.577	97.5% Chebyshev (MVUE) UCL	8.089
99% Chebyshev (MVUE) UCL	9.094		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.818	95% Jackknife UCL	6.842
95% Standard Bootstrap UCL	6.81	95% Bootstrap-t UCL	6.827

95% Hall's Bootstrap UCL	6.775	95% Percentile Bootstrap UCL	6.794
95% BCA Bootstrap UCL	6.782		
90% Chebyshev(Mean, Sd) UCL	7.168	95% Chebyshev(Mean, Sd) UCL	7.52
97.5% Chebyshev(Mean, Sd) UCL	8.008	99% Chebyshev(Mean, Sd) UCL	8.967

Suggested UCL to Use

95% Student's-t UCL	6.842

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

White Perch

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 12:27:37 AM
From File	fsh1_dlc_wide2_flag_sep1_WP.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.4400E-6	Mean	1.3174E-5
Maximum	3.1800E-5	Median	1.2625E-5
SD	7.1169E-6	Std. Error of Mean	1.6775E-6
Coefficient of Variation	N/A	Skewness	0.962

Normal GOF Test

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.137	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.6093E-5	95% Adjusted-CLT UCL (Chen-1995)	1.6340E-5
		95% Modified-t UCL (Johnson-1978)	1.6156E-5

Gamma GOF Test

A-D Test Statistic	0.281	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.108	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.117	k star (bias corrected MLE)	2.634
Theta hat (MLE)	4.2270E-6	Theta star (bias corrected MLE)	5.0010E-6
nu hat (MLE)	112.2	nu star (bias corrected)	94.84
MLE Mean (bias corrected)	1.3174E-5	MLE Sd (bias corrected)	8.1170E-6
		Approximate Chi Square Value (0.05)	73.38
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	71.56

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.7028E-5	95% Adjusted Gamma UCL (use when n<50)	1.7459E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.888	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.147	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.45	Mean of logged Data	-11.41
Maximum of Logged Data	-10.36	SD of logged Data	0.675

Assuming Lognormal Distribution

95% H-UCL	2.0072E-5	90% Chebyshev (MVUE) UCL	2.0732E-5
95% Chebyshev (MVUE) UCL	2.3886E-5	97.5% Chebyshev (MVUE) UCL	2.8263E-5
99% Chebyshev (MVUE) UCL	3.6862E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.5934E-5	95% Jackknife UCL	1.6093E-5
95% Standard Bootstrap UCL	1.5857E-5	95% Bootstrap-t UCL	1.6943E-5
95% Hall's Bootstrap UCL	1.7103E-5	95% Percentile Bootstrap UCL	1.5886E-5
95% BCA Bootstrap UCL	1.6100E-5		
90% Chebyshev(Mean, Sd) UCL	1.8207E-5	95% Chebyshev(Mean, Sd) UCL	2.0486E-5
97.5% Chebyshev(Mean, Sd) UCL	2.3650E-5	99% Chebyshev(Mean, Sd) UCL	2.9865E-5

Suggested UCL to Use

95% Student's-t UCL 1.6093E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	7	Number of Non-Detects	11
Number of Distinct Detects	7	Number of Distinct Non-Detects	11
Minimum Detect	5.1800E-7	Minimum Non-Detect	6.4500E-8
Maximum Detect	7.3600E-7	Maximum Non-Detect	1.9700E-7
Variance Detects	8.166E-15	Percent Non-Detects	61.11%
Mean Detects	6.5357E-7	SD Detects	9.0368E-8
Median Detects	6.9600E-7	CV Detects	N/A
Skewness Detects	-0.791	Kurtosis Detects	-1.349
Mean of Logged Detects	-14.25	SD of Logged Detects	0.145

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.842	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.252	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.9358E-7	KM Standard Error of Mean	7.4307E-8
KM SD	2.9187E-7	95% KM (BCA) UCL	4.2926E-7
95% KM (t) UCL	4.2285E-7	95% KM (Percentile Bootstrap) UCL	4.1203E-7
95% KM (z) UCL	4.1581E-7	95% KM Bootstrap t UCL	3.9438E-7
90% KM Chebyshev UCL	5.1650E-7	95% KM Chebyshev UCL	6.1748E-7
97.5% KM Chebyshev UCL	7.5763E-7	99% KM Chebyshev UCL	1.0329E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.616	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.708	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.272	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.311	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	57.31	k star (bias corrected MLE)	32.85
Theta hat (MLE)	1.1404E-8	Theta star (bias corrected MLE)	1.9898E-8
nu hat (MLE)	802.4	nu star (bias corrected)	459.8
Mean (detects)	6.5357E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.1800E-7	Mean	0.00611
Maximum	0.01	Median	0.01
SD	0.00502	CV	0.821
k hat (MLE)	0.222	k star (bias corrected MLE)	0.222
Theta hat (MLE)	0.0275	Theta star (bias corrected MLE)	0.0275
nu hat (MLE)	7.998	nu star (bias corrected)	7.998
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (8.00, α)	2.734	Adjusted Chi Square Value (8.00, β)	2.447
95% Gamma Approximate UCL (use when n>=50)	0.0179	95% Gamma Adjusted UCL (use when n<50)	0.02

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.9358E-7	SD (KM)	2.9187E-7
Variance (KM)	8.519E-14	SE of Mean (KM)	7.4307E-8
k hat (KM)	1.012	k star (KM)	0.88

nu hat (KM)	36.42	nu star (KM)	31.69
theta hat (KM)	2.9017E-7	theta star (KM)	3.3355E-7
80% gamma percentile (KM)	4.7701E-7	90% gamma percentile (KM)	6.9751E-7
95% gamma percentile (KM)	9.2032E-7	99% gamma percentile (KM)	1.4426E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (31.69, α)	19.82	Adjusted Chi Square Value (31.69, β)	18.92
95% Gamma Approximate KM-UCL (use when n>=50)	4.6927E-7	95% Gamma Adjusted KM-UCL (use when n<50)	4.9156E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.831	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.1621E-7	Mean in Log Scale	-14.5
SD in Original Scale	1.2488E-7	SD in Log Scale	0.224
95% t UCL (assumes normality of ROS data)	5.6742E-7	95% Percentile Bootstrap UCL	5.6268E-7
95% BCA Bootstrap UCL	5.7237E-7	95% Bootstrap t UCL	5.8327E-7
95% H-UCL (Log ROS)	5.6944E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-15.66	KM Geo Mean	1.5820E-7
KM SD (logged)	1.128	95% Critical H Value (KM-Log)	2.829
KM Standard Error of Mean (logged)	0.287	95% H-UCL (KM -Log)	6.4779E-7
KM SD (logged)	1.128	95% Critical H Value (KM-Log)	2.829
KM Standard Error of Mean (logged)	0.287		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.8608E-7	Mean in Log Scale	-15.82
SD in Original Scale	3.0674E-7	SD in Log Scale	1.314
95% t UCL (Assumes normality)	4.1185E-7	95% H-Stat UCL	8.6465E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 4.2285E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	6.9400E-8	Mean	2.0647E-7
Maximum	3.8900E-7	Median	1.8850E-7
SD	8.7372E-8	Std. Error of Mean	2.0594E-8
Coefficient of Variation	N/A	Skewness	0.793

Normal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.4229E-7	95% Adjusted-CLT UCL (Chen-1995)	2.4445E-7
		95% Modified-t UCL (Johnson-1978)	2.4293E-7

Gamma GOF Test

A-D Test Statistic	0.208	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.98	k star (bias corrected MLE)	5.02
Theta hat (MLE)	3.4527E-8	Theta star (bias corrected MLE)	4.1127E-8
nu hat (MLE)	215.3	nu star (bias corrected)	180.7
MLE Mean (bias corrected)	2.0647E-7	MLE Sd (bias corrected)	9.2149E-8
		Approximate Chi Square Value (0.05)	150.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	148

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.4772E-7	95% Adjusted Gamma UCL (use when n<50)	2.5213E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.48	Mean of logged Data	-15.48
Maximum of Logged Data	-14.76	SD of logged Data	0.436

Assuming Lognormal Distribution

95% H-UCL	2.5642E-7	90% Chebyshev (MVUE) UCL	2.7277E-7
95% Chebyshev (MVUE) UCL	3.0249E-7	97.5% Chebyshev (MVUE) UCL	3.4372E-7
99% Chebyshev (MVUE) UCL	4.2473E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.4034E-7	95% Jackknife UCL	2.4229E-7
95% Standard Bootstrap UCL	2.3932E-7	95% Bootstrap-t UCL	2.4950E-7

95% Hall's Bootstrap UCL	2.4596E-7	95% Percentile Bootstrap UCL	2.4161E-7
95% BCA Bootstrap UCL	2.4106E-7		
90% Chebyshev(Mean, Sd) UCL	2.6825E-7	95% Chebyshev(Mean, Sd) UCL	2.9623E-7
97.5% Chebyshev(Mean, Sd) UCL	3.3507E-7	99% Chebyshev(Mean, Sd) UCL	4.1137E-7

Suggested UCL to Use

95% Student's-t UCL 2.4229E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.2100E-7	Mean	5.2942E-7
Maximum	9.2600E-7	Median	5.0475E-7
SD	1.7759E-7	Std. Error of Mean	4.1858E-8
Coefficient of Variation	N/A	Skewness	0.967

Normal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.0223E-7	95% Adjusted-CLT UCL (Chen-1995)	6.0846E-7
		95% Modified-t UCL (Johnson-1978)	6.0382E-7

Gamma GOF Test

A-D Test Statistic	0.387	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.817	k star (bias corrected MLE)	8.218
Theta hat (MLE)	5.3930E-8	Theta star (bias corrected MLE)	6.4424E-8
nu hat (MLE)	353.4	nu star (bias corrected)	295.8
MLE Mean (bias corrected)	5.2942E-7	MLE Sd (bias corrected)	1.8468E-7
		Approximate Chi Square Value (0.05)	257
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	253.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.0943E-7	95% Adjusted Gamma UCL (use when n<50)	6.1778E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.134	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.33	Mean of logged Data	-14.5
Maximum of Logged Data	-13.89	SD of logged Data	0.335

Assuming Lognormal Distribution

95% H-UCL	6.1922E-7	90% Chebyshev (MVUE) UCL	6.5733E-7
95% Chebyshev (MVUE) UCL	7.1505E-7	97.5% Chebyshev (MVUE) UCL	7.9516E-7
99% Chebyshev (MVUE) UCL	9.5251E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.9827E-7	95% Jackknife UCL	6.0223E-7
95% Standard Bootstrap UCL	5.9605E-7	95% Bootstrap-t UCL	6.2031E-7

95% Hall's Bootstrap UCL	6.4894E-7	95% Percentile Bootstrap UCL	6.0061E-7
95% BCA Bootstrap UCL	6.0731E-7		
90% Chebyshev(Mean, Sd) UCL	6.5499E-7	95% Chebyshev(Mean, Sd) UCL	7.1187E-7
97.5% Chebyshev(Mean, Sd) UCL	7.9082E-7	99% Chebyshev(Mean, Sd) UCL	9.4590E-7

Suggested UCL to Use

95% Student's-t UCL 6.0223E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	4.6600E-8	Minimum Non-Detect	5.7400E-8
Maximum Detect	2.2400E-7	Maximum Non-Detect	5.9000E-8
Variance Detects	2.235E-15	Percent Non-Detects	11.11%
Mean Detects	1.2771E-7	SD Detects	4.7271E-8
Median Detects	1.2425E-7	CV Detects	N/A
Skewness Detects	0.53	Kurtosis Detects	0.13
Mean of Logged Detects	-15.94	SD of Logged Detects	0.396

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.1870E-7	KM Standard Error of Mean	1.2201E-8
KM SD	5.0119E-8	95% KM (BCA) UCL	1.3957E-7
95% KM (t) UCL	1.3992E-7	95% KM (Percentile Bootstrap) UCL	1.3891E-7
95% KM (z) UCL	1.3877E-7	95% KM Bootstrap t UCL	1.4162E-7
90% KM Chebyshev UCL	1.5530E-7	95% KM Chebyshev UCL	1.7188E-7
97.5% KM Chebyshev UCL	1.9489E-7	99% KM Chebyshev UCL	2.4009E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.279	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.133	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.439	k star (bias corrected MLE)	6.086
Theta hat (MLE)	1.7168E-8	Theta star (bias corrected MLE)	2.0986E-8
nu hat (MLE)	238	nu star (bias corrected)	194.7
Mean (detects)	1.2771E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.6600E-8	Mean	0.00111
Maximum	0.01	Median	1.2725E-7
SD	0.00323	CV	2.91
k hat (MLE)	0.103	k star (bias corrected MLE)	0.123
Theta hat (MLE)	0.0108	Theta star (bias corrected MLE)	0.00906
nu hat (MLE)	3.698	nu star (bias corrected)	4.415
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.41, α)	0.892	Adjusted Chi Square Value (4.41, β)	0.754
95% Gamma Approximate UCL (use when n>=50)	0.0055	95% Gamma Adjusted UCL (use when n<50)	0.00651

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.1870E-7	SD (KM)	5.0119E-8
Variance (KM)	2.512E-15	SE of Mean (KM)	1.2201E-8
k hat (KM)	5.609	k star (KM)	4.711

nu hat (KM)	201.9	nu star (KM)	169.6
theta hat (KM)	2.1162E-8	theta star (KM)	2.5194E-8
80% gamma percentile (KM)	1.6062E-7	90% gamma percentile (KM)	1.9194E-7
95% gamma percentile (KM)	2.2056E-7	99% gamma percentile (KM)	2.8119E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (169.61, α)	140.5	Adjusted Chi Square Value (169.61, β)	138
95% Gamma Approximate KM-UCL (use when n>=50)	1.4330E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.4594E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.159	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.1976E-7	Mean in Log Scale	-16.03
SD in Original Scale	5.0073E-8	SD in Log Scale	0.445
95% t UCL (assumes normality of ROS data)	1.4029E-7	95% Percentile Bootstrap UCL	1.3805E-7
95% BCA Bootstrap UCL	1.4075E-7	95% Bootstrap t UCL	1.4170E-7
95% H-UCL (Log ROS)	1.4971E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.05	KM Geo Mean	1.0741E-7
KM SD (logged)	0.467	95% Critical H Value (KM-Log)	1.99
KM Standard Error of Mean (logged)	0.114	95% H-UCL (KM -Log)	1.5004E-7
KM SD (logged)	0.467	95% Critical H Value (KM-Log)	1.99
KM Standard Error of Mean (logged)	0.114		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.1676E-7	Mean in Log Scale	-16.1
SD in Original Scale	5.4668E-8	SD in Log Scale	0.589
95% t UCL (Assumes normality)	1.3917E-7	95% H-Stat UCL	1.6387E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.3992E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.0400E-7	Mean	3.2633E-7
Maximum	5.5500E-7	Median	3.0850E-7
SD	1.0663E-7	Std. Error of Mean	2.5133E-8
Coefficient of Variation	N/A	Skewness	1.006

Normal GOF Test

Shapiro Wilk Test Statistic	0.89	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.179	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.7005E-7	95% Adjusted-CLT UCL (Chen-1995)	3.7404E-7
		95% Modified-t UCL (Johnson-1978)	3.7105E-7

Gamma GOF Test

A-D Test Statistic	0.448	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.14	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.04	k star (bias corrected MLE)	9.238
Theta hat (MLE)	2.9558E-8	Theta star (bias corrected MLE)	3.5327E-8
nu hat (MLE)	397.5	nu star (bias corrected)	332.6
MLE Mean (bias corrected)	3.2633E-7	MLE Sd (bias corrected)	1.0737E-7
		Approximate Chi Square Value (0.05)	291.3
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	287.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.7255E-7	95% Adjusted Gamma UCL (use when n<50)	3.7734E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.41	Mean of logged Data	-14.98
Maximum of Logged Data	-14.4	SD of logged Data	0.306

Assuming Lognormal Distribution

95% H-UCL	3.7488E-7	90% Chebyshev (MVUE) UCL	3.9716E-7
95% Chebyshev (MVUE) UCL	4.2952E-7	97.5% Chebyshev (MVUE) UCL	4.7443E-7
99% Chebyshev (MVUE) UCL	5.6265E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.6767E-7	95% Jackknife UCL	3.7005E-7
95% Standard Bootstrap UCL	3.6710E-7	95% Bootstrap-t UCL	3.7791E-7

95% Hall's Bootstrap UCL	3.7194E-7	95% Percentile Bootstrap UCL	3.6944E-7
95% BCA Bootstrap UCL	3.7672E-7		
90% Chebyshev(Mean, Sd) UCL	4.0173E-7	95% Chebyshev(Mean, Sd) UCL	4.3588E-7
97.5% Chebyshev(Mean, Sd) UCL	4.8329E-7	99% Chebyshev(Mean, Sd) UCL	5.7640E-7

Suggested UCL to Use

95% Student's-t UCL 3.7005E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.5700E-7	Mean	7.1761E-7
Maximum	1.5100E-6	Median	6.0100E-7
SD	2.8549E-7	Std. Error of Mean	6.7290E-8
Coefficient of Variation	N/A	Skewness	1.898

Normal GOF Test

Shapiro Wilk Test Statistic	0.763	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.243	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.3467E-7	95% Adjusted-CLT UCL (Chen-1995)	8.6046E-7
		95% Modified-t UCL (Johnson-1978)	8.3969E-7

Gamma GOF Test

A-D Test Statistic	1.095	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.74	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.202	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.827	k star (bias corrected MLE)	7.393
Theta hat (MLE)	8.1301E-8	Theta star (bias corrected MLE)	9.7072E-8
nu hat (MLE)	317.8	nu star (bias corrected)	266.1
MLE Mean (bias corrected)	7.1761E-7	MLE Sd (bias corrected)	2.6393E-7
		Approximate Chi Square Value (0.05)	229.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	226.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	8.3268E-7	95% Adjusted Gamma UCL (use when n<50)	8.4474E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.188	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.6	Mean of logged Data	-14.21
Maximum of Logged Data	-13.4	SD of logged Data	0.329

Assuming Lognormal Distribution

95% H-UCL	8.3067E-7	90% Chebyshev (MVUE) UCL	8.8151E-7
95% Chebyshev (MVUE) UCL	9.5790E-7	97.5% Chebyshev (MVUE) UCL	1.0639E-6
99% Chebyshev (MVUE) UCL	1.2722E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.2829E-7	95% Jackknife UCL	8.3467E-7
95% Standard Bootstrap UCL	8.2392E-7	95% Bootstrap-t UCL	9.4521E-7

95% Hall's Bootstrap UCL	1.3490E-6	95% Percentile Bootstrap UCL	8.3333E-7
95% BCA Bootstrap UCL	8.4817E-7		
90% Chebyshev(Mean, Sd) UCL	9.1948E-7	95% Chebyshev(Mean, Sd) UCL	1.0109E-6
97.5% Chebyshev(Mean, Sd) UCL	1.1378E-6	99% Chebyshev(Mean, Sd) UCL	1.3871E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 8.4474E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.2800E-6	Mean	3.3319E-6
Maximum	6.3900E-6	Median	3.0100E-6
SD	1.2932E-6	Std. Error of Mean	3.0480E-7
Coefficient of Variation	N/A	Skewness	0.753

Normal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.8622E-6	95% Adjusted-CLT UCL (Chen-1995)	3.8911E-6
		95% Modified-t UCL (Johnson-1978)	3.8712E-6

Gamma GOF Test

A-D Test Statistic	0.146	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0844	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.106	k star (bias corrected MLE)	5.959
Theta hat (MLE)	4.6890E-7	Theta star (bias corrected MLE)	5.5918E-7
nu hat (MLE)	255.8	nu star (bias corrected)	214.5
MLE Mean (bias corrected)	3.3319E-6	MLE Sd (bias corrected)	1.3650E-6
		Approximate Chi Square Value (0.05)	181.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	178.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.9354E-6	95% Adjusted Gamma UCL (use when n<50)	3.9994E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.986	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.1	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.57	Mean of logged Data	-12.68
Maximum of Logged Data	-11.96	SD of logged Data	0.397

Assuming Lognormal Distribution

95% H-UCL	4.0405E-6	90% Chebyshev (MVUE) UCL	4.2987E-6
95% Chebyshev (MVUE) UCL	4.7333E-6	97.5% Chebyshev (MVUE) UCL	5.3364E-6
99% Chebyshev (MVUE) UCL	6.5210E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.8333E-6	95% Jackknife UCL	3.8622E-6
95% Standard Bootstrap UCL	3.8211E-6	95% Bootstrap-t UCL	3.9552E-6

95% Hall's Bootstrap UCL	3.9799E-6	95% Percentile Bootstrap UCL	3.8442E-6
95% BCA Bootstrap UCL	3.8508E-6		
90% Chebyshev(Mean, Sd) UCL	4.2464E-6	95% Chebyshev(Mean, Sd) UCL	4.6605E-6
97.5% Chebyshev(Mean, Sd) UCL	5.2354E-6	99% Chebyshev(Mean, Sd) UCL	6.3647E-6

Suggested UCL to Use

95% Student's-t UCL 3.8622E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.5500E-6	Mean	2.5783E-6
Maximum	4.9300E-6	Median	2.1600E-6
SD	9.4088E-7	Std. Error of Mean	2.2177E-7
Coefficient of Variation	N/A	Skewness	1.102

Normal GOF Test

Shapiro Wilk Test Statistic	0.883	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.9641E-6	95% Adjusted-CLT UCL (Chen-1995)	3.0046E-6
		95% Modified-t UCL (Johnson-1978)	2.9737E-6

Gamma GOF Test

A-D Test Statistic	0.597	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.198	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.043	k star (bias corrected MLE)	7.573
Theta hat (MLE)	2.8511E-7	Theta star (bias corrected MLE)	3.4046E-7
nu hat (MLE)	325.6	nu star (bias corrected)	272.6
MLE Mean (bias corrected)	2.5783E-6	MLE Sd (bias corrected)	9.3692E-7
		Approximate Chi Square Value (0.05)	235.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	232.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2.9862E-6	95% Adjusted Gamma UCL (use when n<50)	3.0289E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.18	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.38	Mean of logged Data	-12.92
Maximum of Logged Data	-12.22	SD of logged Data	0.337

Assuming Lognormal Distribution

95% H-UCL	3.0082E-6	90% Chebyshev (MVUE) UCL	3.1938E-6
95% Chebyshev (MVUE) UCL	3.4759E-6	97.5% Chebyshev (MVUE) UCL	3.8675E-6
99% Chebyshev (MVUE) UCL	4.6365E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.9431E-6	95% Jackknife UCL	2.9641E-6
95% Standard Bootstrap UCL	2.9366E-6	95% Bootstrap-t UCL	3.0937E-6

95% Hall's Bootstrap UCL	3.0332E-6	95% Percentile Bootstrap UCL	2.9503E-6
95% BCA Bootstrap UCL	2.9719E-6		
90% Chebyshev(Mean, Sd) UCL	3.2436E-6	95% Chebyshev(Mean, Sd) UCL	3.5450E-6
97.5% Chebyshev(Mean, Sd) UCL	3.9633E-6	99% Chebyshev(Mean, Sd) UCL	4.7849E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 3.0289E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	1.6100E-6	Mean	3.0806E-6
Maximum	4.5900E-6	Median	3.1750E-6
SD	7.8296E-7	Std. Error of Mean	1.8455E-7
Coefficient of Variation	N/A	Skewness	-0.3

Normal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.4016E-6	95% Adjusted-CLT UCL (Chen-1995)	3.3702E-6
		95% Modified-t UCL (Johnson-1978)	3.3994E-6

Gamma GOF Test

A-D Test Statistic	0.438	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.152	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.45	k star (bias corrected MLE)	12.08
Theta hat (MLE)	2.1313E-7	Theta star (bias corrected MLE)	2.5497E-7
nu hat (MLE)	520.3	nu star (bias corrected)	434.9
MLE Mean (bias corrected)	3.0806E-6	MLE Sd (bias corrected)	8.8626E-7
		Approximate Chi Square Value (0.05)	387.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	383.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.4569E-6	95% Adjusted Gamma UCL (use when n<50)	3.4955E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.169	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.34	Mean of logged Data	-12.73
Maximum of Logged Data	-12.29	SD of logged Data	0.283

Assuming Lognormal Distribution

95% H-UCL	3.5143E-6	90% Chebyshev (MVUE) UCL	3.7158E-6
95% Chebyshev (MVUE) UCL	3.9995E-6	97.5% Chebyshev (MVUE) UCL	4.3933E-6
99% Chebyshev (MVUE) UCL	5.1669E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.3841E-6	95% Jackknife UCL	3.4016E-6
95% Standard Bootstrap UCL	3.3741E-6	95% Bootstrap-t UCL	3.3823E-6

95% Hall's Bootstrap UCL	3.3788E-6	95% Percentile Bootstrap UCL	3.3700E-6
95% BCA Bootstrap UCL	3.3622E-6		
90% Chebyshev(Mean, Sd) UCL	3.6342E-6	95% Chebyshev(Mean, Sd) UCL	3.8850E-6
97.5% Chebyshev(Mean, Sd) UCL	4.2330E-6	99% Chebyshev(Mean, Sd) UCL	4.9168E-6

Suggested UCL to Use

95% Student's-t UCL 3.4016E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.2200E-7	Mean	1.3393E-6
Maximum	2.8700E-6	Median	1.2950E-6
SD	6.9022E-7	Std. Error of Mean	1.6269E-7
Coefficient of Variation	N/A	Skewness	0.797

Normal GOF Test

Shapiro Wilk Test Statistic	0.918	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.6223E-6	95% Adjusted-CLT UCL (Chen-1995)	1.6396E-6
		95% Modified-t UCL (Johnson-1978)	1.6274E-6

Gamma GOF Test

A-D Test Statistic	0.446	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.66	k star (bias corrected MLE)	3.087
Theta hat (MLE)	3.6597E-7	Theta star (bias corrected MLE)	4.3389E-7
nu hat (MLE)	131.7	nu star (bias corrected)	111.1
MLE Mean (bias corrected)	1.3393E-6	MLE Sd (bias corrected)	7.6231E-7
		Approximate Chi Square Value (0.05)	87.79
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	85.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.6953E-6	95% Adjusted Gamma UCL (use when n<50)	1.7346E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.185	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.95	Mean of logged Data	-13.67
Maximum of Logged Data	-12.76	SD of logged Data	0.586

Assuming Lognormal Distribution

95% H-UCL	1.8603E-6	90% Chebyshev (MVUE) UCL	1.9545E-6
95% Chebyshev (MVUE) UCL	2.2222E-6	97.5% Chebyshev (MVUE) UCL	2.5937E-6
99% Chebyshev (MVUE) UCL	3.3234E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.6069E-6	95% Jackknife UCL	1.6223E-6
95% Standard Bootstrap UCL	1.6001E-6	95% Bootstrap-t UCL	1.6712E-6

95% Hall's Bootstrap UCL	1.6966E-6	95% Percentile Bootstrap UCL	1.6215E-6
95% BCA Bootstrap UCL	1.6260E-6		
90% Chebyshev(Mean, Sd) UCL	1.8274E-6	95% Chebyshev(Mean, Sd) UCL	2.0485E-6
97.5% Chebyshev(Mean, Sd) UCL	2.3553E-6	99% Chebyshev(Mean, Sd) UCL	2.9581E-6

Suggested UCL to Use

95% Student's-t UCL 1.6223E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	4.5500E-7	Mean	1.0522E-6
Maximum	1.6600E-6	Median	1.0550E-6
SD	3.3135E-7	Std. Error of Mean	7.8099E-8
Coefficient of Variation	N/A	Skewness	0.135

Normal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0925	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.1881E-6	95% Adjusted-CLT UCL (Chen-1995)	1.1833E-6
		95% Modified-t UCL (Johnson-1978)	1.1885E-6

Gamma GOF Test

A-D Test Statistic	0.228	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.108	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.804	k star (bias corrected MLE)	8.207
Theta hat (MLE)	1.0733E-7	Theta star (bias corrected MLE)	1.2821E-7
nu hat (MLE)	352.9	nu star (bias corrected)	295.4
MLE Mean (bias corrected)	1.0522E-6	MLE Sd (bias corrected)	3.6729E-7
		Approximate Chi Square Value (0.05)	256.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	253.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.2113E-6	95% Adjusted Gamma UCL (use when n<50)	1.2279E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.6	Mean of logged Data	-13.82
Maximum of Logged Data	-13.31	SD of logged Data	0.343

Assuming Lognormal Distribution

95% H-UCL	1.2397E-6	90% Chebyshev (MVUE) UCL	1.3167E-6
95% Chebyshev (MVUE) UCL	1.4347E-6	97.5% Chebyshev (MVUE) UCL	1.5986E-6
99% Chebyshev (MVUE) UCL	1.9205E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.1807E-6	95% Jackknife UCL	1.1881E-6
95% Standard Bootstrap UCL	1.1782E-6	95% Bootstrap-t UCL	1.1967E-6

95% Hall's Bootstrap UCL	1.1901E-6	95% Percentile Bootstrap UCL	1.1813E-6
95% BCA Bootstrap UCL	1.1724E-6		
90% Chebyshev(Mean, Sd) UCL	1.2865E-6	95% Chebyshev(Mean, Sd) UCL	1.3926E-6
97.5% Chebyshev(Mean, Sd) UCL	1.5399E-6	99% Chebyshev(Mean, Sd) UCL	1.8293E-6

Suggested UCL to Use

95% Student's-t UCL 1.1881E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	5.3700E-8	Minimum Non-Detect	6.3400E-8
Maximum Detect	2.0800E-7	Maximum Non-Detect	6.3400E-8
Variance Detects	1.317E-15	Percent Non-Detects	5.556%
Mean Detects	9.1750E-8	SD Detects	3.6292E-8
Median Detects	8.9600E-8	CV Detects	N/A
Skewness Detects	2.308	Kurtosis Detects	6.551
Mean of Logged Detects	-16.26	SD of Logged Detects	0.325

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.748	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.311	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.9832E-8	KM Standard Error of Mean	8.5388E-9
KM SD	3.5130E-8	95% KM (BCA) UCL	1.0667E-7
95% KM (t) UCL	1.0469E-7	95% KM (Percentile Bootstrap) UCL	1.0522E-7
95% KM (z) UCL	1.0388E-7	95% KM Bootstrap t UCL	1.1601E-7
90% KM Chebyshev UCL	1.1545E-7	95% KM Chebyshev UCL	1.2705E-7
97.5% KM Chebyshev UCL	1.4316E-7	99% KM Chebyshev UCL	1.7479E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.89	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.739	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.257	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.209	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.154	k star (bias corrected MLE)	7.577
Theta hat (MLE)	1.0023E-8	Theta star (bias corrected MLE)	1.2108E-8
nu hat (MLE)	311.2	nu star (bias corrected)	257.6
Mean (detects)	9.1750E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.3700E-8	Mean	5.5564E-4
Maximum	0.01	Median	8.9650E-8
SD	0.00236	CV	4.242
k hat (MLE)	0.1	k star (bias corrected MLE)	0.12
Theta hat (MLE)	0.00555	Theta star (bias corrected MLE)	0.00461
nu hat (MLE)	3.602	nu star (bias corrected)	4.335
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (4.33, α)	0.858	Adjusted Chi Square Value (4.33, β)	0.724
95% Gamma Approximate UCL (use when n>=50)	0.00281	95% Gamma Adjusted UCL (use when n<50)	0.00333

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.9832E-8	SD (KM)	3.5130E-8
Variance (KM)	1.234E-15	SE of Mean (KM)	8.5388E-9
k hat (KM)	6.539	k star (KM)	5.486

nu hat (KM)	235.4	nu star (KM)	197.5
theta hat (KM)	1.3738E-8	theta star (KM)	1.6374E-8
80% gamma percentile (KM)	1.1952E-7	90% gamma percentile (KM)	1.4114E-7
95% gamma percentile (KM)	1.6078E-7	99% gamma percentile (KM)	2.0209E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (197.50, α)	166	Adjusted Chi Square Value (197.50, β)	163.2
95% Gamma Approximate KM-UCL (use when n>=50)	1.0689E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.0870E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.896	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.233	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.9745E-8	Mean in Log Scale	-16.28
SD in Original Scale	3.6222E-8	SD in Log Scale	0.332
95% t UCL (assumes normality of ROS data)	1.0460E-7	95% Percentile Bootstrap UCL	1.0448E-7
95% BCA Bootstrap UCL	1.1052E-7	95% Bootstrap t UCL	1.1612E-7
95% H-UCL (Log ROS)	1.0408E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.28	KM Geo Mean	8.4792E-8
KM SD (logged)	0.321	95% Critical H Value (KM-Log)	1.869
KM Standard Error of Mean (logged)	0.0782	95% H-UCL (KM -Log)	1.0329E-7
KM SD (logged)	0.321	95% Critical H Value (KM-Log)	1.869
KM Standard Error of Mean (logged)	0.0782		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.8414E-8	Mean in Log Scale	-16.32
SD in Original Scale	3.7947E-8	SD in Log Scale	0.395
95% t UCL (Assumes normality)	1.0397E-7	95% H-Stat UCL	1.0667E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	1.0698E-7	KM H-UCL	1.0329E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	7.5200E-8	Mean	1.8965E-7
Maximum	3.3000E-7	Median	1.9500E-7
SD	5.8417E-8	Std. Error of Mean	1.3769E-8
Coefficient of Variation	N/A	Skewness	0.164

Normal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1360E-7	95% Adjusted-CLT UCL (Chen-1995)	2.1287E-7
		95% Modified-t UCL (Johnson-1978)	2.1369E-7

Gamma GOF Test

A-D Test Statistic	0.476	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.139	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.896	k star (bias corrected MLE)	8.284
Theta hat (MLE)	1.9164E-8	Theta star (bias corrected MLE)	2.2895E-8
nu hat (MLE)	356.3	nu star (bias corrected)	298.2
MLE Mean (bias corrected)	1.8965E-7	MLE Sd (bias corrected)	6.5894E-8
		Approximate Chi Square Value (0.05)	259.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	255.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1819E-7	95% Adjusted Gamma UCL (use when n<50)	2.2116E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.4	Mean of logged Data	-15.53
Maximum of Logged Data	-14.92	SD of logged Data	0.347

Assuming Lognormal Distribution

95% H-UCL	2.2419E-7	90% Chebyshev (MVUE) UCL	2.3814E-7
95% Chebyshev (MVUE) UCL	2.5966E-7	97.5% Chebyshev (MVUE) UCL	2.8953E-7
99% Chebyshev (MVUE) UCL	3.4821E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.1230E-7	95% Jackknife UCL	2.1360E-7
95% Standard Bootstrap UCL	2.1148E-7	95% Bootstrap-t UCL	2.1467E-7

95% Hall's Bootstrap UCL	2.1649E-7	95% Percentile Bootstrap UCL	2.1159E-7
95% BCA Bootstrap UCL	2.1125E-7		
90% Chebyshev(Mean, Sd) UCL	2.3096E-7	95% Chebyshev(Mean, Sd) UCL	2.4967E-7
97.5% Chebyshev(Mean, Sd) UCL	2.7564E-7	99% Chebyshev(Mean, Sd) UCL	3.2665E-7

Suggested UCL to Use

95% Student's-t UCL 2.1360E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	5.6800E-7	Mean	1.8817E-6
Maximum	4.1200E-6	Median	1.5700E-6
SD	9.9398E-7	Std. Error of Mean	2.3428E-7
Coefficient of Variation	N/A	Skewness	1.151

Normal GOF Test

Shapiro Wilk Test Statistic	0.871	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.2893E-6	95% Adjusted-CLT UCL (Chen-1995)	2.3350E-6
		95% Modified-t UCL (Johnson-1978)	2.2999E-6

Gamma GOF Test

A-D Test Statistic	0.504	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.171	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.214	k star (bias corrected MLE)	3.549
Theta hat (MLE)	4.4654E-7	Theta star (bias corrected MLE)	5.3026E-7
nu hat (MLE)	151.7	nu star (bias corrected)	127.8
MLE Mean (bias corrected)	1.8817E-6	MLE Sd (bias corrected)	9.9890E-7
		Approximate Chi Square Value (0.05)	102.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	100.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2.3420E-6	95% Adjusted Gamma UCL (use when n<50)	2.3923E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.162	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.38	Mean of logged Data	-13.31
Maximum of Logged Data	-12.4	SD of logged Data	0.513

Assuming Lognormal Distribution

95% H-UCL	2.4429E-6	90% Chebyshev (MVUE) UCL	2.5886E-6
95% Chebyshev (MVUE) UCL	2.9088E-6	97.5% Chebyshev (MVUE) UCL	3.3532E-6
99% Chebyshev (MVUE) UCL	4.2261E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.2671E-6	95% Jackknife UCL	2.2893E-6
95% Standard Bootstrap UCL	2.2509E-6	95% Bootstrap-t UCL	2.4363E-6

95% Hall's Bootstrap UCL	2.4189E-6	95% Percentile Bootstrap UCL	2.2520E-6
95% BCA Bootstrap UCL	2.3253E-6		
90% Chebyshev(Mean, Sd) UCL	2.5846E-6	95% Chebyshev(Mean, Sd) UCL	2.9029E-6
97.5% Chebyshev(Mean, Sd) UCL	3.3448E-6	99% Chebyshev(Mean, Sd) UCL	4.2128E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 2.3923E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	6	Number of Non-Detects	12
Number of Distinct Detects	6	Number of Distinct Non-Detects	12
Minimum Detect	6.0700E-8	Minimum Non-Detect	6.0800E-8
Maximum Detect	1.8100E-7	Maximum Non-Detect	8.0800E-8
Variance Detects	1.776E-15	Percent Non-Detects	66.67%
Mean Detects	1.0098E-7	SD Detects	4.2144E-8
Median Detects	9.3950E-8	CV Detects	N/A
Skewness Detects	1.709	Kurtosis Detects	3.547
Mean of Logged Detects	-16.17	SD of Logged Detects	0.371

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.324	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.4548E-8	KM Standard Error of Mean	7.5548E-9
KM SD	2.9125E-8	95% KM (BCA) UCL	8.9103E-8
95% KM (t) UCL	8.7690E-8	95% KM (Percentile Bootstrap) UCL	8.7583E-8
95% KM (z) UCL	8.6974E-8	95% KM Bootstrap t UCL	9.3812E-8
90% KM Chebyshev UCL	9.7212E-8	95% KM Chebyshev UCL	1.0748E-7
97.5% KM Chebyshev UCL	1.2173E-7	99% KM Chebyshev UCL	1.4972E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.389	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.276	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.333	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	8.29	k star (bias corrected MLE)	4.256
Theta hat (MLE)	1.2181E-8	Theta star (bias corrected MLE)	2.3726E-8
nu hat (MLE)	99.48	nu star (bias corrected)	51.07
Mean (detects)	1.0098E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.0700E-8	Mean	0.00667
Maximum	0.01	Median	0.01
SD	0.00485	CV	0.728
k hat (MLE)	0.211	k star (bias corrected MLE)	0.213
Theta hat (MLE)	0.0315	Theta star (bias corrected MLE)	0.0313
nu hat (MLE)	7.613	nu star (bias corrected)	7.678
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (7.68, α)	2.55	Adjusted Chi Square Value (7.68, β)	2.275
95% Gamma Approximate UCL (use when n>=50)	0.0201	95% Gamma Adjusted UCL (use when n<50)	0.0225

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.4548E-8	SD (KM)	2.9125E-8
Variance (KM)	8.482E-16	SE of Mean (KM)	7.5548E-9
k hat (KM)	6.552	k star (KM)	5.497

nu hat (KM)	235.9	nu star (KM)	197.9
theta hat (KM)	1.1378E-8	theta star (KM)	1.3562E-8
80% gamma percentile (KM)	9.9164E-8	90% gamma percentile (KM)	1.1709E-7
95% gamma percentile (KM)	1.3336E-7	99% gamma percentile (KM)	1.6760E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (197.88, α)	166.3	Adjusted Chi Square Value (197.88, β)	163.6
95% Gamma Approximate KM-UCL (use when n>=50)	8.8686E-8	95% Gamma Adjusted KM-UCL (use when n<50)	9.0190E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.257	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.9765E-8	Mean in Log Scale	-16.54
SD in Original Scale	3.2245E-8	SD in Log Scale	0.339
95% t UCL (assumes normality of ROS data)	8.2987E-8	95% Percentile Bootstrap UCL	8.2734E-8
95% BCA Bootstrap UCL	8.8144E-8	95% Bootstrap t UCL	9.8072E-8
95% H-UCL (Log ROS)	8.0748E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.46	KM Geo Mean	7.0905E-8
KM SD (logged)	0.286	95% Critical H Value (KM-Log)	1.843
KM Standard Error of Mean (logged)	0.0747	95% H-UCL (KM -Log)	8.3964E-8
KM SD (logged)	0.286	95% Critical H Value (KM-Log)	1.843
KM Standard Error of Mean (logged)	0.0747		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.7356E-8	Mean in Log Scale	-16.83
SD in Original Scale	3.9218E-8	SD in Log Scale	0.526
95% t UCL (Assumes normality)	7.3436E-8	95% H-Stat UCL	7.3276E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 8.7690E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	6.0600E-8	Mean	1.8166E-7
Maximum	4.0800E-7	Median	1.7000E-7
SD	8.8773E-8	Std. Error of Mean	2.0924E-8
Coefficient of Variation	N/A	Skewness	0.979

Normal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1806E-7	95% Adjusted-CLT UCL (Chen-1995)	2.2124E-7
		95% Modified-t UCL (Johnson-1978)	2.1886E-7

Gamma GOF Test

A-D Test Statistic	0.162	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.559	k star (bias corrected MLE)	3.836
Theta hat (MLE)	3.9850E-8	Theta star (bias corrected MLE)	4.7358E-8
nu hat (MLE)	164.1	nu star (bias corrected)	138.1
MLE Mean (bias corrected)	1.8166E-7	MLE Sd (bias corrected)	9.2753E-8
		Approximate Chi Square Value (0.05)	111.9
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	109.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.2410E-7	95% Adjusted Gamma UCL (use when n<50)	2.2872E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.11	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.62	Mean of logged Data	-15.63
Maximum of Logged Data	-14.71	SD of logged Data	0.502

Assuming Lognormal Distribution

95% H-UCL	2.3529E-7	90% Chebyshev (MVUE) UCL	2.4953E-7
95% Chebyshev (MVUE) UCL	2.7989E-7	97.5% Chebyshev (MVUE) UCL	3.2203E-7
99% Chebyshev (MVUE) UCL	4.0481E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.1608E-7	95% Jackknife UCL	2.1806E-7
95% Standard Bootstrap UCL	2.1556E-7	95% Bootstrap-t UCL	2.2653E-7

95% Hall's Bootstrap UCL	2.2831E-7	95% Percentile Bootstrap UCL	2.1685E-7
95% BCA Bootstrap UCL	2.1972E-7		
90% Chebyshev(Mean, Sd) UCL	2.4443E-7	95% Chebyshev(Mean, Sd) UCL	2.7287E-7
97.5% Chebyshev(Mean, Sd) UCL	3.1233E-7	99% Chebyshev(Mean, Sd) UCL	3.8985E-7

Suggested UCL to Use

95% Student's-t UCL 2.1806E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	4.6900E-4	Mean	8.7022E-4
Maximum	0.00151	Median	9.0475E-4
SD	2.6322E-4	Std. Error of Mean	6.2041E-5
Coefficient of Variation	0.302	Skewness	0.495

Normal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.7815E-4	95% Adjusted-CLT UCL (Chen-1995)	9.8000E-4
		95% Modified-t UCL (Johnson-1978)	9.7935E-4

Gamma GOF Test

A-D Test Statistic	0.29	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.141	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.45	k star (bias corrected MLE)	9.576
Theta hat (MLE)	7.6024E-5	Theta star (bias corrected MLE)	9.0876E-5
nu hat (MLE)	412.1	nu star (bias corrected)	344.7
MLE Mean (bias corrected)	8.7022E-4	MLE Sd (bias corrected)	2.8122E-4
		Approximate Chi Square Value (0.05)	302.7
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	298.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.9103E-4	95% Adjusted Gamma UCL (use when n<50)	0.001

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.665	Mean of logged Data	-7.091
Maximum of Logged Data	-6.496	SD of logged Data	0.311

Assuming Lognormal Distribution

95% H-UCL	0.00101	90% Chebyshev (MVUE) UCL	0.00107
95% Chebyshev (MVUE) UCL	0.00115	97.5% Chebyshev (MVUE) UCL	0.00127
99% Chebyshev (MVUE) UCL	0.00151		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.7227E-4	95% Jackknife UCL	9.7815E-4
95% Standard Bootstrap UCL	9.7101E-4	95% Bootstrap-t UCL	9.8086E-4

95% Hall's Bootstrap UCL	9.8412E-4	95% Percentile Bootstrap UCL	9.7358E-4
95% BCA Bootstrap UCL	9.7350E-4		
90% Chebyshev(Mean, Sd) UCL	0.00106	95% Chebyshev(Mean, Sd) UCL	0.00114
97.5% Chebyshev(Mean, Sd) UCL	0.00126	99% Chebyshev(Mean, Sd) UCL	0.00149

Suggested UCL to Use

95% Student's-t UCL 9.7815E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
Number of Detects	16	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	1.8300E-5	Minimum Non-Detect	8.7700E-6
Maximum Detect	6.0200E-5	Maximum Non-Detect	8.8800E-6
Variance Detects	1.171E-10	Percent Non-Detects	11.11%
Mean Detects	3.4166E-5	SD Detects	1.0820E-5
Median Detects	3.5800E-5	CV Detects	N/A
Skewness Detects	0.633	Kurtosis Detects	0.784
Mean of Logged Detects	-10.33	SD of Logged Detects	0.321

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.1344E-5	KM Standard Error of Mean	3.0913E-6
KM SD	1.2699E-5	95% KM (BCA) UCL	3.6331E-5
95% KM (t) UCL	3.6721E-5	95% KM (Percentile Bootstrap) UCL	3.6193E-5
95% KM (z) UCL	3.6429E-5	95% KM Bootstrap t UCL	3.6895E-5
90% KM Chebyshev UCL	4.0618E-5	95% KM Chebyshev UCL	4.4818E-5
97.5% KM Chebyshev UCL	5.0649E-5	99% KM Chebyshev UCL	6.2102E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.324	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.153	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.73	k star (bias corrected MLE)	8.762
Theta hat (MLE)	3.1835E-6	Theta star (bias corrected MLE)	3.8995E-6
nu hat (MLE)	343.4	nu star (bias corrected)	280.4
Mean (detects)	3.4166E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.8300E-5	Mean	0.00114
Maximum	0.01	Median	3.6350E-5
SD	0.00322	CV	2.823
k hat (MLE)	0.244	k star (bias corrected MLE)	0.241
Theta hat (MLE)	0.00467	Theta star (bias corrected MLE)	0.00475
nu hat (MLE)	8.791	nu star (bias corrected)	8.659
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (8.66, α)	3.122	Adjusted Chi Square Value (8.66, β)	2.811
95% Gamma Approximate UCL (use when n>=50)	0.00317	95% Gamma Adjusted UCL (use when n<50)	0.00352

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.1344E-5	SD (KM)	1.2699E-5
Variance (KM)	1.613E-10	SE of Mean (KM)	3.0913E-6
k hat (KM)	6.092	k star (KM)	5.114

nu hat (KM)	219.3	nu star (KM)	184.1
theta hat (KM)	5.1447E-6	theta star (KM)	6.1290E-6
80% gamma percentile (KM)	4.2027E-5	90% gamma percentile (KM)	4.9897E-5
95% gamma percentile (KM)	5.7063E-5	99% gamma percentile (KM)	7.2191E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (184.11, α)	153.7	Adjusted Chi Square Value (184.11, β)	151.1
95% Gamma Approximate KM-UCL (use when n>=50)	3.7540E-5	95% Gamma Adjusted KM-UCL (use when n<50)	3.8201E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.168	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.2095E-5	Mean in Log Scale	-10.41
SD in Original Scale	1.1816E-5	SD in Log Scale	0.385
95% t UCL (assumes normality of ROS data)	3.6940E-5	95% Percentile Bootstrap UCL	3.6579E-5
95% BCA Bootstrap UCL	3.7114E-5	95% Bootstrap t UCL	3.7185E-5
95% H-UCL (Log ROS)	3.8658E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.48	KM Geo Mean	2.8165E-5
KM SD (logged)	0.506	95% Critical H Value (KM-Log)	2.027
KM Standard Error of Mean (logged)	0.123	95% H-UCL (KM -Log)	4.1042E-5
KM SD (logged)	0.506	95% Critical H Value (KM-Log)	2.027
KM Standard Error of Mean (logged)	0.123		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.0860E-5	Mean in Log Scale	-10.55
SD in Original Scale	1.3995E-5	SD in Log Scale	0.713
95% t UCL (Assumes normality)	3.6598E-5	95% H-Stat UCL	4.9704E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.6721E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00331	Mean	0.00664
Maximum	0.00993	Median	0.00623
SD	0.00195	Std. Error of Mean	4.5872E-4
Coefficient of Variation	0.293	Skewness	0.164

Normal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00743	95% Adjusted-CLT UCL (Chen-1995)	0.00741
		95% Modified-t UCL (Johnson-1978)	0.00744

Gamma GOF Test

A-D Test Statistic	0.257	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.13	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.8	k star (bias corrected MLE)	9.873
Theta hat (MLE)	5.6221E-4	Theta star (bias corrected MLE)	6.7212E-4
nu hat (MLE)	424.9	nu star (bias corrected)	355.4
MLE Mean (bias corrected)	0.00664	MLE Sd (bias corrected)	0.00211
		Approximate Chi Square Value (0.05)	312.7
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	308.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00754	95% Adjusted Gamma UCL (use when n<50)	0.00764

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.711	Mean of logged Data	-5.058
Maximum of Logged Data	-4.612	SD of logged Data	0.307

Assuming Lognormal Distribution

95% H-UCL	0.00765	90% Chebyshev (MVUE) UCL	0.00811
95% Chebyshev (MVUE) UCL	0.00877	97.5% Chebyshev (MVUE) UCL	0.00969
99% Chebyshev (MVUE) UCL	0.0115		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00739	95% Jackknife UCL	0.00743
95% Standard Bootstrap UCL	0.00737	95% Bootstrap-t UCL	0.00748

95% Hall's Bootstrap UCL	0.00735	95% Percentile Bootstrap UCL	0.00736
95% BCA Bootstrap UCL	0.00738		
90% Chebyshev(Mean, Sd) UCL	0.00801	95% Chebyshev(Mean, Sd) UCL	0.00864
97.5% Chebyshev(Mean, Sd) UCL	0.0095	99% Chebyshev(Mean, Sd) UCL	0.0112

Suggested UCL to Use

95% Student's-t UCL	0.00743

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.7200E-4	Mean	5.0431E-4
Maximum	7.7200E-4	Median	4.8350E-4
SD	1.4567E-4	Std. Error of Mean	3.4335E-5
Coefficient of Variation	0.289	Skewness	0.206

Normal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.6404E-4	95% Adjusted-CLT UCL (Chen-1995)	5.6257E-4
		95% Modified-t UCL (Johnson-1978)	5.6431E-4

Gamma GOF Test

A-D Test Statistic	0.207	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0978	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.28	k star (bias corrected MLE)	10.27
Theta hat (MLE)	4.1062E-5	Theta star (bias corrected MLE)	4.9097E-5
nu hat (MLE)	442.1	nu star (bias corrected)	369.8
MLE Mean (bias corrected)	5.0431E-4	MLE Sd (bias corrected)	1.5735E-4
		Approximate Chi Square Value (0.05)	326.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	322.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.7166E-4	95% Adjusted Gamma UCL (use when n<50)	5.7862E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.21	Mean of logged Data	-7.634
Maximum of Logged Data	-7.167	SD of logged Data	0.3

Assuming Lognormal Distribution

95% H-UCL	5.7934E-4	90% Chebyshev (MVUE) UCL	6.1348E-4
95% Chebyshev (MVUE) UCL	6.6266E-4	97.5% Chebyshev (MVUE) UCL	7.3092E-4
99% Chebyshev (MVUE) UCL	8.6500E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.6078E-4	95% Jackknife UCL	5.6404E-4
95% Standard Bootstrap UCL	5.5758E-4	95% Bootstrap-t UCL	5.6558E-4

95% Hall's Bootstrap UCL	5.6274E-4	95% Percentile Bootstrap UCL	5.5931E-4
95% BCA Bootstrap UCL	5.5650E-4		
90% Chebyshev(Mean, Sd) UCL	6.0731E-4	95% Chebyshev(Mean, Sd) UCL	6.5397E-4
97.5% Chebyshev(Mean, Sd) UCL	7.1873E-4	99% Chebyshev(Mean, Sd) UCL	8.4594E-4

Suggested UCL to Use

95% Student's-t UCL 5.6404E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.0132	Mean	0.025
Maximum	0.0375	Median	0.0233
SD	0.00734	Std. Error of Mean	0.00173
Coefficient of Variation	0.293	Skewness	0.162

Normal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.028	95% Adjusted-CLT UCL (Chen-1995)	0.0279
		95% Modified-t UCL (Johnson-1978)	0.028

Gamma GOF Test

A-D Test Statistic	0.225	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.82	k star (bias corrected MLE)	9.884
Theta hat (MLE)	0.00212	Theta star (bias corrected MLE)	0.00253
nu hat (MLE)	425.4	nu star (bias corrected)	355.8
MLE Mean (bias corrected)	0.025	MLE Sd (bias corrected)	0.00796
		Approximate Chi Square Value (0.05)	313.1
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	309.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0284	95% Adjusted Gamma UCL (use when n<50)	0.0288

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.328	Mean of logged Data	-3.731
Maximum of Logged Data	-3.283	SD of logged Data	0.307

Assuming Lognormal Distribution

95% H-UCL	0.0289	90% Chebyshev (MVUE) UCL	0.0306
95% Chebyshev (MVUE) UCL	0.0331	97.5% Chebyshev (MVUE) UCL	0.0365
99% Chebyshev (MVUE) UCL	0.0433		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0279	95% Jackknife UCL	0.028
95% Standard Bootstrap UCL	0.0278	95% Bootstrap-t UCL	0.0281

95% Hall's Bootstrap UCL	0.0279	95% Percentile Bootstrap UCL	0.0278
95% BCA Bootstrap UCL	0.0278		
90% Chebyshev(Mean, Sd) UCL	0.0302	95% Chebyshev(Mean, Sd) UCL	0.0326
97.5% Chebyshev(Mean, Sd) UCL	0.0358	99% Chebyshev(Mean, Sd) UCL	0.0422

Suggested UCL to Use

95% Student's-t UCL	0.028

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.1500E-4	Mean	4.9306E-4
Maximum	7.5000E-4	Median	4.9550E-4
SD	1.5816E-4	Std. Error of Mean	3.7280E-5
Coefficient of Variation	0.321	Skewness	0.0054

Normal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.5791E-4	95% Adjusted-CLT UCL (Chen-1995)	5.5443E-4
		95% Modified-t UCL (Johnson-1978)	5.5792E-4

Gamma GOF Test

A-D Test Statistic	0.292	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.139	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.287	k star (bias corrected MLE)	7.776
Theta hat (MLE)	5.3091E-5	Theta star (bias corrected MLE)	6.3406E-5
nu hat (MLE)	334.3	nu star (bias corrected)	279.9
MLE Mean (bias corrected)	4.9306E-4	MLE Sd (bias corrected)	1.7681E-4
		Approximate Chi Square Value (0.05)	242.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	238.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.6991E-4	95% Adjusted Gamma UCL (use when n<50)	5.7794E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.161	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.445	Mean of logged Data	-7.67
Maximum of Logged Data	-7.195	SD of logged Data	0.354

Assuming Lognormal Distribution

95% H-UCL	5.8456E-4	90% Chebyshev (MVUE) UCL	6.2116E-4
95% Chebyshev (MVUE) UCL	6.7827E-4	97.5% Chebyshev (MVUE) UCL	7.5753E-4
99% Chebyshev (MVUE) UCL	9.1322E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.5438E-4	95% Jackknife UCL	5.5791E-4
95% Standard Bootstrap UCL	5.5203E-4	95% Bootstrap-t UCL	5.5723E-4

95% Hall's Bootstrap UCL	5.5672E-4	95% Percentile Bootstrap UCL	5.5286E-4
95% BCA Bootstrap UCL	5.5344E-4		
90% Chebyshev(Mean, Sd) UCL	6.0490E-4	95% Chebyshev(Mean, Sd) UCL	6.5555E-4
97.5% Chebyshev(Mean, Sd) UCL	7.2587E-4	99% Chebyshev(Mean, Sd) UCL	8.6399E-4

Suggested UCL to Use

95% Student's-t UCL 5.5791E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.8400E-5	Mean	5.4619E-5
Maximum	7.8800E-5	Median	5.0850E-5
SD	1.4381E-5	Std. Error of Mean	3.3897E-6
Coefficient of Variation	N/A	Skewness	-0.0118

Normal GOF Test

Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.0516E-5	95% Adjusted-CLT UCL (Chen-1995)	6.0185E-5
		95% Modified-t UCL (Johnson-1978)	6.0515E-5

Gamma GOF Test

A-D Test Statistic	0.318	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.136	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.18	k star (bias corrected MLE)	11.86
Theta hat (MLE)	3.8513E-6	Theta star (bias corrected MLE)	4.6071E-6
nu hat (MLE)	510.6	nu star (bias corrected)	426.8
MLE Mean (bias corrected)	5.4619E-5	MLE Sd (bias corrected)	1.5863E-5
		Approximate Chi Square Value (0.05)	379.9
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	375.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.1361E-5	95% Adjusted Gamma UCL (use when n<50)	6.2054E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.47	Mean of logged Data	-9.851
Maximum of Logged Data	-9.449	SD of logged Data	0.282

Assuming Lognormal Distribution

95% H-UCL	6.2218E-5	90% Chebyshev (MVUE) UCL	6.5778E-5
95% Chebyshev (MVUE) UCL	7.0785E-5	97.5% Chebyshev (MVUE) UCL	7.7735E-5
99% Chebyshev (MVUE) UCL	9.1386E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.0195E-5	95% Jackknife UCL	6.0516E-5
95% Standard Bootstrap UCL	5.9943E-5	95% Bootstrap-t UCL	6.0473E-5

95% Hall's Bootstrap UCL	6.0510E-5	95% Percentile Bootstrap UCL	6.0108E-5
95% BCA Bootstrap UCL	6.0294E-5		
90% Chebyshev(Mean, Sd) UCL	6.4789E-5	95% Chebyshev(Mean, Sd) UCL	6.9395E-5
97.5% Chebyshev(Mean, Sd) UCL	7.5788E-5	99% Chebyshev(Mean, Sd) UCL	8.8347E-5

Suggested UCL to Use

95% Student's-t UCL 6.0516E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

PCB-156/157

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00151	Mean	0.00257
Maximum	0.00371	Median	0.00251
SD	6.7688E-4	Std. Error of Mean	1.5954E-4
Coefficient of Variation	0.264	Skewness	0.131

Normal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.117	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00285	95% Adjusted-CLT UCL (Chen-1995)	0.00284
		95% Modified-t UCL (Johnson-1978)	0.00285

Gamma GOF Test

A-D Test Statistic	0.329	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.143	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.81	k star (bias corrected MLE)	12.38
Theta hat (MLE)	1.7344E-4	Theta star (bias corrected MLE)	2.0751E-4
nu hat (MLE)	533.1	nu star (bias corrected)	445.6
MLE Mean (bias corrected)	0.00257	MLE Sd (bias corrected)	7.3003E-4
		Approximate Chi Square Value (0.05)	397.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	393.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00288	95% Adjusted Gamma UCL (use when n<50)	0.00291

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.148	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.496	Mean of logged Data	-5.999
Maximum of Logged Data	-5.597	SD of logged Data	0.272

Assuming Lognormal Distribution

95% H-UCL	0.00291	90% Chebyshev (MVUE) UCL	0.00307
95% Chebyshev (MVUE) UCL	0.0033	97.5% Chebyshev (MVUE) UCL	0.00361
99% Chebyshev (MVUE) UCL	0.00423		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00283	95% Jackknife UCL	0.00285
95% Standard Bootstrap UCL	0.00283	95% Bootstrap-t UCL	0.00285

95% Hall's Bootstrap UCL	0.00282	95% Percentile Bootstrap UCL	0.00283
95% BCA Bootstrap UCL	0.00282		
90% Chebyshev(Mean, Sd) UCL	0.00305	95% Chebyshev(Mean, Sd) UCL	0.00326
97.5% Chebyshev(Mean, Sd) UCL	0.00356	99% Chebyshev(Mean, Sd) UCL	0.00416

Suggested UCL to Use

95% Student's-t UCL	0.00285

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	6.0200E-4	Mean	0.00104
Maximum	0.00153	Median	0.00103
SD	2.8761E-4	Std. Error of Mean	6.7791E-5
Coefficient of Variation	0.275	Skewness	0.218

Normal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.126	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00116	95% Adjusted-CLT UCL (Chen-1995)	0.00116
		95% Modified-t UCL (Johnson-1978)	0.00116

Gamma GOF Test

A-D Test Statistic	0.339	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.72	k star (bias corrected MLE)	11.47
Theta hat (MLE)	7.6133E-5	Theta star (bias corrected MLE)	9.1064E-5
nu hat (MLE)	493.8	nu star (bias corrected)	412.9
MLE Mean (bias corrected)	0.00104	MLE Sd (bias corrected)	3.0838E-4
		Approximate Chi Square Value (0.05)	366.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	362.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00118	95% Adjusted Gamma UCL (use when n<50)	0.00119

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.415	Mean of logged Data	-6.901
Maximum of Logged Data	-6.482	SD of logged Data	0.282

Assuming Lognormal Distribution

95% H-UCL	0.00119	90% Chebyshev (MVUE) UCL	0.00126
95% Chebyshev (MVUE) UCL	0.00135	97.5% Chebyshev (MVUE) UCL	0.00148
99% Chebyshev (MVUE) UCL	0.00174		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00116	95% Jackknife UCL	0.00116
95% Standard Bootstrap UCL	0.00115	95% Bootstrap-t UCL	0.00116

95% Hall's Bootstrap UCL	0.00115	95% Percentile Bootstrap UCL	0.00115
95% BCA Bootstrap UCL	0.00116		
90% Chebyshev(Mean, Sd) UCL	0.00125	95% Chebyshev(Mean, Sd) UCL	0.00134
97.5% Chebyshev(Mean, Sd) UCL	0.00147	99% Chebyshev(Mean, Sd) UCL	0.00172

Suggested UCL to Use

95% Student's-t UCL	0.00116

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable PCB-169 was not processed!

PCB-189

General Statistics

Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	7
Minimum	1.2600E-4	Mean	1.9305E-4
Maximum	2.8300E-4	Median	1.8025E-4
SD	5.3763E-5	Std. Error of Mean	1.7001E-5
Coefficient of Variation	0.278	Skewness	0.559

Normal GOF Test

Shapiro Wilk Test Statistic	0.926	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.185	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.2422E-4	95% Adjusted-CLT UCL (Chen-1995)	2.2423E-4
		95% Modified-t UCL (Johnson-1978)	2.2472E-4

Gamma GOF Test

A-D Test Statistic	0.294	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.725	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.159	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.266	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.8	k star (bias corrected MLE)	10.42
Theta hat (MLE)	1.3046E-5	Theta star (bias corrected MLE)	1.8519E-5
nu hat (MLE)	295.9	nu star (bias corrected)	208.5
MLE Mean (bias corrected)	1.9305E-4	MLE Sd (bias corrected)	5.9792E-5
		Approximate Chi Square Value (0.05)	176.1
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	170.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.2859E-4	95% Adjusted Gamma UCL (use when n<50)	2.3551E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.262	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.979	Mean of logged Data	-8.587
Maximum of Logged Data	-8.17	SD of logged Data	0.275

Assuming Lognormal Distribution

95% H-UCL	2.3161E-4	90% Chebyshev (MVUE) UCL	2.4356E-4
95% Chebyshev (MVUE) UCL	2.6646E-4	97.5% Chebyshev (MVUE) UCL	2.9826E-4
99% Chebyshev (MVUE) UCL	3.6071E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.2101E-4	95% Jackknife UCL	2.2422E-4
95% Standard Bootstrap UCL	2.1982E-4	95% Bootstrap-t UCL	2.3128E-4
95% Hall's Bootstrap UCL	2.2309E-4	95% Percentile Bootstrap UCL	2.2105E-4
95% BCA Bootstrap UCL	2.2140E-4		
90% Chebyshev(Mean, Sd) UCL	2.4405E-4	95% Chebyshev(Mean, Sd) UCL	2.6716E-4
97.5% Chebyshev(Mean, Sd) UCL	2.9922E-4	99% Chebyshev(Mean, Sd) UCL	3.6221E-4

Suggested UCL to Use

95% Student's-t UCL 2.2422E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 10:19:40 AM
From File	White_Perch_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	2.5998E-6	Mean	1.5151E-5
Maximum	3.3717E-5	Median	1.4814E-5
SD	7.3168E-6	Std. Error of Mean	1.7246E-6
Coefficient of Variation	N/A	Skewness	0.812

Normal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.8151E-5	95% Adjusted-CLT UCL (Chen-1995)	1.8340E-5
		95% Modified-t UCL (Johnson-1978)	1.8206E-5

Gamma GOF Test

A-D Test Statistic	0.227	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.038	k star (bias corrected MLE)	3.402
Theta hat (MLE)	3.7517E-6	Theta star (bias corrected MLE)	4.4530E-6
nu hat (MLE)	145.4	nu star (bias corrected)	122.5
MLE Mean (bias corrected)	1.5151E-5	MLE Sd (bias corrected)	8.2138E-6
		Approximate Chi Square Value (0.05)	97.93
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	95.82

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.8950E-5	95% Adjusted Gamma UCL (use when n<50)	1.9367E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.86	Mean of logged Data	-11.23
Maximum of Logged Data	-10.3	SD of logged Data	0.57

Assuming Lognormal Distribution

95% H-UCL	2.0921E-5	90% Chebyshev (MVUE) UCL	2.2031E-5
95% Chebyshev (MVUE) UCL	2.4986E-5	97.5% Chebyshev (MVUE) UCL	2.9087E-5
99% Chebyshev (MVUE) UCL	3.7143E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.7987E-5	95% Jackknife UCL	1.8151E-5
95% Standard Bootstrap UCL	1.7907E-5	95% Bootstrap-t UCL	1.8758E-5
95% Hall's Bootstrap UCL	1.8934E-5	95% Percentile Bootstrap UCL	1.7864E-5
95% BCA Bootstrap UCL	1.8113E-5		
90% Chebyshev(Mean, Sd) UCL	2.0324E-5	95% Chebyshev(Mean, Sd) UCL	2.2668E-5
97.5% Chebyshev(Mean, Sd) UCL	2.5921E-5	99% Chebyshev(Mean, Sd) UCL	3.2310E-5

Suggested UCL to Use

95% Student's-t UCL 1.8151E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	3.5883E-6	Mean	6.6964E-6
Maximum	9.7288E-6	Median	6.3077E-6
SD	1.7574E-6	Std. Error of Mean	4.1422E-7
Coefficient of Variation	N/A	Skewness	-0.00605

Normal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.4170E-6	95% Adjusted-CLT UCL (Chen-1995)	7.3771E-6
		95% Modified-t UCL (Johnson-1978)	7.4169E-6

Gamma GOF Test

A-D Test Statistic	0.29	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.37	k star (bias corrected MLE)	12.01
Theta hat (MLE)	4.6611E-7	Theta star (bias corrected MLE)	5.5760E-7
nu hat (MLE)	517.2	nu star (bias corrected)	432.3
MLE Mean (bias corrected)	6.6964E-6	MLE Sd (bias corrected)	1.9323E-6
		Approximate Chi Square Value (0.05)	385.1
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	380.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.5171E-6	95% Adjusted Gamma UCL (use when n<50)	7.6015E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.137	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.54	Mean of logged Data	-11.95
Maximum of Logged Data	-11.54	SD of logged Data	0.28

Assuming Lognormal Distribution

95% H-UCL	7.6165E-6	90% Chebyshev (MVUE) UCL	8.0502E-6
95% Chebyshev (MVUE) UCL	8.6583E-6	97.5% Chebyshev (MVUE) UCL	9.5023E-6
99% Chebyshev (MVUE) UCL	1.1160E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.3777E-6	95% Jackknife UCL	7.4170E-6
95% Standard Bootstrap UCL	7.3512E-6	95% Bootstrap-t UCL	7.3982E-6

95% Hall's Bootstrap UCL	7.3670E-6	95% Percentile Bootstrap UCL	7.3407E-6
95% BCA Bootstrap UCL	7.3768E-6		
90% Chebyshev(Mean, Sd) UCL	7.9390E-6	95% Chebyshev(Mean, Sd) UCL	8.5019E-6
97.5% Chebyshev(Mean, Sd) UCL	9.2832E-6	99% Chebyshev(Mean, Sd) UCL	1.0818E-5

Suggested UCL to Use

95% Student's-t UCL 7.4170E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 12:45:00 AM
From File	fsh10_ndl_PCB_sum_wide2_flag_sep1_WP.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.197	Mean	0.419
Maximum	0.647	Median	0.411
SD	0.132	Std. Error of Mean	0.031
Coefficient of Variation	0.314	Skewness	0.274

Normal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.473	95% Adjusted-CLT UCL (Chen-1995)	0.473
		95% Modified-t UCL (Johnson-1978)	0.474

Gamma GOF Test

A-D Test Statistic	0.188	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.104	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.34	k star (bias corrected MLE)	8.653
Theta hat (MLE)	0.0406	Theta star (bias corrected MLE)	0.0485
nu hat (MLE)	372.2	nu star (bias corrected)	311.5
MLE Mean (bias corrected)	0.419	MLE Sd (bias corrected)	0.143
		Approximate Chi Square Value (0.05)	271.6
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	268.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.481	95% Adjusted Gamma UCL (use when n<50)	0.488

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0959	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.625	Mean of logged Data	-0.918
Maximum of Logged Data	-0.435	SD of logged Data	0.329

Assuming Lognormal Distribution

95% H-UCL	0.49	90% Chebyshev (MVUE) UCL	0.52
95% Chebyshev (MVUE) UCL	0.565	97.5% Chebyshev (MVUE) UCL	0.627
99% Chebyshev (MVUE) UCL	0.75		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.471	95% Jackknife UCL	0.473
95% Standard Bootstrap UCL	0.468	95% Bootstrap-t UCL	0.48
95% Hall's Bootstrap UCL	0.473	95% Percentile Bootstrap UCL	0.469
95% BCA Bootstrap UCL	0.468		
90% Chebyshev(Mean, Sd) UCL	0.513	95% Chebyshev(Mean, Sd) UCL	0.555
97.5% Chebyshev(Mean, Sd) UCL	0.613	99% Chebyshev(Mean, Sd) UCL	0.728

Suggested UCL to Use

95% Student's-t UCL	0.473

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 12:35:41 AM
From File	fsh5_PAH_wide2_flag_sep1_WP.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)anthracene was not processed!

Benzo(a)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)pyrene was not processed!

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(b)fluoranthene was not processed!

Chrysene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chrysene was not processed!

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Dibenzo(a,h)anthracene was not processed!

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Indeno(1,2,3-cd)pyrene was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 12:39:35 AM
From File	fsh7_pest_wide2_flag_sep1_WP.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00271	Mean	0.0327
Maximum	0.101	Median	0.0202
SD	0.0292	Std. Error of Mean	0.00689
Coefficient of Variation	0.894	Skewness	1.161

Normal GOF Test

Shapiro Wilk Test Statistic	0.858	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0447	95% Adjusted-CLT UCL (Chen-1995)	0.0461
		95% Modified-t UCL (Johnson-1978)	0.045

Gamma GOF Test

A-D Test Statistic	0.22	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.76	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.319	k star (bias corrected MLE)	1.136
Theta hat (MLE)	0.0248	Theta star (bias corrected MLE)	0.0288
nu hat (MLE)	47.49	nu star (bias corrected)	40.91
MLE Mean (bias corrected)	0.0327	MLE Sd (bias corrected)	0.0307
		Approximate Chi Square Value (0.05)	27.25
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	26.18

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0491	95% Adjusted Gamma UCL (use when n<50)	0.0511

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0796	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.911	Mean of logged Data	-3.845
Maximum of Logged Data	-2.293	SD of logged Data	1.02

Assuming Lognormal Distribution

95% H-UCL	0.0696	90% Chebyshev (MVUE) UCL	0.0623
95% Chebyshev (MVUE) UCL	0.0748	97.5% Chebyshev (MVUE) UCL	0.0922
99% Chebyshev (MVUE) UCL	0.126		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0441	95% Jackknife UCL	0.0447
95% Standard Bootstrap UCL	0.0436	95% Bootstrap-t UCL	0.0483
95% Hall's Bootstrap UCL	0.0463	95% Percentile Bootstrap UCL	0.0441
95% BCA Bootstrap UCL	0.0448		
90% Chebyshev(Mean, Sd) UCL	0.0534	95% Chebyshev(Mean, Sd) UCL	0.0628
97.5% Chebyshev(Mean, Sd) UCL	0.0758	99% Chebyshev(Mean, Sd) UCL	0.101

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0511

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00173	Mean	0.00833
Maximum	0.0198	Median	0.007
SD	0.00489	Std. Error of Mean	0.00115
Coefficient of Variation	0.587	Skewness	1.004

Normal GOF Test

Shapiro Wilk Test Statistic	0.917	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.145	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0103	95% Adjusted-CLT UCL (Chen-1995)	0.0105
		95% Modified-t UCL (Johnson-1978)	0.0104

Gamma GOF Test

A-D Test Statistic	0.175	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0859	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.137	k star (bias corrected MLE)	2.651
Theta hat (MLE)	0.00266	Theta star (bias corrected MLE)	0.00314
nu hat (MLE)	112.9	nu star (bias corrected)	95.44
MLE Mean (bias corrected)	0.00833	MLE Sd (bias corrected)	0.00512
		Approximate Chi Square Value (0.05)	73.91
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	72.09

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0108	95% Adjusted Gamma UCL (use when n<50)	0.011

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.095	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.36	Mean of logged Data	-4.955
Maximum of Logged Data	-3.925	SD of logged Data	0.619

Assuming Lognormal Distribution

95% H-UCL	0.0118	90% Chebyshev (MVUE) UCL	0.0123
95% Chebyshev (MVUE) UCL	0.0141	97.5% Chebyshev (MVUE) UCL	0.0165
99% Chebyshev (MVUE) UCL	0.0213		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0102	95% Jackknife UCL	0.0103
95% Standard Bootstrap UCL	0.0102	95% Bootstrap-t UCL	0.0107

95% Hall's Bootstrap UCL	0.0107	95% Percentile Bootstrap UCL	0.0102
95% BCA Bootstrap UCL	0.0104		
90% Chebyshev(Mean, Sd) UCL	0.0118	95% Chebyshev(Mean, Sd) UCL	0.0134
97.5% Chebyshev(Mean, Sd) UCL	0.0155	99% Chebyshev(Mean, Sd) UCL	0.0198

Suggested UCL to Use

95% Student's-t UCL	0.0103

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	1.0400E-4	Mean	0.00515
Maximum	0.0304	Median	0.00151
SD	0.0085	Std. Error of Mean	0.002
Coefficient of Variation	1.651	Skewness	2.141

Normal GOF Test

Shapiro Wilk Test Statistic	0.637	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.39	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00863	95% Adjusted-CLT UCL (Chen-1995)	0.00952
		95% Modified-t UCL (Johnson-1978)	0.0088

Gamma GOF Test

A-D Test Statistic	0.857	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.799	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.25	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.215	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.515	k star (bias corrected MLE)	0.466
Theta hat (MLE)	0.00999	Theta star (bias corrected MLE)	0.011
nu hat (MLE)	18.55	nu star (bias corrected)	16.79
MLE Mean (bias corrected)	0.00515	MLE Sd (bias corrected)	0.00754
		Approximate Chi Square Value (0.05)	8.522
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	7.961

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0101	95% Adjusted Gamma UCL (use when n<50)	0.0109

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.171	Mean of logged Data	-6.496
Maximum of Logged Data	-3.493	SD of logged Data	1.683

Assuming Lognormal Distribution

95% H-UCL	0.0287	90% Chebyshev (MVUE) UCL	0.0128
95% Chebyshev (MVUE) UCL	0.0162	97.5% Chebyshev (MVUE) UCL	0.0209
99% Chebyshev (MVUE) UCL	0.0302		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00844	95% Jackknife UCL	0.00863
95% Standard Bootstrap UCL	0.00841	95% Bootstrap-t UCL	0.0113

95% Hall's Bootstrap UCL	0.0099	95% Percentile Bootstrap UCL	0.00844
95% BCA Bootstrap UCL	0.00947		
90% Chebyshev(Mean, Sd) UCL	0.0112	95% Chebyshev(Mean, Sd) UCL	0.0139
97.5% Chebyshev(Mean, Sd) UCL	0.0177	99% Chebyshev(Mean, Sd) UCL	0.0251

Suggested UCL to Use

99% Chebyshev (Mean, Sd) UCL	0.0251

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00973	Mean	0.102
Maximum	0.369	Median	0.0651
SD	0.0928	Std. Error of Mean	0.0219
Coefficient of Variation	0.908	Skewness	1.731

Normal GOF Test

Shapiro Wilk Test Statistic	0.818	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.14	95% Adjusted-CLT UCL (Chen-1995)	0.148
		95% Modified-t UCL (Johnson-1978)	0.142

Gamma GOF Test

A-D Test Statistic	0.29	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.489	k star (bias corrected MLE)	1.278
Theta hat (MLE)	0.0686	Theta star (bias corrected MLE)	0.08
nu hat (MLE)	53.62	nu star (bias corrected)	46.02
MLE Mean (bias corrected)	0.102	MLE Sd (bias corrected)	0.0904
		Approximate Chi Square Value (0.05)	31.45
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	30.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.15	95% Adjusted Gamma UCL (use when n<50)	0.155

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.152	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.633	Mean of logged Data	-2.652
Maximum of Logged Data	-0.998	SD of logged Data	0.934

Assuming Lognormal Distribution

95% H-UCL	0.194	90% Chebyshev (MVUE) UCL	0.182
95% Chebyshev (MVUE) UCL	0.217	97.5% Chebyshev (MVUE) UCL	0.265
99% Chebyshev (MVUE) UCL	0.359		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.138	95% Jackknife UCL	0.14
95% Standard Bootstrap UCL	0.137	95% Bootstrap-t UCL	0.158

95% Hall's Bootstrap UCL	0.167	95% Percentile Bootstrap UCL	0.14
95% BCA Bootstrap UCL	0.15		
90% Chebyshev(Mean, Sd) UCL	0.168	95% Chebyshev(Mean, Sd) UCL	0.198
97.5% Chebyshev(Mean, Sd) UCL	0.239	99% Chebyshev(Mean, Sd) UCL	0.32

Suggested UCL to Use

95% Adjusted Gamma UCL	0.155

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.0272	Mean	0.0977
Maximum	0.237	Median	0.0911
SD	0.052	Std. Error of Mean	0.0122
Coefficient of Variation	0.532	Skewness	1.208

Normal GOF Test

Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.119	95% Adjusted-CLT UCL (Chen-1995)	0.122
		95% Modified-t UCL (Johnson-1978)	0.12

Gamma GOF Test

A-D Test Statistic	0.184	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.018	k star (bias corrected MLE)	3.386
Theta hat (MLE)	0.0243	Theta star (bias corrected MLE)	0.0289
nu hat (MLE)	144.7	nu star (bias corrected)	121.9
MLE Mean (bias corrected)	0.0977	MLE Sd (bias corrected)	0.0531
		Approximate Chi Square Value (0.05)	97.39
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	95.28

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.122	95% Adjusted Gamma UCL (use when n<50)	0.125

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.987	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.135	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.605	Mean of logged Data	-2.455
Maximum of Logged Data	-1.44	SD of logged Data	0.533

Assuming Lognormal Distribution

95% H-UCL	0.129	90% Chebyshev (MVUE) UCL	0.137
95% Chebyshev (MVUE) UCL	0.154	97.5% Chebyshev (MVUE) UCL	0.178
99% Chebyshev (MVUE) UCL	0.226		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.118	95% Jackknife UCL	0.119
95% Standard Bootstrap UCL	0.117	95% Bootstrap-t UCL	0.125

95% Hall's Bootstrap UCL	0.127	95% Percentile Bootstrap UCL	0.119
95% BCA Bootstrap UCL	0.12		
90% Chebyshev(Mean, Sd) UCL	0.134	95% Chebyshev(Mean, Sd) UCL	0.151
97.5% Chebyshev(Mean, Sd) UCL	0.174	99% Chebyshev(Mean, Sd) UCL	0.22

Suggested UCL to Use

95% Student's-t UCL	0.119

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	6.0200E-4	Mean	0.0152
Maximum	0.0635	Median	0.00682
SD	0.02	Std. Error of Mean	0.00472
Coefficient of Variation	1.32	Skewness	1.667

Normal GOF Test

Shapiro Wilk Test Statistic	0.698	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.334	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0234	95% Adjusted-CLT UCL (Chen-1995)	0.0249
		95% Modified-t UCL (Johnson-1978)	0.0237

Gamma GOF Test

A-D Test Statistic	0.667	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.778	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.189	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.211	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.749	k star (bias corrected MLE)	0.662
Theta hat (MLE)	0.0202	Theta star (bias corrected MLE)	0.0229
nu hat (MLE)	26.98	nu star (bias corrected)	23.82
MLE Mean (bias corrected)	0.0152	MLE Sd (bias corrected)	0.0186
		Approximate Chi Square Value (0.05)	13.71
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	12.97

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0263	95% Adjusted Gamma UCL (use when n<50)	0.0278

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.415	Mean of logged Data	-4.988
Maximum of Logged Data	-2.757	SD of logged Data	1.354

Assuming Lognormal Distribution

95% H-UCL	0.0487	90% Chebyshev (MVUE) UCL	0.033
95% Chebyshev (MVUE) UCL	0.0409	97.5% Chebyshev (MVUE) UCL	0.0518
99% Chebyshev (MVUE) UCL	0.0733		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0229	95% Jackknife UCL	0.0234
95% Standard Bootstrap UCL	0.0229	95% Bootstrap-t UCL	0.0265

95% Hall's Bootstrap UCL	0.0226	95% Percentile Bootstrap UCL	0.0235
95% BCA Bootstrap UCL	0.0247		
90% Chebyshev(Mean, Sd) UCL	0.0293	95% Chebyshev(Mean, Sd) UCL	0.0357
97.5% Chebyshev(Mean, Sd) UCL	0.0446	99% Chebyshev(Mean, Sd) UCL	0.0621

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0278

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.00603	Mean	0.0189
Maximum	0.0552	Median	0.017
SD	0.0106	Std. Error of Mean	0.0025
Coefficient of Variation	0.559	Skewness	2.51

Normal GOF Test

Shapiro Wilk Test Statistic	0.755	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.223	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0233	95% Adjusted-CLT UCL (Chen-1995)	0.0246
		95% Modified-t UCL (Johnson-1978)	0.0235

Gamma GOF Test

A-D Test Statistic	0.534	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.15	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.7	k star (bias corrected MLE)	3.954
Theta hat (MLE)	0.00403	Theta star (bias corrected MLE)	0.00479
nu hat (MLE)	169.2	nu star (bias corrected)	142.3
MLE Mean (bias corrected)	0.0189	MLE Sd (bias corrected)	0.00952
		Approximate Chi Square Value (0.05)	115.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	113.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0233	95% Adjusted Gamma UCL (use when n<50)	0.0237

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.111	Mean of logged Data	-4.077
Maximum of Logged Data	-2.897	SD of logged Data	0.467

Assuming Lognormal Distribution

95% H-UCL	0.0237	90% Chebyshev (MVUE) UCL	0.0252
95% Chebyshev (MVUE) UCL	0.0281	97.5% Chebyshev (MVUE) UCL	0.0321
99% Chebyshev (MVUE) UCL	0.04		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.023	95% Jackknife UCL	0.0233
95% Standard Bootstrap UCL	0.0229	95% Bootstrap-t UCL	0.0261

95% Hall's Bootstrap UCL	0.0432	95% Percentile Bootstrap UCL	0.023
95% BCA Bootstrap UCL	0.025		
90% Chebyshev(Mean, Sd) UCL	0.0264	95% Chebyshev(Mean, Sd) UCL	0.0298
97.5% Chebyshev(Mean, Sd) UCL	0.0345	99% Chebyshev(Mean, Sd) UCL	0.0438

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0237

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.0027	Mean	0.00628
Maximum	0.0117	Median	0.00603
SD	0.00205	Std. Error of Mean	4.8288E-4
Coefficient of Variation	0.326	Skewness	1.222

Normal GOF Test

Shapiro Wilk Test Statistic	0.872	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.229	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00712	95% Adjusted-CLT UCL (Chen-1995)	0.00723
		95% Modified-t UCL (Johnson-1978)	0.00715

Gamma GOF Test

A-D Test Statistic	0.71	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.187	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.64	k star (bias corrected MLE)	8.902
Theta hat (MLE)	5.9063E-4	Theta star (bias corrected MLE)	7.0581E-4
nu hat (MLE)	383	nu star (bias corrected)	320.5
MLE Mean (bias corrected)	0.00628	MLE Sd (bias corrected)	0.00211
		Approximate Chi Square Value (0.05)	280
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	276.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00719	95% Adjusted Gamma UCL (use when n<50)	0.00729

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.18	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.915	Mean of logged Data	-5.118
Maximum of Logged Data	-4.448	SD of logged Data	0.32

Assuming Lognormal Distribution

95% H-UCL	0.00729	90% Chebyshev (MVUE) UCL	0.00773
95% Chebyshev (MVUE) UCL	0.00839	97.5% Chebyshev (MVUE) UCL	0.00929
99% Chebyshev (MVUE) UCL	0.0111		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00708	95% Jackknife UCL	0.00712
95% Standard Bootstrap UCL	0.00706	95% Bootstrap-t UCL	0.00753

95% Hall's Bootstrap UCL	0.00854	95% Percentile Bootstrap UCL	0.00714
95% BCA Bootstrap UCL	0.00723		
90% Chebyshev(Mean, Sd) UCL	0.00773	95% Chebyshev(Mean, Sd) UCL	0.00839
97.5% Chebyshev(Mean, Sd) UCL	0.0093	99% Chebyshev(Mean, Sd) UCL	0.0111

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00729

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	5.4000E-4	Mean	0.00167
Maximum	0.0047	Median	0.00146
SD	9.2943E-4	Std. Error of Mean	2.1907E-4
Coefficient of Variation	0.557	Skewness	2.197

Normal GOF Test

Shapiro Wilk Test Statistic	0.791	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00205	95% Adjusted-CLT UCL (Chen-1995)	0.00215
		95% Modified-t UCL (Johnson-1978)	0.00207

Gamma GOF Test

A-D Test Statistic	0.542	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.167	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.469	k star (bias corrected MLE)	3.761
Theta hat (MLE)	3.7363E-4	Theta star (bias corrected MLE)	4.4394E-4
nu hat (MLE)	160.9	nu star (bias corrected)	135.4
MLE Mean (bias corrected)	0.00167	MLE Sd (bias corrected)	8.6098E-4
		Approximate Chi Square Value (0.05)	109.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	107.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00206	95% Adjusted Gamma UCL (use when n<50)	0.00211

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.15	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.524	Mean of logged Data	-6.511
Maximum of Logged Data	-5.36	SD of logged Data	0.486

Assuming Lognormal Distribution

95% H-UCL	0.00212	90% Chebyshev (MVUE) UCL	0.00225
95% Chebyshev (MVUE) UCL	0.00252	97.5% Chebyshev (MVUE) UCL	0.00289
99% Chebyshev (MVUE) UCL	0.00362		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00203	95% Jackknife UCL	0.00205
95% Standard Bootstrap UCL	0.00201	95% Bootstrap-t UCL	0.00231

95% Hall's Bootstrap UCL	0.00395	95% Percentile Bootstrap UCL	0.00205
95% BCA Bootstrap UCL	0.00215		
90% Chebyshev(Mean, Sd) UCL	0.00233	95% Chebyshev(Mean, Sd) UCL	0.00262
97.5% Chebyshev(Mean, Sd) UCL	0.00304	99% Chebyshev(Mean, Sd) UCL	0.00385

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00211

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Hexachlorobenzene

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	5.0200E-4	Mean	0.00108
Maximum	0.00222	Median	0.00107
SD	4.2651E-4	Std. Error of Mean	1.0053E-4
Coefficient of Variation	0.394	Skewness	0.894

Normal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00126	95% Adjusted-CLT UCL (Chen-1995)	0.00127
		95% Modified-t UCL (Johnson-1978)	0.00126

Gamma GOF Test

A-D Test Statistic	0.355	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.056	k star (bias corrected MLE)	5.917
Theta hat (MLE)	1.5343E-4	Theta star (bias corrected MLE)	1.8297E-4
nu hat (MLE)	254	nu star (bias corrected)	213
MLE Mean (bias corrected)	0.00108	MLE Sd (bias corrected)	4.4508E-4
		Approximate Chi Square Value (0.05)	180.2
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	177.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00128	95% Adjusted Gamma UCL (use when n<50)	0.0013

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.164	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.597	Mean of logged Data	-6.901
Maximum of Logged Data	-6.11	SD of logged Data	0.396

Assuming Lognormal Distribution

95% H-UCL	0.00131	90% Chebyshev (MVUE) UCL	0.00139
95% Chebyshev (MVUE) UCL	0.00153	97.5% Chebyshev (MVUE) UCL	0.00173
99% Chebyshev (MVUE) UCL	0.00211		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00125	95% Jackknife UCL	0.00126
95% Standard Bootstrap UCL	0.00124	95% Bootstrap-t UCL	0.00127

95% Hall's Bootstrap UCL	0.0013	95% Percentile Bootstrap UCL	0.00125
95% BCA Bootstrap UCL	0.00126		
90% Chebyshev(Mean, Sd) UCL	0.00138	95% Chebyshev(Mean, Sd) UCL	0.00152
97.5% Chebyshev(Mean, Sd) UCL	0.00171	99% Chebyshev(Mean, Sd) UCL	0.00208

Suggested UCL to Use

95% Student's-t UCL	0.00126

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mirex

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	8.4000E-5	Mean	2.7191E-4
Maximum	9.4200E-4	Median	2.1150E-4
SD	2.0886E-4	Std. Error of Mean	4.9228E-5
Coefficient of Variation	0.768	Skewness	2.145

Normal GOF Test

Shapiro Wilk Test Statistic	0.784	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	3.5755E-4	95% Adjusted-CLT UCL (Chen-1995)	3.7948E-4
		95% Modified-t UCL (Johnson-1978)	3.6170E-4

Gamma GOF Test

A-D Test Statistic	0.357	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.487	k star (bias corrected MLE)	2.109
Theta hat (MLE)	1.0934E-4	Theta star (bias corrected MLE)	1.2891E-4
nu hat (MLE)	89.53	nu star (bias corrected)	75.94
MLE Mean (bias corrected)	2.7191E-4	MLE Sd (bias corrected)	1.8722E-4
		Approximate Chi Square Value (0.05)	56.87
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	55.28

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.6311E-4	95% Adjusted Gamma UCL (use when n<50)	3.7351E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0992	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.385	Mean of logged Data	-8.424
Maximum of Logged Data	-6.968	SD of logged Data	0.651

Assuming Lognormal Distribution

95% H-UCL	3.8259E-4	90% Chebyshev (MVUE) UCL	3.9734E-4
95% Chebyshev (MVUE) UCL	4.5616E-4	97.5% Chebyshev (MVUE) UCL	5.3780E-4
99% Chebyshev (MVUE) UCL	6.9817E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.5289E-4	95% Jackknife UCL	3.5755E-4
95% Standard Bootstrap UCL	3.5293E-4	95% Bootstrap-t UCL	4.1698E-4

95% Hall's Bootstrap UCL	7.3748E-4	95% Percentile Bootstrap UCL	3.6111E-4
95% BCA Bootstrap UCL	3.7667E-4		
90% Chebyshev(Mean, Sd) UCL	4.1960E-4	95% Chebyshev(Mean, Sd) UCL	4.8650E-4
97.5% Chebyshev(Mean, Sd) UCL	5.7935E-4	99% Chebyshev(Mean, Sd) UCL	7.6173E-4

Suggested UCL to Use

95% Student's-t UCL 3.5755E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Nonachlor, trans-

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00591	Mean	0.0168
Maximum	0.03	Median	0.0167
SD	0.0058	Std. Error of Mean	0.00137
Coefficient of Variation	0.345	Skewness	0.477

Normal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0192	95% Adjusted-CLT UCL (Chen-1995)	0.0192
		95% Modified-t UCL (Johnson-1978)	0.0192

Gamma GOF Test

A-D Test Statistic	0.285	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.127	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.361	k star (bias corrected MLE)	7.004
Theta hat (MLE)	0.00201	Theta star (bias corrected MLE)	0.0024
nu hat (MLE)	301	nu star (bias corrected)	252.2
MLE Mean (bias corrected)	0.0168	MLE Sd (bias corrected)	0.00635
		Approximate Chi Square Value (0.05)	216.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	213.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0196	95% Adjusted Gamma UCL (use when n<50)	0.0199

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.131	Mean of logged Data	-4.147
Maximum of Logged Data	-3.507	SD of logged Data	0.374

Assuming Lognormal Distribution

95% H-UCL	0.0202	90% Chebyshev (MVUE) UCL	0.0214
95% Chebyshev (MVUE) UCL	0.0235	97.5% Chebyshev (MVUE) UCL	0.0264
99% Chebyshev (MVUE) UCL	0.032		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0191	95% Jackknife UCL	0.0192
95% Standard Bootstrap UCL	0.019	95% Bootstrap-t UCL	0.0192

95% Hall's Bootstrap UCL	0.0194	95% Percentile Bootstrap UCL	0.019
95% BCA Bootstrap UCL	0.0192		
90% Chebyshev(Mean, Sd) UCL	0.0209	95% Chebyshev(Mean, Sd) UCL	0.0228
97.5% Chebyshev(Mean, Sd) UCL	0.0253	99% Chebyshev(Mean, Sd) UCL	0.0304

Suggested UCL to Use

95% Student's-t UCL	0.0192

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Oxychlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.00108	Mean	0.00271
Maximum	0.00453	Median	0.00279
SD	9.5835E-4	Std. Error of Mean	2.2589E-4
Coefficient of Variation	0.354	Skewness	-0.161

Normal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0031	95% Adjusted-CLT UCL (Chen-1995)	0.00307
		95% Modified-t UCL (Johnson-1978)	0.0031

Gamma GOF Test

A-D Test Statistic	0.637	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.186	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.211	k star (bias corrected MLE)	6.046
Theta hat (MLE)	3.7517E-4	Theta star (bias corrected MLE)	4.4744E-4
nu hat (MLE)	259.6	nu star (bias corrected)	217.7
MLE Mean (bias corrected)	0.00271	MLE Sd (bias corrected)	0.0011
		Approximate Chi Square Value (0.05)	184.5
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	181.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00319	95% Adjusted Gamma UCL (use when n<50)	0.00324

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.909	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.208	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.831	Mean of logged Data	-5.983
Maximum of Logged Data	-5.397	SD of logged Data	0.408

Assuming Lognormal Distribution

95% H-UCL	0.00332	90% Chebyshev (MVUE) UCL	0.00353
95% Chebyshev (MVUE) UCL	0.00389	97.5% Chebyshev (MVUE) UCL	0.0044
99% Chebyshev (MVUE) UCL	0.00539		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00308	95% Jackknife UCL	0.0031
95% Standard Bootstrap UCL	0.00307	95% Bootstrap-t UCL	0.0031

95% Hall's Bootstrap UCL	0.00306	95% Percentile Bootstrap UCL	0.00307
95% BCA Bootstrap UCL	0.00305		
90% Chebyshev(Mean, Sd) UCL	0.00338	95% Chebyshev(Mean, Sd) UCL	0.00369
97.5% Chebyshev(Mean, Sd) UCL	0.00412	99% Chebyshev(Mean, Sd) UCL	0.00495

Suggested UCL to Use

95% Student's-t UCL 0.0031

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

cis-Nonachlor

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00241	Mean	0.00655
Maximum	0.0118	Median	0.00649
SD	0.00234	Std. Error of Mean	5.5210E-4
Coefficient of Variation	0.358	Skewness	0.528

Normal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.139	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00751	95% Adjusted-CLT UCL (Chen-1995)	0.00753
		95% Modified-t UCL (Johnson-1978)	0.00752

Gamma GOF Test

A-D Test Statistic	0.186	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.092	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.964	k star (bias corrected MLE)	6.674
Theta hat (MLE)	8.2199E-4	Theta star (bias corrected MLE)	9.8092E-4
nu hat (MLE)	286.7	nu star (bias corrected)	240.3
MLE Mean (bias corrected)	0.00655	MLE Sd (bias corrected)	0.00253
		Approximate Chi Square Value (0.05)	205.4
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	202.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00766	95% Adjusted Gamma UCL (use when n<50)	0.00778

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.028	Mean of logged Data	-5.093
Maximum of Logged Data	-4.44	SD of logged Data	0.38

Assuming Lognormal Distribution

95% H-UCL	0.00787	90% Chebyshev (MVUE) UCL	0.00837
95% Chebyshev (MVUE) UCL	0.00919	97.5% Chebyshev (MVUE) UCL	0.0103
99% Chebyshev (MVUE) UCL	0.0125		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00745	95% Jackknife UCL	0.00751
95% Standard Bootstrap UCL	0.00742	95% Bootstrap-t UCL	0.00765

95% Hall's Bootstrap UCL	0.00766	95% Percentile Bootstrap UCL	0.00745
95% BCA Bootstrap UCL	0.00761		
90% Chebyshev(Mean, Sd) UCL	0.0082	95% Chebyshev(Mean, Sd) UCL	0.00895
97.5% Chebyshev(Mean, Sd) UCL	0.00999	99% Chebyshev(Mean, Sd) UCL	0.012

Suggested UCL to Use

95% Student's-t UCL	0.00751

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Chlordane

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.00111	Mean	0.00387
Maximum	0.0113	Median	0.00355
SD	0.00236	Std. Error of Mean	5.5525E-4
Coefficient of Variation	0.609	Skewness	1.989

Normal GOF Test

Shapiro Wilk Test Statistic	0.825	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.194	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00483	95% Adjusted-CLT UCL (Chen-1995)	0.00506
		95% Modified-t UCL (Johnson-1978)	0.00488

Gamma GOF Test

A-D Test Statistic	0.266	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.127	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.205	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.61	k star (bias corrected MLE)	3.046
Theta hat (MLE)	0.00107	Theta star (bias corrected MLE)	0.00127
nu hat (MLE)	130	nu star (bias corrected)	109.6
MLE Mean (bias corrected)	0.00387	MLE Sd (bias corrected)	0.00222
		Approximate Chi Square Value (0.05)	86.47
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	84.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0049	95% Adjusted Gamma UCL (use when n<50)	0.00502

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.986	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.113	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.803	Mean of logged Data	-5.7
Maximum of Logged Data	-4.483	SD of logged Data	0.547

Assuming Lognormal Distribution

95% H-UCL	0.00511	90% Chebyshev (MVUE) UCL	0.0054
95% Chebyshev (MVUE) UCL	0.0061	97.5% Chebyshev (MVUE) UCL	0.00708
99% Chebyshev (MVUE) UCL	0.00899		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00478	95% Jackknife UCL	0.00483
95% Standard Bootstrap UCL	0.00475	95% Bootstrap-t UCL	0.00529

95% Hall's Bootstrap UCL	0.00989	95% Percentile Bootstrap UCL	0.00481
95% BCA Bootstrap UCL	0.00503		
90% Chebyshev(Mean, Sd) UCL	0.00553	95% Chebyshev(Mean, Sd) UCL	0.00629
97.5% Chebyshev(Mean, Sd) UCL	0.00733	99% Chebyshev(Mean, Sd) UCL	0.00939

Suggested UCL to Use

95% Student's-t UCL 0.00483

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Heptachlor Epoxide

General Statistics

Total Number of Observations	18	Number of Distinct Observations	1
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	1

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable trans-Heptachlor Epoxide was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/12/18 12:41:58 AM
From File	fsh8_SVOC_wide2_flag_sep1_WP.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzaldehyde was not processed!

Pyridine

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Pyridine was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/25/18 2:26:53 PM
From File	fsh4_met_wide2_flag_sep1_WP.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	10
Minimum Detect	5.79	Minimum Non-Detect	4.52
Maximum Detect	15.2	Maximum Non-Detect	5.6
Variance Detects	44.27	Percent Non-Detects	88.89%
Mean Detects	10.5	SD Detects	6.654
Median Detects	10.5	CV Detects	0.634
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	2.239	SD of Logged Detects	0.682

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.184	KM Standard Error of Mean	0.816
KM SD	2.447	95% KM (BCA) UCL	N/A
95% KM (t) UCL	6.603	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	6.525	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	7.63	95% KM Chebyshev UCL	8.739
97.5% KM Chebyshev UCL	10.28	99% KM Chebyshev UCL	13.3

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	4.617	k star (bias corrected MLE)	N/A
Theta hat (MLE)	2.273	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	18.47	nu star (bias corrected)	N/A
Mean (detects)	10.5		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.184	SD (KM)	2.447
Variance (KM)	5.986	SE of Mean (KM)	0.816
k hat (KM)	4.49	k star (KM)	3.778
nu hat (KM)	161.6	nu star (KM)	136
theta hat (KM)	1.155	theta star (KM)	1.372
80% gamma percentile (KM)	7.195	90% gamma percentile (KM)	8.759
95% gamma percentile (KM)	10.2	99% gamma percentile (KM)	13.29

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0357
Approximate Chi Square Value (136.02, α)	110.1	Adjusted Chi Square Value (136.02, β)	107.8
95% Gamma Approximate KM-UCL (use when n>=50)	6.406	95% Gamma Adjusted KM-UCL (use when n<50)	6.539

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.26	Mean in Log Scale	-2.218
SD in Original Scale	3.729	SD in Log Scale	1.925
95% t UCL (assumes normality of ROS data)	2.789	95% Percentile Bootstrap UCL	2.92
95% BCA Bootstrap UCL	3.782	95% Bootstrap t UCL	38.61
95% H-UCL (Log ROS)	4.88		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.59	KM Geo Mean	4.902
KM SD (logged)	0.28	95% Critical H Value (KM-Log)	1.839
KM Standard Error of Mean (logged)	0.0934	95% H-UCL (KM -Log)	5.777
KM SD (logged)	0.28	95% Critical H Value (KM-Log)	1.839
KM Standard Error of Mean (logged)	0.0934		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	3.407	Mean in Log Scale	1.069
SD in Original Scale	3.045	SD in Log Scale	0.46
95% t UCL (Assumes normality)	4.655	95% H-Stat UCL	4.039

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	8.739

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.3	Mean	0.671
Maximum	1.19	Median	0.674
SD	0.235	Std. Error of Mean	0.0554
Coefficient of Variation	0.351	Skewness	0.312

Normal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0857	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.767	95% Adjusted-CLT UCL (Chen-1995)	0.766
		95% Modified-t UCL (Johnson-1978)	0.768

Gamma GOF Test

A-D Test Statistic	0.222	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.106	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.123	k star (bias corrected MLE)	6.806
Theta hat (MLE)	0.0826	Theta star (bias corrected MLE)	0.0986
nu hat (MLE)	292.4	nu star (bias corrected)	245
MLE Mean (bias corrected)	0.671	MLE Sd (bias corrected)	0.257
		Approximate Chi Square Value (0.05)	209.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	206.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.783	95% Adjusted Gamma UCL (use when n<50)	0.795

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.132	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.204	Mean of logged Data	-0.462
Maximum of Logged Data	0.174	SD of logged Data	0.375

Assuming Lognormal Distribution

95% H-UCL	0.804	90% Chebyshev (MVUE) UCL	0.855
95% Chebyshev (MVUE) UCL	0.938	97.5% Chebyshev (MVUE) UCL	1.052
99% Chebyshev (MVUE) UCL	1.277		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.762	95% Jackknife UCL	0.767
95% Standard Bootstrap UCL	0.759	95% Bootstrap-t UCL	0.768

95% Hall's Bootstrap UCL	0.772	95% Percentile Bootstrap UCL	0.762
95% BCA Bootstrap UCL	0.761		
90% Chebyshev(Mean, Sd) UCL	0.837	95% Chebyshev(Mean, Sd) UCL	0.912
97.5% Chebyshev(Mean, Sd) UCL	1.017	99% Chebyshev(Mean, Sd) UCL	1.222

Suggested UCL to Use

95% Student's-t UCL	0.767

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic - inorganic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.03	Mean	0.0671
Maximum	0.119	Median	0.0674
SD	0.0235	Std. Error of Mean	0.00554
Coefficient of Variation	0.351	Skewness	0.312

Normal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0857	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0767	95% Adjusted-CLT UCL (Chen-1995)	0.0766
		95% Modified-t UCL (Johnson-1978)	0.0768

Gamma GOF Test

A-D Test Statistic	0.222	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.106	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.123	k star (bias corrected MLE)	6.806
Theta hat (MLE)	0.00826	Theta star (bias corrected MLE)	0.00986
nu hat (MLE)	292.4	nu star (bias corrected)	245
MLE Mean (bias corrected)	0.0671	MLE Sd (bias corrected)	0.0257
		Approximate Chi Square Value (0.05)	209.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	206.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0783	95% Adjusted Gamma UCL (use when n<50)	0.0795

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.132	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.507	Mean of logged Data	-2.765
Maximum of Logged Data	-2.129	SD of logged Data	0.375

Assuming Lognormal Distribution

95% H-UCL	0.0804	90% Chebyshev (MVUE) UCL	0.0855
95% Chebyshev (MVUE) UCL	0.0938	97.5% Chebyshev (MVUE) UCL	0.105
99% Chebyshev (MVUE) UCL	0.128		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0762	95% Jackknife UCL	0.0767
95% Standard Bootstrap UCL	0.0758	95% Bootstrap-t UCL	0.0773

95% Hall's Bootstrap UCL	0.0778	95% Percentile Bootstrap UCL	0.0764
95% BCA Bootstrap UCL	0.076		
90% Chebyshev(Mean, Sd) UCL	0.0837	95% Chebyshev(Mean, Sd) UCL	0.0912
97.5% Chebyshev(Mean, Sd) UCL	0.102	99% Chebyshev(Mean, Sd) UCL	0.122

Suggested UCL to Use

95% Student's-t UCL	0.0767

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic - organic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.27	Mean	0.604
Maximum	1.071	Median	0.607
SD	0.212	Std. Error of Mean	0.0499
Coefficient of Variation	0.351	Skewness	0.312

Normal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0857	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.69	95% Adjusted-CLT UCL (Chen-1995)	0.69
		95% Modified-t UCL (Johnson-1978)	0.691

Gamma GOF Test

A-D Test Statistic	0.222	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.106	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.123	k star (bias corrected MLE)	6.806
Theta hat (MLE)	0.0743	Theta star (bias corrected MLE)	0.0887
nu hat (MLE)	292.4	nu star (bias corrected)	245
MLE Mean (bias corrected)	0.604	MLE Sd (bias corrected)	0.231
		Approximate Chi Square Value (0.05)	209.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	206.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.705	95% Adjusted Gamma UCL (use when n<50)	0.716

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.132	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.309	Mean of logged Data	-0.567
Maximum of Logged Data	0.0686	SD of logged Data	0.375

Assuming Lognormal Distribution

95% H-UCL	0.724	90% Chebyshev (MVUE) UCL	0.77
95% Chebyshev (MVUE) UCL	0.844	97.5% Chebyshev (MVUE) UCL	0.947
99% Chebyshev (MVUE) UCL	1.15		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.686	95% Jackknife UCL	0.69
95% Standard Bootstrap UCL	0.683	95% Bootstrap-t UCL	0.696

95% Hall's Bootstrap UCL	0.697	95% Percentile Bootstrap UCL	0.681
95% BCA Bootstrap UCL	0.689		
90% Chebyshev(Mean, Sd) UCL	0.753	95% Chebyshev(Mean, Sd) UCL	0.821
97.5% Chebyshev(Mean, Sd) UCL	0.915	99% Chebyshev(Mean, Sd) UCL	1.1

Suggested UCL to Use

95% Student's-t UCL	0.69

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cadmium was not processed!

Chromium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	13	Number of Non-Detects	5
Number of Distinct Detects	12	Number of Distinct Non-Detects	5
Minimum Detect	0.0979	Minimum Non-Detect	0.0806
Maximum Detect	0.278	Maximum Non-Detect	0.0971
Variance Detects	0.00242	Percent Non-Detects	27.78%
Mean Detects	0.133	SD Detects	0.0492
Median Detects	0.111	CV Detects	0.369
Skewness Detects	2.365	Kurtosis Detects	6.538
Mean of Logged Detects	-2.061	SD of Logged Detects	0.298

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.706	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.119	KM Standard Error of Mean	0.0114
KM SD	0.0466	95% KM (BCA) UCL	0.14
95% KM (t) UCL	0.139	95% KM (Percentile Bootstrap) UCL	0.139
95% KM (z) UCL	0.138	95% KM Bootstrap t UCL	0.152
90% KM Chebyshev UCL	0.153	95% KM Chebyshev UCL	0.169
97.5% KM Chebyshev UCL	0.19	99% KM Chebyshev UCL	0.233

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.997	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.734	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.225	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.237	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.85	k star (bias corrected MLE)	8.401
Theta hat (MLE)	0.0123	Theta star (bias corrected MLE)	0.0159
nu hat (MLE)	282.2	nu star (bias corrected)	218.4
Mean (detects)	0.133		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0421	Mean	0.108
Maximum	0.278	Median	0.104
SD	0.059	CV	0.546
k hat (MLE)	3.647	k star (bias corrected MLE)	3.076
Theta hat (MLE)	0.0296	Theta star (bias corrected MLE)	0.0351
nu hat (MLE)	131.3	nu star (bias corrected)	110.7
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (110.73, α)	87.44	Adjusted Chi Square Value (110.73, β)	85.46
95% Gamma Approximate UCL (use when n>=50)	0.137	95% Gamma Adjusted UCL (use when n<50)	0.14

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.119	SD (KM)	0.0466
Variance (KM)	0.00217	SE of Mean (KM)	0.0114
k hat (KM)	6.489	k star (KM)	5.445

nu hat (KM)	233.6	nu star (KM)	196
theta hat (KM)	0.0183	theta star (KM)	0.0218
80% gamma percentile (KM)	0.158	90% gamma percentile (KM)	0.187
95% gamma percentile (KM)	0.213	99% gamma percentile (KM)	0.268

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (196.01, α)	164.6	Adjusted Chi Square Value (196.01, β)	161.9
95% Gamma Approximate KM-UCL (use when n>=50)	0.141	95% Gamma Adjusted KM-UCL (use when n<50)	0.144

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.813	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.114	Mean in Log Scale	-2.248
SD in Original Scale	0.052	SD in Log Scale	0.398
95% t UCL (assumes normality of ROS data)	0.136	95% Percentile Bootstrap UCL	0.134
95% BCA Bootstrap UCL	0.139	95% Bootstrap t UCL	0.145
95% H-UCL (Log ROS)	0.138		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.188	KM Geo Mean	0.112
KM SD (logged)	0.318	95% Critical H Value (KM-Log)	1.866
KM Standard Error of Mean (logged)	0.078	95% H-UCL (KM -Log)	0.136
KM SD (logged)	0.318	95% Critical H Value (KM-Log)	1.866
KM Standard Error of Mean (logged)	0.078		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.109	Mean in Log Scale	-2.348
SD in Original Scale	0.0579	SD in Log Scale	0.539
95% t UCL (Assumes normality)	0.133	95% H-Stat UCL	0.145

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	0.144	95% GROS Adjusted Gamma UCL	0.14

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cobalt was not processed!

Copper

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.541	Mean	0.607
Maximum	0.801	Median	0.605
SD	0.0624	Std. Error of Mean	0.0147
Coefficient of Variation	0.103	Skewness	1.789

Normal GOF Test

Shapiro Wilk Test Statistic	0.836	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.633	95% Adjusted-CLT UCL (Chen-1995)	0.638
		95% Modified-t UCL (Johnson-1978)	0.634

Gamma GOF Test

A-D Test Statistic	0.64	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.159	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	109.7	k star (bias corrected MLE)	91.42
Theta hat (MLE)	0.00554	Theta star (bias corrected MLE)	0.00664
nu hat (MLE)	3948	nu star (bias corrected)	3291
MLE Mean (bias corrected)	0.607	MLE Sd (bias corrected)	0.0635
		Approximate Chi Square Value (0.05)	3159
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	3146

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.633	95% Adjusted Gamma UCL (use when n<50)	0.635

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.877	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.614	Mean of logged Data	-0.503
Maximum of Logged Data	-0.222	SD of logged Data	0.0963

Assuming Lognormal Distribution

95% H-UCL	N/A	90% Chebyshev (MVUE) UCL	0.649
95% Chebyshev (MVUE) UCL	0.667	97.5% Chebyshev (MVUE) UCL	0.693
99% Chebyshev (MVUE) UCL	0.744		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.631	95% Jackknife UCL	0.633
95% Standard Bootstrap UCL	0.631	95% Bootstrap-t UCL	0.644
95% Hall's Bootstrap UCL	0.676	95% Percentile Bootstrap UCL	0.632
95% BCA Bootstrap UCL	0.637		
90% Chebyshev(Mean, Sd) UCL	0.651	95% Chebyshev(Mean, Sd) UCL	0.671
97.5% Chebyshev(Mean, Sd) UCL	0.699	99% Chebyshev(Mean, Sd) UCL	0.754

Suggested UCL to Use

95% Student's-t UCL	0.633

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	18	Number of Distinct Observations	15
Number of Detects	17	Number of Non-Detects	1
Number of Distinct Detects	14	Number of Distinct Non-Detects	1
Minimum Detect	4.86	Minimum Non-Detect	4.49
Maximum Detect	7.55	Maximum Non-Detect	4.49
Variance Detects	0.722	Percent Non-Detects	5.556%
Mean Detects	5.828	SD Detects	0.85
Median Detects	5.65	CV Detects	0.146
Skewness Detects	0.741	Kurtosis Detects	-0.61
Mean of Logged Detects	1.753	SD of Logged Detects	0.141

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.754	KM Standard Error of Mean	0.208
KM SD	0.858	95% KM (BCA) UCL	6.108
95% KM (t) UCL	6.117	95% KM (Percentile Bootstrap) UCL	6.086
95% KM (z) UCL	6.097	95% KM Bootstrap t UCL	6.162
90% KM Chebyshev UCL	6.379	95% KM Chebyshev UCL	6.663
97.5% KM Chebyshev UCL	7.056	99% KM Chebyshev UCL	7.828

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.566	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.173	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	52.41	k star (bias corrected MLE)	43.2
Theta hat (MLE)	0.111	Theta star (bias corrected MLE)	0.135
nu hat (MLE)	1782	nu star (bias corrected)	1469
Mean (detects)	5.828		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.924	Mean	5.722
Maximum	7.55	Median	5.565
SD	0.939	CV	0.164
k hat (MLE)	39.54	k star (bias corrected MLE)	32.99
Theta hat (MLE)	0.145	Theta star (bias corrected MLE)	0.173
nu hat (MLE)	1423	nu star (bias corrected)	1188
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (N/A, α)	1108	Adjusted Chi Square Value (N/A, β)	1101
95% Gamma Approximate UCL (use when n>=50)	6.13	95% Gamma Adjusted UCL (use when n<50)	6.171

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.754	SD (KM)	0.858
Variance (KM)	0.736	SE of Mean (KM)	0.208
k hat (KM)	44.97	k star (KM)	37.51

nu hat (KM)	1619	nu star (KM)	1351
theta hat (KM)	0.128	theta star (KM)	0.153
80% gamma percentile (KM)	6.526	90% gamma percentile (KM)	6.986
95% gamma percentile (KM)	7.381	99% gamma percentile (KM)	8.162

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1266	Adjusted Chi Square Value (N/A, β)	1258
95% Gamma Approximate KM-UCL (use when n>=50)	6.137	95% Gamma Adjusted KM-UCL (use when n<50)	6.175

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.732	Mean in Log Scale	1.734
SD in Original Scale	0.921	SD in Log Scale	0.159
95% t UCL (assumes normality of ROS data)	6.109	95% Percentile Bootstrap UCL	6.091
95% BCA Bootstrap UCL	6.092	95% Bootstrap t UCL	6.152
95% H-UCL (Log ROS)	6.139		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.739	KM Geo Mean	5.693
KM SD (logged)	0.145	95% Critical H Value (KM-Log)	1.756
KM Standard Error of Mean (logged)	0.0352	95% H-UCL (KM -Log)	6.119
KM SD (logged)	0.145	95% Critical H Value (KM-Log)	1.756
KM Standard Error of Mean (logged)	0.0352		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.629	Mean in Log Scale	1.701
SD in Original Scale	1.18	SD in Log Scale	0.261
95% t UCL (Assumes normality)	6.113	95% H-Stat UCL	6.363

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	6.117

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Number of Detects	14	Number of Non-Detects	4
Number of Distinct Detects	13	Number of Distinct Non-Detects	4
Minimum Detect	0.0257	Minimum Non-Detect	0.0226
Maximum Detect	0.103	Maximum Non-Detect	0.0252
Variance Detects	4.2290E-4	Percent Non-Detects	22.22%
Mean Detects	0.0442	SD Detects	0.0206
Median Detects	0.0419	CV Detects	0.466
Skewness Detects	1.963	Kurtosis Detects	4.811
Mean of Logged Detects	-3.199	SD of Logged Detects	0.395

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.795	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.254	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0394	KM Standard Error of Mean	0.0048
KM SD	0.0196	95% KM (BCA) UCL	0.048
95% KM (t) UCL	0.0477	95% KM (Percentile Bootstrap) UCL	0.048
95% KM (z) UCL	0.0473	95% KM Bootstrap t UCL	0.0524
90% KM Chebyshev UCL	0.0538	95% KM Chebyshev UCL	0.0603
97.5% KM Chebyshev UCL	0.0694	99% KM Chebyshev UCL	0.0872

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.536	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.197	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.229	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.455	k star (bias corrected MLE)	5.119
Theta hat (MLE)	0.00684	Theta star (bias corrected MLE)	0.00863
nu hat (MLE)	180.7	nu star (bias corrected)	143.3
Mean (detects)	0.0442		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0366
Maximum	0.103	Median	0.0357
SD	0.0232	CV	0.634
k hat (MLE)	2.615	k star (bias corrected MLE)	2.216
Theta hat (MLE)	0.014	Theta star (bias corrected MLE)	0.0165
nu hat (MLE)	94.12	nu star (bias corrected)	79.77
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (79.77, α)	60.19	Adjusted Chi Square Value (79.77, β)	58.56
95% Gamma Approximate UCL (use when n>=50)	0.0485	95% Gamma Adjusted UCL (use when n<50)	0.0498

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0394	SD (KM)	0.0196
Variance (KM)	3.8583E-4	SE of Mean (KM)	0.0048
k hat (KM)	4.018	k star (KM)	3.386

nu hat (KM)	144.7	nu star (KM)	121.9
theta hat (KM)	0.0098	theta star (KM)	0.0116
80% gamma percentile (KM)	0.0554	90% gamma percentile (KM)	0.0681
95% gamma percentile (KM)	0.0799	99% gamma percentile (KM)	0.105

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (121.88, α)	97.39	Adjusted Chi Square Value (121.88, β)	95.29
95% Gamma Approximate KM-UCL (use when n>=50)	0.0493	95% Gamma Adjusted KM-UCL (use when n<50)	0.0504

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.038	Mean in Log Scale	-3.401
SD in Original Scale	0.0215	SD in Log Scale	0.52
95% t UCL (assumes normality of ROS data)	0.0468	95% Percentile Bootstrap UCL	0.0461
95% BCA Bootstrap UCL	0.0487	95% Bootstrap t UCL	0.0506
95% H-UCL (Log ROS)	0.0494		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.33	KM Geo Mean	0.0358
KM SD (logged)	0.416	95% Critical H Value (KM-Log)	1.945
KM Standard Error of Mean (logged)	0.102	95% H-UCL (KM -Log)	0.0475
KM SD (logged)	0.416	95% Critical H Value (KM-Log)	1.945
KM Standard Error of Mean (logged)	0.102		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.037	Mean in Log Scale	-3.474
SD in Original Scale	0.0227	SD in Log Scale	0.632
95% t UCL (Assumes normality)	0.0463	95% H-Stat UCL	0.0527

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	0.0504	95% GROS Adjusted Gamma UCL	0.0498

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Manganese

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
Number of Detects	10	Number of Non-Detects	8
Number of Distinct Detects	10	Number of Distinct Non-Detects	6
Minimum Detect	0.212	Minimum Non-Detect	0.135
Maximum Detect	0.871	Maximum Non-Detect	0.154
Variance Detects	0.0411	Percent Non-Detects	44.44%
Mean Detects	0.418	SD Detects	0.203
Median Detects	0.356	CV Detects	0.485
Skewness Detects	1.311	Kurtosis Detects	1.765
Mean of Logged Detects	-0.967	SD of Logged Detects	0.45

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.886	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.292	KM Standard Error of Mean	0.0499
KM SD	0.201	95% KM (BCA) UCL	0.371
95% KM (t) UCL	0.379	95% KM (Percentile Bootstrap) UCL	0.375
95% KM (z) UCL	0.374	95% KM Bootstrap t UCL	0.408
90% KM Chebyshev UCL	0.442	95% KM Chebyshev UCL	0.51
97.5% KM Chebyshev UCL	0.604	99% KM Chebyshev UCL	0.789

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.252	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.729	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.267	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.445	k star (bias corrected MLE)	3.878
Theta hat (MLE)	0.0768	Theta star (bias corrected MLE)	0.108
nu hat (MLE)	108.9	nu star (bias corrected)	77.57
Mean (detects)	0.418		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.24
Maximum	0.871	Median	0.216
SD	0.253	CV	1.057
k hat (MLE)	0.588	k star (bias corrected MLE)	0.527
Theta hat (MLE)	0.407	Theta star (bias corrected MLE)	0.454
nu hat (MLE)	21.17	nu star (bias corrected)	18.98
Adjusted Level of Significance (β)	0.0357		
Approximate Chi Square Value (18.98, α)	10.1	Adjusted Chi Square Value (18.98, β)	9.483
95% Gamma Approximate UCL (use when n>=50)	0.45	95% Gamma Adjusted UCL (use when n<50)	0.479

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.292	SD (KM)	0.201
Variance (KM)	0.0403	SE of Mean (KM)	0.0499
k hat (KM)	2.117	k star (KM)	1.801

nu hat (KM)	76.21	nu star (KM)	64.84
theta hat (KM)	0.138	theta star (KM)	0.162
80% gamma percentile (KM)	0.443	90% gamma percentile (KM)	0.583
95% gamma percentile (KM)	0.717	99% gamma percentile (KM)	1.016

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (64.84, α)	47.31	Adjusted Chi Square Value (64.84, β)	45.88
95% Gamma Approximate KM-UCL (use when n>=50)	0.401	95% Gamma Adjusted KM-UCL (use when n<50)	0.413

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.112	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.283	Mean in Log Scale	-1.508
SD in Original Scale	0.215	SD in Log Scale	0.713
95% t UCL (assumes normality of ROS data)	0.371	95% Percentile Bootstrap UCL	0.366
95% BCA Bootstrap UCL	0.382	95% Bootstrap t UCL	0.399
95% H-UCL (Log ROS)	0.421		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.427	KM Geo Mean	0.24
KM SD (logged)	0.605	95% Critical H Value (KM-Log)	2.129
KM Standard Error of Mean (logged)	0.15	95% H-UCL (KM -Log)	0.394
KM SD (logged)	0.605	95% Critical H Value (KM-Log)	2.129
KM Standard Error of Mean (logged)	0.15		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.265	Mean in Log Scale	-1.702
SD in Original Scale	0.23	SD in Log Scale	0.908
95% t UCL (Assumes normality)	0.359	95% H-Stat UCL	0.478

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.379

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	0.133	Mean	0.269
Maximum	0.43	Median	0.255
SD	0.0852	Std. Error of Mean	0.0201
Coefficient of Variation	0.317	Skewness	0.152

Normal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.304	95% Adjusted-CLT UCL (Chen-1995)	0.303
		95% Modified-t UCL (Johnson-1978)	0.304

Gamma GOF Test

A-D Test Statistic	0.474	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.194	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.07	k star (bias corrected MLE)	8.43
Theta hat (MLE)	0.0267	Theta star (bias corrected MLE)	0.0319
nu hat (MLE)	362.6	nu star (bias corrected)	303.5
MLE Mean (bias corrected)	0.269	MLE Sd (bias corrected)	0.0926
		Approximate Chi Square Value (0.05)	264.1
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	260.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.309	95% Adjusted Gamma UCL (use when n<50)	0.313

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.194	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.017	Mean of logged Data	-1.364
Maximum of Logged Data	-0.845	SD of logged Data	0.333

Assuming Lognormal Distribution

95% H-UCL	0.314	90% Chebyshev (MVUE) UCL	0.334
95% Chebyshev (MVUE) UCL	0.363	97.5% Chebyshev (MVUE) UCL	0.404
99% Chebyshev (MVUE) UCL	0.483		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.302	95% Jackknife UCL	0.304
95% Standard Bootstrap UCL	0.301	95% Bootstrap-t UCL	0.305

95% Hall's Bootstrap UCL	0.303	95% Percentile Bootstrap UCL	0.301
95% BCA Bootstrap UCL	0.301		
90% Chebyshev(Mean, Sd) UCL	0.329	95% Chebyshev(Mean, Sd) UCL	0.356
97.5% Chebyshev(Mean, Sd) UCL	0.394	99% Chebyshev(Mean, Sd) UCL	0.469

Suggested UCL to Use

95% Student's-t UCL	0.304

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Methyl Mercury

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	2
Minimum	0.153	Mean	0.352
Maximum	0.657	Median	0.342
SD	0.139	Std. Error of Mean	0.0347
Coefficient of Variation	0.394	Skewness	0.441

Normal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.413	95% Adjusted-CLT UCL (Chen-1995)	0.413
		95% Modified-t UCL (Johnson-1978)	0.413

Gamma GOF Test

A-D Test Statistic	0.319	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.164	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.624	k star (bias corrected MLE)	5.424
Theta hat (MLE)	0.0531	Theta star (bias corrected MLE)	0.0649
nu hat (MLE)	212	nu star (bias corrected)	173.6
MLE Mean (bias corrected)	0.352	MLE Sd (bias corrected)	0.151
		Approximate Chi Square Value (0.05)	144.1
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	141

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.424	95% Adjusted Gamma UCL (use when n<50)	0.433

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.169	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.877	Mean of logged Data	-1.122
Maximum of Logged Data	-0.42	SD of logged Data	0.415

Assuming Lognormal Distribution

95% H-UCL	0.439	90% Chebyshev (MVUE) UCL	0.466
95% Chebyshev (MVUE) UCL	0.517	97.5% Chebyshev (MVUE) UCL	0.587
99% Chebyshev (MVUE) UCL	0.726		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.409	95% Jackknife UCL	0.413
95% Standard Bootstrap UCL	0.407	95% Bootstrap-t UCL	0.421

95% Hall's Bootstrap UCL	0.414	95% Percentile Bootstrap UCL	0.408
95% BCA Bootstrap UCL	0.413		
90% Chebyshev(Mean, Sd) UCL	0.456	95% Chebyshev(Mean, Sd) UCL	0.503
97.5% Chebyshev(Mean, Sd) UCL	0.569	99% Chebyshev(Mean, Sd) UCL	0.697

Suggested UCL to Use

95% Student's-t UCL	0.413

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Selenium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	0.484	Mean	0.61
Maximum	0.811	Median	0.6
SD	0.0977	Std. Error of Mean	0.023
Coefficient of Variation	0.16	Skewness	0.826

Normal GOF Test

Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.65	95% Adjusted-CLT UCL (Chen-1995)	0.652
		95% Modified-t UCL (Johnson-1978)	0.651

Gamma GOF Test

A-D Test Statistic	0.549	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.162	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	43.48	k star (bias corrected MLE)	36.27
Theta hat (MLE)	0.014	Theta star (bias corrected MLE)	0.0168
nu hat (MLE)	1565	nu star (bias corrected)	1306
MLE Mean (bias corrected)	0.61	MLE Sd (bias corrected)	0.101
		Approximate Chi Square Value (0.05)	1223
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	1215

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.651	95% Adjusted Gamma UCL (use when n<50)	0.655

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.926	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.726	Mean of logged Data	-0.506
Maximum of Logged Data	-0.209	SD of logged Data	0.155

Assuming Lognormal Distribution

95% H-UCL	0.652	90% Chebyshev (MVUE) UCL	0.676
95% Chebyshev (MVUE) UCL	0.707	97.5% Chebyshev (MVUE) UCL	0.749
99% Chebyshev (MVUE) UCL	0.831		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.648	95% Jackknife UCL	0.65
95% Standard Bootstrap UCL	0.646	95% Bootstrap-t UCL	0.658

95% Hall's Bootstrap UCL	0.656	95% Percentile Bootstrap UCL	0.648
95% BCA Bootstrap UCL	0.65		
90% Chebyshev(Mean, Sd) UCL	0.679	95% Chebyshev(Mean, Sd) UCL	0.71
97.5% Chebyshev(Mean, Sd) UCL	0.754	99% Chebyshev(Mean, Sd) UCL	0.839

Suggested UCL to Use

95% Student's-t UCL	0.65

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Silver

General Statistics

Total Number of Observations	18	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	18
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Silver was not processed!

Vanadium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	13
Number of Detects	1	Number of Non-Detects	17
Number of Distinct Detects	1	Number of Distinct Non-Detects	12

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Vanadium was not processed!

Zinc

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	6.87	Mean	11.22
Maximum	18.7	Median	11
SD	3.105	Std. Error of Mean	0.732
Coefficient of Variation	0.277	Skewness	0.821

Normal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.185	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	12.49	95% Adjusted-CLT UCL (Chen-1995)	12.57
		95% Modified-t UCL (Johnson-1978)	12.52

Gamma GOF Test

A-D Test Statistic	0.478	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.46	k star (bias corrected MLE)	12.09
Theta hat (MLE)	0.776	Theta star (bias corrected MLE)	0.928
nu hat (MLE)	520.7	nu star (bias corrected)	435.2
MLE Mean (bias corrected)	11.22	MLE Sd (bias corrected)	3.227
		Approximate Chi Square Value (0.05)	387.8
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	383.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	12.59	95% Adjusted Gamma UCL (use when n<50)	12.73

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.927	Mean of logged Data	2.383
Maximum of Logged Data	2.929	SD of logged Data	0.272

Assuming Lognormal Distribution

95% H-UCL	12.69	90% Chebyshev (MVUE) UCL	13.4
95% Chebyshev (MVUE) UCL	14.38	97.5% Chebyshev (MVUE) UCL	15.75
99% Chebyshev (MVUE) UCL	18.45		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	12.42	95% Jackknife UCL	12.49
95% Standard Bootstrap UCL	12.35	95% Bootstrap-t UCL	12.76

95% Hall's Bootstrap UCL	12.93	95% Percentile Bootstrap UCL	12.44
95% BCA Bootstrap UCL	12.42		
90% Chebyshev(Mean, Sd) UCL	13.41	95% Chebyshev(Mean, Sd) UCL	14.41
97.5% Chebyshev(Mean, Sd) UCL	15.79	99% Chebyshev(Mean, Sd) UCL	18.5

Suggested UCL to Use

95% Student's-t UCL	12.49

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Blue Crab – Muscle Only

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:16:50 PM
From File	crb_mus1_dlc_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	8.4100E-7	Mean	3.2056E-6
Maximum	8.5300E-6	Median	2.4500E-6
SD	2.1435E-6	Std. Error of Mean	3.5239E-7
Coefficient of Variation	N/A	Skewness	1.225

Normal GOF Test

Shapiro Wilk Test Statistic	0.828	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.8006E-6	95% Adjusted-CLT UCL (Chen-1995)	3.8611E-6
		95% Modified-t UCL (Johnson-1978)	3.8124E-6

Gamma GOF Test

A-D Test Statistic	0.873	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.136	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.725	k star (bias corrected MLE)	2.522
Theta hat (MLE)	1.1765E-6	Theta star (bias corrected MLE)	1.2712E-6
nu hat (MLE)	201.6	nu star (bias corrected)	186.6
MLE Mean (bias corrected)	3.2056E-6	MLE Sd (bias corrected)	2.0187E-6
		Approximate Chi Square Value (0.05)	156
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	154.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.8344E-6	95% Adjusted Gamma UCL (use when n<50)	3.8644E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.99	Mean of logged Data	-12.85
Maximum of Logged Data	-11.67	SD of logged Data	0.624

Assuming Lognormal Distribution

95% H-UCL	3.9536E-6	90% Chebyshev (MVUE) UCL	4.2381E-6
95% Chebyshev (MVUE) UCL	4.7142E-6	97.5% Chebyshev (MVUE) UCL	5.3751E-6
99% Chebyshev (MVUE) UCL	6.6732E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.7853E-6	95% Jackknife UCL	3.8006E-6
95% Standard Bootstrap UCL	3.7804E-6	95% Bootstrap-t UCL	3.9424E-6
95% Hall's Bootstrap UCL	3.8419E-6	95% Percentile Bootstrap UCL	3.7970E-6
95% BCA Bootstrap UCL	3.8833E-6		
90% Chebyshev(Mean, Sd) UCL	4.2628E-6	95% Chebyshev(Mean, Sd) UCL	4.7417E-6
97.5% Chebyshev(Mean, Sd) UCL	5.4063E-6	99% Chebyshev(Mean, Sd) UCL	6.7119E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 3.8644E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	30	Number of Non-Detects	7
Number of Distinct Detects	29	Number of Distinct Non-Detects	7
Minimum Detect	5.1200E-8	Minimum Non-Detect	2.8100E-8
Maximum Detect	5.3200E-7	Maximum Non-Detect	7.0500E-8
Variance Detects	2.024E-14	Percent Non-Detects	18.92%
Mean Detects	1.7622E-7	SD Detects	1.4228E-7
Median Detects	1.0550E-7	CV Detects	N/A
Skewness Detects	1.484	Kurtosis Detects	1.021
Mean of Logged Detects	-15.8	SD of Logged Detects	0.685

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.758	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.927	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.159	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.5000E-7	KM Standard Error of Mean	2.2981E-8
KM SD	1.3727E-7	95% KM (BCA) UCL	1.8611E-7
95% KM (t) UCL	1.8879E-7	95% KM (Percentile Bootstrap) UCL	1.8820E-7
95% KM (z) UCL	1.8780E-7	95% KM Bootstrap t UCL	1.9988E-7
90% KM Chebyshev UCL	2.1894E-7	95% KM Chebyshev UCL	2.5017E-7
97.5% KM Chebyshev UCL	2.9351E-7	99% KM Chebyshev UCL	3.7865E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.618	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.198	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.162	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.141	k star (bias corrected MLE)	1.949
Theta hat (MLE)	8.2315E-8	Theta star (bias corrected MLE)	9.0418E-8
nu hat (MLE)	128.4	nu star (bias corrected)	116.9
Mean (detects)	1.7622E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.1200E-8	Mean	0.00189
Maximum	0.01	Median	1.3600E-7
SD	0.00397	CV	2.099
k hat (MLE)	0.108	k star (bias corrected MLE)	0.118
Theta hat (MLE)	0.0175	Theta star (bias corrected MLE)	0.0161
nu hat (MLE)	8.022	nu star (bias corrected)	8.705
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.71, α)	3.15	Adjusted Chi Square Value (8.71, β)	3.006
95% Gamma Approximate UCL (use when n>=50)	0.00523	95% Gamma Adjusted UCL (use when n<50)	0.00548

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.5000E-7	SD (KM)	1.3727E-7
Variance (KM)	1.884E-14	SE of Mean (KM)	2.2981E-8
k hat (KM)	1.194	k star (KM)	1.115

nu hat (KM)	88.36	nu star (KM)	82.53
theta hat (KM)	1.2562E-7	theta star (KM)	1.3450E-7
80% gamma percentile (KM)	2.3915E-7	90% gamma percentile (KM)	3.3620E-7
95% gamma percentile (KM)	4.3245E-7	99% gamma percentile (KM)	6.5418E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (82.53, α)	62.59	Adjusted Chi Square Value (82.53, β)	61.84
95% Gamma Approximate KM-UCL (use when n>=50)	1.9777E-7	95% Gamma Adjusted KM-UCL (use when n<50)	2.0018E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.907	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.927	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.169	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.159	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.4922E-7	Mean in Log Scale	-16.07
SD in Original Scale	1.3972E-7	SD in Log Scale	0.838
95% t UCL (assumes normality of ROS data)	1.8800E-7	95% Percentile Bootstrap UCL	1.8767E-7
95% BCA Bootstrap UCL	1.9286E-7	95% Bootstrap t UCL	1.9622E-7
95% H-UCL (Log ROS)	2.0273E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.06	KM Geo Mean	1.0627E-7
KM SD (logged)	0.815	95% Critical H Value (KM-Log)	2.191
KM Standard Error of Mean (logged)	0.139	95% H-UCL (KM -Log)	1.9938E-7
KM SD (logged)	0.815	95% Critical H Value (KM-Log)	2.191
KM Standard Error of Mean (logged)	0.139		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.4801E-7	Mean in Log Scale	-16.12
SD in Original Scale	1.4080E-7	SD in Log Scale	0.921
95% t UCL (Assumes normality)	1.8709E-7	95% H-Stat UCL	2.1705E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 2.5017E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	24	Number of Non-Detects	13
Number of Distinct Detects	24	Number of Distinct Non-Detects	13
Minimum Detect	1.4800E-8	Minimum Non-Detect	3.5900E-9
Maximum Detect	4.6400E-8	Maximum Non-Detect	3.2100E-8
Variance Detects	1.001E-16	Percent Non-Detects	35.14%
Mean Detects	2.9896E-8	SD Detects	1.0007E-8
Median Detects	2.8800E-8	CV Detects	N/A
Skewness Detects	0.231	Kurtosis Detects	-1.131
Mean of Logged Detects	-17.38	SD of Logged Detects	0.35

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.916	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.177	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.3502E-8	KM Standard Error of Mean	2.2941E-9
KM SD	1.2551E-8	95% KM (BCA) UCL	2.8102E-8
95% KM (t) UCL	2.7375E-8	95% KM (Percentile Bootstrap) UCL	2.7694E-8
95% KM (z) UCL	2.7275E-8	95% KM Bootstrap t UCL	2.7135E-8
90% KM Chebyshev UCL	3.0384E-8	95% KM Chebyshev UCL	3.3501E-8
97.5% KM Chebyshev UCL	3.7828E-8	99% KM Chebyshev UCL	4.6327E-8

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.341	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.178	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	8.975	k star (bias corrected MLE)	7.881
Theta hat (MLE)	3.3311E-9	Theta star (bias corrected MLE)	3.7936E-9
nu hat (MLE)	430.8	nu star (bias corrected)	378.3
Mean (detects)	2.9896E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.4800E-8	Mean	0.00351
Maximum	0.01	Median	3.9200E-8
SD	0.00484	CV	1.377
k hat (MLE)	0.111	k star (bias corrected MLE)	0.12
Theta hat (MLE)	0.0317	Theta star (bias corrected MLE)	0.0293
nu hat (MLE)	8.191	nu star (bias corrected)	8.86
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.86, α)	3.243	Adjusted Chi Square Value (8.86, β)	3.096
95% Gamma Approximate UCL (use when n>=50)	0.0096	95% Gamma Adjusted UCL (use when n<50)	0.0101

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.3502E-8	SD (KM)	1.2551E-8
Variance (KM)	1.575E-16	SE of Mean (KM)	2.2941E-9
k hat (KM)	3.506	k star (KM)	3.24

nu hat (KM)	259.5	nu star (KM)	239.8
theta hat (KM)	6.7026E-9	theta star (KM)	7.2535E-9
80% gamma percentile (KM)	3.3215E-8	90% gamma percentile (KM)	4.1009E-8
95% gamma percentile (KM)	4.8254E-8	99% gamma percentile (KM)	6.3893E-8

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (239.76, α)	204.9	Adjusted Chi Square Value (239.76, β)	203.5
95% Gamma Approximate KM-UCL (use when n>=50)	2.7498E-8	95% Gamma Adjusted KM-UCL (use when n<50)	2.7687E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.916	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.177	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.4861E-8	Mean in Log Scale	-17.6
SD in Original Scale	1.0677E-8	SD in Log Scale	0.417
95% t UCL (assumes normality of ROS data)	2.7824E-8	95% Percentile Bootstrap UCL	2.7735E-8
95% BCA Bootstrap UCL	2.7723E-8	95% Bootstrap t UCL	2.8181E-8
95% H-UCL (Log ROS)	2.8310E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-17.79	KM Geo Mean	1.8787E-8
KM SD (logged)	0.779	95% Critical H Value (KM-Log)	2.155
KM Standard Error of Mean (logged)	0.166	95% H-UCL (KM -Log)	3.3670E-8
KM SD (logged)	0.779	95% Critical H Value (KM-Log)	2.155
KM Standard Error of Mean (logged)	0.166		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.3055E-8	Mean in Log Scale	-17.77
SD in Original Scale	1.2529E-8	SD in Log Scale	0.677
95% t UCL (Assumes normality)	2.6533E-8	95% H-Stat UCL	3.0523E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.7375E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	33	Number of Non-Detects	4
Number of Distinct Detects	32	Number of Distinct Non-Detects	4
Minimum Detect	1.9000E-8	Minimum Non-Detect	2.0800E-8
Maximum Detect	1.3900E-7	Maximum Non-Detect	2.9900E-8
Variance Detects	1.067E-15	Percent Non-Detects	10.81%
Mean Detects	6.4533E-8	SD Detects	3.2669E-8
Median Detects	5.9200E-8	CV Detects	N/A
Skewness Detects	0.748	Kurtosis Detects	-0.0679
Mean of Logged Detects	-16.69	SD of Logged Detects	0.53

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.931	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.152	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.9883E-8	KM Standard Error of Mean	5.5466E-9
KM SD	3.3205E-8	95% KM (BCA) UCL	6.9089E-8
95% KM (t) UCL	6.9247E-8	95% KM (Percentile Bootstrap) UCL	6.9314E-8
95% KM (z) UCL	6.9006E-8	95% KM Bootstrap t UCL	6.9878E-8
90% KM Chebyshev UCL	7.6523E-8	95% KM Chebyshev UCL	8.4060E-8
97.5% KM Chebyshev UCL	9.4521E-8	99% KM Chebyshev UCL	1.1507E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.201	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0723	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.154	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.021	k star (bias corrected MLE)	3.676
Theta hat (MLE)	1.6048E-8	Theta star (bias corrected MLE)	1.7556E-8
nu hat (MLE)	265.4	nu star (bias corrected)	242.6
Mean (detects)	6.4533E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.9000E-8	Mean	0.00108
Maximum	0.01	Median	6.4600E-8
SD	0.00315	CV	2.912
k hat (MLE)	0.0955	k star (bias corrected MLE)	0.106
Theta hat (MLE)	0.0113	Theta star (bias corrected MLE)	0.0102
nu hat (MLE)	7.069	nu star (bias corrected)	7.829
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (7.83, α)	2.637	Adjusted Chi Square Value (7.83, β)	2.507
95% Gamma Approximate UCL (use when n>=50)	0.00321	95% Gamma Adjusted UCL (use when n<50)	0.00338

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.9883E-8	SD (KM)	3.3205E-8
Variance (KM)	1.103E-15	SE of Mean (KM)	5.5466E-9
k hat (KM)	3.252	k star (KM)	3.007

nu hat (KM)	240.7	nu star (KM)	222.5
theta hat (KM)	1.8412E-8	theta star (KM)	1.9916E-8
80% gamma percentile (KM)	8.5391E-8	90% gamma percentile (KM)	1.0619E-7
95% gamma percentile (KM)	1.2559E-7	99% gamma percentile (KM)	1.6764E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (222.50, α)	189	Adjusted Chi Square Value (222.50, β)	187.6
95% Gamma Approximate KM-UCL (use when n>=50)	7.0506E-8	95% Gamma Adjusted KM-UCL (use when n<50)	7.1009E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.931	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.09	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.152	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.9928E-8	Mean in Log Scale	-16.79
SD in Original Scale	3.3606E-8	SD in Log Scale	0.586
95% t UCL (assumes normality of ROS data)	6.9256E-8	95% Percentile Bootstrap UCL	6.8925E-8
95% BCA Bootstrap UCL	7.0037E-8	95% Bootstrap t UCL	7.0319E-8
95% H-UCL (Log ROS)	7.3620E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.79	KM Geo Mean	5.1000E-8
KM SD (logged)	0.581	95% Critical H Value (KM-Log)	1.976
KM Standard Error of Mean (logged)	0.0974	95% H-UCL (KM -Log)	7.3142E-8
KM SD (logged)	0.581	95% Critical H Value (KM-Log)	1.976
KM Standard Error of Mean (logged)	0.0974		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.8949E-8	Mean in Log Scale	-16.85
SD in Original Scale	3.4834E-8	SD in Log Scale	0.687
95% t UCL (Assumes normality)	6.8617E-8	95% H-Stat UCL	7.7438E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 6.9247E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	27	Number of Non-Detects	10
Number of Distinct Detects	27	Number of Distinct Non-Detects	10
Minimum Detect	1.9900E-8	Minimum Non-Detect	3.2200E-9
Maximum Detect	6.5000E-8	Maximum Non-Detect	3.1200E-8
Variance Detects	1.617E-16	Percent Non-Detects	27.03%
Mean Detects	3.8448E-8	SD Detects	1.2716E-8
Median Detects	3.5300E-8	CV Detects	N/A
Skewness Detects	0.641	Kurtosis Detects	-0.627
Mean of Logged Detects	-17.13	SD of Logged Detects	0.325

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.146	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.0328E-8	KM Standard Error of Mean	3.0663E-9
KM SD	1.7734E-8	95% KM (BCA) UCL	3.7105E-8
95% KM (t) UCL	3.5505E-8	95% KM (Percentile Bootstrap) UCL	3.6346E-8
95% KM (z) UCL	3.5372E-8	95% KM Bootstrap t UCL	3.4961E-8
90% KM Chebyshev UCL	3.9527E-8	95% KM Chebyshev UCL	4.3694E-8
97.5% KM Chebyshev UCL	4.9477E-8	99% KM Chebyshev UCL	6.0837E-8

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.39	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.946	k star (bias corrected MLE)	8.865
Theta hat (MLE)	3.8658E-9	Theta star (bias corrected MLE)	4.3370E-9
nu hat (MLE)	537.1	nu star (bias corrected)	478.7
Mean (detects)	3.8448E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.9900E-8	Mean	0.0027
Maximum	0.01	Median	4.3100E-8
SD	0.0045	CV	1.666
k hat (MLE)	0.103	k star (bias corrected MLE)	0.113
Theta hat (MLE)	0.0262	Theta star (bias corrected MLE)	0.0239
nu hat (MLE)	7.646	nu star (bias corrected)	8.359
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.36, α)	2.945	Adjusted Chi Square Value (8.36, β)	2.806
95% Gamma Approximate UCL (use when n>=50)	0.00767	95% Gamma Adjusted UCL (use when n<50)	0.00805

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.0328E-8	SD (KM)	1.7734E-8
Variance (KM)	3.145E-16	SE of Mean (KM)	3.0663E-9
k hat (KM)	2.925	k star (KM)	2.706

nu hat (KM)	216.4	nu star (KM)	200.2
theta hat (KM)	1.0370E-8	theta star (KM)	1.1209E-8
80% gamma percentile (KM)	4.3797E-8	90% gamma percentile (KM)	5.5041E-8
95% gamma percentile (KM)	6.5588E-8	99% gamma percentile (KM)	8.8580E-8

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (200.21, α)	168.5	Adjusted Chi Square Value (200.21, β)	167.2
95% Gamma Approximate KM-UCL (use when n>=50)	3.6042E-8	95% Gamma Adjusted KM-UCL (use when n<50)	3.6314E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0924	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.3167E-8	Mean in Log Scale	-17.3
SD in Original Scale	1.3980E-8	SD in Log Scale	0.411
95% t UCL (assumes normality of ROS data)	3.7047E-8	95% Percentile Bootstrap UCL	3.7002E-8
95% BCA Bootstrap UCL	3.7017E-8	95% Bootstrap t UCL	3.7442E-8
95% H-UCL (Log ROS)	3.7711E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-17.65	KM Geo Mean	2.1663E-8
KM SD (logged)	1.008	95% Critical H Value (KM-Log)	2.398
KM Standard Error of Mean (logged)	0.184	95% H-UCL (KM -Log)	5.3850E-8
KM SD (logged)	1.008	95% Critical H Value (KM-Log)	2.398
KM Standard Error of Mean (logged)	0.184		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.0925E-8	Mean in Log Scale	-17.5
SD in Original Scale	1.6681E-8	SD in Log Scale	0.752
95% t UCL (Assumes normality)	3.5554E-8	95% H-Stat UCL	4.3727E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.5505E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	31
		Number of Missing Observations	0
Minimum	3.2600E-8	Mean	1.2123E-7
Maximum	2.3900E-7	Median	1.1800E-7
SD	4.6225E-8	Std. Error of Mean	7.5994E-9
Coefficient of Variation	N/A	Skewness	0.401

Normal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3406E-7	95% Adjusted-CLT UCL (Chen-1995)	1.3427E-7
		95% Modified-t UCL (Johnson-1978)	1.3415E-7

Gamma GOF Test

A-D Test Statistic	0.288	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0879	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.539	k star (bias corrected MLE)	6.027
Theta hat (MLE)	1.8541E-8	Theta star (bias corrected MLE)	2.0117E-8
nu hat (MLE)	483.9	nu star (bias corrected)	446
MLE Mean (bias corrected)	1.2123E-7	MLE Sd (bias corrected)	4.9384E-8
		Approximate Chi Square Value (0.05)	398
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	396

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.3584E-7	95% Adjusted Gamma UCL (use when n<50)	1.3651E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.105	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.24	Mean of logged Data	-16
Maximum of Logged Data	-15.25	SD of logged Data	0.42

Assuming Lognormal Distribution

95% H-UCL	1.3938E-7	90% Chebyshev (MVUE) UCL	1.4822E-7
95% Chebyshev (MVUE) UCL	1.6005E-7	97.5% Chebyshev (MVUE) UCL	1.7648E-7
99% Chebyshev (MVUE) UCL	2.0874E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3373E-7	95% Jackknife UCL	1.3406E-7
95% Standard Bootstrap UCL	1.3376E-7	95% Bootstrap-t UCL	1.3500E-7

95% Hall's Bootstrap UCL	1.3421E-7	95% Percentile Bootstrap UCL	1.3351E-7
95% BCA Bootstrap UCL	1.3375E-7		
90% Chebyshev(Mean, Sd) UCL	1.4403E-7	95% Chebyshev(Mean, Sd) UCL	1.5436E-7
97.5% Chebyshev(Mean, Sd) UCL	1.6869E-7	99% Chebyshev(Mean, Sd) UCL	1.9685E-7

Suggested UCL to Use

95% Student's-t UCL 1.3406E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	2.0300E-7	Mean	4.1370E-7
Maximum	8.6900E-7	Median	3.8900E-7
SD	1.5906E-7	Std. Error of Mean	2.6150E-8
Coefficient of Variation	N/A	Skewness	1.039

Normal GOF Test

Shapiro Wilk Test Statistic	0.902	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.5785E-7	95% Adjusted-CLT UCL (Chen-1995)	4.6149E-7
		95% Modified-t UCL (Johnson-1978)	4.5860E-7

Gamma GOF Test

A-D Test Statistic	0.615	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.137	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.671	k star (bias corrected MLE)	7.067
Theta hat (MLE)	5.3930E-8	Theta star (bias corrected MLE)	5.8539E-8
nu hat (MLE)	567.7	nu star (bias corrected)	523
MLE Mean (bias corrected)	4.1370E-7	MLE Sd (bias corrected)	1.5562E-7
		Approximate Chi Square Value (0.05)	470.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	468.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	4.5941E-7	95% Adjusted Gamma UCL (use when n<50)	4.6151E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.119	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.41	Mean of logged Data	-14.76
Maximum of Logged Data	-13.96	SD of logged Data	0.367

Assuming Lognormal Distribution

95% H-UCL	4.6277E-7	90% Chebyshev (MVUE) UCL	4.8985E-7
95% Chebyshev (MVUE) UCL	5.2458E-7	97.5% Chebyshev (MVUE) UCL	5.7279E-7
99% Chebyshev (MVUE) UCL	6.6748E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.5672E-7	95% Jackknife UCL	4.5785E-7
95% Standard Bootstrap UCL	4.5656E-7	95% Bootstrap-t UCL	4.6235E-7

95% Hall's Bootstrap UCL	4.6335E-7	95% Percentile Bootstrap UCL	4.5730E-7
95% BCA Bootstrap UCL	4.6119E-7		
90% Chebyshev(Mean, Sd) UCL	4.9215E-7	95% Chebyshev(Mean, Sd) UCL	5.2769E-7
97.5% Chebyshev(Mean, Sd) UCL	5.7701E-7	99% Chebyshev(Mean, Sd) UCL	6.7389E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 4.6151E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	3.1200E-7	Mean	1.0393E-6
Maximum	2.3000E-6	Median	9.8000E-7
SD	4.1599E-7	Std. Error of Mean	6.8389E-8
Coefficient of Variation	N/A	Skewness	0.887

Normal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.135	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.1547E-6	95% Adjusted-CLT UCL (Chen-1995)	1.1624E-6
		95% Modified-t UCL (Johnson-1978)	1.1564E-6

Gamma GOF Test

A-D Test Statistic	0.234	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0847	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.484	k star (bias corrected MLE)	5.976
Theta hat (MLE)	1.6028E-7	Theta star (bias corrected MLE)	1.7390E-7
nu hat (MLE)	479.8	nu star (bias corrected)	442.2
MLE Mean (bias corrected)	1.0393E-6	MLE Sd (bias corrected)	4.2512E-7
		Approximate Chi Square Value (0.05)	394.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	392.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.1651E-6	95% Adjusted Gamma UCL (use when n<50)	1.1709E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.981	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.98	Mean of logged Data	-13.86
Maximum of Logged Data	-12.98	SD of logged Data	0.414

Assuming Lognormal Distribution

95% H-UCL	1.1884E-6	90% Chebyshev (MVUE) UCL	1.2632E-6
95% Chebyshev (MVUE) UCL	1.3627E-6	97.5% Chebyshev (MVUE) UCL	1.5009E-6
99% Chebyshev (MVUE) UCL	1.7723E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.1518E-6	95% Jackknife UCL	1.1547E-6
95% Standard Bootstrap UCL	1.1514E-6	95% Bootstrap-t UCL	1.1697E-6

95% Hall's Bootstrap UCL	1.1663E-6	95% Percentile Bootstrap UCL	1.1507E-6
95% BCA Bootstrap UCL	1.1608E-6		
90% Chebyshev(Mean, Sd) UCL	1.2444E-6	95% Chebyshev(Mean, Sd) UCL	1.3374E-6
97.5% Chebyshev(Mean, Sd) UCL	1.4664E-6	99% Chebyshev(Mean, Sd) UCL	1.7197E-6

Suggested UCL to Use

95% Student's-t UCL 1.1547E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	1.0000E-7	Mean	2.3995E-7
Maximum	5.1400E-7	Median	2.1900E-7
SD	1.0655E-7	Std. Error of Mean	1.7517E-8
Coefficient of Variation	N/A	Skewness	0.816

Normal GOF Test

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.111	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.6952E-7	95% Adjusted-CLT UCL (Chen-1995)	2.7127E-7
		95% Modified-t UCL (Johnson-1978)	2.6991E-7

Gamma GOF Test

A-D Test Statistic	0.263	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0715	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.479	k star (bias corrected MLE)	5.052
Theta hat (MLE)	4.3796E-8	Theta star (bias corrected MLE)	4.7491E-8
nu hat (MLE)	405.4	nu star (bias corrected)	373.9
MLE Mean (bias corrected)	2.3995E-7	MLE Sd (bias corrected)	1.0675E-7
		Approximate Chi Square Value (0.05)	330.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	328.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.7180E-7	95% Adjusted Gamma UCL (use when n<50)	2.7327E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0652	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.12	Mean of logged Data	-15.34
Maximum of Logged Data	-14.48	SD of logged Data	0.442

Assuming Lognormal Distribution

95% H-UCL	2.7636E-7	90% Chebyshev (MVUE) UCL	2.9436E-7
95% Chebyshev (MVUE) UCL	3.1893E-7	97.5% Chebyshev (MVUE) UCL	3.5304E-7
99% Chebyshev (MVUE) UCL	4.2004E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.6876E-7	95% Jackknife UCL	2.6952E-7
95% Standard Bootstrap UCL	2.6809E-7	95% Bootstrap-t UCL	2.7243E-7

95% Hall's Bootstrap UCL	2.7076E-7	95% Percentile Bootstrap UCL	2.6997E-7
95% BCA Bootstrap UCL	2.7146E-7		
90% Chebyshev(Mean, Sd) UCL	2.9250E-7	95% Chebyshev(Mean, Sd) UCL	3.1630E-7
97.5% Chebyshev(Mean, Sd) UCL	3.4934E-7	99% Chebyshev(Mean, Sd) UCL	4.1424E-7

Suggested UCL to Use

95% Student's-t UCL 2.6952E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	36	Number of Distinct Non-Detects	1
Minimum Detect	8.6500E-8	Minimum Non-Detect	3.0700E-8
Maximum Detect	9.7600E-7	Maximum Non-Detect	3.0700E-8
Variance Detects	6.430E-14	Percent Non-Detects	2.703%
Mean Detects	4.0498E-7	SD Detects	2.5357E-7
Median Detects	3.2300E-7	CV Detects	N/A
Skewness Detects	0.968	Kurtosis Detects	-0.144
Mean of Logged Detects	-14.91	SD of Logged Detects	0.641

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.871	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.164	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.9486E-7	KM Standard Error of Mean	4.2346E-8
KM SD	2.5398E-7	95% KM (BCA) UCL	4.6475E-7
95% KM (t) UCL	4.6636E-7	95% KM (Percentile Bootstrap) UCL	4.6708E-7
95% KM (z) UCL	4.6452E-7	95% KM Bootstrap t UCL	4.7722E-7
90% KM Chebyshev UCL	5.2190E-7	95% KM Chebyshev UCL	5.7945E-7
97.5% KM Chebyshev UCL	6.5931E-7	99% KM Chebyshev UCL	8.1620E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.479	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.103	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.777	k star (bias corrected MLE)	2.564
Theta hat (MLE)	1.4585E-7	Theta star (bias corrected MLE)	1.5796E-7
nu hat (MLE)	199.9	nu star (bias corrected)	184.6
Mean (detects)	4.0498E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	8.6500E-8	Mean	2.7066E-4
Maximum	0.01	Median	3.2400E-7
SD	0.00164	CV	6.074
k hat (MLE)	0.123	k star (bias corrected MLE)	0.131
Theta hat (MLE)	0.0022	Theta star (bias corrected MLE)	0.00206
nu hat (MLE)	9.113	nu star (bias corrected)	9.707
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (9.71, α)	3.76	Adjusted Chi Square Value (9.71, β)	3.6
95% Gamma Approximate UCL (use when n>=50)	6.9884E-4	95% Gamma Adjusted UCL (use when n<50)	7.2988E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.9486E-7	SD (KM)	2.5398E-7
Variance (KM)	6.451E-14	SE of Mean (KM)	4.2346E-8
k hat (KM)	2.417	k star (KM)	2.239

nu hat (KM)	178.9	nu star (KM)	165.7
theta hat (KM)	1.6336E-7	theta star (KM)	1.7635E-7
80% gamma percentile (KM)	5.8330E-7	90% gamma percentile (KM)	7.4801E-7
95% gamma percentile (KM)	9.0411E-7	99% gamma percentile (KM)	1.2480E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (165.70, α)	136.9	Adjusted Chi Square Value (165.70, β)	135.8
95% Gamma Approximate KM-UCL (use when n>=50)	4.7781E-7	95% Gamma Adjusted KM-UCL (use when n<50)	4.8179E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0858	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.9580E-7	Mean in Log Scale	-14.95
SD in Original Scale	2.5617E-7	SD in Log Scale	0.687
95% t UCL (assumes normality of ROS data)	4.6691E-7	95% Percentile Bootstrap UCL	4.6587E-7
95% BCA Bootstrap UCL	4.6398E-7	95% Bootstrap t UCL	4.7528E-7
95% H-UCL (Log ROS)	5.1360E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-14.97	KM Geo Mean	3.1373E-7
KM SD (logged)	0.734	95% Critical H Value (KM-Log)	2.111
KM Standard Error of Mean (logged)	0.122	95% H-UCL (KM -Log)	5.3187E-7
KM SD (logged)	0.734	95% Critical H Value (KM-Log)	2.111
KM Standard Error of Mean (logged)	0.122		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.9445E-7	Mean in Log Scale	-14.99
SD in Original Scale	2.5810E-7	SD in Log Scale	0.81
95% t UCL (Assumes normality)	4.6608E-7	95% H-Stat UCL	5.7439E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	4.8179E-7	95% GROS Adjusted Gamma UCL	7.2988E-4

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	1.1200E-7	Mean	4.4965E-7
Maximum	1.2600E-6	Median	2.7000E-7
SD	3.6908E-7	Std. Error of Mean	6.0676E-8
Coefficient of Variation	N/A	Skewness	1.186

Normal GOF Test

Shapiro Wilk Test Statistic	0.789	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.2	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.5209E-7	95% Adjusted-CLT UCL (Chen-1995)	5.6209E-7
		95% Modified-t UCL (Johnson-1978)	5.5406E-7

Gamma GOF Test

A-D Test Statistic	1.357	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.762	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.161	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.829	k star (bias corrected MLE)	1.698
Theta hat (MLE)	2.4588E-7	Theta star (bias corrected MLE)	2.6474E-7
nu hat (MLE)	135.3	nu star (bias corrected)	125.7
MLE Mean (bias corrected)	4.4965E-7	MLE Sd (bias corrected)	3.4502E-7
		Approximate Chi Square Value (0.05)	100.8
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	99.83

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.6070E-7	95% Adjusted Gamma UCL (use when n<50)	5.6613E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16	Mean of logged Data	-14.91
Maximum of Logged Data	-13.58	SD of logged Data	0.769

Assuming Lognormal Distribution

95% H-UCL	5.9067E-7	90% Chebyshev (MVUE) UCL	6.3006E-7
95% Chebyshev (MVUE) UCL	7.1425E-7	97.5% Chebyshev (MVUE) UCL	8.3111E-7
99% Chebyshev (MVUE) UCL	1.0606E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.4945E-7	95% Jackknife UCL	5.5209E-7
95% Standard Bootstrap UCL	5.4761E-7	95% Bootstrap-t UCL	5.6466E-7

95% Hall's Bootstrap UCL	5.5734E-7	95% Percentile Bootstrap UCL	5.5462E-7
95% BCA Bootstrap UCL	5.5900E-7		
90% Chebyshev(Mean, Sd) UCL	6.3168E-7	95% Chebyshev(Mean, Sd) UCL	7.1413E-7
97.5% Chebyshev(Mean, Sd) UCL	8.2857E-7	99% Chebyshev(Mean, Sd) UCL	1.0534E-6

Suggested UCL to Use

95% H-UCL 5.9067E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	3.0000E-8	Mean	1.1882E-7
Maximum	3.3400E-7	Median	9.1700E-8
SD	8.6304E-8	Std. Error of Mean	1.4188E-8
Coefficient of Variation	N/A	Skewness	1.157

Normal GOF Test

Shapiro Wilk Test Statistic	0.825	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.242	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.4278E-7	95% Adjusted-CLT UCL (Chen-1995)	1.4504E-7
		95% Modified-t UCL (Johnson-1978)	1.4323E-7

Gamma GOF Test

A-D Test Statistic	0.916	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.758	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.153	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.238	k star (bias corrected MLE)	2.075
Theta hat (MLE)	5.3090E-8	Theta star (bias corrected MLE)	5.7273E-8
nu hat (MLE)	165.6	nu star (bias corrected)	153.5
MLE Mean (bias corrected)	1.1882E-7	MLE Sd (bias corrected)	8.2494E-8
		Approximate Chi Square Value (0.05)	125.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	124.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.4491E-7	95% Adjusted Gamma UCL (use when n<50)	1.4617E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.32	Mean of logged Data	-16.19
Maximum of Logged Data	-14.91	SD of logged Data	0.703

Assuming Lognormal Distribution

95% H-UCL	1.5271E-7	90% Chebyshev (MVUE) UCL	1.6346E-7
95% Chebyshev (MVUE) UCL	1.8373E-7	97.5% Chebyshev (MVUE) UCL	2.1187E-7
99% Chebyshev (MVUE) UCL	2.6715E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.4216E-7	95% Jackknife UCL	1.4278E-7
95% Standard Bootstrap UCL	1.4178E-7	95% Bootstrap-t UCL	1.4710E-7

95% Hall's Bootstrap UCL	1.4422E-7	95% Percentile Bootstrap UCL	1.4214E-7
95% BCA Bootstrap UCL	1.4326E-7		
90% Chebyshev(Mean, Sd) UCL	1.6139E-7	95% Chebyshev(Mean, Sd) UCL	1.8067E-7
97.5% Chebyshev(Mean, Sd) UCL	2.0743E-7	99% Chebyshev(Mean, Sd) UCL	2.5999E-7

Suggested UCL to Use

95% H-UCL 1.5271E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	2.2900E-8	Mean	6.5624E-8
Maximum	9.4700E-8	Median	6.6600E-8
SD	1.8976E-8	Std. Error of Mean	3.1197E-9
Coefficient of Variation	N/A	Skewness	-0.502

Normal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.0891E-8	95% Adjusted-CLT UCL (Chen-1995)	7.0481E-8
		95% Modified-t UCL (Johnson-1978)	7.0848E-8

Gamma GOF Test

A-D Test Statistic	0.897	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.01	k star (bias corrected MLE)	9.216
Theta hat (MLE)	6.5564E-9	Theta star (bias corrected MLE)	7.1210E-9
nu hat (MLE)	740.7	nu star (bias corrected)	682
MLE Mean (bias corrected)	6.5624E-8	MLE Sd (bias corrected)	2.1617E-8
		Approximate Chi Square Value (0.05)	622.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	619.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.1907E-8	95% Adjusted Gamma UCL (use when n<50)	7.2193E-8

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.888	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.144	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.59	Mean of logged Data	-16.59
Maximum of Logged Data	-16.17	SD of logged Data	0.345

Assuming Lognormal Distribution

95% H-UCL	7.3445E-8	90% Chebyshev (MVUE) UCL	7.7571E-8
95% Chebyshev (MVUE) UCL	8.2776E-8	97.5% Chebyshev (MVUE) UCL	9.0000E-8
99% Chebyshev (MVUE) UCL	1.0419E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.0756E-8	95% Jackknife UCL	7.0891E-8
95% Standard Bootstrap UCL	7.0809E-8	95% Bootstrap-t UCL	7.0613E-8

95% Hall's Bootstrap UCL	7.0252E-8	95% Percentile Bootstrap UCL	7.0370E-8
95% BCA Bootstrap UCL	7.0403E-8		
90% Chebyshev(Mean, Sd) UCL	7.4983E-8	95% Chebyshev(Mean, Sd) UCL	7.9223E-8
97.5% Chebyshev(Mean, Sd) UCL	8.5107E-8	99% Chebyshev(Mean, Sd) UCL	9.6665E-8

Suggested UCL to Use

95% Student's-t UCL 7.0891E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	35	Number of Non-Detects	2
Number of Distinct Detects	34	Number of Distinct Non-Detects	2
Minimum Detect	5.0500E-9	Minimum Non-Detect	1.9200E-8
Maximum Detect	8.5800E-8	Maximum Non-Detect	2.1800E-8
Variance Detects	3.541E-16	Percent Non-Detects	5.405%
Mean Detects	4.2367E-8	SD Detects	1.8818E-8
Median Detects	3.6400E-8	CV Detects	N/A
Skewness Detects	0.724	Kurtosis Detects	0.176
Mean of Logged Detects	-17.09	SD of Logged Detects	0.521

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.934	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.139	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.148	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.0480E-8	KM Standard Error of Mean	3.2980E-9
KM SD	1.9730E-8	95% KM (BCA) UCL	4.6770E-8
95% KM (t) UCL	4.6048E-8	95% KM (Percentile Bootstrap) UCL	4.6282E-8
95% KM (z) UCL	4.5905E-8	95% KM Bootstrap t UCL	4.6180E-8
90% KM Chebyshev UCL	5.0374E-8	95% KM Chebyshev UCL	5.4856E-8
97.5% KM Chebyshev UCL	6.1076E-8	99% KM Chebyshev UCL	7.3295E-8

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.448	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.104	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.149	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.712	k star (bias corrected MLE)	4.327
Theta hat (MLE)	8.9916E-9	Theta star (bias corrected MLE)	9.7913E-9
nu hat (MLE)	329.8	nu star (bias corrected)	302.9
Mean (detects)	4.2367E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.0500E-9	Mean	5.4058E-4
Maximum	0.01	Median	4.0200E-8
SD	0.00229	CV	4.241
k hat (MLE)	0.0923	k star (bias corrected MLE)	0.103
Theta hat (MLE)	0.00586	Theta star (bias corrected MLE)	0.00526
nu hat (MLE)	6.828	nu star (bias corrected)	7.608
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (7.61, α)	2.51	Adjusted Chi Square Value (7.61, β)	2.385
95% Gamma Approximate UCL (use when n>=50)	0.00164	95% Gamma Adjusted UCL (use when n<50)	0.00172

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.0480E-8	SD (KM)	1.9730E-8
Variance (KM)	3.893E-16	SE of Mean (KM)	3.2980E-9
k hat (KM)	4.209	k star (KM)	3.886

nu hat (KM)	311.5	nu star (KM)	287.6
theta hat (KM)	9.6166E-9	theta star (KM)	1.0417E-8
80% gamma percentile (KM)	5.6000E-8	90% gamma percentile (KM)	6.8007E-8
95% gamma percentile (KM)	7.9073E-8	99% gamma percentile (KM)	1.0274E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (287.57, α)	249.3	Adjusted Chi Square Value (287.57, β)	247.8
95% Gamma Approximate KM-UCL (use when n>=50)	4.6696E-8	95% Gamma Adjusted KM-UCL (use when n<50)	4.6986E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.13	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.0830E-8	Mean in Log Scale	-17.14
SD in Original Scale	1.9416E-8	SD in Log Scale	0.556
95% t UCL (assumes normality of ROS data)	4.6219E-8	95% Percentile Bootstrap UCL	4.6205E-8
95% BCA Bootstrap UCL	4.6373E-8	95% Bootstrap t UCL	4.6489E-8
95% H-UCL (Log ROS)	5.0308E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-17.18	KM Geo Mean	3.4455E-8
KM SD (logged)	0.654	95% Critical H Value (KM-Log)	2.037
KM Standard Error of Mean (logged)	0.111	95% H-UCL (KM -Log)	5.3256E-8
KM SD (logged)	0.654	95% Critical H Value (KM-Log)	2.037
KM Standard Error of Mean (logged)	0.111		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.0631E-8	Mean in Log Scale	-17.16
SD in Original Scale	1.9715E-8	SD in Log Scale	0.589
95% t UCL (Assumes normality)	4.6103E-8	95% H-Stat UCL	5.1087E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 4.6048E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	6.6400E-8	Mean	3.1678E-7
Maximum	8.8100E-7	Median	2.4900E-7
SD	2.3642E-7	Std. Error of Mean	3.8866E-8
Coefficient of Variation	N/A	Skewness	1.138

Normal GOF Test

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.194	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.8240E-7	95% Adjusted-CLT UCL (Chen-1995)	3.8848E-7
		95% Modified-t UCL (Johnson-1978)	3.8361E-7

Gamma GOF Test

A-D Test Statistic	0.853	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.759	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.112	k star (bias corrected MLE)	1.958
Theta hat (MLE)	1.5002E-7	Theta star (bias corrected MLE)	1.6176E-7
nu hat (MLE)	156.3	nu star (bias corrected)	144.9
MLE Mean (bias corrected)	3.1678E-7	MLE Sd (bias corrected)	2.2637E-7
		Approximate Chi Square Value (0.05)	118.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	117.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.8873E-7	95% Adjusted Gamma UCL (use when n<50)	3.9221E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0923	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.53	Mean of logged Data	-15.22
Maximum of Logged Data	-13.94	SD of logged Data	0.724

Assuming Lognormal Distribution

95% H-UCL	4.1104E-7	90% Chebyshev (MVUE) UCL	4.3959E-7
95% Chebyshev (MVUE) UCL	4.9548E-7	97.5% Chebyshev (MVUE) UCL	5.7305E-7
99% Chebyshev (MVUE) UCL	7.2542E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.8071E-7	95% Jackknife UCL	3.8240E-7
95% Standard Bootstrap UCL	3.7973E-7	95% Bootstrap-t UCL	3.9168E-7

95% Hall's Bootstrap UCL	3.8698E-7	95% Percentile Bootstrap UCL	3.8365E-7
95% BCA Bootstrap UCL	3.8829E-7		
90% Chebyshev(Mean, Sd) UCL	4.3338E-7	95% Chebyshev(Mean, Sd) UCL	4.8620E-7
97.5% Chebyshev(Mean, Sd) UCL	5.5950E-7	99% Chebyshev(Mean, Sd) UCL	7.0350E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 3.9221E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	27	Number of Non-Detects	10
Number of Distinct Detects	27	Number of Distinct Non-Detects	10
Minimum Detect	1.6700E-8	Minimum Non-Detect	6.1700E-9
Maximum Detect	6.0800E-8	Maximum Non-Detect	2.7000E-8
Variance Detects	1.439E-16	Percent Non-Detects	27.03%
Mean Detects	3.6344E-8	SD Detects	1.1997E-8
Median Detects	3.3400E-8	CV Detects	N/A
Skewness Detects	0.413	Kurtosis Detects	-0.714
Mean of Logged Detects	-17.18	SD of Logged Detects	0.34

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.129	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.9103E-8	KM Standard Error of Mean	2.7240E-9
KM SD	1.5855E-8	95% KM (BCA) UCL	3.4150E-8
95% KM (t) UCL	3.3702E-8	95% KM (Percentile Bootstrap) UCL	3.3914E-8
95% KM (z) UCL	3.3583E-8	95% KM Bootstrap t UCL	3.3686E-8
90% KM Chebyshev UCL	3.7275E-8	95% KM Chebyshev UCL	4.0976E-8
97.5% KM Chebyshev UCL	4.6114E-8	99% KM Chebyshev UCL	5.6206E-8

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.281	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0959	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.414	k star (bias corrected MLE)	8.393
Theta hat (MLE)	3.8605E-9	Theta star (bias corrected MLE)	4.3303E-9
nu hat (MLE)	508.4	nu star (bias corrected)	453.2
Mean (detects)	3.6344E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.6700E-8	Mean	0.0027
Maximum	0.01	Median	4.2100E-8
SD	0.0045	CV	1.666
k hat (MLE)	0.103	k star (bias corrected MLE)	0.112
Theta hat (MLE)	0.0263	Theta star (bias corrected MLE)	0.024
nu hat (MLE)	7.608	nu star (bias corrected)	8.325
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.32, α)	2.925	Adjusted Chi Square Value (8.32, β)	2.787
95% Gamma Approximate UCL (use when n>=50)	0.00769	95% Gamma Adjusted UCL (use when n<50)	0.00807

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.9103E-8	SD (KM)	1.5855E-8
Variance (KM)	2.514E-16	SE of Mean (KM)	2.7240E-9
k hat (KM)	3.369	k star (KM)	3.114

nu hat (KM)	249.3	nu star (KM)	230.4
theta hat (KM)	8.6377E-9	theta star (KM)	9.3454E-9
80% gamma percentile (KM)	4.1326E-8	90% gamma percentile (KM)	5.1216E-8
95% gamma percentile (KM)	6.0427E-8	99% gamma percentile (KM)	8.0354E-8

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (230.44, α)	196.3	Adjusted Chi Square Value (230.44, β)	194.9
95% Gamma Approximate KM-UCL (use when n>=50)	3.4164E-8	95% Gamma Adjusted KM-UCL (use when n<50)	3.4403E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0781	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.1068E-8	Mean in Log Scale	-17.38
SD in Original Scale	1.3481E-8	SD in Log Scale	0.436
95% t UCL (assumes normality of ROS data)	3.4810E-8	95% Percentile Bootstrap UCL	3.4634E-8
95% BCA Bootstrap UCL	3.4630E-8	95% Bootstrap t UCL	3.4857E-8
95% H-UCL (Log ROS)	3.5707E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-17.57	KM Geo Mean	2.3461E-8
KM SD (logged)	0.737	95% Critical H Value (KM-Log)	2.114
KM Standard Error of Mean (logged)	0.135	95% H-UCL (KM -Log)	3.9907E-8
KM SD (logged)	0.737	95% Critical H Value (KM-Log)	2.114
KM Standard Error of Mean (logged)	0.135		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.8936E-8	Mean in Log Scale	-17.57
SD in Original Scale	1.6083E-8	SD in Log Scale	0.735
95% t UCL (Assumes normality)	3.3400E-8	95% H-Stat UCL	3.9785E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.3702E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	34	Number of Distinct Non-Detects	1
Minimum Detect	2.3400E-8	Minimum Non-Detect	2.9300E-8
Maximum Detect	1.7300E-7	Maximum Non-Detect	2.9300E-8
Variance Detects	1.221E-15	Percent Non-Detects	2.703%
Mean Detects	8.4997E-8	SD Detects	3.4947E-8
Median Detects	7.8900E-8	CV Detects	N/A
Skewness Detects	0.503	Kurtosis Detects	0.0632
Mean of Logged Detects	-16.37	SD of Logged Detects	0.461

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0962	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.3335E-8	KM Standard Error of Mean	5.9060E-9
KM SD	3.5423E-8	95% KM (BCA) UCL	9.2116E-8
95% KM (t) UCL	9.3306E-8	95% KM (Percentile Bootstrap) UCL	9.3146E-8
95% KM (z) UCL	9.3050E-8	95% KM Bootstrap t UCL	9.3417E-8
90% KM Chebyshev UCL	1.0105E-7	95% KM Chebyshev UCL	1.0908E-7
97.5% KM Chebyshev UCL	1.2022E-7	99% KM Chebyshev UCL	1.4210E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.232	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0605	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.564	k star (bias corrected MLE)	5.119
Theta hat (MLE)	1.5276E-8	Theta star (bias corrected MLE)	1.6604E-8
nu hat (MLE)	400.6	nu star (bias corrected)	368.6
Mean (detects)	8.4997E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.3400E-8	Mean	2.7035E-4
Maximum	0.01	Median	7.9600E-8
SD	0.00164	CV	6.081
k hat (MLE)	0.103	k star (bias corrected MLE)	0.113
Theta hat (MLE)	0.00262	Theta star (bias corrected MLE)	0.0024
nu hat (MLE)	7.636	nu star (bias corrected)	8.35
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.35, α)	2.939	Adjusted Chi Square Value (8.35, β)	2.801
95% Gamma Approximate UCL (use when n>=50)	7.6802E-4	95% Gamma Adjusted UCL (use when n<50)	8.0588E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.3335E-8	SD (KM)	3.5423E-8
Variance (KM)	1.255E-15	SE of Mean (KM)	5.9060E-9
k hat (KM)	5.535	k star (KM)	5.104

nu hat (KM)	409.6	nu star (KM)	377.7
theta hat (KM)	1.5057E-8	theta star (KM)	1.6327E-8
80% gamma percentile (KM)	1.1176E-7	90% gamma percentile (KM)	1.3271E-7
95% gamma percentile (KM)	1.5179E-7	99% gamma percentile (KM)	1.9206E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (377.70, α)	333.7	Adjusted Chi Square Value (377.70, β)	331.9
95% Gamma Approximate KM-UCL (use when n>=50)	9.4335E-8	95% Gamma Adjusted KM-UCL (use when n<50)	9.4845E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0854	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.3564E-8	Mean in Log Scale	-16.4
SD in Original Scale	3.5545E-8	SD in Log Scale	0.477
95% t UCL (assumes normality of ROS data)	9.3429E-8	95% Percentile Bootstrap UCL	9.2842E-8
95% BCA Bootstrap UCL	9.3265E-8	95% Bootstrap t UCL	9.4710E-8
95% H-UCL (Log ROS)	9.8562E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.41	KM Geo Mean	7.5026E-8
KM SD (logged)	0.488	95% Critical H Value (KM-Log)	1.904
KM Standard Error of Mean (logged)	0.0814	95% H-UCL (KM -Log)	9.8677E-8
KM SD (logged)	0.488	95% Critical H Value (KM-Log)	1.904
KM Standard Error of Mean (logged)	0.0814		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.3096E-8	Mean in Log Scale	-16.42
SD in Original Scale	3.6348E-8	SD in Log Scale	0.53
95% t UCL (Assumes normality)	9.3184E-8	95% H-Stat UCL	1.0118E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 9.3306E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-77

General Statistics

Total Number of Observations	25	Number of Distinct Observations	24
		Number of Missing Observations	12
Minimum	3.1800E-5	Mean	1.6508E-4
Maximum	3.6000E-4	Median	1.4000E-4
SD	9.9858E-5	Std. Error of Mean	1.9972E-5
Coefficient of Variation	0.605	Skewness	0.548

Normal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.9925E-4	95% Adjusted-CLT UCL (Chen-1995)	2.0027E-4
		95% Modified-t UCL (Johnson-1978)	1.9961E-4

Gamma GOF Test

A-D Test Statistic	0.375	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.125	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.176	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.597	k star (bias corrected MLE)	2.312
Theta hat (MLE)	6.3568E-5	Theta star (bias corrected MLE)	7.1403E-5
nu hat (MLE)	129.8	nu star (bias corrected)	115.6
MLE Mean (bias corrected)	1.6508E-4	MLE Sd (bias corrected)	1.0857E-4
		Approximate Chi Square Value (0.05)	91.77
Adjusted Level of Significance	0.0395	Adjusted Chi Square Value	90.33

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.0793E-4	95% Adjusted Gamma UCL (use when n<50)	2.1126E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.918	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.173	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.36	Mean of logged Data	-8.914
Maximum of Logged Data	-7.929	SD of logged Data	0.69

Assuming Lognormal Distribution

95% H-UCL	2.3043E-4	90% Chebyshev (MVUE) UCL	2.4361E-4
95% Chebyshev (MVUE) UCL	2.7756E-4	97.5% Chebyshev (MVUE) UCL	3.2467E-4
99% Chebyshev (MVUE) UCL	4.1720E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.9793E-4	95% Jackknife UCL	1.9925E-4
95% Standard Bootstrap UCL	1.9819E-4	95% Bootstrap-t UCL	2.0102E-4

95% Hall's Bootstrap UCL	1.9953E-4	95% Percentile Bootstrap UCL	1.9866E-4
95% BCA Bootstrap UCL	1.9876E-4		
90% Chebyshev(Mean, Sd) UCL	2.2500E-4	95% Chebyshev(Mean, Sd) UCL	2.5213E-4
97.5% Chebyshev(Mean, Sd) UCL	2.8980E-4	99% Chebyshev(Mean, Sd) UCL	3.6380E-4

Suggested UCL to Use

95% Student's-t UCL 1.9925E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-81

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	2.4600E-6	Minimum Non-Detect	1.7300E-6
Maximum Detect	1.5400E-5	Maximum Non-Detect	1.7300E-6
Variance Detects	1.583E-11	Percent Non-Detects	2.703%
Mean Detects	7.8697E-6	SD Detects	3.9787E-6
Median Detects	6.9700E-6	CV Detects	N/A
Skewness Detects	0.48	Kurtosis Detects	-0.998
Mean of Logged Detects	-11.89	SD of Logged Detects	0.54

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.159	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.7038E-6	KM Standard Error of Mean	6.6620E-7
KM SD	3.9957E-6	95% KM (BCA) UCL	8.8219E-6
95% KM (t) UCL	8.8285E-6	95% KM (Percentile Bootstrap) UCL	8.8114E-6
95% KM (z) UCL	8.7996E-6	95% KM Bootstrap t UCL	8.8222E-6
90% KM Chebyshev UCL	9.7024E-6	95% KM Chebyshev UCL	1.0608E-5
97.5% KM Chebyshev UCL	1.1864E-5	99% KM Chebyshev UCL	1.4332E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.525	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.121	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.886	k star (bias corrected MLE)	3.581
Theta hat (MLE)	2.0249E-6	Theta star (bias corrected MLE)	2.1976E-6
nu hat (MLE)	279.8	nu star (bias corrected)	257.8
Mean (detects)	7.8697E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.4600E-6	Mean	2.7793E-4
Maximum	0.01	Median	7.1400E-6
SD	0.00164	CV	5.911
k hat (MLE)	0.209	k star (bias corrected MLE)	0.21
Theta hat (MLE)	0.00133	Theta star (bias corrected MLE)	0.00132
nu hat (MLE)	15.45	nu star (bias corrected)	15.53
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (15.53, α)	7.631	Adjusted Chi Square Value (15.53, β)	7.39
95% Gamma Approximate UCL (use when n>=50)	5.6559E-4	95% Gamma Adjusted UCL (use when n<50)	5.8400E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.7038E-6	SD (KM)	3.9957E-6
Variance (KM)	1.597E-11	SE of Mean (KM)	6.6620E-7
k hat (KM)	3.717	k star (KM)	3.434

nu hat (KM)	275.1	nu star (KM)	254.1
theta hat (KM)	2.0724E-6	theta star (KM)	2.2434E-6
80% gamma percentile (KM)	1.0813E-5	90% gamma percentile (KM)	1.3278E-5
95% gamma percentile (KM)	1.5563E-5	99% gamma percentile (KM)	2.0481E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (254.11, α)	218.2	Adjusted Chi Square Value (254.11, β)	216.8
95% Gamma Approximate KM-UCL (use when n>=50)	8.9716E-6	95% Gamma Adjusted KM-UCL (use when n<50)	9.0313E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0966	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.7044E-6	Mean in Log Scale	-11.92
SD in Original Scale	4.0499E-6	SD in Log Scale	0.578
95% t UCL (assumes normality of ROS data)	8.8284E-6	95% Percentile Bootstrap UCL	8.8506E-6
95% BCA Bootstrap UCL	8.8005E-6	95% Bootstrap t UCL	8.8929E-6
95% H-UCL (Log ROS)	9.4767E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-11.92	KM Geo Mean	6.6298E-6
KM SD (logged)	0.571	95% Critical H Value (KM-Log)	1.967
KM Standard Error of Mean (logged)	0.0952	95% H-UCL (KM -Log)	9.4080E-6
KM SD (logged)	0.571	95% Critical H Value (KM-Log)	1.967
KM Standard Error of Mean (logged)	0.0952		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.6804E-6	Mean in Log Scale	-11.94
SD in Original Scale	4.0885E-6	SD in Log Scale	0.632
95% t UCL (Assumes normality)	8.8152E-6	95% H-Stat UCL	9.8276E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	9.0313E-6	95% GROS Adjusted Gamma UCL	5.8400E-4

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	1.6300E-4	Mean	8.7422E-4
Maximum	0.0032	Median	7.2700E-4
SD	5.9332E-4	Std. Error of Mean	9.7542E-5
Coefficient of Variation	0.679	Skewness	1.861

Normal GOF Test

Shapiro Wilk Test Statistic	0.852	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00104	95% Adjusted-CLT UCL (Chen-1995)	0.00107
		95% Modified-t UCL (Johnson-1978)	0.00104

Gamma GOF Test

A-D Test Statistic	0.281	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0891	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.662	k star (bias corrected MLE)	2.464
Theta hat (MLE)	3.2842E-4	Theta star (bias corrected MLE)	3.5478E-4
nu hat (MLE)	197	nu star (bias corrected)	182.3
MLE Mean (bias corrected)	8.7422E-4	MLE Sd (bias corrected)	5.5692E-4
		Approximate Chi Square Value (0.05)	152.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	150.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00105	95% Adjusted Gamma UCL (use when n<50)	0.00106

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.988	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0959	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.722	Mean of logged Data	-7.242
Maximum of Logged Data	-5.745	SD of logged Data	0.648

Assuming Lognormal Distribution

95% H-UCL	0.0011	90% Chebyshev (MVUE) UCL	0.00118
95% Chebyshev (MVUE) UCL	0.00132	97.5% Chebyshev (MVUE) UCL	0.00151
99% Chebyshev (MVUE) UCL	0.00188		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00103	95% Jackknife UCL	0.00104
95% Standard Bootstrap UCL	0.00103	95% Bootstrap-t UCL	0.00109

95% Hall's Bootstrap UCL	0.00113	95% Percentile Bootstrap UCL	0.00104
95% BCA Bootstrap UCL	0.00107		
90% Chebyshev(Mean, Sd) UCL	0.00117	95% Chebyshev(Mean, Sd) UCL	0.0013
97.5% Chebyshev(Mean, Sd) UCL	0.00148	99% Chebyshev(Mean, Sd) UCL	0.00184

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00106

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	1.2900E-5	Minimum Non-Detect	1.4300E-6
Maximum Detect	2.8100E-4	Maximum Non-Detect	1.4300E-6
Variance Detects	2.6839E-9	Percent Non-Detects	2.703%
Mean Detects	7.6792E-5	SD Detects	5.1807E-5
Median Detects	6.8950E-5	CV Detects	N/A
Skewness Detects	1.829	Kurtosis Detects	5.556
Mean of Logged Detects	-9.678	SD of Logged Detects	0.661

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.4755E-5	KM Standard Error of Mean	8.6446E-6
KM SD	5.1848E-5	95% KM (BCA) UCL	9.0271E-5
95% KM (t) UCL	8.9350E-5	95% KM (Percentile Bootstrap) UCL	8.9282E-5
95% KM (z) UCL	8.8974E-5	95% KM Bootstrap t UCL	9.2407E-5
90% KM Chebyshev UCL	1.0069E-4	95% KM Chebyshev UCL	1.1244E-4
97.5% KM Chebyshev UCL	1.2874E-4	99% KM Chebyshev UCL	1.6077E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.381	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.131	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.613	k star (bias corrected MLE)	2.414
Theta hat (MLE)	2.9386E-5	Theta star (bias corrected MLE)	3.1811E-5
nu hat (MLE)	188.2	nu star (bias corrected)	173.8
Mean (detects)	7.6792E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.2900E-5	Mean	3.4499E-4
Maximum	0.01	Median	7.2700E-5
SD	0.00163	CV	4.731
k hat (MLE)	0.417	k star (bias corrected MLE)	0.401
Theta hat (MLE)	8.2784E-4	Theta star (bias corrected MLE)	8.6040E-4
nu hat (MLE)	30.84	nu star (bias corrected)	29.67
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (29.67, α)	18.23	Adjusted Chi Square Value (29.67, β)	17.84
95% Gamma Approximate UCL (use when n>=50)	5.6136E-4	95% Gamma Adjusted UCL (use when n<50)	5.7364E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.4755E-5	SD (KM)	5.1848E-5
Variance (KM)	2.6882E-9	SE of Mean (KM)	8.6446E-6
k hat (KM)	2.079	k star (KM)	1.928

nu hat (KM)	153.8	nu star (KM)	142.7
theta hat (KM)	3.5960E-5	theta star (KM)	3.8767E-5
80% gamma percentile (KM)	1.1240E-4	90% gamma percentile (KM)	1.4665E-4
95% gamma percentile (KM)	1.7938E-4	99% gamma percentile (KM)	2.5215E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (142.69, α)	116.1	Adjusted Chi Square Value (142.69, β)	115
95% Gamma Approximate KM-UCL (use when n>=50)	9.1887E-5	95% Gamma Adjusted KM-UCL (use when n<50)	9.2718E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.5033E-5	Mean in Log Scale	-9.723
SD in Original Scale	5.2190E-5	SD in Log Scale	0.708
95% t UCL (assumes normality of ROS data)	8.9519E-5	95% Percentile Bootstrap UCL	8.9714E-5
95% BCA Bootstrap UCL	9.0436E-5	95% Bootstrap t UCL	9.2236E-5
95% H-UCL (Log ROS)	9.8371E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.78	KM Geo Mean	5.6575E-5
KM SD (logged)	0.888	95% Critical H Value (KM-Log)	2.266
KM Standard Error of Mean (logged)	0.148	95% H-UCL (KM -Log)	1.1739E-4
KM SD (logged)	0.888	95% Critical H Value (KM-Log)	2.266
KM Standard Error of Mean (logged)	0.148		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.4736E-5	Mean in Log Scale	-9.799
SD in Original Scale	5.2591E-5	SD in Log Scale	0.983
95% t UCL (Assumes normality)	8.9332E-5	95% H-Stat UCL	1.3264E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	9.2718E-5	95% GROS Adjusted Gamma UCL	5.7364E-4

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	5.6900E-4	Mean	0.00327
Maximum	0.0123	Median	0.00286
SD	0.00226	Std. Error of Mean	3.7209E-4
Coefficient of Variation	0.693	Skewness	1.917

Normal GOF Test

Shapiro Wilk Test Statistic	0.847	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0039	95% Adjusted-CLT UCL (Chen-1995)	0.004
		95% Modified-t UCL (Johnson-1978)	0.00392

Gamma GOF Test

A-D Test Statistic	0.269	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.562	k star (bias corrected MLE)	2.372
Theta hat (MLE)	0.00128	Theta star (bias corrected MLE)	0.00138
nu hat (MLE)	189.6	nu star (bias corrected)	175.5
MLE Mean (bias corrected)	0.00327	MLE Sd (bias corrected)	0.00212
		Approximate Chi Square Value (0.05)	145.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	144.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00393	95% Adjusted Gamma UCL (use when n<50)	0.00396

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.988	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0843	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.472	Mean of logged Data	-5.931
Maximum of Logged Data	-4.398	SD of logged Data	0.663

Assuming Lognormal Distribution

95% H-UCL	0.00414	90% Chebyshev (MVUE) UCL	0.00444
95% Chebyshev (MVUE) UCL	0.00497	97.5% Chebyshev (MVUE) UCL	0.00569
99% Chebyshev (MVUE) UCL	0.00712		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00388	95% Jackknife UCL	0.0039
95% Standard Bootstrap UCL	0.00388	95% Bootstrap-t UCL	0.00407

95% Hall's Bootstrap UCL	0.00424	95% Percentile Bootstrap UCL	0.00387
95% BCA Bootstrap UCL	0.00404		
90% Chebyshev(Mean, Sd) UCL	0.00438	95% Chebyshev(Mean, Sd) UCL	0.00489
97.5% Chebyshev(Mean, Sd) UCL	0.00559	99% Chebyshev(Mean, Sd) UCL	0.00697

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00396

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	1.1000E-5	Mean	6.6522E-5
Maximum	2.2100E-4	Median	5.7400E-5
SD	4.3142E-5	Std. Error of Mean	7.0925E-6
Coefficient of Variation	N/A	Skewness	1.409

Normal GOF Test

Shapiro Wilk Test Statistic	0.888	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.136	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.8496E-5	95% Adjusted-CLT UCL (Chen-1995)	7.9943E-5
		95% Modified-t UCL (Johnson-1978)	7.8770E-5

Gamma GOF Test

A-D Test Statistic	0.333	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.101	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.662	k star (bias corrected MLE)	2.464
Theta hat (MLE)	2.4988E-5	Theta star (bias corrected MLE)	2.6994E-5
nu hat (MLE)	197	nu star (bias corrected)	182.4
MLE Mean (bias corrected)	6.6522E-5	MLE Sd (bias corrected)	4.2376E-5
		Approximate Chi Square Value (0.05)	152.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	150.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.9743E-5	95% Adjusted Gamma UCL (use when n<50)	8.0375E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.982	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0934	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.42	Mean of logged Data	-9.817
Maximum of Logged Data	-8.417	SD of logged Data	0.658

Assuming Lognormal Distribution

95% H-UCL	8.4603E-5	90% Chebyshev (MVUE) UCL	9.0665E-5
95% Chebyshev (MVUE) UCL	1.0130E-4	97.5% Chebyshev (MVUE) UCL	1.1607E-4
99% Chebyshev (MVUE) UCL	1.4508E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.8188E-5	95% Jackknife UCL	7.8496E-5
95% Standard Bootstrap UCL	7.8039E-5	95% Bootstrap-t UCL	8.1069E-5

95% Hall's Bootstrap UCL	8.1373E-5	95% Percentile Bootstrap UCL	7.8970E-5
95% BCA Bootstrap UCL	7.9570E-5		
90% Chebyshev(Mean, Sd) UCL	8.7799E-5	95% Chebyshev(Mean, Sd) UCL	9.7437E-5
97.5% Chebyshev(Mean, Sd) UCL	1.1081E-4	99% Chebyshev(Mean, Sd) UCL	1.3709E-4

Suggested UCL to Use

95% Student's-t UCL 7.8496E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	36	Number of Distinct Observations	32
		Number of Missing Observations	1
Number of Detects	31	Number of Non-Detects	5
Number of Distinct Detects	29	Number of Distinct Non-Detects	3
Minimum Detect	2.2200E-6	Minimum Non-Detect	1.5400E-6
Maximum Detect	2.2600E-5	Maximum Non-Detect	1.5900E-6
Variance Detects	1.961E-11	Percent Non-Detects	13.89%
Mean Detects	8.0561E-6	SD Detects	4.4288E-6
Median Detects	7.4800E-6	CV Detects	N/A
Skewness Detects	1.235	Kurtosis Detects	2.433
Mean of Logged Detects	-11.87	SD of Logged Detects	0.564

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.918	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.117	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.1511E-6	KM Standard Error of Mean	7.8418E-7
KM SD	4.6286E-6	95% KM (BCA) UCL	8.3889E-6
95% KM (t) UCL	8.4760E-6	95% KM (Percentile Bootstrap) UCL	8.4333E-6
95% KM (z) UCL	8.4410E-6	95% KM Bootstrap t UCL	8.7249E-6
90% KM Chebyshev UCL	9.5036E-6	95% KM Chebyshev UCL	1.0569E-5
97.5% KM Chebyshev UCL	1.2048E-5	99% KM Chebyshev UCL	1.4954E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.151	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0739	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.159	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.594	k star (bias corrected MLE)	3.268
Theta hat (MLE)	2.2414E-6	Theta star (bias corrected MLE)	2.4652E-6
nu hat (MLE)	222.8	nu star (bias corrected)	202.6
Mean (detects)	8.0561E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.2200E-6	Mean	0.0014
Maximum	0.01	Median	8.3950E-6
SD	0.0035	CV	2.511
k hat (MLE)	0.175	k star (bias corrected MLE)	0.179
Theta hat (MLE)	0.00797	Theta star (bias corrected MLE)	0.0078
nu hat (MLE)	12.6	nu star (bias corrected)	12.89
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (12.89, α)	5.817	Adjusted Chi Square Value (12.89, β)	5.602
95% Gamma Approximate UCL (use when n>=50)	0.00309	95% Gamma Adjusted UCL (use when n<50)	0.00321

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.1511E-6	SD (KM)	4.6286E-6
Variance (KM)	2.142E-11	SE of Mean (KM)	7.8418E-7

k hat (KM)	2.387	k star (KM)	2.207
nu hat (KM)	171.9	nu star (KM)	158.9
theta hat (KM)	2.9958E-6	theta star (KM)	3.2408E-6
80% gamma percentile (KM)	1.0582E-5	90% gamma percentile (KM)	1.3593E-5
95% gamma percentile (KM)	1.6448E-5	99% gamma percentile (KM)	2.2745E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (158.88, α)	130.7	Adjusted Chi Square Value (158.88, β)	129.6
95% Gamma Approximate KM-UCL (use when n>=50)	8.6904E-6	95% Gamma Adjusted KM-UCL (use when n<50)	8.7680E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0841	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.2130E-6	Mean in Log Scale	-12.05
SD in Original Scale	4.6210E-6	SD in Log Scale	0.686
95% t UCL (assumes normality of ROS data)	8.5142E-6	95% Percentile Bootstrap UCL	8.4564E-6
95% BCA Bootstrap UCL	8.6616E-6	95% Bootstrap t UCL	8.7413E-6
95% H-UCL (Log ROS)	9.3902E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.08	KM Geo Mean	5.6481E-6
KM SD (logged)	0.733	95% Critical H Value (KM-Log)	2.106
KM Standard Error of Mean (logged)	0.124	95% H-UCL (KM -Log)	9.5899E-6
KM SD (logged)	0.733	95% Critical H Value (KM-Log)	2.106
KM Standard Error of Mean (logged)	0.124		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.0451E-6	Mean in Log Scale	-12.18
SD in Original Scale	4.8302E-6	SD in Log Scale	0.93
95% t UCL (Assumes normality)	8.4053E-6	95% H-Stat UCL	1.1364E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 8.4760E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	4.1800E-5	Mean	2.6104E-4
Maximum	0.00131	Median	2.2100E-4
SD	2.1847E-4	Std. Error of Mean	3.5915E-5
Coefficient of Variation	0.837	Skewness	3.233

Normal GOF Test

Shapiro Wilk Test Statistic	0.711	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.167	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.2168E-4	95% Adjusted-CLT UCL (Chen-1995)	3.4051E-4
		95% Modified-t UCL (Johnson-1978)	3.2486E-4

Gamma GOF Test

A-D Test Statistic	0.37	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.758	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0716	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.276	k star (bias corrected MLE)	2.11
Theta hat (MLE)	1.1469E-4	Theta star (bias corrected MLE)	1.2374E-4
nu hat (MLE)	168.4	nu star (bias corrected)	156.1
MLE Mean (bias corrected)	2.6104E-4	MLE Sd (bias corrected)	1.7973E-4
		Approximate Chi Square Value (0.05)	128.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	127.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.1781E-4	95% Adjusted Gamma UCL (use when n<50)	3.2054E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.989	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0639	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.08	Mean of logged Data	-8.486
Maximum of Logged Data	-6.638	SD of logged Data	0.684

Assuming Lognormal Distribution

95% H-UCL	3.2977E-4	90% Chebyshev (MVUE) UCL	3.5320E-4
95% Chebyshev (MVUE) UCL	3.9603E-4	97.5% Chebyshev (MVUE) UCL	4.5548E-4
99% Chebyshev (MVUE) UCL	5.7226E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.2012E-4	95% Jackknife UCL	3.2168E-4
95% Standard Bootstrap UCL	3.1779E-4	95% Bootstrap-t UCL	3.5708E-4

95% Hall's Bootstrap UCL	5.9739E-4	95% Percentile Bootstrap UCL	3.2397E-4
95% BCA Bootstrap UCL	3.3715E-4		
90% Chebyshev(Mean, Sd) UCL	3.6879E-4	95% Chebyshev(Mean, Sd) UCL	4.1759E-4
97.5% Chebyshev(Mean, Sd) UCL	4.8533E-4	99% Chebyshev(Mean, Sd) UCL	6.1840E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 3.2054E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.5800E-5	Mean	1.0045E-4
Maximum	4.5400E-4	Median	8.8200E-5
SD	7.7570E-5	Std. Error of Mean	1.2752E-5
Coefficient of Variation	0.772	Skewness	2.788

Normal GOF Test

Shapiro Wilk Test Statistic	0.764	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.2198E-4	95% Adjusted-CLT UCL (Chen-1995)	1.2767E-4
		95% Modified-t UCL (Johnson-1978)	1.2296E-4

Gamma GOF Test

A-D Test Statistic	0.247	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.757	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0634	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.405	k star (bias corrected MLE)	2.228
Theta hat (MLE)	4.1772E-5	Theta star (bias corrected MLE)	4.5090E-5
nu hat (MLE)	178	nu star (bias corrected)	164.9
MLE Mean (bias corrected)	1.0045E-4	MLE Sd (bias corrected)	6.7300E-5
		Approximate Chi Square Value (0.05)	136.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	135

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.2161E-4	95% Adjusted Gamma UCL (use when n<50)	1.2263E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.992	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0676	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.06	Mean of logged Data	-9.428
Maximum of Logged Data	-7.697	SD of logged Data	0.676

Assuming Lognormal Distribution

95% H-UCL	1.2749E-4	90% Chebyshev (MVUE) UCL	1.3657E-4
95% Chebyshev (MVUE) UCL	1.5298E-4	97.5% Chebyshev (MVUE) UCL	1.7574E-4
99% Chebyshev (MVUE) UCL	2.2047E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.2143E-4	95% Jackknife UCL	1.2198E-4
95% Standard Bootstrap UCL	1.2112E-4	95% Bootstrap-t UCL	1.3036E-4

95% Hall's Bootstrap UCL	2.1294E-4	95% Percentile Bootstrap UCL	1.2264E-4
95% BCA Bootstrap UCL	1.3085E-4		
90% Chebyshev(Mean, Sd) UCL	1.3871E-4	95% Chebyshev(Mean, Sd) UCL	1.5604E-4
97.5% Chebyshev(Mean, Sd) UCL	1.8009E-4	99% Chebyshev(Mean, Sd) UCL	2.2734E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 1.2263E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	37	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable PCB-169 was not processed!

PCB-189

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	34	Number of Non-Detects	3
Number of Distinct Detects	34	Number of Distinct Non-Detects	3
Minimum Detect	2.0400E-6	Minimum Non-Detect	1.2500E-6
Maximum Detect	4.5800E-5	Maximum Non-Detect	1.2900E-6
Variance Detects	8.959E-11	Percent Non-Detects	8.108%
Mean Detects	1.3290E-5	SD Detects	9.4654E-6
Median Detects	1.0750E-5	CV Detects	N/A
Skewness Detects	1.569	Kurtosis Detects	3.081
Mean of Logged Detects	-11.46	SD of Logged Detects	0.71

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.871	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.933	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.15	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.2314E-5	KM Standard Error of Mean	1.5893E-6
KM SD	9.5241E-6	95% KM (BCA) UCL	1.5168E-5
95% KM (t) UCL	1.4997E-5	95% KM (Percentile Bootstrap) UCL	1.5122E-5
95% KM (z) UCL	1.4928E-5	95% KM Bootstrap t UCL	1.5866E-5
90% KM Chebyshev UCL	1.7082E-5	95% KM Chebyshev UCL	1.9241E-5
97.5% KM Chebyshev UCL	2.2239E-5	99% KM Chebyshev UCL	2.8127E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.171	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.758	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0753	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.153	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.308	k star (bias corrected MLE)	2.124
Theta hat (MLE)	5.7586E-6	Theta star (bias corrected MLE)	6.2575E-6
nu hat (MLE)	156.9	nu star (bias corrected)	144.4
Mean (detects)	1.3290E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.0400E-6	Mean	8.2302E-4
Maximum	0.01	Median	1.1100E-5
SD	0.00276	CV	3.358
k hat (MLE)	0.194	k star (bias corrected MLE)	0.197
Theta hat (MLE)	0.00423	Theta star (bias corrected MLE)	0.00418
nu hat (MLE)	14.39	nu star (bias corrected)	14.55
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (14.55, α)	6.952	Adjusted Chi Square Value (14.55, β)	6.724
95% Gamma Approximate UCL (use when n>=50)	0.00172	95% Gamma Adjusted UCL (use when n<50)	0.00178

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.2314E-5	SD (KM)	9.5241E-6
Variance (KM)	9.071E-11	SE of Mean (KM)	1.5893E-6
k hat (KM)	1.672	k star (KM)	1.554

nu hat (KM)	123.7	nu star (KM)	115
theta hat (KM)	7.3664E-6	theta star (KM)	7.9234E-6
80% gamma percentile (KM)	1.8978E-5	90% gamma percentile (KM)	2.5439E-5
95% gamma percentile (KM)	3.1700E-5	99% gamma percentile (KM)	4.5804E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (115.00, α)	91.24	Adjusted Chi Square Value (115.00, β)	90.33
95% Gamma Approximate KM-UCL (use when n>=50)	1.5520E-5	95% Gamma Adjusted KM-UCL (use when n<50)	1.5678E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.99	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.933	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.07	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.15	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.2379E-5	Mean in Log Scale	-11.59
SD in Original Scale	9.5806E-6	SD in Log Scale	0.816
95% t UCL (assumes normality of ROS data)	1.5038E-5	95% Percentile Bootstrap UCL	1.5023E-5
95% BCA Bootstrap UCL	1.5342E-5	95% Bootstrap t UCL	1.5772E-5
95% H-UCL (Log ROS)	1.7353E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-11.63	KM Geo Mean	8.8652E-6
KM SD (logged)	0.888	95% Critical H Value (KM-Log)	2.265
KM Standard Error of Mean (logged)	0.148	95% H-UCL (KM -Log)	1.8380E-5
KM SD (logged)	0.888	95% Critical H Value (KM-Log)	2.265
KM Standard Error of Mean (logged)	0.148		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.2264E-5	Mean in Log Scale	-11.69
SD in Original Scale	9.7155E-6	SD in Log Scale	1.033
95% t UCL (Assumes normality)	1.4960E-5	95% H-Stat UCL	2.1711E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	1.5678E-5	95% GROS Adjusted Gamma UCL	0.00178

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.12/2/17 10:45:24 AM
From File	Crab-Mus_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	9.4279E-7	Mean	3.6622E-6
Maximum	9.6318E-6	Median	2.8365E-6
SD	2.3830E-6	Std. Error of Mean	3.9177E-7
Coefficient of Variation	N/A	Skewness	1.228

Normal GOF Test

Shapiro Wilk Test Statistic	0.835	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.179	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.3237E-6	95% Adjusted-CLT UCL (Chen-1995)	4.3911E-6
		95% Modified-t UCL (Johnson-1978)	4.3368E-6

Gamma GOF Test

A-D Test Statistic	0.801	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.113	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.869	k star (bias corrected MLE)	2.654
Theta hat (MLE)	1.2764E-6	Theta star (bias corrected MLE)	1.3796E-6
nu hat (MLE)	212.3	nu star (bias corrected)	196.4
MLE Mean (bias corrected)	3.6622E-6	MLE Sd (bias corrected)	2.2478E-6
		Approximate Chi Square Value (0.05)	165
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	163.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	4.3597E-6	95% Adjusted Gamma UCL (use when n<50)	4.3930E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.87	Mean of logged Data	-12.7
Maximum of Logged Data	-11.55	SD of logged Data	0.608

Assuming Lognormal Distribution

95% H-UCL	4.4879E-6	90% Chebyshev (MVUE) UCL	4.8107E-6
95% Chebyshev (MVUE) UCL	5.3393E-6	97.5% Chebyshev (MVUE) UCL	6.0731E-6
99% Chebyshev (MVUE) UCL	7.5144E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.3066E-6	95% Jackknife UCL	4.3237E-6
95% Standard Bootstrap UCL	4.2961E-6	95% Bootstrap-t UCL	4.4955E-6
95% Hall's Bootstrap UCL	4.3130E-6	95% Percentile Bootstrap UCL	4.3115E-6
95% BCA Bootstrap UCL	4.3399E-6		
90% Chebyshev(Mean, Sd) UCL	4.8375E-6	95% Chebyshev(Mean, Sd) UCL	5.3699E-6
97.5% Chebyshev(Mean, Sd) UCL	6.1088E-6	99% Chebyshev(Mean, Sd) UCL	7.5603E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 4.3930E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	8.0303E-8	Mean	8.5633E-7
Maximum	2.8469E-6	Median	7.1888E-7
SD	5.7819E-7	Std. Error of Mean	9.5055E-8
Coefficient of Variation	N/A	Skewness	1.242

Normal GOF Test

Shapiro Wilk Test Statistic	0.914	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.0168E-6	95% Adjusted-CLT UCL (Chen-1995)	1.0334E-6
		95% Modified-t UCL (Johnson-1978)	1.0200E-6

Gamma GOF Test

A-D Test Statistic	0.194	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.758	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0712	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.181	k star (bias corrected MLE)	2.022
Theta hat (MLE)	3.9267E-7	Theta star (bias corrected MLE)	4.2351E-7
nu hat (MLE)	161.4	nu star (bias corrected)	149.6
MLE Mean (bias corrected)	8.5633E-7	MLE Sd (bias corrected)	6.0222E-7
		Approximate Chi Square Value (0.05)	122.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	121.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.0472E-6	95% Adjusted Gamma UCL (use when n<50)	1.0564E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.34	Mean of logged Data	-14.22
Maximum of Logged Data	-12.77	SD of logged Data	0.767

Assuming Lognormal Distribution

95% H-UCL	1.1818E-6	90% Chebyshev (MVUE) UCL	1.2607E-6
95% Chebyshev (MVUE) UCL	1.4289E-6	97.5% Chebyshev (MVUE) UCL	1.6624E-6
99% Chebyshev (MVUE) UCL	2.1209E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.0127E-6	95% Jackknife UCL	1.0168E-6
95% Standard Bootstrap UCL	1.0093E-6	95% Bootstrap-t UCL	1.0340E-6

95% Hall's Bootstrap UCL	1.0566E-6	95% Percentile Bootstrap UCL	1.0179E-6
95% BCA Bootstrap UCL	1.0362E-6		
90% Chebyshev(Mean, Sd) UCL	1.1415E-6	95% Chebyshev(Mean, Sd) UCL	1.2707E-6
97.5% Chebyshev(Mean, Sd) UCL	1.4499E-6	99% Chebyshev(Mean, Sd) UCL	1.8021E-6

Suggested UCL to Use

95% Student's-t UCL 1.0168E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Stati

User Selected Options	
Date/Time of Computation	ProUCL 5.13/10/17 3:09:37
From File	crb_mus2a_ndl_PCB_sum
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

Total Number of Observations

Minimum
Maximum
SD
Coefficient of Variation

Shapiro Wilk Test Statistic
5% Shapiro Wilk Critical Value
Lilliefors Test Statistic
5% Lilliefors Critical Value
Data No

As

95% Normal UCL

95% Student's-t UCL

A-D Test Statistic
5% A-D Critical Value
K-S Test Statistic
5% K-S Critical Value
Detected data appea

k hat (MLE)
Theta hat (MLE)
nu hat (MLE)
MLE Mean (bias corrected)

Adjusted Level of Significance

As

95% Approximate Gamma UCL (use when n>=50)

Shapiro Wilk Test Statistic
5% Shapiro Wilk Critical Value
Lilliefors Test Statistic
5% Lilliefors Critical Value
Data appea

Minimum of Logged Data
Maximum of Logged Data

Ass

95% H-UCL
95% Chebyshev (MVUE) UCL
99% Chebyshev (MVUE) UCL

Nonparam
Data appear to follow a

Nonpa
95% CLT UCL
95% Standard Bootstrap UCL
95% Hall's Bootstrap UCL
95% BCA Bootstrap UCL
90% Chebyshev(Mean, Sd) UCL
97.5% Chebyshev(Mean, Sd) UCL

95% Adjusted Gamma UCL

Note: Suggestions regarding the selection of a 95
Recommendations are ba
These recommendations are based upon the res
However, simulations results will not cover all Real

stics for Data Sets with Non-Detects

7 PM
_flag_sep.xls

General Statistics

37	Number of Distinct Observations	37
	Number of Missing Observations	0
0.00519	Mean	0.0231
0.0573	Median	0.0184
0.0137	Std. Error of Mean	0.00226
0.595	Skewness	0.844

Normal GOF Test

0.909	**Shapiro Wilk GOF Test**
0.936	Data Not Normal at 5% Significance Level
0.152	**Lilliefors GOF Test**
0.144	Data Not Normal at 5% Significance Level

t Normal at 5% Significance Level

ssuming Normal Distribution

	95% UCLs (Adjusted for Skewness)	
0.0269	95% Adjusted-CLT UCL (Chen-1995)	0.0271
	95% Modified-t UCL (Johnson-1978)	0.0269

Gamma GOF Test

0.373	**Anderson-Darling Gamma GOF Test**
0.754	Detected data appear Gamma Distributed at 5% Significance Level
0.106	**Kolmogorov-Smirnov Gamma GOF Test**
0.146	Detected data appear Gamma Distributed at 5% Significance Level

ar Gamma Distributed at 5% Significance Level

Gamma Statistics

2.993	k star (bias corrected MLE)	2.769
0.00771	Theta star (bias corrected MLE)	0.00834
221.5	nu star (bias corrected)	204.9
0.0231	MLE Sd (bias corrected)	0.0139
	Approximate Chi Square Value (0.05)	172.8
0.0431	Adjusted Chi Square Value	171.5

ssuming Gamma Distribution

0.0274	95% Adjusted Gamma UCL (use when n<50)	0.0276

Lognormal GOF Test

0.973	**Shapiro Wilk Lognormal GOF Test**
0.936	Data appear Lognormal at 5% Significance Level
0.0769	**Lilliefors Lognormal GOF Test**
0.144	Data appear Lognormal at 5% Significance Level

ar Lognormal at 5% Significance Level

Lognormal Statistics

-5.261	Mean of logged Data	-3.945
-2.86	SD of logged Data	0.615

suming Lognormal Distribution

0.0287	90% Chebyshev (MVUE) UCL	0.0308
0.0342	97.5% Chebyshev (MVUE) UCL	0.0389
0.0482		

ıetric Distribution Free UCL Statistics

ı Discernible Distribution at 5% Significance Level

ıarametric Distribution Free UCLs

0.0268	95% Jackknife UCL	0.0269
0.0267	95% Bootstrap-t UCL	0.0274
0.0272	95% Percentile Bootstrap UCL	0.0271
0.0271		
0.0299	95% Chebyshev(Mean, Sd) UCL	0.0329
0.0372	99% Chebyshev(Mean, Sd) UCL	0.0456

Suggested UCL to Use

0.0276

% UCL are provided to help the user to select the most appropriate 95% UCL.
ısed upon data size, data distribution, and skewness.
ults of the simulation studies summarized in Singh, Maichle, and Lee (2006).
Vorld data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:24:40 PM
From File	crb_mus5_PAH_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)anthracene was not processed!

Benzo(a)pyrene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(a)pyrene was not processed!

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzo(b)fluoranthene was not processed!

Chrysene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Chrysene was not processed!

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Dibenzo(a,h)anthracene was not processed!

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	3
Number of Detects	0	Number of Non-Detects	37
Number of Distinct Detects	0	Number of Distinct Non-Detects	3

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Indeno(1,2,3-cd)pyrene was not processed!

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:28:38 PM
From File	crb_mus7_pest_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	23
Number of Detects	22	Number of Non-Detects	15
Number of Distinct Detects	22	Number of Distinct Non-Detects	1
Minimum Detect	3.9900E-6	Minimum Non-Detect	4.9800E-6
Maximum Detect	1.0500E-4	Maximum Non-Detect	4.9800E-6
Variance Detects	5.711E-10	Percent Non-Detects	40.54%
Mean Detects	2.3819E-5	SD Detects	2.3898E-5
Median Detects	1.5950E-5	CV Detects	N/A
Skewness Detects	2.295	Kurtosis Detects	5.802
Mean of Logged Detects	-10.99	SD of Logged Detects	0.815

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.724	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.184	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.5780E-5	KM Standard Error of Mean	3.4441E-6
KM SD	2.0468E-5	95% KM (BCA) UCL	2.2505E-5
95% KM (t) UCL	2.1595E-5	95% KM (Percentile Bootstrap) UCL	2.1749E-5
95% KM (z) UCL	2.1445E-5	95% KM Bootstrap t UCL	2.5647E-5
90% KM Chebyshev UCL	2.6113E-5	95% KM Chebyshev UCL	3.0793E-5
97.5% KM Chebyshev UCL	3.7289E-5	99% KM Chebyshev UCL	5.0048E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.699	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.758	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.188	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.589	k star (bias corrected MLE)	1.403
Theta hat (MLE)	1.4986E-5	Theta star (bias corrected MLE)	1.6977E-5
nu hat (MLE)	69.94	nu star (bias corrected)	61.73
Mean (detects)	2.3819E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.9900E-6	Mean	0.00407
Maximum	0.01	Median	3.4400E-5
SD	0.00497	CV	1.221
k hat (MLE)	0.246	k star (bias corrected MLE)	0.244
Theta hat (MLE)	0.0166	Theta star (bias corrected MLE)	0.0167

nu hat (MLE)	18.19	nu star (bias corrected)	18.05
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (18.05, α)	9.424	Adjusted Chi Square Value (18.05, β)	9.153
95% Gamma Approximate UCL (use when n>=50)	0.00779	95% Gamma Adjusted UCL (use when n<50)	0.00802

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.5780E-5	SD (KM)	2.0468E-5
Variance (KM)	4.189E-10	SE of Mean (KM)	3.4441E-6
k hat (KM)	0.594	k star (KM)	0.564
nu hat (KM)	43.99	nu star (KM)	41.75
theta hat (KM)	2.6548E-5	theta star (KM)	2.7968E-5
80% gamma percentile (KM)	2.6003E-5	90% gamma percentile (KM)	4.1606E-5
95% gamma percentile (KM)	5.8053E-5	99% gamma percentile (KM)	9.8049E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (41.75, α)	27.94	Adjusted Chi Square Value (41.75, β)	27.45
95% Gamma Approximate KM-UCL (use when n>=50)	2.3580E-5	95% Gamma Adjusted KM-UCL (use when n<50)	2.4002E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.911	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.112	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.184	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.5400E-5	Mean in Log Scale	-11.75
SD in Original Scale	2.1000E-5	SD in Log Scale	1.186
95% t UCL (assumes normality of ROS data)	2.1229E-5	95% Percentile Bootstrap UCL	2.1260E-5
95% BCA Bootstrap UCL	2.2880E-5	95% Bootstrap t UCL	2.5066E-5
95% H-UCL (Log ROS)	2.6736E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-11.58	KM Geo Mean	9.3949E-6
KM SD (logged)	0.936	95% Critical H Value (KM-Log)	2.318
KM Standard Error of Mean (logged)	0.158	95% H-UCL (KM -Log)	2.0912E-5
KM SD (logged)	0.936	95% Critical H Value (KM-Log)	2.318
KM Standard Error of Mean (logged)	0.158		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.5172E-5	Mean in Log Scale	-11.77
SD in Original Scale	2.1116E-5	SD in Log Scale	1.137
95% t UCL (Assumes normality)	2.1033E-5	95% H-Stat UCL	2.4013E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	2.4002E-5	95% GROS Adjusted Gamma UCL	0.00802

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	36	Number of Distinct Observations	33
		Number of Missing Observations	1
Number of Detects	33	Number of Non-Detects	3
Number of Distinct Detects	32	Number of Distinct Non-Detects	1
Minimum Detect	7.7600E-6	Minimum Non-Detect	9.9500E-6
Maximum Detect	1.2300E-4	Maximum Non-Detect	9.9500E-6
Variance Detects	5.497E-10	Percent Non-Detects	8.333%
Mean Detects	3.3362E-5	SD Detects	2.3445E-5
Median Detects	2.8200E-5	CV Detects	N/A
Skewness Detects	2.587	Kurtosis Detects	7.479
Mean of Logged Detects	-10.47	SD of Logged Detects	0.548

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.704	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.931	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.278	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.152	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.1229E-5	KM Standard Error of Mean	3.9282E-6
KM SD	2.3209E-5	95% KM (BCA) UCL	3.7879E-5
95% KM (t) UCL	3.7866E-5	95% KM (Percentile Bootstrap) UCL	3.8010E-5
95% KM (z) UCL	3.7690E-5	95% KM Bootstrap t UCL	4.2057E-5
90% KM Chebyshev UCL	4.3014E-5	95% KM Chebyshev UCL	4.8352E-5
97.5% KM Chebyshev UCL	5.5761E-5	99% KM Chebyshev UCL	7.0314E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.491	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.753	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.218	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.154	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.245	k star (bias corrected MLE)	2.97
Theta hat (MLE)	1.0281E-5	Theta star (bias corrected MLE)	1.1232E-5
nu hat (MLE)	214.2	nu star (bias corrected)	196
Mean (detects)	3.3362E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	7.7600E-6	Mean	8.6392E-4
Maximum	0.01	Median	2.8750E-5
SD	0.00279	CV	3.234
k hat (MLE)	0.244	k star (bias corrected MLE)	0.242
Theta hat (MLE)	0.00355	Theta star (bias corrected MLE)	0.00357
nu hat (MLE)	17.54	nu star (bias corrected)	17.41
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (17.41, α)	8.969	Adjusted Chi Square Value (17.41, β)	8.694
95% Gamma Approximate UCL (use when n>=50)	0.00168	95% Gamma Adjusted UCL (use when n<50)	0.00173

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.1229E-5	SD (KM)	2.3209E-5
Variance (KM)	5.387E-10	SE of Mean (KM)	3.9282E-6

k hat (KM)	1.81	k star (KM)	1.678
nu hat (KM)	130.4	nu star (KM)	120.8
theta hat (KM)	1.7249E-5	theta star (KM)	1.8610E-5
80% gamma percentile (KM)	4.7716E-5	90% gamma percentile (KM)	6.3328E-5
95% gamma percentile (KM)	7.8381E-5	99% gamma percentile (KM)	1.1213E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (120.82, α)	96.44	Adjusted Chi Square Value (120.82, β)	95.45
95% Gamma Approximate KM-UCL (use when n>=50)	3.9124E-5	95% Gamma Adjusted KM-UCL (use when n<50)	3.9530E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.938	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.931	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.177	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.152	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.1359E-5	Mean in Log Scale	-10.56
SD in Original Scale	2.3412E-5	SD in Log Scale	0.613
95% t UCL (assumes normality of ROS data)	3.7951E-5	95% Percentile Bootstrap UCL	3.8197E-5
95% BCA Bootstrap UCL	3.9606E-5	95% Bootstrap t UCL	4.2130E-5
95% H-UCL (Log ROS)	3.8358E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.58	KM Geo Mean	2.5469E-5
KM SD (logged)	0.629	95% Critical H Value (KM-Log)	2.012
KM Standard Error of Mean (logged)	0.106	95% H-UCL (KM -Log)	3.8452E-5
KM SD (logged)	0.629	95% Critical H Value (KM-Log)	2.012
KM Standard Error of Mean (logged)	0.106		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.0997E-5	Mean in Log Scale	-10.62
SD in Original Scale	2.3788E-5	SD in Log Scale	0.716
95% t UCL (Assumes normality)	3.7695E-5	95% H-Stat UCL	4.0860E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 3.8452E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	37	Number of Distinct Observations	15
Number of Detects	14	Number of Non-Detects	23
Number of Distinct Detects	14	Number of Distinct Non-Detects	1
Minimum Detect	7.1700E-6	Minimum Non-Detect	1.0800E-5
Maximum Detect	1.7400E-4	Maximum Non-Detect	1.0800E-5
Variance Detects	1.8431E-9	Percent Non-Detects	62.16%
Mean Detects	2.9718E-5	SD Detects	4.2931E-5
Median Detects	1.5950E-5	CV Detects	N/A
Skewness Detects	3.359	Kurtosis Detects	11.81
Mean of Logged Detects	-10.86	SD of Logged Detects	0.811

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.502	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.338	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.6746E-5	KM Standard Error of Mean	4.7006E-6
KM SD	2.7403E-5	95% KM (BCA) UCL	2.6025E-5
95% KM (t) UCL	2.4682E-5	95% KM (Percentile Bootstrap) UCL	2.5598E-5
95% KM (z) UCL	2.4478E-5	95% KM Bootstrap t UCL	4.6606E-5
90% KM Chebyshev UCL	3.0848E-5	95% KM Chebyshev UCL	3.7236E-5
97.5% KM Chebyshev UCL	4.6101E-5	99% KM Chebyshev UCL	6.3517E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.379	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.257	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.234	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.29	k star (bias corrected MLE)	1.061
Theta hat (MLE)	2.3045E-5	Theta star (bias corrected MLE)	2.8014E-5
nu hat (MLE)	36.11	nu star (bias corrected)	29.7
Mean (detects)	2.9718E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	7.1700E-6	Mean	0.00623
Maximum	0.01	Median	0.01
SD	0.0049	CV	0.787
k hat (MLE)	0.355	k star (bias corrected MLE)	0.344
Theta hat (MLE)	0.0176	Theta star (bias corrected MLE)	0.0181
nu hat (MLE)	26.23	nu star (bias corrected)	25.44
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (25.44, α)	14.95	Adjusted Chi Square Value (25.44, β)	14.6
95% Gamma Approximate UCL (use when n>=50)	0.0106	95% Gamma Adjusted UCL (use when n<50)	0.0109

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.6746E-5	SD (KM)	2.7403E-5
Variance (KM)	7.509E-10	SE of Mean (KM)	4.7006E-6
k hat (KM)	0.373	k star (KM)	0.361

nu hat (KM)	27.63	nu star (KM)	26.73
theta hat (KM)	4.4844E-5	theta star (KM)	4.6366E-5
80% gamma percentile (KM)	2.6653E-5	90% gamma percentile (KM)	4.8121E-5
95% gamma percentile (KM)	7.2052E-5	99% gamma percentile (KM)	1.3290E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (26.73, α)	15.94	Adjusted Chi Square Value (26.73, β)	15.58
95% Gamma Approximate KM-UCL (use when n>=50)	2.8078E-5	95% Gamma Adjusted KM-UCL (use when n<50)	2.8731E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.867	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.19	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.5748E-5	Mean in Log Scale	-11.55
SD in Original Scale	2.8206E-5	SD in Log Scale	0.857
95% t UCL (assumes normality of ROS data)	2.3577E-5	95% Percentile Bootstrap UCL	2.3891E-5
95% BCA Bootstrap UCL	2.9030E-5	95% Bootstrap t UCL	4.3648E-5
95% H-UCL (Log ROS)	1.9103E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-11.35	KM Geo Mean	1.1794E-5
KM SD (logged)	0.624	95% Critical H Value (KM-Log)	2.012
KM Standard Error of Mean (logged)	0.121	95% H-UCL (KM -Log)	1.7665E-5
KM SD (logged)	0.624	95% Critical H Value (KM-Log)	2.012
KM Standard Error of Mean (logged)	0.121		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.4601E-5	Mean in Log Scale	-11.65
SD in Original Scale	2.8434E-5	SD in Log Scale	0.792
95% t UCL (Assumes normality)	2.2493E-5	95% H-Stat UCL	1.5905E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.7665E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	0.00104	Mean	0.00434
Maximum	0.0143	Median	0.00354
SD	0.00282	Std. Error of Mean	4.6409E-4
Coefficient of Variation	0.651	Skewness	1.694

Normal GOF Test

Shapiro Wilk Test Statistic	0.844	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00512	95% Adjusted-CLT UCL (Chen-1995)	0.00524
		95% Modified-t UCL (Johnson-1978)	0.00514

Gamma GOF Test

A-D Test Statistic	0.603	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.133	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.031	k star (bias corrected MLE)	2.803
Theta hat (MLE)	0.00143	Theta star (bias corrected MLE)	0.00155
nu hat (MLE)	224.3	nu star (bias corrected)	207.4
MLE Mean (bias corrected)	0.00434	MLE Sd (bias corrected)	0.00259
		Approximate Chi Square Value (0.05)	175.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	173.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00514	95% Adjusted Gamma UCL (use when n<50)	0.00517

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.869	Mean of logged Data	-5.615
Maximum of Logged Data	-4.247	SD of logged Data	0.588

Assuming Lognormal Distribution

95% H-UCL	0.00526	90% Chebyshev (MVUE) UCL	0.00564
95% Chebyshev (MVUE) UCL	0.00624	97.5% Chebyshev (MVUE) UCL	0.00708
99% Chebyshev (MVUE) UCL	0.00872		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0051	95% Jackknife UCL	0.00512
95% Standard Bootstrap UCL	0.00509	95% Bootstrap-t UCL	0.00534

95% Hall's Bootstrap UCL	0.00539	95% Percentile Bootstrap UCL	0.00511
95% BCA Bootstrap UCL	0.00532		
90% Chebyshev(Mean, Sd) UCL	0.00573	95% Chebyshev(Mean, Sd) UCL	0.00636
97.5% Chebyshev(Mean, Sd) UCL	0.00723	99% Chebyshev(Mean, Sd) UCL	0.00895

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00517

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.00458	Mean	0.0129
Maximum	0.0331	Median	0.011
SD	0.00633	Std. Error of Mean	0.00104
Coefficient of Variation	0.492	Skewness	1.236

Normal GOF Test

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.129	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0146	95% Adjusted-CLT UCL (Chen-1995)	0.0148
		95% Modified-t UCL (Johnson-1978)	0.0147

Gamma GOF Test

A-D Test Statistic	0.331	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0942	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.788	k star (bias corrected MLE)	4.417
Theta hat (MLE)	0.00269	Theta star (bias corrected MLE)	0.00291
nu hat (MLE)	354.3	nu star (bias corrected)	326.9
MLE Mean (bias corrected)	0.0129	MLE Sd (bias corrected)	0.00612
		Approximate Chi Square Value (0.05)	286
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	284.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0147	95% Adjusted Gamma UCL (use when n<50)	0.0148

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.982	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0807	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.386	Mean of logged Data	-4.462
Maximum of Logged Data	-3.408	SD of logged Data	0.469

Assuming Lognormal Distribution

95% H-UCL	0.0149	90% Chebyshev (MVUE) UCL	0.0159
95% Chebyshev (MVUE) UCL	0.0173	97.5% Chebyshev (MVUE) UCL	0.0193
99% Chebyshev (MVUE) UCL	0.0231		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0146	95% Jackknife UCL	0.0146
95% Standard Bootstrap UCL	0.0146	95% Bootstrap-t UCL	0.0148

95% Hall's Bootstrap UCL	0.0151	95% Percentile Bootstrap UCL	0.0146
95% BCA Bootstrap UCL	0.0148		
90% Chebyshev(Mean, Sd) UCL	0.016	95% Chebyshev(Mean, Sd) UCL	0.0174
97.5% Chebyshev(Mean, Sd) UCL	0.0194	99% Chebyshev(Mean, Sd) UCL	0.0232

Suggested UCL to Use

95% Student's-t UCL 0.0146

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Number of Detects	34	Number of Non-Detects	2
Number of Distinct Detects	34	Number of Distinct Non-Detects	1
Minimum Detect	2.5200E-5	Minimum Non-Detect	9.4000E-6
Maximum Detect	3.5400E-4	Maximum Non-Detect	9.4000E-6
Variance Detects	5.2725E-9	Percent Non-Detects	5.556%
Mean Detects	1.0288E-4	SD Detects	7.2612E-5
Median Detects	8.8400E-5	CV Detects	0.706
Skewness Detects	2.215	Kurtosis Detects	5.079
Mean of Logged Detects	-9.358	SD of Logged Detects	0.579

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.744	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.933	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.252	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.15	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.7689E-5	KM Standard Error of Mean	1.2306E-5
KM SD	7.2744E-5	95% KM (BCA) UCL	1.2044E-4
95% KM (t) UCL	1.1848E-4	95% KM (Percentile Bootstrap) UCL	1.1813E-4
95% KM (z) UCL	1.1793E-4	95% KM Bootstrap t UCL	1.2691E-4
90% KM Chebyshev UCL	1.3461E-4	95% KM Chebyshev UCL	1.5133E-4
97.5% KM Chebyshev UCL	1.7454E-4	99% KM Chebyshev UCL	2.2013E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.992	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.753	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.179	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.152	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.992	k star (bias corrected MLE)	2.747
Theta hat (MLE)	3.4390E-5	Theta star (bias corrected MLE)	3.7449E-5
nu hat (MLE)	203.4	nu star (bias corrected)	186.8
Mean (detects)	1.0288E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.5200E-5	Mean	6.5272E-4
Maximum	0.01	Median	9.0850E-5
SD	0.0023	CV	3.524
k hat (MLE)	0.377	k star (bias corrected MLE)	0.365
Theta hat (MLE)	0.00173	Theta star (bias corrected MLE)	0.00179
nu hat (MLE)	27.18	nu star (bias corrected)	26.24
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (26.24, α)	15.57	Adjusted Chi Square Value (26.24, β)	15.19
95% Gamma Approximate UCL (use when n>=50)	0.0011	95% Gamma Adjusted UCL (use when n<50)	0.00113

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.7689E-5	SD (KM)	7.2744E-5
Variance (KM)	5.2916E-9	SE of Mean (KM)	1.2306E-5

k hat (KM)	1.803	k star (KM)	1.672
nu hat (KM)	129.8	nu star (KM)	120.4
theta hat (KM)	5.4168E-5	theta star (KM)	5.8438E-5
80% gamma percentile (KM)	1.4933E-4	90% gamma percentile (KM)	1.9828E-4
95% gamma percentile (KM)	2.4550E-4	99% gamma percentile (KM)	3.5137E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (120.36, α)	96.03	Adjusted Chi Square Value (120.36, β)	95.04
95% Gamma Approximate KM-UCL (use when n>=50)	1.2244E-4	95% Gamma Adjusted KM-UCL (use when n<50)	1.2371E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.933	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.136	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.15	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.8387E-5	Mean in Log Scale	-9.435
SD in Original Scale	7.2971E-5	SD in Log Scale	0.647
95% t UCL (assumes normality of ROS data)	1.1894E-4	95% Percentile Bootstrap UCL	1.1878E-4
95% BCA Bootstrap UCL	1.2535E-4	95% Bootstrap t UCL	1.2592E-4
95% H-UCL (Log ROS)	1.2299E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.481	KM Geo Mean	7.6256E-5
KM SD (logged)	0.752	95% Critical H Value (KM-Log)	2.124
KM Standard Error of Mean (logged)	0.127	95% H-UCL (KM -Log)	1.3252E-4
KM SD (logged)	0.752	95% Critical H Value (KM-Log)	2.124
KM Standard Error of Mean (logged)	0.127		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9.7428E-5	Mean in Log Scale	-9.52
SD in Original Scale	7.4104E-5	SD in Log Scale	0.879
95% t UCL (Assumes normality)	1.1830E-4	95% H-Stat UCL	1.5094E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.3252E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	33	Number of Distinct Non-Detects	1
Minimum Detect	6.0200E-5	Minimum Non-Detect	8.8300E-6
Maximum Detect	0.00159	Maximum Non-Detect	8.8300E-6
Variance Detects	8.4796E-8	Percent Non-Detects	2.703%
Mean Detects	3.8226E-4	SD Detects	2.9120E-4
Median Detects	3.0500E-4	CV Detects	0.762
Skewness Detects	2.644	Kurtosis Detects	8.395
Mean of Logged Detects	-8.063	SD of Logged Detects	0.606

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.723	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.24	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.7216E-4	KM Standard Error of Mean	4.8288E-5
KM SD	2.8962E-4	95% KM (BCA) UCL	4.5663E-4
95% KM (t) UCL	4.5369E-4	95% KM (Percentile Bootstrap) UCL	4.5873E-4
95% KM (z) UCL	4.5159E-4	95% KM Bootstrap t UCL	4.9761E-4
90% KM Chebyshev UCL	5.1703E-4	95% KM Chebyshev UCL	5.8265E-4
97.5% KM Chebyshev UCL	6.7372E-4	99% KM Chebyshev UCL	8.5263E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.134	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.148	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.148	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.745	k star (bias corrected MLE)	2.534
Theta hat (MLE)	1.3927E-4	Theta star (bias corrected MLE)	1.5083E-4
nu hat (MLE)	197.6	nu star (bias corrected)	182.5
Mean (detects)	3.8226E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.0200E-5	Mean	6.4219E-4
Maximum	0.01	Median	3.2200E-4
SD	0.00161	CV	2.502
k hat (MLE)	0.94	k star (bias corrected MLE)	0.882
Theta hat (MLE)	6.8303E-4	Theta star (bias corrected MLE)	7.2812E-4
nu hat (MLE)	69.58	nu star (bias corrected)	65.27
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (65.27, α)	47.68	Adjusted Chi Square Value (65.27, β)	47.03
95% Gamma Approximate UCL (use when n>=50)	8.7911E-4	95% Gamma Adjusted UCL (use when n<50)	8.9132E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.7216E-4	SD (KM)	2.8962E-4
Variance (KM)	8.3879E-8	SE of Mean (KM)	4.8288E-5
k hat (KM)	1.651	k star (KM)	1.535

nu hat (KM)	122.2	nu star (KM)	113.6
theta hat (KM)	2.2538E-4	theta star (KM)	2.4239E-4
80% gamma percentile (KM)	5.7434E-4	90% gamma percentile (KM)	7.7112E-4
95% gamma percentile (KM)	9.6193E-4	99% gamma percentile (KM)	0.00139

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (113.62, α)	90.01	Adjusted Chi Square Value (113.62, β)	89.1
95% Gamma Approximate KM-UCL (use when n>=50)	4.6977E-4	95% Gamma Adjusted KM-UCL (use when n<50)	4.7458E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.7382E-4	Mean in Log Scale	-8.103
SD in Original Scale	2.9168E-4	SD in Log Scale	0.647
95% t UCL (assumes normality of ROS data)	4.5477E-4	95% Percentile Bootstrap UCL	4.5635E-4
95% BCA Bootstrap UCL	4.7098E-4	95% Bootstrap t UCL	4.9552E-4
95% H-UCL (Log ROS)	4.6417E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.159	KM Geo Mean	2.8611E-4
KM SD (logged)	0.827	95% Critical H Value (KM-Log)	2.203
KM Standard Error of Mean (logged)	0.138	95% H-UCL (KM -Log)	5.4539E-4
KM SD (logged)	0.827	95% Critical H Value (KM-Log)	2.203
KM Standard Error of Mean (logged)	0.138		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.7204E-4	Mean in Log Scale	-8.178
SD in Original Scale	2.9377E-4	SD in Log Scale	0.922
95% t UCL (Assumes normality)	4.5358E-4	95% H-Stat UCL	6.1139E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 5.4539E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

cis-Nonachlor

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.7900E-4	Mean	5.8370E-4
Maximum	0.00117	Median	5.1800E-4
SD	2.6865E-4	Std. Error of Mean	4.4166E-5
Coefficient of Variation	0.46	Skewness	0.768

Normal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.14	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.5827E-4	95% Adjusted-CLT UCL (Chen-1995)	6.6231E-4
		95% Modified-t UCL (Johnson-1978)	6.5920E-4

Gamma GOF Test

A-D Test Statistic	0.342	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0819	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.924	k star (bias corrected MLE)	4.543
Theta hat (MLE)	1.1853E-4	Theta star (bias corrected MLE)	1.2848E-4
nu hat (MLE)	364.4	nu star (bias corrected)	336.2
MLE Mean (bias corrected)	5.8370E-4	MLE Sd (bias corrected)	2.7385E-4
		Approximate Chi Square Value (0.05)	294.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	293

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.6587E-4	95% Adjusted Gamma UCL (use when n<50)	6.6969E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0827	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.628	Mean of logged Data	-7.551
Maximum of Logged Data	-6.751	SD of logged Data	0.475

Assuming Lognormal Distribution

95% H-UCL	6.8365E-4	90% Chebyshev (MVUE) UCL	7.2972E-4
95% Chebyshev (MVUE) UCL	7.9464E-4	97.5% Chebyshev (MVUE) UCL	8.8474E-4
99% Chebyshev (MVUE) UCL	0.00106		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.5635E-4	95% Jackknife UCL	6.5827E-4
95% Standard Bootstrap UCL	6.5434E-4	95% Bootstrap-t UCL	6.7072E-4

95% Hall's Bootstrap UCL	6.5754E-4	95% Percentile Bootstrap UCL	6.5743E-4
95% BCA Bootstrap UCL	6.6105E-4		
90% Chebyshev(Mean, Sd) UCL	7.1620E-4	95% Chebyshev(Mean, Sd) UCL	7.7622E-4
97.5% Chebyshev(Mean, Sd) UCL	8.5952E-4	99% Chebyshev(Mean, Sd) UCL	0.00102

Suggested UCL to Use

95% Student's-t UCL 6.5827E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	3.0700E-4	Mean	0.00118
Maximum	0.00266	Median	9.9900E-4
SD	5.5421E-4	Std. Error of Mean	9.1112E-5
Coefficient of Variation	0.47	Skewness	1.099

Normal GOF Test

Shapiro Wilk Test Statistic	0.906	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00133	95% Adjusted-CLT UCL (Chen-1995)	0.00135
		95% Modified-t UCL (Johnson-1978)	0.00134

Gamma GOF Test

A-D Test Statistic	0.432	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.106	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.97	k star (bias corrected MLE)	4.585
Theta hat (MLE)	2.3745E-4	Theta star (bias corrected MLE)	2.5739E-4
nu hat (MLE)	367.8	nu star (bias corrected)	339.3
MLE Mean (bias corrected)	0.00118	MLE Sd (bias corrected)	5.5113E-4
		Approximate Chi Square Value (0.05)	297.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	295.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00135	95% Adjusted Gamma UCL (use when n<50)	0.00135

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.089	Mean of logged Data	-6.846
Maximum of Logged Data	-5.929	SD of logged Data	0.471

Assuming Lognormal Distribution

95% H-UCL	0.00138	90% Chebyshev (MVUE) UCL	0.00147
95% Chebyshev (MVUE) UCL	0.0016	97.5% Chebyshev (MVUE) UCL	0.00178
99% Chebyshev (MVUE) UCL	0.00214		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00133	95% Jackknife UCL	0.00133
95% Standard Bootstrap UCL	0.00133	95% Bootstrap-t UCL	0.00137

95% Hall's Bootstrap UCL	0.00135	95% Percentile Bootstrap UCL	0.00133
95% BCA Bootstrap UCL	0.00134		
90% Chebyshev(Mean, Sd) UCL	0.00145	95% Chebyshev(Mean, Sd) UCL	0.00158
97.5% Chebyshev(Mean, Sd) UCL	0.00175	99% Chebyshev(Mean, Sd) UCL	0.00209

Suggested UCL to Use

95% Adjusted Gamma UCL	0.00135

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor Epoxide

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	6.0900E-5	Mean	2.1967E-4
Maximum	6.4000E-4	Median	1.5600E-4
SD	1.4948E-4	Std. Error of Mean	2.4574E-5
Coefficient of Variation	0.68	Skewness	1.753

Normal GOF Test

Shapiro Wilk Test Statistic	0.757	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.236	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.6116E-4	95% Adjusted-CLT UCL (Chen-1995)	2.6766E-4
		95% Modified-t UCL (Johnson-1978)	2.6234E-4

Gamma GOF Test

A-D Test Statistic	1.657	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.18	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.088	k star (bias corrected MLE)	2.855
Theta hat (MLE)	7.1142E-5	Theta star (bias corrected MLE)	7.6930E-5
nu hat (MLE)	228.5	nu star (bias corrected)	211.3
MLE Mean (bias corrected)	2.1967E-4	MLE Sd (bias corrected)	1.3000E-4
		Approximate Chi Square Value (0.05)	178.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	177.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.5980E-4	95% Adjusted Gamma UCL (use when n<50)	2.6171E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.152	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.706	Mean of logged Data	-8.594
Maximum of Logged Data	-7.354	SD of logged Data	0.562

Assuming Lognormal Distribution

95% H-UCL	2.6067E-4	90% Chebyshev (MVUE) UCL	2.7922E-4
95% Chebyshev (MVUE) UCL	3.0792E-4	97.5% Chebyshev (MVUE) UCL	3.4775E-4
99% Chebyshev (MVUE) UCL	4.2599E-4		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	2.6009E-4	95% Jackknife UCL	2.6116E-4
95% Standard Bootstrap UCL	2.6021E-4	95% Bootstrap-t UCL	2.7189E-4

95% Hall's Bootstrap UCL	2.6785E-4	95% Percentile Bootstrap UCL	2.6259E-4
95% BCA Bootstrap UCL	2.7027E-4		
90% Chebyshev(Mean, Sd) UCL	2.9340E-4	95% Chebyshev(Mean, Sd) UCL	3.2679E-4
97.5% Chebyshev(Mean, Sd) UCL	3.7314E-4	99% Chebyshev(Mean, Sd) UCL	4.6419E-4

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 3.2679E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Hexachlorobenzene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	7.6500E-5	Mean	1.9441E-4
Maximum	4.1200E-4	Median	1.8500E-4
SD	8.8486E-5	Std. Error of Mean	1.4547E-5
Coefficient of Variation	0.455	Skewness	1.029

Normal GOF Test

Shapiro Wilk Test Statistic	0.883	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.173	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1897E-4	95% Adjusted-CLT UCL (Chen-1995)	2.2096E-4
		95% Modified-t UCL (Johnson-1978)	2.1938E-4

Gamma GOF Test

A-D Test Statistic	0.705	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.588	k star (bias corrected MLE)	5.153
Theta hat (MLE)	3.4789E-5	Theta star (bias corrected MLE)	3.7726E-5
nu hat (MLE)	413.5	nu star (bias corrected)	381.3
MLE Mean (bias corrected)	1.9441E-4	MLE Sd (bias corrected)	8.5639E-5
		Approximate Chi Square Value (0.05)	337.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	335.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2.1993E-4	95% Adjusted Gamma UCL (use when n<50)	2.2111E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0971	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.478	Mean of logged Data	-8.638
Maximum of Logged Data	-7.794	SD of logged Data	0.429

Assuming Lognormal Distribution

95% H-UCL	2.2214E-4	90% Chebyshev (MVUE) UCL	2.3639E-4
95% Chebyshev (MVUE) UCL	2.5565E-4	97.5% Chebyshev (MVUE) UCL	2.8237E-4
99% Chebyshev (MVUE) UCL	3.3486E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.1833E-4	95% Jackknife UCL	2.1897E-4
95% Standard Bootstrap UCL	2.1865E-4	95% Bootstrap-t UCL	2.2147E-4

95% Hall's Bootstrap UCL	2.2089E-4	95% Percentile Bootstrap UCL	2.1803E-4
95% BCA Bootstrap UCL	2.2088E-4		
90% Chebyshev(Mean, Sd) UCL	2.3805E-4	95% Chebyshev(Mean, Sd) UCL	2.5781E-4
97.5% Chebyshev(Mean, Sd) UCL	2.8525E-4	99% Chebyshev(Mean, Sd) UCL	3.3915E-4

Suggested UCL to Use

95% Adjusted Gamma UCL 2.2111E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mirex

General Statistics

Total Number of Observations	33	Number of Distinct Observations	31
		Number of Missing Observations	4
Number of Detects	30	Number of Non-Detects	3
Number of Distinct Detects	30	Number of Distinct Non-Detects	1
Minimum Detect	1.6200E-5	Minimum Non-Detect	9.3300E-6
Maximum Detect	1.1900E-4	Maximum Non-Detect	9.3300E-6
Variance Detects	3.975E-10	Percent Non-Detects	9.091%
Mean Detects	4.7707E-5	SD Detects	1.9939E-5
Median Detects	4.9000E-5	CV Detects	N/A
Skewness Detects	1.406	Kurtosis Detects	4.44
Mean of Logged Detects	-10.03	SD of Logged Detects	0.416

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.927	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.108	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.159	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.4218E-5	KM Standard Error of Mean	3.8428E-6
KM SD	2.1704E-5	95% KM (BCA) UCL	5.0572E-5
95% KM (t) UCL	5.0727E-5	95% KM (Percentile Bootstrap) UCL	5.0578E-5
95% KM (z) UCL	5.0539E-5	95% KM Bootstrap t UCL	5.1585E-5
90% KM Chebyshev UCL	5.5746E-5	95% KM Chebyshev UCL	6.0968E-5
97.5% KM Chebyshev UCL	6.8216E-5	99% KM Chebyshev UCL	8.2454E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.383	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.16	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.332	k star (bias corrected MLE)	5.721
Theta hat (MLE)	7.5341E-6	Theta star (bias corrected MLE)	8.3387E-6
nu hat (MLE)	379.9	nu star (bias corrected)	343.3
Mean (detects)	4.7707E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.6200E-5	Mean	9.5246E-4
Maximum	0.01	Median	5.0700E-5
SD	0.00291	CV	3.051
k hat (MLE)	0.271	k star (bias corrected MLE)	0.267
Theta hat (MLE)	0.00351	Theta star (bias corrected MLE)	0.00357
nu hat (MLE)	17.92	nu star (bias corrected)	17.62
Adjusted Level of Significance (β)	0.0419		
Approximate Chi Square Value (17.62, α)	9.118	Adjusted Chi Square Value (17.62, β)	8.803
95% Gamma Approximate UCL (use when n>=50)	0.00184	95% Gamma Adjusted UCL (use when n<50)	0.00191

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.4218E-5	SD (KM)	2.1704E-5
Variance (KM)	4.711E-10	SE of Mean (KM)	3.8428E-6

k hat (KM)	4.151	k star (KM)	3.793
nu hat (KM)	273.9	nu star (KM)	250.4
theta hat (KM)	1.0654E-5	theta star (KM)	1.1657E-5
80% gamma percentile (KM)	6.1343E-5	90% gamma percentile (KM)	7.4654E-5
95% gamma percentile (KM)	8.6935E-5	99% gamma percentile (KM)	1.1323E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (250.36, α)	214.7	Adjusted Chi Square Value (250.36, β)	213
95% Gamma Approximate KM-UCL (use when n>=50)	5.1556E-5	95% Gamma Adjusted KM-UCL (use when n<50)	5.1966E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.927	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.159	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.4928E-5	Mean in Log Scale	-10.12
SD in Original Scale	2.0980E-5	SD in Log Scale	0.485
95% t UCL (assumes normality of ROS data)	5.1115E-5	95% Percentile Bootstrap UCL	5.1086E-5
95% BCA Bootstrap UCL	5.2320E-5	95% Bootstrap t UCL	5.1659E-5
95% H-UCL (Log ROS)	5.3516E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.17	KM Geo Mean	3.8208E-5
KM SD (logged)	0.593	95% Critical H Value (KM-Log)	2.012
KM Standard Error of Mean (logged)	0.105	95% H-UCL (KM -Log)	5.6228E-5
KM SD (logged)	0.593	95% Critical H Value (KM-Log)	2.012
KM Standard Error of Mean (logged)	0.105		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.3794E-5	Mean in Log Scale	-10.24
SD in Original Scale	2.2763E-5	SD in Log Scale	0.766
95% t UCL (Assumes normality)	5.0506E-5	95% H-Stat UCL	6.4592E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.0727E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	37	Number of Distinct Observations	30
Number of Detects	30	Number of Non-Detects	7
Number of Distinct Detects	29	Number of Distinct Non-Detects	1
Minimum Detect	3.5800E-4	Minimum Non-Detect	1.0400E-5
Maximum Detect	0.00238	Maximum Non-Detect	1.0400E-5
Variance Detects	3.0186E-7	Percent Non-Detects	18.92%
Mean Detects	0.00119	SD Detects	5.4941E-4
Median Detects	9.9900E-4	CV Detects	0.461
Skewness Detects	0.616	Kurtosis Detects	-0.771
Mean of Logged Detects	-6.838	SD of Logged Detects	0.473

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.927	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.189	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.159	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.6756E-4	KM Standard Error of Mean	1.1221E-4
KM SD	6.7109E-4	95% KM (BCA) UCL	0.00116
95% KM (t) UCL	0.00116	95% KM (Percentile Bootstrap) UCL	0.00117
95% KM (z) UCL	0.00115	95% KM Bootstrap t UCL	0.00116
90% KM Chebyshev UCL	0.0013	95% KM Chebyshev UCL	0.00146
97.5% KM Chebyshev UCL	0.00167	99% KM Chebyshev UCL	0.00208

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.556	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.139	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.16	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.921	k star (bias corrected MLE)	4.451
Theta hat (MLE)	2.4202E-4	Theta star (bias corrected MLE)	2.6757E-4
nu hat (MLE)	295.2	nu star (bias corrected)	267.1
Mean (detects)	0.00119		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.5800E-4	Mean	0.00286
Maximum	0.01	Median	0.0012
SD	0.00353	CV	1.236
k hat (MLE)	1.031	k star (bias corrected MLE)	0.965
Theta hat (MLE)	0.00277	Theta star (bias corrected MLE)	0.00296
nu hat (MLE)	76.3	nu star (bias corrected)	71.45
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (71.45, α)	52.99	Adjusted Chi Square Value (71.45, β)	52.29
95% Gamma Approximate UCL (use when n>=50)	0.00385	95% Gamma Adjusted UCL (use when n<50)	0.0039

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.6756E-4	SD (KM)	6.7109E-4
Variance (KM)	4.5036E-7	SE of Mean (KM)	1.1221E-4
k hat (KM)	2.079	k star (KM)	1.928

nu hat (KM)	153.8	nu star (KM)	142.7
theta hat (KM)	4.6546E-4	theta star (KM)	5.0180E-4
80% gamma percentile (KM)	0.00145	90% gamma percentile (KM)	0.0019
95% gamma percentile (KM)	0.00232	99% gamma percentile (KM)	0.00326

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (142.69, α)	116.1	Adjusted Chi Square Value (142.69, β)	115
95% Gamma Approximate KM-UCL (use when n>=50)	0.00119	95% Gamma Adjusted KM-UCL (use when n<50)	0.0012

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.927	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.159	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00104	Mean in Log Scale	-7.043
SD in Original Scale	5.9192E-4	SD in Log Scale	0.612
95% t UCL (assumes normality of ROS data)	0.0012	95% Percentile Bootstrap UCL	0.00119
95% BCA Bootstrap UCL	0.00121	95% Bootstrap t UCL	0.00121
95% H-UCL (Log ROS)	0.00129		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.715	KM Geo Mean	4.4604E-4
KM SD (logged)	1.863	95% Critical H Value (KM-Log)	3.53
KM Standard Error of Mean (logged)	0.312	95% H-UCL (KM -Log)	0.00758
KM SD (logged)	1.863	95% Critical H Value (KM-Log)	3.53
KM Standard Error of Mean (logged)	0.312		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9.6658E-4	Mean in Log Scale	-7.846
SD in Original Scale	6.8177E-4	SD in Log Scale	2.158
95% t UCL (Assumes normality)	0.00116	95% H-Stat UCL	0.0167

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	0.0012	95% GROS Adjusted Gamma UCL	0.0039

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	5.4900E-4	Mean	0.00147
Maximum	0.00363	Median	0.00117
SD	8.1960E-4	Std. Error of Mean	1.3474E-4
Coefficient of Variation	0.557	Skewness	1.388

Normal GOF Test

Shapiro Wilk Test Statistic	0.826	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0017	95% Adjusted-CLT UCL (Chen-1995)	0.00173
		95% Modified-t UCL (Johnson-1978)	0.0017

Gamma GOF Test

A-D Test Statistic	1.16	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.752	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.129	k star (bias corrected MLE)	3.812
Theta hat (MLE)	3.5623E-4	Theta star (bias corrected MLE)	3.8583E-4
nu hat (MLE)	305.5	nu star (bias corrected)	282.1
MLE Mean (bias corrected)	0.00147	MLE Sd (bias corrected)	7.5332E-4
		Approximate Chi Square Value (0.05)	244.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	242.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0017	95% Adjusted Gamma UCL (use when n<50)	0.00171

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.507	Mean of logged Data	-6.648
Maximum of Logged Data	-5.619	SD of logged Data	0.491

Assuming Lognormal Distribution

95% H-UCL	0.00171	90% Chebyshev (MVUE) UCL	0.00183
95% Chebyshev (MVUE) UCL	0.00199	97.5% Chebyshev (MVUE) UCL	0.00223
99% Chebyshev (MVUE) UCL	0.00268		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00169	95% Jackknife UCL	0.0017
95% Standard Bootstrap UCL	0.0017	95% Bootstrap-t UCL	0.00176

95% Hall's Bootstrap UCL	0.00171	95% Percentile Bootstrap UCL	0.0017
95% BCA Bootstrap UCL	0.00172		
90% Chebyshev(Mean, Sd) UCL	0.00188	95% Chebyshev(Mean, Sd) UCL	0.00206
97.5% Chebyshev(Mean, Sd) UCL	0.00231	99% Chebyshev(Mean, Sd) UCL	0.00281

Suggested UCL to Use

95% Student's-t UCL	0.0017	or 95% Modified-t UCL	0.0017
or 95% H-UCL	0.00171		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

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General Statistics

Total Number of Observations	32	Number of Distinct Observations	11
		Number of Missing Observations	5
Number of Detects	11	Number of Non-Detects	21
Number of Distinct Detects	10	Number of Distinct Non-Detects	1
Minimum Detect	2.2200E-5	Minimum Non-Detect	1.3700E-5
Maximum Detect	6.2200E-5	Maximum Non-Detect	1.3700E-5
Variance Detects	1.421E-10	Percent Non-Detects	65.63%
Mean Detects	3.8345E-5	SD Detects	1.1920E-5
Median Detects	3.7500E-5	CV Detects	N/A
Skewness Detects	0.453	Kurtosis Detects	0.148
Mean of Logged Detects	-10.21	SD of Logged Detects	0.319

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.119	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.2172E-5	KM Standard Error of Mean	2.4973E-6
KM SD	1.3469E-5	95% KM (BCA) UCL	2.6406E-5
95% KM (t) UCL	2.6406E-5	95% KM (Percentile Bootstrap) UCL	2.6206E-5
95% KM (z) UCL	2.6279E-5	95% KM Bootstrap t UCL	2.7114E-5
90% KM Chebyshev UCL	2.9664E-5	95% KM Chebyshev UCL	3.3057E-5
97.5% KM Chebyshev UCL	3.7767E-5	99% KM Chebyshev UCL	4.7019E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.24	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.729	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.132	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.255	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	11.25	k star (bias corrected MLE)	8.244
Theta hat (MLE)	3.4077E-6	Theta star (bias corrected MLE)	4.6512E-6
nu hat (MLE)	247.6	nu star (bias corrected)	181.4
Mean (detects)	3.8345E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.2200E-5	Mean	0.00658
Maximum	0.01	Median	0.01
SD	0.00481	CV	0.731
k hat (MLE)	0.431	k star (bias corrected MLE)	0.411
Theta hat (MLE)	0.0153	Theta star (bias corrected MLE)	0.016
nu hat (MLE)	27.58	nu star (bias corrected)	26.33
Adjusted Level of Significance (β)	0.0416		
Approximate Chi Square Value (26.33, α)	15.63	Adjusted Chi Square Value (26.33, β)	15.19
95% Gamma Approximate UCL (use when n>=50)	0.0111	95% Gamma Adjusted UCL (use when n<50)	0.0114

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.2172E-5	SD (KM)	1.3469E-5
Variance (KM)	1.814E-10	SE of Mean (KM)	2.4973E-6

k hat (KM)	2.71	k star (KM)	2.477
nu hat (KM)	173.4	nu star (KM)	158.5
theta hat (KM)	8.1824E-6	theta star (KM)	8.9529E-6
80% gamma percentile (KM)	3.2360E-5	90% gamma percentile (KM)	4.1045E-5
95% gamma percentile (KM)	4.9230E-5	99% gamma percentile (KM)	6.7162E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (158.50, α)	130.4	Adjusted Chi Square Value (158.50, β)	129
95% Gamma Approximate KM-UCL (use when n>=50)	2.6951E-5	95% Gamma Adjusted KM-UCL (use when n<50)	2.7236E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.151	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.2153E-5	Mean in Log Scale	-10.91
SD in Original Scale	1.4306E-5	SD in Log Scale	0.639
95% t UCL (assumes normality of ROS data)	2.6441E-5	95% Percentile Bootstrap UCL	2.6448E-5
95% BCA Bootstrap UCL	2.7189E-5	95% Bootstrap t UCL	2.7073E-5
95% H-UCL (Log ROS)	2.8322E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.86	KM Geo Mean	1.9215E-5
KM SD (logged)	0.5	95% Critical H Value (KM-Log)	1.932
KM Standard Error of Mean (logged)	0.0928	95% H-UCL (KM -Log)	2.5904E-5
KM SD (logged)	0.5	95% Critical H Value (KM-Log)	1.932
KM Standard Error of Mean (logged)	0.0928		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.7677E-5	Mean in Log Scale	-11.31
SD in Original Scale	1.6638E-5	SD in Log Scale	0.829
95% t UCL (Assumes normality)	2.2663E-5	95% H-Stat UCL	2.4008E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.6406E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	37	Number of Distinct Observations	29
Number of Detects	31	Number of Non-Detects	6
Number of Distinct Detects	28	Number of Distinct Non-Detects	1
Minimum Detect	1.0700E-4	Minimum Non-Detect	1.7000E-5
Maximum Detect	4.8000E-4	Maximum Non-Detect	1.7000E-5
Variance Detects	7.5988E-9	Percent Non-Detects	16.22%
Mean Detects	2.2277E-4	SD Detects	8.7171E-5
Median Detects	2.0900E-4	CV Detects	0.391
Skewness Detects	1.203	Kurtosis Detects	1.441
Mean of Logged Detects	-8.476	SD of Logged Detects	0.365

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.907	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.8941E-4	KM Standard Error of Mean	1.8241E-5
KM SD	1.0915E-4	95% KM (BCA) UCL	2.2073E-4
95% KM (t) UCL	2.2020E-4	95% KM (Percentile Bootstrap) UCL	2.2103E-4
95% KM (z) UCL	2.1941E-4	95% KM Bootstrap t UCL	2.2033E-4
90% KM Chebyshev UCL	2.4413E-4	95% KM Chebyshev UCL	2.6892E-4
97.5% KM Chebyshev UCL	3.0332E-4	99% KM Chebyshev UCL	3.7090E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.37	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.114	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.158	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.669	k star (bias corrected MLE)	6.949
Theta hat (MLE)	2.9048E-5	Theta star (bias corrected MLE)	3.2061E-5
nu hat (MLE)	475.5	nu star (bias corrected)	430.8
Mean (detects)	2.2277E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.0700E-4	Mean	0.00181
Maximum	0.01	Median	2.2500E-4
SD	0.00365	CV	2.021
k hat (MLE)	0.425	k star (bias corrected MLE)	0.409
Theta hat (MLE)	0.00425	Theta star (bias corrected MLE)	0.00442
nu hat (MLE)	31.46	nu star (bias corrected)	30.24
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (30.24, α)	18.68	Adjusted Chi Square Value (30.24, β)	18.29
95% Gamma Approximate UCL (use when n>=50)	0.00293	95% Gamma Adjusted UCL (use when n<50)	0.00299

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.8941E-4	SD (KM)	1.0915E-4
Variance (KM)	1.1914E-8	SE of Mean (KM)	1.8241E-5
k hat (KM)	3.011	k star (KM)	2.785

nu hat (KM)	222.8	nu star (KM)	206.1
theta hat (KM)	6.2903E-5	theta star (KM)	6.8010E-5
80% gamma percentile (KM)	2.7257E-4	90% gamma percentile (KM)	3.4155E-4
95% gamma percentile (KM)	4.0615E-4	99% gamma percentile (KM)	5.4675E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (206.09, α)	173.9	Adjusted Chi Square Value (206.09, β)	172.6
95% Gamma Approximate KM-UCL (use when n>=50)	2.2450E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.2617E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.929	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0991	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.156	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.0125E-4	Mean in Log Scale	-8.614
SD in Original Scale	9.3919E-5	SD in Log Scale	0.464
95% t UCL (assumes normality of ROS data)	2.2732E-4	95% Percentile Bootstrap UCL	2.2755E-4
95% BCA Bootstrap UCL	2.2953E-4	95% Bootstrap t UCL	2.2952E-4
95% H-UCL (Log ROS)	2.3406E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.882	KM Geo Mean	1.3881E-4
KM SD (logged)	0.981	95% Critical H Value (KM-Log)	2.367
KM Standard Error of Mean (logged)	0.164	95% H-UCL (KM -Log)	3.3053E-4
KM SD (logged)	0.981	95% Critical H Value (KM-Log)	2.367
KM Standard Error of Mean (logged)	0.164		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.8803E-4	Mean in Log Scale	-8.995
SD in Original Scale	1.1289E-4	SD in Log Scale	1.241
95% t UCL (Assumes normality)	2.1936E-4	95% H-Stat UCL	4.6644E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	2.2617E-4	95% GROS Adjusted Gamma UCL	0.00299

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:21:30 PM
From File	crb_mus4_met_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	36	Number of Distinct Observations	6
		Number of Missing Observations	1
Number of Detects	1	Number of Non-Detects	35
Number of Distinct Detects	1	Number of Distinct Non-Detects	6

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Aluminum was not processed!

Arsenic

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Minimum	1.37	Mean	2.448
Maximum	3.81	Median	2.365
SD	0.623	Std. Error of Mean	0.104
Coefficient of Variation	0.254	Skewness	0.367

Normal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0951	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.623	95% Adjusted-CLT UCL (Chen-1995)	2.625
		95% Modified-t UCL (Johnson-1978)	2.624

Gamma GOF Test

A-D Test Statistic	0.194	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0777	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	15.87	k star (bias corrected MLE)	14.56
Theta hat (MLE)	0.154	Theta star (bias corrected MLE)	0.168
nu hat (MLE)	1142	nu star (bias corrected)	1048
MLE Mean (bias corrected)	2.448	MLE Sd (bias corrected)	0.641
		Approximate Chi Square Value (0.05)	974.3
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	971.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.634	95% Adjusted Gamma UCL (use when n<50)	2.643

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0721	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.315	Mean of logged Data	0.863
Maximum of Logged Data	1.338	SD of logged Data	0.258

Assuming Lognormal Distribution

95% H-UCL	2.647	90% Chebyshev (MVUE) UCL	2.768
95% Chebyshev (MVUE) UCL	2.913	97.5% Chebyshev (MVUE) UCL	3.114
99% Chebyshev (MVUE) UCL	3.509		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.619	95% Jackknife UCL	2.623
95% Standard Bootstrap UCL	2.62	95% Bootstrap-t UCL	2.633
95% Hall's Bootstrap UCL	2.627	95% Percentile Bootstrap UCL	2.618
95% BCA Bootstrap UCL	2.616		
90% Chebyshev(Mean, Sd) UCL	2.759	95% Chebyshev(Mean, Sd) UCL	2.9
97.5% Chebyshev(Mean, Sd) UCL	3.096	99% Chebyshev(Mean, Sd) UCL	3.481

Suggested UCL to Use

95% Student's-t UCL 2.623

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	36	Number of Distinct Observations	8
		Number of Missing Observations	1
Number of Detects	2	Number of Non-Detects	34
Number of Distinct Detects	2	Number of Distinct Non-Detects	6
Minimum Detect	0.795	Minimum Non-Detect	0.0438
Maximum Detect	0.933	Maximum Non-Detect	0.046
Variance Detects	0.00952	Percent Non-Detects	94.44%
Mean Detects	0.864	SD Detects	0.0976
Median Detects	0.864	CV Detects	0.113
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-0.149	SD of Logged Detects	0.113

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0894	KM Standard Error of Mean	0.0444
KM SD	0.189	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.164	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.162	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.223	95% KM Chebyshev UCL	0.283
97.5% KM Chebyshev UCL	0.367	99% KM Chebyshev UCL	0.532

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	156.5	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.00552	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	625.8	nu star (bias corrected)	N/A
Mean (detects)	0.864		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0894	SD (KM)	0.189
Variance (KM)	0.0356	SE of Mean (KM)	0.0444
k hat (KM)	0.225	k star (KM)	0.224
nu hat (KM)	16.17	nu star (KM)	16.16
theta hat (KM)	0.398	theta star (KM)	0.398
80% gamma percentile (KM)	0.124	90% gamma percentile (KM)	0.27
95% gamma percentile (KM)	0.446	99% gamma percentile (KM)	0.924

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0428
Approximate Chi Square Value (16.16, α)	8.072	Adjusted Chi Square Value (16.16, β)	7.812
95% Gamma Approximate KM-UCL (use when n>=50)	0.179	95% Gamma Adjusted KM-UCL (use when n<50)	0.185

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.34	Mean in Log Scale	-1.172
SD in Original Scale	0.166	SD in Log Scale	0.427
95% t UCL (assumes normality of ROS data)	0.387	95% Percentile Bootstrap UCL	0.391
95% BCA Bootstrap UCL	0.393	95% Bootstrap t UCL	0.401
95% H-UCL (Log ROS)	0.388		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.963	KM Geo Mean	0.0517
KM SD (logged)	0.683	95% Critical H Value (KM-Log)	2.059
KM Standard Error of Mean (logged)	0.161	95% H-UCL (KM -Log)	0.0827
KM SD (logged)	0.683	95% Critical H Value (KM-Log)	2.059
KM Standard Error of Mean (logged)	0.161		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0692	Mean in Log Scale	-3.595
SD in Original Scale	0.196	SD in Log Scale	0.848
95% t UCL (Assumes normality)	0.124	95% H-Stat UCL	0.0541

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.164	KM H-UCL	0.0827
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chromium

General Statistics

Total Number of Observations	36	Number of Distinct Observations	12
		Number of Missing Observations	1
Number of Detects	7	Number of Non-Detects	29
Number of Distinct Detects	6	Number of Distinct Non-Detects	6
Minimum Detect	0.116	Minimum Non-Detect	0.0952
Maximum Detect	0.544	Maximum Non-Detect	0.1
Variance Detects	0.0241	Percent Non-Detects	80.56%
Mean Detects	0.251	SD Detects	0.155
Median Detects	0.178	CV Detects	0.619
Skewness Detects	1.267	Kurtosis Detects	1.191
Mean of Logged Detects	-1.534	SD of Logged Detects	0.581

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.861	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.252	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.125	KM Standard Error of Mean	0.0159
KM SD	0.0884	95% KM (BCA) UCL	0.154
95% KM (t) UCL	0.152	95% KM (Percentile Bootstrap) UCL	0.152
95% KM (z) UCL	0.152	95% KM Bootstrap t UCL	0.171
90% KM Chebyshev UCL	0.173	95% KM Chebyshev UCL	0.195
97.5% KM Chebyshev UCL	0.225	99% KM Chebyshev UCL	0.284

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.348	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.711	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.235	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.313	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.489	k star (bias corrected MLE)	2.089
Theta hat (MLE)	0.0719	Theta star (bias corrected MLE)	0.12
nu hat (MLE)	48.85	nu star (bias corrected)	29.25
Mean (detects)	0.251		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0568
Maximum	0.544	Median	0.01
SD	0.116	CV	2.043
k hat (MLE)	0.549	k star (bias corrected MLE)	0.522
Theta hat (MLE)	0.103	Theta star (bias corrected MLE)	0.109
nu hat (MLE)	39.55	nu star (bias corrected)	37.59
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (37.59, α)	24.55	Adjusted Chi Square Value (37.59, β)	24.07
95% Gamma Approximate UCL (use when n>=50)	0.087	95% Gamma Adjusted UCL (use when n<50)	0.0887

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.125	SD (KM)	0.0884
Variance (KM)	0.00781	SE of Mean (KM)	0.0159

k hat (KM)	2.015	k star (KM)	1.866
nu hat (KM)	145.1	nu star (KM)	134.3
theta hat (KM)	0.0622	theta star (KM)	0.0672
80% gamma percentile (KM)	0.189	90% gamma percentile (KM)	0.248
95% gamma percentile (KM)	0.304	99% gamma percentile (KM)	0.429

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (134.33, α)	108.6	Adjusted Chi Square Value (134.33, β)	107.5
95% Gamma Approximate KM-UCL (use when n>=50)	0.155	95% Gamma Adjusted KM-UCL (use when n<50)	0.157

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.066	Mean in Log Scale	-3.664
SD in Original Scale	0.113	SD in Log Scale	1.345
95% t UCL (assumes normality of ROS data)	0.0979	95% Percentile Bootstrap UCL	0.0996
95% BCA Bootstrap UCL	0.107	95% Bootstrap t UCL	0.121
95% H-UCL (Log ROS)	0.12		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.193	KM Geo Mean	0.112
KM SD (logged)	0.401	95% Critical H Value (KM-Log)	1.842
KM Standard Error of Mean (logged)	0.0723	95% H-UCL (KM -Log)	0.137
KM SD (logged)	0.401	95% Critical H Value (KM-Log)	1.842
KM Standard Error of Mean (logged)	0.0723		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0881	Mean in Log Scale	-2.73
SD in Original Scale	0.103	SD in Log Scale	0.643
95% t UCL (Assumes normality)	0.117	95% H-Stat UCL	0.0999

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.152

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	36	Number of Distinct Observations	13
		Number of Missing Observations	1
Number of Detects	8	Number of Non-Detects	28
Number of Distinct Detects	8	Number of Distinct Non-Detects	6
Minimum Detect	0.02	Minimum Non-Detect	0.019
Maximum Detect	0.259	Maximum Non-Detect	0.02
Variance Detects	0.00983	Percent Non-Detects	77.78%
Mean Detects	0.0762	SD Detects	0.0992
Median Detects	0.0233	CV Detects	1.301
Skewness Detects	1.504	Kurtosis Detects	0.436
Mean of Logged Detects	-3.195	SD of Logged Detects	1.086

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.623	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.427	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0317	KM Standard Error of Mean	0.00887
KM SD	0.0498	95% KM (BCA) UCL	0.0487
95% KM (t) UCL	0.0467	95% KM (Percentile Bootstrap) UCL	0.0464
95% KM (z) UCL	0.0463	95% KM Bootstrap t UCL	0.313
90% KM Chebyshev UCL	0.0583	95% KM Chebyshev UCL	0.0704
97.5% KM Chebyshev UCL	0.0871	99% KM Chebyshev UCL	0.12

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.494	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.738	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.406	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.302	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.936	k star (bias corrected MLE)	0.668
Theta hat (MLE)	0.0814	Theta star (bias corrected MLE)	0.114
nu hat (MLE)	14.98	nu star (bias corrected)	10.69
Mean (detects)	0.0762		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0247
Maximum	0.259	Median	0.01
SD	0.0524	CV	2.12
k hat (MLE)	0.978	k star (bias corrected MLE)	0.915
Theta hat (MLE)	0.0253	Theta star (bias corrected MLE)	0.027
nu hat (MLE)	70.42	nu star (bias corrected)	65.88
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (65.88, α)	48.21	Adjusted Chi Square Value (65.88, β)	47.52
95% Gamma Approximate UCL (use when n>=50)	0.0338	95% Gamma Adjusted UCL (use when n<50)	0.0343

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0317	SD (KM)	0.0498
Variance (KM)	0.00248	SE of Mean (KM)	0.00887

k hat (KM)	0.406	k star (KM)	0.391
nu hat (KM)	29.23	nu star (KM)	28.13
theta hat (KM)	0.0781	theta star (KM)	0.0812
80% gamma percentile (KM)	0.051	90% gamma percentile (KM)	0.09
95% gamma percentile (KM)	0.133	99% gamma percentile (KM)	0.241

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (28.13, α)	17.03	Adjusted Chi Square Value (28.13, β)	16.64
95% Gamma Approximate KM-UCL (use when n>=50)	0.0524	95% Gamma Adjusted KM-UCL (use when n<50)	0.0536

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.674	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.356	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.018	Mean in Log Scale	-6.453
SD in Original Scale	0.0545	SD in Log Scale	2.196
95% t UCL (assumes normality of ROS data)	0.0333	95% Percentile Bootstrap UCL	0.0336
95% BCA Bootstrap UCL	0.0402	95% Bootstrap t UCL	0.107
95% H-UCL (Log ROS)	0.0776		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.793	KM Geo Mean	0.0225
KM SD (logged)	0.576	95% Critical H Value (KM-Log)	1.968
KM Standard Error of Mean (logged)	0.103	95% H-UCL (KM -Log)	0.0322
KM SD (logged)	0.576	95% Critical H Value (KM-Log)	1.968
KM Standard Error of Mean (logged)	0.103		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0245	Mean in Log Scale	-4.313
SD in Original Scale	0.0525	SD in Log Scale	0.777
95% t UCL (Assumes normality)	0.0393	95% H-Stat UCL	0.024

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.0704

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Copper

General Statistics

Total Number of Observations	36	Number of Distinct Observations	31
		Number of Missing Observations	1
Minimum	8.79	Mean	15.42
Maximum	62.2	Median	13.3
SD	9.62	Std. Error of Mean	1.603
Coefficient of Variation	0.624	Skewness	3.888

Normal GOF Test

Shapiro Wilk Test Statistic	0.546	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.3	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	18.12	95% Adjusted-CLT UCL (Chen-1995)	19.16
		95% Modified-t UCL (Johnson-1978)	18.3

Gamma GOF Test

A-D Test Statistic	2.718	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.221	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.147	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.312	k star (bias corrected MLE)	4.888
Theta hat (MLE)	2.902	Theta star (bias corrected MLE)	3.154
nu hat (MLE)	382.5	nu star (bias corrected)	351.9
MLE Mean (bias corrected)	15.42	MLE Sd (bias corrected)	6.973
		Approximate Chi Square Value (0.05)	309.4
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	307.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	17.53	95% Adjusted Gamma UCL (use when n<50)	17.63

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.814	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.174	Mean of logged Data	2.638
Maximum of Logged Data	4.13	SD of logged Data	0.388

Assuming Lognormal Distribution

95% H-UCL	17.01	90% Chebyshev (MVUE) UCL	18.05
95% Chebyshev (MVUE) UCL	19.41	97.5% Chebyshev (MVUE) UCL	21.3
99% Chebyshev (MVUE) UCL	25.01		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	18.05	95% Jackknife UCL	18.12
95% Standard Bootstrap UCL	18.04	95% Bootstrap-t UCL	22.61

95% Hall's Bootstrap UCL	31.22	95% Percentile Bootstrap UCL	18.38
95% BCA Bootstrap UCL	19.42		
90% Chebyshev(Mean, Sd) UCL	20.23	95% Chebyshev(Mean, Sd) UCL	22.4
97.5% Chebyshev(Mean, Sd) UCL	25.43	99% Chebyshev(Mean, Sd) UCL	31.37

Suggested UCL to Use

95% Student's-t UCL	18.12	or 95% Modified-t UCL	18.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Number of Detects	35	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	4.55	Minimum Non-Detect	4.49
Maximum Detect	45.1	Maximum Non-Detect	4.49
Variance Detects	97.4	Percent Non-Detects	2.778%
Mean Detects	11.77	SD Detects	9.869
Median Detects	8.13	CV Detects	0.839
Skewness Detects	2.406	Kurtosis Detects	5.172
Mean of Logged Detects	2.26	SD of Logged Detects	0.577

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.634	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.298	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	11.57	KM Standard Error of Mean	1.634
KM SD	9.666	95% KM (BCA) UCL	14.56
95% KM (t) UCL	14.33	95% KM (Percentile Bootstrap) UCL	14.34
95% KM (z) UCL	14.25	95% KM Bootstrap t UCL	15.9
90% KM Chebyshev UCL	16.47	95% KM Chebyshev UCL	18.69
97.5% KM Chebyshev UCL	21.77	99% KM Chebyshev UCL	27.83

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.935	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.756	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.227	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.15	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.594	k star (bias corrected MLE)	2.391
Theta hat (MLE)	4.537	Theta star (bias corrected MLE)	4.922
nu hat (MLE)	181.6	nu star (bias corrected)	167.4
Mean (detects)	11.77		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	11.44
Maximum	45.1	Median	8.08
SD	9.923	CV	0.867
k hat (MLE)	1.505	k star (bias corrected MLE)	1.399
Theta hat (MLE)	7.6	Theta star (bias corrected MLE)	8.181
nu hat (MLE)	108.4	nu star (bias corrected)	100.7
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (100.69, α)	78.54	Adjusted Chi Square Value (100.69, β)	77.65
95% Gamma Approximate UCL (use when n>=50)	14.67	95% Gamma Adjusted UCL (use when n<50)	14.84

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	11.57	SD (KM)	9.666
Variance (KM)	93.42	SE of Mean (KM)	1.634

k hat (KM)	1.432	k star (KM)	1.331
nu hat (KM)	103.1	nu star (KM)	95.85
theta hat (KM)	8.077	theta star (KM)	8.689
80% gamma percentile (KM)	18.12	90% gamma percentile (KM)	24.82
95% gamma percentile (KM)	31.37	99% gamma percentile (KM)	46.28

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (95.85, α)	74.26	Adjusted Chi Square Value (95.85, β)	73.4
95% Gamma Approximate KM-UCL (use when n>=50)	14.93	95% Gamma Adjusted KM-UCL (use when n<50)	15.1

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.847	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.202	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	11.51	Mean in Log Scale	2.222
SD in Original Scale	9.852	SD in Log Scale	0.614
95% t UCL (assumes normality of ROS data)	14.28	95% Percentile Bootstrap UCL	14.41
95% BCA Bootstrap UCL	15.05	95% Bootstrap t UCL	15.35
95% H-UCL (Log ROS)	13.71		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.239	KM Geo Mean	9.388
KM SD (logged)	0.575	95% Critical H Value (KM-Log)	1.968
KM Standard Error of Mean (logged)	0.0972	95% H-UCL (KM -Log)	13.41
KM SD (logged)	0.575	95% Critical H Value (KM-Log)	1.968
KM Standard Error of Mean (logged)	0.0972		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	11.5	Mean in Log Scale	2.22
SD in Original Scale	9.856	SD in Log Scale	0.618
95% t UCL (Assumes normality)	14.28	95% H-Stat UCL	13.75

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	18.69

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	36	Number of Distinct Observations	33
		Number of Missing Observations	1
Number of Detects	31	Number of Non-Detects	5
Number of Distinct Detects	29	Number of Distinct Non-Detects	4
Minimum Detect	0.0263	Minimum Non-Detect	0.0248
Maximum Detect	0.336	Maximum Non-Detect	0.0255
Variance Detects	0.00355	Percent Non-Detects	13.89%
Mean Detects	0.0602	SD Detects	0.0596
Median Detects	0.0365	CV Detects	0.989
Skewness Detects	3.615	Kurtosis Detects	15.56
Mean of Logged Detects	-3.045	SD of Logged Detects	0.606

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.563	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.284	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0553	KM Standard Error of Mean	0.00945
KM SD	0.0558	95% KM (BCA) UCL	0.0735
95% KM (t) UCL	0.0713	95% KM (Percentile Bootstrap) UCL	0.0714
95% KM (z) UCL	0.0709	95% KM Bootstrap t UCL	0.086
90% KM Chebyshev UCL	0.0837	95% KM Chebyshev UCL	0.0965
97.5% KM Chebyshev UCL	0.114	99% KM Chebyshev UCL	0.149

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.539	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.757	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.221	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.16	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.277	k star (bias corrected MLE)	2.078
Theta hat (MLE)	0.0265	Theta star (bias corrected MLE)	0.029
nu hat (MLE)	141.2	nu star (bias corrected)	128.8
Mean (detects)	0.0602		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0533
Maximum	0.336	Median	0.0348
SD	0.0579	CV	1.087
k hat (MLE)	1.667	k star (bias corrected MLE)	1.546
Theta hat (MLE)	0.032	Theta star (bias corrected MLE)	0.0344
nu hat (MLE)	120	nu star (bias corrected)	111.3
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (111.35, α)	87.99	Adjusted Chi Square Value (111.35, β)	87.05
95% Gamma Approximate UCL (use when n>=50)	0.0674	95% Gamma Adjusted UCL (use when n<50)	0.0681

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0553	SD (KM)	0.0558
Variance (KM)	0.00311	SE of Mean (KM)	0.00945

k hat (KM)	0.984	k star (KM)	0.921
nu hat (KM)	70.85	nu star (KM)	66.28
theta hat (KM)	0.0562	theta star (KM)	0.0601
80% gamma percentile (KM)	0.0896	90% gamma percentile (KM)	0.13
95% gamma percentile (KM)	0.171	99% gamma percentile (KM)	0.266

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (66.28, α)	48.54	Adjusted Chi Square Value (66.28, β)	47.85
95% Gamma Approximate KM-UCL (use when n>=50)	0.0755	95% Gamma Adjusted KM-UCL (use when n<50)	0.0766

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.827	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0537	Mean in Log Scale	-3.225
SD in Original Scale	0.0576	SD in Log Scale	0.724
95% t UCL (assumes normality of ROS data)	0.0699	95% Percentile Bootstrap UCL	0.0707
95% BCA Bootstrap UCL	0.0785	95% Bootstrap t UCL	0.0851
95% H-UCL (Log ROS)	0.0667		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.135	KM Geo Mean	0.0435
KM SD (logged)	0.597	95% Critical H Value (KM-Log)	1.986
KM Standard Error of Mean (logged)	0.101	95% H-UCL (KM -Log)	0.0635
KM SD (logged)	0.597	95% Critical H Value (KM-Log)	1.986
KM Standard Error of Mean (logged)	0.101		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0536	Mean in Log Scale	-3.23
SD in Original Scale	0.0577	SD in Log Scale	0.731
95% t UCL (Assumes normality)	0.0699	95% H-Stat UCL	0.067

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.0965

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Manganese

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Minimum	0.796	Mean	4.813
Maximum	35.1	Median	3.23
SD	5.794	Std. Error of Mean	0.966
Coefficient of Variation	1.204	Skewness	4.379

Normal GOF Test

Shapiro Wilk Test Statistic	0.532	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.276	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.444	95% Adjusted-CLT UCL (Chen-1995)	7.154
		95% Modified-t UCL (Johnson-1978)	6.562

Gamma GOF Test

A-D Test Statistic	1.099	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.764	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.143	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.149	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.694	k star (bias corrected MLE)	1.571
Theta hat (MLE)	2.842	Theta star (bias corrected MLE)	3.063
nu hat (MLE)	121.9	nu star (bias corrected)	113.1
MLE Mean (bias corrected)	4.813	MLE Sd (bias corrected)	3.84
		Approximate Chi Square Value (0.05)	89.57
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	88.61

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	6.079	95% Adjusted Gamma UCL (use when n<50)	6.144

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0947	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.228	Mean of logged Data	1.248
Maximum of Logged Data	3.558	SD of logged Data	0.741

Assuming Lognormal Distribution

95% H-UCL	5.971	90% Chebyshev (MVUE) UCL	6.382
95% Chebyshev (MVUE) UCL	7.217	97.5% Chebyshev (MVUE) UCL	8.375
99% Chebyshev (MVUE) UCL	10.65		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.401	95% Jackknife UCL	6.444
95% Standard Bootstrap UCL	6.397	95% Bootstrap-t UCL	8.597

95% Hall's Bootstrap UCL	13.32	95% Percentile Bootstrap UCL	6.61
95% BCA Bootstrap UCL	7.684		
90% Chebyshev(Mean, Sd) UCL	7.71	95% Chebyshev(Mean, Sd) UCL	9.022
97.5% Chebyshev(Mean, Sd) UCL	10.84	99% Chebyshev(Mean, Sd) UCL	14.42

Suggested UCL to Use

95% Adjusted Gamma UCL 6.144

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.0495	Mean	0.169
Maximum	0.284	Median	0.168
SD	0.0433	Std. Error of Mean	0.00712
Coefficient of Variation	0.256	Skewness	0.158

Normal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0973	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.181	95% Adjusted-CLT UCL (Chen-1995)	0.181
		95% Modified-t UCL (Johnson-1978)	0.181

Gamma GOF Test

A-D Test Statistic	0.475	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0887	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.62	k star (bias corrected MLE)	12.53
Theta hat (MLE)	0.0124	Theta star (bias corrected MLE)	0.0135
nu hat (MLE)	1008	nu star (bias corrected)	927.3
MLE Mean (bias corrected)	0.169	MLE Sd (bias corrected)	0.0477
		Approximate Chi Square Value (0.05)	857.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	854.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.183	95% Adjusted Gamma UCL (use when n<50)	0.183

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.892	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.113	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.006	Mean of logged Data	-1.815
Maximum of Logged Data	-1.259	SD of logged Data	0.295

Assuming Lognormal Distribution

95% H-UCL	0.186	90% Chebyshev (MVUE) UCL	0.195
95% Chebyshev (MVUE) UCL	0.206	97.5% Chebyshev (MVUE) UCL	0.222
99% Chebyshev (MVUE) UCL	0.253		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.181	95% Jackknife UCL	0.181
95% Standard Bootstrap UCL	0.181	95% Bootstrap-t UCL	0.182

95% Hall's Bootstrap UCL	0.181	95% Percentile Bootstrap UCL	0.181
95% BCA Bootstrap UCL	0.181		
90% Chebyshev(Mean, Sd) UCL	0.19	95% Chebyshev(Mean, Sd) UCL	0.2
97.5% Chebyshev(Mean, Sd) UCL	0.213	99% Chebyshev(Mean, Sd) UCL	0.24

Suggested UCL to Use

95% Student's-t UCL	0.181

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Methyl Mercury

General Statistics

Total Number of Observations	34	Number of Distinct Observations	32
		Number of Missing Observations	3
Minimum	0.0476	Mean	0.194
Maximum	0.333	Median	0.19
SD	0.0666	Std. Error of Mean	0.0114
Coefficient of Variation	0.343	Skewness	0.179

Normal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.933	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.091	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.15	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.213	95% Adjusted-CLT UCL (Chen-1995)	0.213
		95% Modified-t UCL (Johnson-1978)	0.213

Gamma GOF Test

A-D Test Statistic	0.404	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.151	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.506	k star (bias corrected MLE)	6.864
Theta hat (MLE)	0.0259	Theta star (bias corrected MLE)	0.0283
nu hat (MLE)	510.4	nu star (bias corrected)	466.7
MLE Mean (bias corrected)	0.194	MLE Sd (bias corrected)	0.0741
		Approximate Chi Square Value (0.05)	417.6
Adjusted Level of Significance	0.0422	Adjusted Chi Square Value	415.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.217	95% Adjusted Gamma UCL (use when n<50)	0.218

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.933	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.136	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.15	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.045	Mean of logged Data	-1.708
Maximum of Logged Data	-1.1	SD of logged Data	0.402

Assuming Lognormal Distribution

95% H-UCL	0.224	90% Chebyshev (MVUE) UCL	0.238
95% Chebyshev (MVUE) UCL	0.257	97.5% Chebyshev (MVUE) UCL	0.283
99% Chebyshev (MVUE) UCL	0.334		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.213	95% Jackknife UCL	0.213
95% Standard Bootstrap UCL	0.213	95% Bootstrap-t UCL	0.214

95% Hall's Bootstrap UCL	0.214	95% Percentile Bootstrap UCL	0.212
95% BCA Bootstrap UCL	0.213		
90% Chebyshev(Mean, Sd) UCL	0.228	95% Chebyshev(Mean, Sd) UCL	0.244
97.5% Chebyshev(Mean, Sd) UCL	0.265	99% Chebyshev(Mean, Sd) UCL	0.308

Suggested UCL to Use

95% Student's-t UCL	0.213

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Selenium

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Minimum	0.519	Mean	0.867
Maximum	1.61	Median	0.846
SD	0.218	Std. Error of Mean	0.0363
Coefficient of Variation	0.251	Skewness	1.512

Normal GOF Test

Shapiro Wilk Test Statistic	0.885	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.929	95% Adjusted-CLT UCL (Chen-1995)	0.937
		95% Modified-t UCL (Johnson-1978)	0.93

Gamma GOF Test

A-D Test Statistic	0.504	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	18.57	k star (bias corrected MLE)	17.04
Theta hat (MLE)	0.0467	Theta star (bias corrected MLE)	0.0509
nu hat (MLE)	1337	nu star (bias corrected)	1227
MLE Mean (bias corrected)	0.867	MLE Sd (bias corrected)	0.21
		Approximate Chi Square Value (0.05)	1146
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	1143

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.928	95% Adjusted Gamma UCL (use when n<50)	0.931

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0974	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.656	Mean of logged Data	-0.17
Maximum of Logged Data	0.476	SD of logged Data	0.232

Assuming Lognormal Distribution

95% H-UCL	0.928	90% Chebyshev (MVUE) UCL	0.968
95% Chebyshev (MVUE) UCL	1.014	97.5% Chebyshev (MVUE) UCL	1.077
99% Chebyshev (MVUE) UCL	1.203		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.927	95% Jackknife UCL	0.929
95% Standard Bootstrap UCL	0.925	95% Bootstrap-t UCL	0.941

95% Hall's Bootstrap UCL	0.954	95% Percentile Bootstrap UCL	0.927
95% BCA Bootstrap UCL	0.934		
90% Chebyshev(Mean, Sd) UCL	0.976	95% Chebyshev(Mean, Sd) UCL	1.025
97.5% Chebyshev(Mean, Sd) UCL	1.094	99% Chebyshev(Mean, Sd) UCL	1.228

Suggested UCL to Use

95% Student's-t UCL 0.929

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Silver

General Statistics

Total Number of Observations	36	Number of Distinct Observations	34
		Number of Missing Observations	1
Minimum	0.127	Mean	0.382
Maximum	1.81	Median	0.315
SD	0.315	Std. Error of Mean	0.0526
Coefficient of Variation	0.826	Skewness	3.875

Normal GOF Test

Shapiro Wilk Test Statistic	0.46	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.386	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.471	95% Adjusted-CLT UCL (Chen-1995)	0.504
		95% Modified-t UCL (Johnson-1978)	0.476

Gamma GOF Test

A-D Test Statistic	4.297	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.301	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.148	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.578	k star (bias corrected MLE)	3.299
Theta hat (MLE)	0.107	Theta star (bias corrected MLE)	0.116
nu hat (MLE)	257.6	nu star (bias corrected)	237.5
MLE Mean (bias corrected)	0.382	MLE Sd (bias corrected)	0.21
		Approximate Chi Square Value (0.05)	202.8
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	201.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.447	95% Adjusted Gamma UCL (use when n<50)	0.45

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.759	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.242	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.064	Mean of logged Data	-1.109
Maximum of Logged Data	0.593	SD of logged Data	0.459

Assuming Lognormal Distribution

95% H-UCL	0.424	90% Chebyshev (MVUE) UCL	0.453
95% Chebyshev (MVUE) UCL	0.492	97.5% Chebyshev (MVUE) UCL	0.547
99% Chebyshev (MVUE) UCL	0.655		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.468	95% Jackknife UCL	0.471
95% Standard Bootstrap UCL	0.466	95% Bootstrap-t UCL	0.74

95% Hall's Bootstrap UCL	0.984	95% Percentile Bootstrap UCL	0.474
95% BCA Bootstrap UCL	0.535		
90% Chebyshev(Mean, Sd) UCL	0.539	95% Chebyshev(Mean, Sd) UCL	0.611
97.5% Chebyshev(Mean, Sd) UCL	0.71	99% Chebyshev(Mean, Sd) UCL	0.905

Suggested UCL to Use

95% Student's-t UCL	0.471	or 95% Modified-t UCL	0.476

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Vanadium

General Statistics

Total Number of Observations	36	Number of Distinct Observations	19
		Number of Missing Observations	1
Number of Detects	15	Number of Non-Detects	21
Number of Distinct Detects	14	Number of Distinct Non-Detects	6
Minimum Detect	0.0291	Minimum Non-Detect	0.0286
Maximum Detect	0.158	Maximum Non-Detect	0.03
Variance Detects	0.00104	Percent Non-Detects	58.33%
Mean Detects	0.0468	SD Detects	0.0322
Median Detects	0.0359	CV Detects	0.687
Skewness Detects	3.329	Kurtosis Detects	11.94
Mean of Logged Detects	-3.179	SD of Logged Detects	0.435

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.533	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.336	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0362	KM Standard Error of Mean	0.00379
KM SD	0.022	95% KM (BCA) UCL	0.0427
95% KM (t) UCL	0.0426	95% KM (Percentile Bootstrap) UCL	0.0427
95% KM (z) UCL	0.0424	95% KM Bootstrap t UCL	0.0548
90% KM Chebyshev UCL	0.0476	95% KM Chebyshev UCL	0.0527
97.5% KM Chebyshev UCL	0.0599	99% KM Chebyshev UCL	0.0739

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.677	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.739	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.243	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.222	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.394	k star (bias corrected MLE)	3.56
Theta hat (MLE)	0.0107	Theta star (bias corrected MLE)	0.0132
nu hat (MLE)	131.8	nu star (bias corrected)	106.8
Mean (detects)	0.0468		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0253
Maximum	0.158	Median	0.01
SD	0.0274	CV	1.083
k hat (MLE)	1.635	k star (bias corrected MLE)	1.517
Theta hat (MLE)	0.0155	Theta star (bias corrected MLE)	0.0167
nu hat (MLE)	117.7	nu star (bias corrected)	109.3
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (109.25, α)	86.13	Adjusted Chi Square Value (109.25, β)	85.19
95% Gamma Approximate UCL (use when n>=50)	0.0322	95% Gamma Adjusted UCL (use when n<50)	0.0325

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0362	SD (KM)	0.022
Variance (KM)	4.8320E-4	SE of Mean (KM)	0.00379

k hat (KM)	2.713	k star (KM)	2.506
nu hat (KM)	195.4	nu star (KM)	180.4
theta hat (KM)	0.0133	theta star (KM)	0.0145
80% gamma percentile (KM)	0.0528	90% gamma percentile (KM)	0.0669
95% gamma percentile (KM)	0.0801	99% gamma percentile (KM)	0.109

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (180.41, α)	150.3	Adjusted Chi Square Value (180.41, β)	149.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.0434	95% Gamma Adjusted KM-UCL (use when n<50)	0.0438

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.739	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0274	Mean in Log Scale	-3.864
SD in Original Scale	0.0265	SD in Log Scale	0.695
95% t UCL (assumes normality of ROS data)	0.0349	95% Percentile Bootstrap UCL	0.0354
95% BCA Bootstrap UCL	0.0387	95% Bootstrap t UCL	0.0402
95% H-UCL (Log ROS)	0.0341		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.398	KM Geo Mean	0.0335
KM SD (logged)	0.328	95% Critical H Value (KM-Log)	1.798
KM Standard Error of Mean (logged)	0.0566	95% H-UCL (KM -Log)	0.039
KM SD (logged)	0.328	95% Critical H Value (KM-Log)	1.798
KM Standard Error of Mean (logged)	0.0566		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.028	Mean in Log Scale	-3.792
SD in Original Scale	0.026	SD in Log Scale	0.593
95% t UCL (Assumes normality)	0.0353	95% H-Stat UCL	0.0328

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	0.0393	KM H-UCL	0.039

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Zinc

General Statistics

Total Number of Observations	36	Number of Distinct Observations	34
		Number of Missing Observations	1
Minimum	31.2	Mean	44.88
Maximum	65	Median	45.7
SD	9.317	Std. Error of Mean	1.553
Coefficient of Variation	0.208	Skewness	0.404

Normal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	47.5	95% Adjusted-CLT UCL (Chen-1995)	47.54
		95% Modified-t UCL (Johnson-1978)	47.52

Gamma GOF Test

A-D Test Statistic	0.486	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.134	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	24.26	k star (bias corrected MLE)	22.26
Theta hat (MLE)	1.849	Theta star (bias corrected MLE)	2.016
nu hat (MLE)	1747	nu star (bias corrected)	1603
MLE Mean (bias corrected)	44.88	MLE Sd (bias corrected)	9.512
		Approximate Chi Square Value (0.05)	1511
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	1507

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	47.61	95% Adjusted Gamma UCL (use when n<50)	47.74

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.44	Mean of logged Data	3.783
Maximum of Logged Data	4.174	SD of logged Data	0.206

Assuming Lognormal Distribution

95% H-UCL	47.71	90% Chebyshev (MVUE) UCL	49.55
95% Chebyshev (MVUE) UCL	51.66	97.5% Chebyshev (MVUE) UCL	54.6
99% Chebyshev (MVUE) UCL	60.37		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	47.43	95% Jackknife UCL	47.5
95% Standard Bootstrap UCL	47.37	95% Bootstrap-t UCL	47.6

95% Hall's Bootstrap UCL	47.66	95% Percentile Bootstrap UCL	47.58
95% BCA Bootstrap UCL	47.35		
90% Chebyshev(Mean, Sd) UCL	49.54	95% Chebyshev(Mean, Sd) UCL	51.65
97.5% Chebyshev(Mean, Sd) UCL	54.58	99% Chebyshev(Mean, Sd) UCL	60.33

Suggested UCL to Use

95% Student's-t UCL 47.5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:32:35 PM
From File	crb_mus8_SVOC_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	36	Number of Distinct Observations	4
Number of Detects	1	Number of Non-Detects	35
Number of Distinct Detects	1	Number of Distinct Non-Detects	3

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Benzaldehyde was not processed!

Pyridine

General Statistics

Total Number of Observations	36	Number of Distinct Observations	6
Number of Detects	3	Number of Non-Detects	33
Number of Distinct Detects	3	Number of Distinct Non-Detects	3
Minimum Detect	0.39	Minimum Non-Detect	0.26
Maximum Detect	1.1	Maximum Non-Detect	1.3
Variance Detects	0.148	Percent Non-Detects	91.67%
Mean Detects	0.66	SD Detects	0.384
Median Detects	0.49	CV Detects	0.582
Skewness Detects	1.601	Kurtosis Detects	N/A
Mean of Logged Detects	-0.52	SD of Logged Detects	0.545

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.338	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.323	KM Standard Error of Mean	0.0539
KM SD	0.192	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.414	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.412	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.485	95% KM Chebyshev UCL	0.558
97.5% KM Chebyshev UCL	0.66	99% KM Chebyshev UCL	0.86

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	4.951	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.133	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	29.71	nu star (bias corrected)	N/A

Mean (detects)	0.66

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0987
Maximum	1.1	Median	0.01
SD	0.245	CV	2.479
k hat (MLE)	0.394	k star (bias corrected MLE)	0.38
Theta hat (MLE)	0.25	Theta star (bias corrected MLE)	0.26
nu hat (MLE)	28.4	nu star (bias corrected)	27.37
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (27.37, α)	16.44	Adjusted Chi Square Value (27.37, β)	16.05
95% Gamma Approximate UCL (use when n>=50)	0.164	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.323	SD (KM)	0.192
Variance (KM)	0.0368	SE of Mean (KM)	0.0539
k hat (KM)	2.836	k star (KM)	2.618
nu hat (KM)	204.2	nu star (KM)	188.5
theta hat (KM)	0.114	theta star (KM)	0.123
80% gamma percentile (KM)	0.469	90% gamma percentile (KM)	0.591
95% gamma percentile (KM)	0.706	99% gamma percentile (KM)	0.957

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (188.52, α)	157.8	Adjusted Chi Square Value (188.52, β)	156.5
95% Gamma Approximate KM-UCL (use when n>=50)	0.386	95% Gamma Adjusted KM-UCL (use when n<50)	0.389

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.305	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.133	Mean in Log Scale	-3.185
SD in Original Scale	0.234	SD in Log Scale	1.607
95% t UCL (assumes normality of ROS data)	0.198	95% Percentile Bootstrap UCL	0.199
95% BCA Bootstrap UCL	0.219	95% Bootstrap t UCL	0.247
95% H-UCL (Log ROS)	0.354		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.216	KM Geo Mean	0.296
KM SD (logged)	0.35	95% Critical H Value (KM-Log)	1.811
KM Standard Error of Mean (logged)	0.0982	95% H-UCL (KM -Log)	0.351
KM SD (logged)	0.35	95% Critical H Value (KM-Log)	1.811
KM Standard Error of Mean (logged)	0.0982		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.42	Mean in Log Scale	-1.15
SD in Original Scale	0.278	SD in Log Scale	0.812
95% t UCL (Assumes normality)	0.498	95% H-Stat UCL	0.594

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.414

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Blue Crab – Hepatopancreas Only

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:00:34 PM
From File	crb_hep1_dlc_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	1.5700E-5	Mean	8.2308E-5
Maximum	1.6500E-4	Median	8.0400E-5
SD	3.1835E-5	Std. Error of Mean	5.2337E-6
Coefficient of Variation	N/A	Skewness	0.341

Normal GOF Test

Shapiro Wilk Test Statistic	0.987	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0687	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.1144E-5	95% Adjusted-CLT UCL (Chen-1995)	9.1230E-5
		95% Modified-t UCL (Johnson-1978)	9.1193E-5

Gamma GOF Test

A-D Test Statistic	0.291	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0883	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.956	k star (bias corrected MLE)	5.491
Theta hat (MLE)	1.3820E-5	Theta star (bias corrected MLE)	1.4990E-5
nu hat (MLE)	440.7	nu star (bias corrected)	406.3
MLE Mean (bias corrected)	8.2308E-5	MLE Sd (bias corrected)	3.5126E-5
		Approximate Chi Square Value (0.05)	360.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	358.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.2745E-5	95% Adjusted Gamma UCL (use when n<50)	9.3227E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.06	Mean of logged Data	-9.491
Maximum of Logged Data	-8.71	SD of logged Data	0.453

Assuming Lognormal Distribution

95% H-UCL	9.6412E-5	90% Chebyshev (MVUE) UCL	1.0277E-4
95% Chebyshev (MVUE) UCL	1.1154E-4	97.5% Chebyshev (MVUE) UCL	1.2371E-4
99% Chebyshev (MVUE) UCL	1.4762E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.0917E-5	95% Jackknife UCL	9.1144E-5
95% Standard Bootstrap UCL	9.0715E-5	95% Bootstrap-t UCL	9.1617E-5
95% Hall's Bootstrap UCL	9.1411E-5	95% Percentile Bootstrap UCL	9.0962E-5
95% BCA Bootstrap UCL	9.0727E-5		
90% Chebyshev(Mean, Sd) UCL	9.8009E-5	95% Chebyshev(Mean, Sd) UCL	1.0512E-4
97.5% Chebyshev(Mean, Sd) UCL	1.1499E-4	99% Chebyshev(Mean, Sd) UCL	1.3438E-4

Suggested UCL to Use

95% Student's-t UCL 9.1144E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
Number of Detects	29	Number of Non-Detects	8
Number of Distinct Detects	26	Number of Distinct Non-Detects	8
Minimum Detect	1.2000E-6	Minimum Non-Detect	5.4700E-8
Maximum Detect	3.3800E-6	Maximum Non-Detect	9.9900E-8
Variance Detects	2.970E-13	Percent Non-Detects	21.62%
Mean Detects	2.3669E-6	SD Detects	5.4501E-7
Median Detects	2.3700E-6	CV Detects	N/A
Skewness Detects	-0.108	Kurtosis Detects	-0.782
Mean of Logged Detects	-12.98	SD of Logged Detects	0.245

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.926	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.161	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.8670E-6	KM Standard Error of Mean	1.7791E-7
KM SD	1.0634E-6	95% KM (BCA) UCL	2.1398E-6
95% KM (t) UCL	2.1673E-6	95% KM (Percentile Bootstrap) UCL	2.1552E-6
95% KM (z) UCL	2.1596E-6	95% KM Bootstrap t UCL	2.1409E-6
90% KM Chebyshev UCL	2.4007E-6	95% KM Chebyshev UCL	2.6425E-6
97.5% KM Chebyshev UCL	2.9780E-6	99% KM Chebyshev UCL	3.6372E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.369	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.118	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.162	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	18.22	k star (bias corrected MLE)	16.36
Theta hat (MLE)	1.2992E-7	Theta star (bias corrected MLE)	1.4471E-7
nu hat (MLE)	1057	nu star (bias corrected)	948.7
Mean (detects)	2.3669E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.2000E-6	Mean	0.00216
Maximum	0.01	Median	2.5800E-6
SD	0.00417	CV	1.928
k hat (MLE)	0.152	k star (bias corrected MLE)	0.158
Theta hat (MLE)	0.0142	Theta star (bias corrected MLE)	0.0137
nu hat (MLE)	11.27	nu star (bias corrected)	11.69
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (11.69, α)	5.024	Adjusted Chi Square Value (11.69, β)	4.835
95% Gamma Approximate UCL (use when n>=50)	0.00504	95% Gamma Adjusted UCL (use when n<50)	0.00523

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.8670E-6	SD (KM)	1.0634E-6
Variance (KM)	1.131E-12	SE of Mean (KM)	1.7791E-7
k hat (KM)	3.082	k star (KM)	2.85

nu hat (KM)	228.1	nu star (KM)	210.9
theta hat (KM)	6.0569E-7	theta star (KM)	6.5496E-7
80% gamma percentile (KM)	2.6793E-6	90% gamma percentile (KM)	3.3494E-6
95% gamma percentile (KM)	3.9763E-6	99% gamma percentile (KM)	5.3390E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (210.94, α)	178.3	Adjusted Chi Square Value (210.94, β)	177
95% Gamma Approximate KM-UCL (use when n>=50)	2.2084E-6	95% Gamma Adjusted KM-UCL (use when n<50)	2.2246E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.115	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.1490E-6	Mean in Log Scale	-13.1
SD in Original Scale	6.3870E-7	SD in Log Scale	0.309
95% t UCL (assumes normality of ROS data)	2.3263E-6	95% Percentile Bootstrap UCL	2.3150E-6
95% BCA Bootstrap UCL	2.3199E-6	95% Bootstrap t UCL	2.3330E-6
95% H-UCL (Log ROS)	2.3621E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-13.79	KM Geo Mean	1.0256E-6
KM SD (logged)	1.554	95% Critical H Value (KM-Log)	3.092
KM Standard Error of Mean (logged)	0.26	95% H-UCL (KM -Log)	7.6461E-6
KM SD (logged)	1.554	95% Critical H Value (KM-Log)	3.092
KM Standard Error of Mean (logged)	0.26		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.8638E-6	Mean in Log Scale	-13.86
SD in Original Scale	1.0835E-6	SD in Log Scale	1.712
95% t UCL (Assumes normality)	2.1645E-6	95% H-Stat UCL	1.0660E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.1673E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	2.8600E-7	Mean	6.4722E-7
Maximum	1.0400E-6	Median	6.4000E-7
SD	1.6718E-7	Std. Error of Mean	2.7485E-8
Coefficient of Variation	N/A	Skewness	0.309

Normal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.9362E-7	95% Adjusted-CLT UCL (Chen-1995)	6.9391E-7
		95% Modified-t UCL (Johnson-1978)	6.9385E-7

Gamma GOF Test

A-D Test Statistic	0.437	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.149	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.99	k star (bias corrected MLE)	13.79
Theta hat (MLE)	4.3181E-8	Theta star (bias corrected MLE)	4.6929E-8
nu hat (MLE)	1109	nu star (bias corrected)	1021
MLE Mean (bias corrected)	6.4722E-7	MLE Sd (bias corrected)	1.7428E-7
		Approximate Chi Square Value (0.05)	947.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	944.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.9719E-7	95% Adjusted Gamma UCL (use when n<50)	6.9944E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.135	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.07	Mean of logged Data	-14.28
Maximum of Logged Data	-13.78	SD of logged Data	0.268

Assuming Lognormal Distribution

95% H-UCL	7.0192E-7	90% Chebyshev (MVUE) UCL	7.3481E-7
95% Chebyshev (MVUE) UCL	7.7415E-7	97.5% Chebyshev (MVUE) UCL	8.2874E-7
99% Chebyshev (MVUE) UCL	9.3599E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.9243E-7	95% Jackknife UCL	6.9362E-7
95% Standard Bootstrap UCL	6.9338E-7	95% Bootstrap-t UCL	6.9335E-7

95% Hall's Bootstrap UCL	6.9260E-7	95% Percentile Bootstrap UCL	6.9186E-7
95% BCA Bootstrap UCL	6.9476E-7		
90% Chebyshev(Mean, Sd) UCL	7.2967E-7	95% Chebyshev(Mean, Sd) UCL	7.6702E-7
97.5% Chebyshev(Mean, Sd) UCL	8.1886E-7	99% Chebyshev(Mean, Sd) UCL	9.2069E-7

Suggested UCL to Use

95% Student's-t UCL 6.9362E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	1.1600E-6	Mean	1.9581E-6
Maximum	3.2000E-6	Median	1.9900E-6
SD	4.8948E-7	Std. Error of Mean	8.0470E-8
Coefficient of Variation	N/A	Skewness	0.24

Normal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.0940E-6	95% Adjusted-CLT UCL (Chen-1995)	2.0939E-6
		95% Modified-t UCL (Johnson-1978)	2.0945E-6

Gamma GOF Test

A-D Test Statistic	0.478	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	16.11	k star (bias corrected MLE)	14.82
Theta hat (MLE)	1.2157E-7	Theta star (bias corrected MLE)	1.3214E-7
nu hat (MLE)	1192	nu star (bias corrected)	1097
MLE Mean (bias corrected)	1.9581E-6	MLE Sd (bias corrected)	5.0867E-7
		Approximate Chi Square Value (0.05)	1021
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1018

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1037E-6	95% Adjusted Gamma UCL (use when n<50)	2.1102E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.67	Mean of logged Data	-13.17
Maximum of Logged Data	-12.65	SD of logged Data	0.257

Assuming Lognormal Distribution

95% H-UCL	2.1149E-6	90% Chebyshev (MVUE) UCL	2.2108E-6
95% Chebyshev (MVUE) UCL	2.3247E-6	97.5% Chebyshev (MVUE) UCL	2.4827E-6
99% Chebyshev (MVUE) UCL	2.7931E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0905E-6	95% Jackknife UCL	2.0940E-6
95% Standard Bootstrap UCL	2.0876E-6	95% Bootstrap-t UCL	2.0989E-6

95% Hall's Bootstrap UCL	2.0892E-6	95% Percentile Bootstrap UCL	2.0954E-6
95% BCA Bootstrap UCL	2.0862E-6		
90% Chebyshev(Mean, Sd) UCL	2.1995E-6	95% Chebyshev(Mean, Sd) UCL	2.3089E-6
97.5% Chebyshev(Mean, Sd) UCL	2.4606E-6	99% Chebyshev(Mean, Sd) UCL	2.7588E-6

Suggested UCL to Use

95% Student's-t UCL 2.0940E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	3.5000E-7	Mean	6.6611E-7
Maximum	1.0100E-6	Median	6.5400E-7
SD	1.6659E-7	Std. Error of Mean	2.7388E-8
Coefficient of Variation	N/A	Skewness	0.169

Normal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.115	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.1235E-7	95% Adjusted-CLT UCL (Chen-1995)	7.1197E-7
		95% Modified-t UCL (Johnson-1978)	7.1247E-7

Gamma GOF Test

A-D Test Statistic	0.367	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	15.95	k star (bias corrected MLE)	14.67
Theta hat (MLE)	4.1771E-8	Theta star (bias corrected MLE)	4.5401E-8
nu hat (MLE)	1180	nu star (bias corrected)	1086
MLE Mean (bias corrected)	6.6611E-7	MLE Sd (bias corrected)	1.7390E-7
		Approximate Chi Square Value (0.05)	1010
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1007

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.1589E-7	95% Adjusted Gamma UCL (use when n<50)	7.1812E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.87	Mean of logged Data	-14.25
Maximum of Logged Data	-13.81	SD of logged Data	0.259

Assuming Lognormal Distribution

95% H-UCL	7.2004E-7	90% Chebyshev (MVUE) UCL	7.5289E-7
95% Chebyshev (MVUE) UCL	7.9194E-7	97.5% Chebyshev (MVUE) UCL	8.4614E-7
99% Chebyshev (MVUE) UCL	9.5260E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.1116E-7	95% Jackknife UCL	7.1235E-7
95% Standard Bootstrap UCL	7.1158E-7	95% Bootstrap-t UCL	7.1398E-7

95% Hall's Bootstrap UCL	7.1374E-7	95% Percentile Bootstrap UCL	7.1122E-7
95% BCA Bootstrap UCL	7.1127E-7		
90% Chebyshev(Mean, Sd) UCL	7.4827E-7	95% Chebyshev(Mean, Sd) UCL	7.8549E-7
97.5% Chebyshev(Mean, Sd) UCL	8.3714E-7	99% Chebyshev(Mean, Sd) UCL	9.3861E-7

Suggested UCL to Use

95% Student's-t UCL 7.1235E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	1.0800E-6	Mean	2.1078E-6
Maximum	3.2500E-6	Median	2.1100E-6
SD	5.5885E-7	Std. Error of Mean	9.1874E-8
Coefficient of Variation	N/A	Skewness	0.158

Normal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0682	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.2629E-6	95% Adjusted-CLT UCL (Chen-1995)	2.2615E-6
		95% Modified-t UCL (Johnson-1978)	2.2633E-6

Gamma GOF Test

A-D Test Statistic	0.225	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0835	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.97	k star (bias corrected MLE)	12.86
Theta hat (MLE)	1.5086E-7	Theta star (bias corrected MLE)	1.6394E-7
nu hat (MLE)	1034	nu star (bias corrected)	951.4
MLE Mean (bias corrected)	2.1078E-6	MLE Sd (bias corrected)	5.8784E-7
		Approximate Chi Square Value (0.05)	880.8
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	877.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.2768E-6	95% Adjusted Gamma UCL (use when n<50)	2.2844E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.74	Mean of logged Data	-13.11
Maximum of Logged Data	-12.64	SD of logged Data	0.278

Assuming Lognormal Distribution

95% H-UCL	2.2942E-6	90% Chebyshev (MVUE) UCL	2.4049E-6
95% Chebyshev (MVUE) UCL	2.5381E-6	97.5% Chebyshev (MVUE) UCL	2.7230E-6
99% Chebyshev (MVUE) UCL	3.0861E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.2590E-6	95% Jackknife UCL	2.2629E-6
95% Standard Bootstrap UCL	2.2578E-6	95% Bootstrap-t UCL	2.2708E-6

95% Hall's Bootstrap UCL	2.2605E-6	95% Percentile Bootstrap UCL	2.2632E-6
95% BCA Bootstrap UCL	2.2627E-6		
90% Chebyshev(Mean, Sd) UCL	2.3835E-6	95% Chebyshev(Mean, Sd) UCL	2.5083E-6
97.5% Chebyshev(Mean, Sd) UCL	2.6816E-6	99% Chebyshev(Mean, Sd) UCL	3.0220E-6

Suggested UCL to Use

95% Student's-t UCL 2.2629E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	2.5000E-6	Mean	5.6305E-6
Maximum	2.0400E-5	Median	5.1900E-6
SD	2.7944E-6	Std. Error of Mean	4.5940E-7
Coefficient of Variation	N/A	Skewness	4.296

Normal GOF Test

Shapiro Wilk Test Statistic	0.578	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.272	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.4062E-6	95% Adjusted-CLT UCL (Chen-1995)	6.7329E-6
		95% Modified-t UCL (Johnson-1978)	6.4602E-6

Gamma GOF Test

A-D Test Statistic	2.024	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.198	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.577	k star (bias corrected MLE)	6.98
Theta hat (MLE)	7.4313E-7	Theta star (bias corrected MLE)	8.0661E-7
nu hat (MLE)	560.7	nu star (bias corrected)	516.6
MLE Mean (bias corrected)	5.6305E-6	MLE Sd (bias corrected)	2.1311E-6
		Approximate Chi Square Value (0.05)	464.8
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	462.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.2569E-6	95% Adjusted Gamma UCL (use when n<50)	6.2855E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.873	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.163	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.9	Mean of logged Data	-12.15
Maximum of Logged Data	-10.8	SD of logged Data	0.336

Assuming Lognormal Distribution

95% H-UCL	6.1621E-6	90% Chebyshev (MVUE) UCL	6.5025E-6
95% Chebyshev (MVUE) UCL	6.9293E-6	97.5% Chebyshev (MVUE) UCL	7.5216E-6
99% Chebyshev (MVUE) UCL	8.6851E-6		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	6.3862E-6	95% Jackknife UCL	6.4062E-6
95% Standard Bootstrap UCL	6.3921E-6	95% Bootstrap-t UCL	7.1880E-6

95% Hall's Bootstrap UCL	9.7632E-6	95% Percentile Bootstrap UCL	6.4338E-6
95% BCA Bootstrap UCL	6.8486E-6		
90% Chebyshev(Mean, Sd) UCL	7.0088E-6	95% Chebyshev(Mean, Sd) UCL	7.6330E-6
97.5% Chebyshev(Mean, Sd) UCL	8.4995E-6	99% Chebyshev(Mean, Sd) UCL	1.0202E-5

Suggested UCL to Use

95% Student's-t UCL	6.4062E-6	or 95% Modified-t UCL	6.4602E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,7,8-TCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	1.9300E-5	Mean	3.2205E-5
Maximum	5.8700E-5	Median	3.2300E-5
SD	7.4582E-6	Std. Error of Mean	1.2261E-6
Coefficient of Variation	N/A	Skewness	1.175

Normal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.0957	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.4275E-5	95% Adjusted-CLT UCL (Chen-1995)	3.4475E-5
		95% Modified-t UCL (Johnson-1978)	3.4315E-5

Gamma GOF Test

A-D Test Statistic	0.274	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0865	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	20.68	k star (bias corrected MLE)	19.02
Theta hat (MLE)	1.5573E-6	Theta star (bias corrected MLE)	1.6931E-6
nu hat (MLE)	1530	nu star (bias corrected)	1408
MLE Mean (bias corrected)	3.2205E-5	MLE Sd (bias corrected)	7.3843E-6
		Approximate Chi Square Value (0.05)	1321
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1318

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.4304E-5	95% Adjusted Gamma UCL (use when n<50)	3.4398E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.981	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0757	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.86	Mean of logged Data	-10.37
Maximum of Logged Data	-9.743	SD of logged Data	0.222

Assuming Lognormal Distribution

95% H-UCL	3.4364E-5	90% Chebyshev (MVUE) UCL	3.5752E-5
95% Chebyshev (MVUE) UCL	3.7364E-5	97.5% Chebyshev (MVUE) UCL	3.9602E-5
99% Chebyshev (MVUE) UCL	4.3998E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.4222E-5	95% Jackknife UCL	3.4275E-5
95% Standard Bootstrap UCL	3.4125E-5	95% Bootstrap-t UCL	3.4509E-5

95% Hall's Bootstrap UCL	3.5041E-5	95% Percentile Bootstrap UCL	3.4192E-5
95% BCA Bootstrap UCL	3.4368E-5		
90% Chebyshev(Mean, Sd) UCL	3.5884E-5	95% Chebyshev(Mean, Sd) UCL	3.7550E-5
97.5% Chebyshev(Mean, Sd) UCL	3.9863E-5	99% Chebyshev(Mean, Sd) UCL	4.4405E-5

Suggested UCL to Use

95% Student's-t UCL 3.4275E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	3.6000E-6	Mean	6.8951E-6
Maximum	1.0600E-5	Median	6.6900E-6
SD	1.7226E-6	Std. Error of Mean	2.8320E-7
Coefficient of Variation	N/A	Skewness	0.442

Normal GOF Test

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.3733E-6	95% Adjusted-CLT UCL (Chen-1995)	7.3830E-6
		95% Modified-t UCL (Johnson-1978)	7.3767E-6

Gamma GOF Test

A-D Test Statistic	0.351	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0902	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	16.6	k star (bias corrected MLE)	15.27
Theta hat (MLE)	4.1535E-7	Theta star (bias corrected MLE)	4.5146E-7
nu hat (MLE)	1228	nu star (bias corrected)	1130
MLE Mean (bias corrected)	6.8951E-6	MLE Sd (bias corrected)	1.7643E-6
		Approximate Chi Square Value (0.05)	1053
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1050

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.3996E-6	95% Adjusted Gamma UCL (use when n<50)	7.4222E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0811	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.53	Mean of logged Data	-11.92
Maximum of Logged Data	-11.45	SD of logged Data	0.251

Assuming Lognormal Distribution

95% H-UCL	7.4316E-6	90% Chebyshev (MVUE) UCL	7.7631E-6
95% Chebyshev (MVUE) UCL	8.1553E-6	97.5% Chebyshev (MVUE) UCL	8.6997E-6
99% Chebyshev (MVUE) UCL	9.7690E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.3610E-6	95% Jackknife UCL	7.3733E-6
95% Standard Bootstrap UCL	7.3647E-6	95% Bootstrap-t UCL	7.3896E-6

95% Hall's Bootstrap UCL	7.3734E-6	95% Percentile Bootstrap UCL	7.3562E-6
95% BCA Bootstrap UCL	7.3559E-6		
90% Chebyshev(Mean, Sd) UCL	7.7447E-6	95% Chebyshev(Mean, Sd) UCL	8.1296E-6
97.5% Chebyshev(Mean, Sd) UCL	8.6637E-6	99% Chebyshev(Mean, Sd) UCL	9.7129E-6

Suggested UCL to Use

95% Student's-t UCL 7.3733E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	5.8200E-6	Mean	1.6196E-5
Maximum	2.4200E-5	Median	1.6500E-5
SD	4.7666E-6	Std. Error of Mean	7.8363E-7
Coefficient of Variation	N/A	Skewness	-0.177

Normal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0991	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.7519E-5	95% Adjusted-CLT UCL (Chen-1995)	1.7460E-5
		95% Modified-t UCL (Johnson-1978)	1.7515E-5

Gamma GOF Test

A-D Test Statistic	0.548	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.126	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.44	k star (bias corrected MLE)	9.611
Theta hat (MLE)	1.5514E-6	Theta star (bias corrected MLE)	1.6851E-6
nu hat (MLE)	772.5	nu star (bias corrected)	711.2
MLE Mean (bias corrected)	1.6196E-5	MLE Sd (bias corrected)	5.2241E-6
		Approximate Chi Square Value (0.05)	650.3
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	647.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.7712E-5	95% Adjusted Gamma UCL (use when n<50)	1.7781E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.05	Mean of logged Data	-11.08
Maximum of Logged Data	-10.63	SD of logged Data	0.331

Assuming Lognormal Distribution

95% H-UCL	1.7993E-5	90% Chebyshev (MVUE) UCL	1.8976E-5
95% Chebyshev (MVUE) UCL	2.0203E-5	97.5% Chebyshev (MVUE) UCL	2.1905E-5
99% Chebyshev (MVUE) UCL	2.5250E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.7485E-5	95% Jackknife UCL	1.7519E-5
95% Standard Bootstrap UCL	1.7457E-5	95% Bootstrap-t UCL	1.7504E-5

95% Hall's Bootstrap UCL	1.7474E-5	95% Percentile Bootstrap UCL	1.7441E-5
95% BCA Bootstrap UCL	1.7449E-5		
90% Chebyshev(Mean, Sd) UCL	1.8547E-5	95% Chebyshev(Mean, Sd) UCL	1.9611E-5
97.5% Chebyshev(Mean, Sd) UCL	2.1089E-5	99% Chebyshev(Mean, Sd) UCL	2.3993E-5

Suggested UCL to Use

95% Student's-t UCL 1.7519E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	2.1300E-6	Mean	1.4292E-5
Maximum	3.0500E-5	Median	1.2800E-5
SD	8.1371E-6	Std. Error of Mean	1.3377E-6
Coefficient of Variation	N/A	Skewness	0.433

Normal GOF Test

Shapiro Wilk Test Statistic	0.927	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.135	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.6551E-5	95% Adjusted-CLT UCL (Chen-1995)	1.6594E-5
		95% Modified-t UCL (Johnson-1978)	1.6567E-5

Gamma GOF Test

A-D Test Statistic	0.52	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.124	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.838	k star (bias corrected MLE)	2.626
Theta hat (MLE)	5.0354E-6	Theta star (bias corrected MLE)	5.4421E-6
nu hat (MLE)	210	nu star (bias corrected)	194.3
MLE Mean (bias corrected)	1.4292E-5	MLE Sd (bias corrected)	8.8192E-6
		Approximate Chi Square Value (0.05)	163.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	161.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.7031E-5	95% Adjusted Gamma UCL (use when n<50)	1.7161E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.11	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.06	Mean of logged Data	-11.34
Maximum of Logged Data	-10.4	SD of logged Data	0.657

Assuming Lognormal Distribution

95% H-UCL	1.8405E-5	90% Chebyshev (MVUE) UCL	1.9724E-5
95% Chebyshev (MVUE) UCL	2.2037E-5	97.5% Chebyshev (MVUE) UCL	2.5247E-5
99% Chebyshev (MVUE) UCL	3.1553E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.6493E-5	95% Jackknife UCL	1.6551E-5
95% Standard Bootstrap UCL	1.6431E-5	95% Bootstrap-t UCL	1.6617E-5

95% Hall's Bootstrap UCL	1.6594E-5	95% Percentile Bootstrap UCL	1.6501E-5
95% BCA Bootstrap UCL	1.6705E-5		
90% Chebyshev(Mean, Sd) UCL	1.8305E-5	95% Chebyshev(Mean, Sd) UCL	2.0123E-5
97.5% Chebyshev(Mean, Sd) UCL	2.2646E-5	99% Chebyshev(Mean, Sd) UCL	2.7602E-5

Suggested UCL to Use

95% Student's-t UCL 1.6551E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.6200E-6	Mean	4.5403E-6
Maximum	8.3200E-6	Median	4.4800E-6
SD	1.6938E-6	Std. Error of Mean	2.7846E-7
Coefficient of Variation	N/A	Skewness	0.3

Normal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.105	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.0104E-6	95% Adjusted-CLT UCL (Chen-1995)	5.0130E-6
		95% Modified-t UCL (Johnson-1978)	5.0127E-6

Gamma GOF Test

A-D Test Statistic	0.327	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.108	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.965	k star (bias corrected MLE)	6.419
Theta hat (MLE)	6.5184E-7	Theta star (bias corrected MLE)	7.0736E-7
nu hat (MLE)	515.4	nu star (bias corrected)	475
MLE Mean (bias corrected)	4.5403E-6	MLE Sd (bias corrected)	1.7921E-6
		Approximate Chi Square Value (0.05)	425.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	423.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.0689E-6	95% Adjusted Gamma UCL (use when n<50)	5.0932E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.104	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.33	Mean of logged Data	-12.38
Maximum of Logged Data	-11.7	SD of logged Data	0.4

Assuming Lognormal Distribution

95% H-UCL	5.1688E-6	90% Chebyshev (MVUE) UCL	5.4880E-6
95% Chebyshev (MVUE) UCL	5.9084E-6	97.5% Chebyshev (MVUE) UCL	6.4919E-6
99% Chebyshev (MVUE) UCL	7.6380E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.9983E-6	95% Jackknife UCL	5.0104E-6
95% Standard Bootstrap UCL	4.9888E-6	95% Bootstrap-t UCL	5.0425E-6

95% Hall's Bootstrap UCL	5.0136E-6	95% Percentile Bootstrap UCL	5.0068E-6
95% BCA Bootstrap UCL	5.0170E-6		
90% Chebyshev(Mean, Sd) UCL	5.3757E-6	95% Chebyshev(Mean, Sd) UCL	5.7541E-6
97.5% Chebyshev(Mean, Sd) UCL	6.2793E-6	99% Chebyshev(Mean, Sd) UCL	7.3109E-6

Suggested UCL to Use

95% Student's-t UCL 5.0104E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,7,8,9-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	31
Number of Detects	35	Number of Non-Detects	2
Number of Distinct Detects	30	Number of Distinct Non-Detects	2
Minimum Detect	5.2500E-8	Minimum Non-Detect	9.8500E-8
Maximum Detect	3.1200E-7	Maximum Non-Detect	1.6400E-7
Variance Detects	2.765E-15	Percent Non-Detects	5.405%
Mean Detects	1.2094E-7	SD Detects	5.2586E-8
Median Detects	1.1100E-7	CV Detects	N/A
Skewness Detects	2.075	Kurtosis Detects	5.601
Mean of Logged Detects	-16	SD of Logged Detects	0.373

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.811	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.1940E-7	KM Standard Error of Mean	8.5730E-9
KM SD	5.1146E-8	95% KM (BCA) UCL	1.3564E-7
95% KM (t) UCL	1.3387E-7	95% KM (Percentile Bootstrap) UCL	1.3452E-7
95% KM (z) UCL	1.3350E-7	95% KM Bootstrap t UCL	1.3893E-7
90% KM Chebyshev UCL	1.4512E-7	95% KM Chebyshev UCL	1.5677E-7
97.5% KM Chebyshev UCL	1.7294E-7	99% KM Chebyshev UCL	2.0470E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.73	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.129	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.149	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.044	k star (bias corrected MLE)	6.459
Theta hat (MLE)	1.7169E-8	Theta star (bias corrected MLE)	1.8723E-8
nu hat (MLE)	493.1	nu star (bias corrected)	452.1
Mean (detects)	1.2094E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.2500E-8	Mean	5.4065E-4
Maximum	0.01	Median	1.1400E-7
SD	0.00229	CV	4.24
k hat (MLE)	0.103	k star (bias corrected MLE)	0.113
Theta hat (MLE)	0.00525	Theta star (bias corrected MLE)	0.0048
nu hat (MLE)	7.616	nu star (bias corrected)	8.332
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.33, α)	2.929	Adjusted Chi Square Value (8.33, β)	2.791
95% Gamma Approximate UCL (use when n>=50)	0.00154	95% Gamma Adjusted UCL (use when n<50)	0.00161

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.1940E-7	SD (KM)	5.1146E-8
Variance (KM)	2.616E-15	SE of Mean (KM)	8.5730E-9
k hat (KM)	5.45	k star (KM)	5.026

nu hat (KM)	403.3	nu star (KM)	371.9
theta hat (KM)	2.1910E-8	theta star (KM)	2.3757E-8
80% gamma percentile (KM)	1.6040E-7	90% gamma percentile (KM)	1.9070E-7
95% gamma percentile (KM)	2.1830E-7	99% gamma percentile (KM)	2.7663E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (371.90, α)	328.2	Adjusted Chi Square Value (371.90, β)	326.4
95% Gamma Approximate KM-UCL (use when n>=50)	1.3529E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.3603E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.934	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.105	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.148	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.1936E-7	Mean in Log Scale	-16.01
SD in Original Scale	5.1639E-8	SD in Log Scale	0.368
95% t UCL (assumes normality of ROS data)	1.3369E-7	95% Percentile Bootstrap UCL	1.3429E-7
95% BCA Bootstrap UCL	1.3763E-7	95% Bootstrap t UCL	1.3961E-7
95% H-UCL (Log ROS)	1.3300E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.01	KM Geo Mean	1.1106E-7
KM SD (logged)	0.367	95% Critical H Value (KM-Log)	1.823
KM Standard Error of Mean (logged)	0.0619	95% H-UCL (KM -Log)	1.3281E-7
KM SD (logged)	0.367	95% Critical H Value (KM-Log)	1.823
KM Standard Error of Mean (logged)	0.0619		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.1795E-7	Mean in Log Scale	-16.03
SD in Original Scale	5.2795E-8	SD in Log Scale	0.39
95% t UCL (Assumes normality)	1.3260E-7	95% H-Stat UCL	1.3260E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	1.3603E-7	95% GROS Adjusted Gamma UCL	0.00161

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	5.6100E-7	Mean	1.1546E-6
Maximum	2.0900E-6	Median	1.0700E-6
SD	4.5946E-7	Std. Error of Mean	7.5535E-8
Coefficient of Variation	N/A	Skewness	0.613

Normal GOF Test

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.2821E-6	95% Adjusted-CLT UCL (Chen-1995)	1.2869E-6
		95% Modified-t UCL (Johnson-1978)	1.2834E-6

Gamma GOF Test

A-D Test Statistic	0.703	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.765	k star (bias corrected MLE)	6.234
Theta hat (MLE)	1.7068E-7	Theta star (bias corrected MLE)	1.8520E-7
nu hat (MLE)	500.6	nu star (bias corrected)	461.3
MLE Mean (bias corrected)	1.1546E-6	MLE Sd (bias corrected)	4.6241E-7
		Approximate Chi Square Value (0.05)	412.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	410.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.2911E-6	95% Adjusted Gamma UCL (use when n<50)	1.2974E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.938	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.115	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.39	Mean of logged Data	-13.75
Maximum of Logged Data	-13.08	SD of logged Data	0.394

Assuming Lognormal Distribution

95% H-UCL	1.3056E-6	90% Chebyshev (MVUE) UCL	1.3855E-6
95% Chebyshev (MVUE) UCL	1.4902E-6	97.5% Chebyshev (MVUE) UCL	1.6356E-6
99% Chebyshev (MVUE) UCL	1.9211E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.2788E-6	95% Jackknife UCL	1.2821E-6
95% Standard Bootstrap UCL	1.2761E-6	95% Bootstrap-t UCL	1.2919E-6

95% Hall's Bootstrap UCL	1.2833E-6	95% Percentile Bootstrap UCL	1.2783E-6
95% BCA Bootstrap UCL	1.2839E-6		
90% Chebyshev(Mean, Sd) UCL	1.3812E-6	95% Chebyshev(Mean, Sd) UCL	1.4838E-6
97.5% Chebyshev(Mean, Sd) UCL	1.6263E-6	99% Chebyshev(Mean, Sd) UCL	1.9061E-6

Suggested UCL to Use

95% Adjusted Gamma UCL 1.2974E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,6,7,8-HpCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	3.3900E-6	Mean	1.4725E-5
Maximum	3.5200E-5	Median	1.3600E-5
SD	8.0313E-6	Std. Error of Mean	1.3203E-6
Coefficient of Variation	N/A	Skewness	0.843

Normal GOF Test

Shapiro Wilk Test Statistic	0.926	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.6954E-5	95% Adjusted-CLT UCL (Chen-1995)	1.7092E-5
		95% Modified-t UCL (Johnson-1978)	1.6984E-5

Gamma GOF Test

A-D Test Statistic	0.29	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0905	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.48	k star (bias corrected MLE)	3.216
Theta hat (MLE)	4.2315E-6	Theta star (bias corrected MLE)	4.5791E-6
nu hat (MLE)	257.5	nu star (bias corrected)	238
MLE Mean (bias corrected)	1.4725E-5	MLE Sd (bias corrected)	8.2113E-6
		Approximate Chi Square Value (0.05)	203.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	201.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.7239E-5	95% Adjusted Gamma UCL (use when n<50)	1.7358E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0899	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.59	Mean of logged Data	-11.28
Maximum of Logged Data	-10.25	SD of logged Data	0.573

Assuming Lognormal Distribution

95% H-UCL	1.8009E-5	90% Chebyshev (MVUE) UCL	1.9295E-5
95% Chebyshev (MVUE) UCL	2.1309E-5	97.5% Chebyshev (MVUE) UCL	2.4105E-5
99% Chebyshev (MVUE) UCL	2.9597E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.6896E-5	95% Jackknife UCL	1.6954E-5
95% Standard Bootstrap UCL	1.6913E-5	95% Bootstrap-t UCL	1.7075E-5

95% Hall's Bootstrap UCL	1.7083E-5	95% Percentile Bootstrap UCL	1.7015E-5
95% BCA Bootstrap UCL	1.7032E-5		
90% Chebyshev(Mean, Sd) UCL	1.8686E-5	95% Chebyshev(Mean, Sd) UCL	2.0480E-5
97.5% Chebyshev(Mean, Sd) UCL	2.2970E-5	99% Chebyshev(Mean, Sd) UCL	2.7862E-5

Suggested UCL to Use

95% Student's-t UCL 1.6954E-5

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

1,2,3,4,7,8,9-HpCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
Number of Detects	14	Number of Non-Detects	23
Number of Distinct Detects	13	Number of Distinct Non-Detects	23
Minimum Detect	5.0400E-8	Minimum Non-Detect	6.9100E-8
Maximum Detect	3.6800E-7	Maximum Non-Detect	2.0600E-7
Variance Detects	9.791E-15	Percent Non-Detects	62.16%
Mean Detects	1.9314E-7	SD Detects	9.8952E-8
Median Detects	1.7750E-7	CV Detects	N/A
Skewness Detects	0.459	Kurtosis Detects	-0.789
Mean of Logged Detects	-15.6	SD of Logged Detects	0.578

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.949	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.1089E-7	KM Standard Error of Mean	1.5631E-8
KM SD	8.8489E-8	95% KM (BCA) UCL	1.4905E-7
95% KM (t) UCL	1.3728E-7	95% KM (Percentile Bootstrap) UCL	1.4005E-7
95% KM (z) UCL	1.3660E-7	95% KM Bootstrap t UCL	1.4081E-7
90% KM Chebyshev UCL	1.5778E-7	95% KM Chebyshev UCL	1.7902E-7
97.5% KM Chebyshev UCL	2.0850E-7	99% KM Chebyshev UCL	2.6641E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.168	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.23	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.736	k star (bias corrected MLE)	2.983
Theta hat (MLE)	5.1700E-8	Theta star (bias corrected MLE)	6.4749E-8
nu hat (MLE)	104.6	nu star (bias corrected)	83.52
Mean (detects)	1.9314E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.0400E-8	Mean	0.00622
Maximum	0.01	Median	0.01
SD	0.00492	CV	0.791
k hat (MLE)	0.2	k star (bias corrected MLE)	0.202
Theta hat (MLE)	0.0311	Theta star (bias corrected MLE)	0.0308
nu hat (MLE)	14.78	nu star (bias corrected)	14.92
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (14.92, α)	7.204	Adjusted Chi Square Value (14.92, β)	6.971
95% Gamma Approximate UCL (use when n>=50)	0.0129	95% Gamma Adjusted UCL (use when n<50)	0.0133

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.1089E-7	SD (KM)	8.8489E-8
Variance (KM)	7.830E-15	SE of Mean (KM)	1.5631E-8
k hat (KM)	1.57	k star (KM)	1.461

nu hat (KM)	116.2	nu star (KM)	108.1
theta hat (KM)	7.0615E-8	theta star (KM)	7.5898E-8
80% gamma percentile (KM)	1.7206E-7	90% gamma percentile (KM)	2.3256E-7
95% gamma percentile (KM)	2.9141E-7	99% gamma percentile (KM)	4.2454E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (108.11, α)	85.12	Adjusted Chi Square Value (108.11, β)	84.23
95% Gamma Approximate KM-UCL (use when n>=50)	1.4085E-7	95% Gamma Adjusted KM-UCL (use when n<50)	1.4233E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0958	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.0888E-7	Mean in Log Scale	-16.27
SD in Original Scale	8.9449E-8	SD in Log Scale	0.639
95% t UCL (assumes normality of ROS data)	1.3371E-7	95% Percentile Bootstrap UCL	1.3384E-7
95% BCA Bootstrap UCL	1.3595E-7	95% Bootstrap t UCL	1.4296E-7
95% H-UCL (Log ROS)	1.3090E-7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.26	KM Geo Mean	8.6988E-8
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	2.037
KM Standard Error of Mean (logged)	0.125	95% H-UCL (KM -Log)	1.3435E-7
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	2.037
KM Standard Error of Mean (logged)	0.125		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0864E-7	Mean in Log Scale	-16.29
SD in Original Scale	9.0265E-8	SD in Log Scale	0.68
95% t UCL (Assumes normality)	1.3370E-7	95% H-Stat UCL	1.3401E-7

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.3728E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

OCDF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	1.8900E-7	Mean	5.7424E-7
Maximum	1.7700E-6	Median	4.4000E-7
SD	3.6742E-7	Std. Error of Mean	6.0404E-8
Coefficient of Variation	N/A	Skewness	2.121

Normal GOF Test

Shapiro Wilk Test Statistic	0.736	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.253	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.7622E-7	95% Adjusted-CLT UCL (Chen-1995)	6.9611E-7
		95% Modified-t UCL (Johnson-1978)	6.7973E-7

Gamma GOF Test

A-D Test Statistic	1.769	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.183	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.712	k star (bias corrected MLE)	3.429
Theta hat (MLE)	1.5471E-7	Theta star (bias corrected MLE)	1.6747E-7
nu hat (MLE)	274.7	nu star (bias corrected)	253.7
MLE Mean (bias corrected)	5.7424E-7	MLE Sd (bias corrected)	3.1011E-7
		Approximate Chi Square Value (0.05)	217.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	216.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.6883E-7	95% Adjusted Gamma UCL (use when n<50)	6.7328E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.48	Mean of logged Data	-14.51
Maximum of Logged Data	-13.24	SD of logged Data	0.502

Assuming Lognormal Distribution

95% H-UCL	6.6427E-7	90% Chebyshev (MVUE) UCL	7.1002E-7
95% Chebyshev (MVUE) UCL	7.7627E-7	97.5% Chebyshev (MVUE) UCL	8.6821E-7
99% Chebyshev (MVUE) UCL	1.0488E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.7360E-7	95% Jackknife UCL	6.7622E-7
95% Standard Bootstrap UCL	6.7304E-7	95% Bootstrap-t UCL	7.2560E-7

95% Hall's Bootstrap UCL	7.1807E-7	95% Percentile Bootstrap UCL	6.7862E-7
95% BCA Bootstrap UCL	7.0754E-7		
90% Chebyshev(Mean, Sd) UCL	7.5546E-7	95% Chebyshev(Mean, Sd) UCL	8.3754E-7
97.5% Chebyshev(Mean, Sd) UCL	9.5147E-7	99% Chebyshev(Mean, Sd) UCL	1.1753E-6

Suggested UCL to Use

95% H-UCL 6.6427E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

PCB-77

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	21
Minimum	0.00241	Mean	0.00595
Maximum	0.00949	Median	0.00653
SD	0.00196	Std. Error of Mean	5.2340E-4
Coefficient of Variation	0.329	Skewness	-0.0839

Normal GOF Test

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00688	95% Adjusted-CLT UCL (Chen-1995)	0.0068
		95% Modified-t UCL (Johnson-1978)	0.00687

Gamma GOF Test

A-D Test Statistic	0.473	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.735	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.193	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.229	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.76	k star (bias corrected MLE)	6.93
Theta hat (MLE)	6.7906E-4	Theta star (bias corrected MLE)	8.5832E-4
nu hat (MLE)	245.3	nu star (bias corrected)	194.1
MLE Mean (bias corrected)	0.00595	MLE Sd (bias corrected)	0.00226
		Approximate Chi Square Value (0.05)	162.8
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	159

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00709	95% Adjusted Gamma UCL (use when n<50)	0.00726

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.194	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.028	Mean of logged Data	-5.183
Maximum of Logged Data	-4.658	SD of logged Data	0.37

Assuming Lognormal Distribution

95% H-UCL	0.00735	90% Chebyshev (MVUE) UCL	0.00778
95% Chebyshev (MVUE) UCL	0.0086	97.5% Chebyshev (MVUE) UCL	0.00973
99% Chebyshev (MVUE) UCL	0.012		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00681	95% Jackknife UCL	0.00688
95% Standard Bootstrap UCL	0.00679	95% Bootstrap-t UCL	0.00689

95% Hall's Bootstrap UCL	0.00678	95% Percentile Bootstrap UCL	0.00683
95% BCA Bootstrap UCL	0.00677		
90% Chebyshev(Mean, Sd) UCL	0.00752	95% Chebyshev(Mean, Sd) UCL	0.00823
97.5% Chebyshev(Mean, Sd) UCL	0.00922	99% Chebyshev(Mean, Sd) UCL	0.0112

Suggested UCL to Use

95% Student's-t UCL	0.00688

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

PCB-81

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	1.3400E-4	Mean	2.8116E-4
Maximum	5.0700E-4	Median	2.8900E-4
SD	8.5866E-5	Std. Error of Mean	1.4116E-5
Coefficient of Variation	0.305	Skewness	0.469

Normal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.11	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.0499E-4	95% Adjusted-CLT UCL (Chen-1995)	3.0554E-4
		95% Modified-t UCL (Johnson-1978)	3.0518E-4

Gamma GOF Test

A-D Test Statistic	0.378	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.121	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.97	k star (bias corrected MLE)	10.1
Theta hat (MLE)	2.5628E-5	Theta star (bias corrected MLE)	2.7839E-5
nu hat (MLE)	811.9	nu star (bias corrected)	747.4
MLE Mean (bias corrected)	2.8116E-4	MLE Sd (bias corrected)	8.8472E-5
		Approximate Chi Square Value (0.05)	684.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	682.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.0679E-4	95% Adjusted Gamma UCL (use when n<50)	3.0795E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.139	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.918	Mean of logged Data	-8.223
Maximum of Logged Data	-7.587	SD of logged Data	0.312

Assuming Lognormal Distribution

95% H-UCL	3.0934E-4	90% Chebyshev (MVUE) UCL	3.2556E-4
95% Chebyshev (MVUE) UCL	3.4554E-4	97.5% Chebyshev (MVUE) UCL	3.7328E-4
99% Chebyshev (MVUE) UCL	4.2775E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.0438E-4	95% Jackknife UCL	3.0499E-4
95% Standard Bootstrap UCL	3.0366E-4	95% Bootstrap-t UCL	3.0640E-4

95% Hall's Bootstrap UCL	3.0628E-4	95% Percentile Bootstrap UCL	3.0438E-4
95% BCA Bootstrap UCL	3.0427E-4		
90% Chebyshev(Mean, Sd) UCL	3.2351E-4	95% Chebyshev(Mean, Sd) UCL	3.4269E-4
97.5% Chebyshev(Mean, Sd) UCL	3.6932E-4	99% Chebyshev(Mean, Sd) UCL	4.2162E-4

Suggested UCL to Use

95% Student's-t UCL 3.0499E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-105

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.0135	Mean	0.0343
Maximum	0.0557	Median	0.0337
SD	0.0107	Std. Error of Mean	0.00176
Coefficient of Variation	0.313	Skewness	0.125

Normal GOF Test

Shapiro Wilk Test Statistic	0.975	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0777	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0372	95% Adjusted-CLT UCL (Chen-1995)	0.0372
		95% Modified-t UCL (Johnson-1978)	0.0372

Gamma GOF Test

A-D Test Statistic	0.273	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0848	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.707	k star (bias corrected MLE)	8.938
Theta hat (MLE)	0.00353	Theta star (bias corrected MLE)	0.00383
nu hat (MLE)	718.3	nu star (bias corrected)	661.4
MLE Mean (bias corrected)	0.0343	MLE Sd (bias corrected)	0.0115
		Approximate Chi Square Value (0.05)	602.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	600.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0376	95% Adjusted Gamma UCL (use when n<50)	0.0377

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.305	Mean of logged Data	-3.426
Maximum of Logged Data	-2.888	SD of logged Data	0.338

Assuming Lognormal Distribution

95% H-UCL	0.0381	90% Chebyshev (MVUE) UCL	0.0402
95% Chebyshev (MVUE) UCL	0.0429	97.5% Chebyshev (MVUE) UCL	0.0466
99% Chebyshev (MVUE) UCL	0.0538		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0372	95% Jackknife UCL	0.0372
95% Standard Bootstrap UCL	0.0371	95% Bootstrap-t UCL	0.0373

95% Hall's Bootstrap UCL	0.0371	95% Percentile Bootstrap UCL	0.0373
95% BCA Bootstrap UCL	0.0371		
90% Chebyshev(Mean, Sd) UCL	0.0395	95% Chebyshev(Mean, Sd) UCL	0.0419
97.5% Chebyshev(Mean, Sd) UCL	0.0453	99% Chebyshev(Mean, Sd) UCL	0.0518

Suggested UCL to Use

95% Student's-t UCL	0.0372

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-114

General Statistics

Total Number of Observations	37	Number of Distinct Observations	32
		Number of Missing Observations	0
Minimum	0.00139	Mean	0.00293
Maximum	0.00496	Median	0.00293
SD	8.2092E-4	Std. Error of Mean	1.3496E-4
Coefficient of Variation	0.28	Skewness	0.284

Normal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.136	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00316	95% Adjusted-CLT UCL (Chen-1995)	0.00316
		95% Modified-t UCL (Johnson-1978)	0.00316

Gamma GOF Test

A-D Test Statistic	0.38	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.127	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.76	k star (bias corrected MLE)	11.75
Theta hat (MLE)	2.2995E-4	Theta star (bias corrected MLE)	2.4985E-4
nu hat (MLE)	944.5	nu star (bias corrected)	869.2
MLE Mean (bias corrected)	0.00293	MLE Sd (bias corrected)	8.5632E-4
		Approximate Chi Square Value (0.05)	801.8
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	799

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00318	95% Adjusted Gamma UCL (use when n<50)	0.00319

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.145	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.578	Mean of logged Data	-5.871
Maximum of Logged Data	-5.306	SD of logged Data	0.29

Assuming Lognormal Distribution

95% H-UCL	0.00321	90% Chebyshev (MVUE) UCL	0.00337
95% Chebyshev (MVUE) UCL	0.00356	97.5% Chebyshev (MVUE) UCL	0.00383
99% Chebyshev (MVUE) UCL	0.00436		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00316	95% Jackknife UCL	0.00316
95% Standard Bootstrap UCL	0.00316	95% Bootstrap-t UCL	0.00316

95% Hall's Bootstrap UCL	0.00318	95% Percentile Bootstrap UCL	0.00315
95% BCA Bootstrap UCL	0.00315		
90% Chebyshev(Mean, Sd) UCL	0.00334	95% Chebyshev(Mean, Sd) UCL	0.00352
97.5% Chebyshev(Mean, Sd) UCL	0.00378	99% Chebyshev(Mean, Sd) UCL	0.00428

Suggested UCL to Use

95% Student's-t UCL	0.00316

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-118

General Statistics

Total Number of Observations	36	Number of Distinct Observations	33
		Number of Missing Observations	1
Minimum	0.0718	Mean	0.157
Maximum	0.248	Median	0.154
SD	0.0436	Std. Error of Mean	0.00726
Coefficient of Variation	0.278	Skewness	0.231

Normal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.081	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.169	95% Adjusted-CLT UCL (Chen-1995)	0.169
		95% Modified-t UCL (Johnson-1978)	0.169

Gamma GOF Test

A-D Test Statistic	0.181	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0899	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.83	k star (bias corrected MLE)	11.78
Theta hat (MLE)	0.0122	Theta star (bias corrected MLE)	0.0133
nu hat (MLE)	923.6	nu star (bias corrected)	848
MLE Mean (bias corrected)	0.157	MLE Sd (bias corrected)	0.0457
		Approximate Chi Square Value (0.05)	781.4
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	778.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.17	95% Adjusted Gamma UCL (use when n<50)	0.171

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0985	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.634	Mean of logged Data	-1.892
Maximum of Logged Data	-1.394	SD of logged Data	0.291

Assuming Lognormal Distribution

95% H-UCL	0.172	90% Chebyshev (MVUE) UCL	0.18
95% Chebyshev (MVUE) UCL	0.191	97.5% Chebyshev (MVUE) UCL	0.205
99% Chebyshev (MVUE) UCL	0.234		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.169	95% Jackknife UCL	0.169
95% Standard Bootstrap UCL	0.169	95% Bootstrap-t UCL	0.169

95% Hall's Bootstrap UCL	0.169	95% Percentile Bootstrap UCL	0.169
95% BCA Bootstrap UCL	0.169		
90% Chebyshev(Mean, Sd) UCL	0.179	95% Chebyshev(Mean, Sd) UCL	0.189
97.5% Chebyshev(Mean, Sd) UCL	0.202	99% Chebyshev(Mean, Sd) UCL	0.229

Suggested UCL to Use

95% Student's-t UCL	0.169

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-123

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.0014	Mean	0.00274
Maximum	0.00443	Median	0.00272
SD	7.6510E-4	Std. Error of Mean	1.2578E-4
Coefficient of Variation	0.279	Skewness	0.339

Normal GOF Test

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.129	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00295	95% Adjusted-CLT UCL (Chen-1995)	0.00295
		95% Modified-t UCL (Johnson-1978)	0.00295

Gamma GOF Test

A-D Test Statistic	0.414	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.116	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.03	k star (bias corrected MLE)	11.99
Theta hat (MLE)	2.1005E-4	Theta star (bias corrected MLE)	2.2824E-4
nu hat (MLE)	964.4	nu star (bias corrected)	887.6
MLE Mean (bias corrected)	0.00274	MLE Sd (bias corrected)	7.9046E-4
		Approximate Chi Square Value (0.05)	819.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	816.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00297	95% Adjusted Gamma UCL (use when n<50)	0.00298

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.571	Mean of logged Data	-5.94
Maximum of Logged Data	-5.419	SD of logged Data	0.285

Assuming Lognormal Distribution

95% H-UCL	0.00298	90% Chebyshev (MVUE) UCL	0.00313
95% Chebyshev (MVUE) UCL	0.00331	97.5% Chebyshev (MVUE) UCL	0.00356
99% Chebyshev (MVUE) UCL	0.00404		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00294	95% Jackknife UCL	0.00295
95% Standard Bootstrap UCL	0.00294	95% Bootstrap-t UCL	0.00296

95% Hall's Bootstrap UCL	0.00294	95% Percentile Bootstrap UCL	0.00294
95% BCA Bootstrap UCL	0.00294		
90% Chebyshev(Mean, Sd) UCL	0.00311	95% Chebyshev(Mean, Sd) UCL	0.00329
97.5% Chebyshev(Mean, Sd) UCL	0.00352	99% Chebyshev(Mean, Sd) UCL	0.00399

Suggested UCL to Use

95% Student's-t UCL	0.00295

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-126

General Statistics

Total Number of Observations	36	Number of Distinct Observations	33
		Number of Missing Observations	1
Number of Detects	35	Number of Non-Detects	1
Number of Distinct Detects	32	Number of Distinct Non-Detects	1
Minimum Detect	1.4000E-4	Minimum Non-Detect	1.5600E-6
Maximum Detect	5.7000E-4	Maximum Non-Detect	1.5600E-6
Variance Detects	8.8725E-9	Percent Non-Detects	2.778%
Mean Detects	3.2911E-4	SD Detects	9.4194E-5
Median Detects	3.0900E-4	CV Detects	0.286
Skewness Detects	0.45	Kurtosis Detects	0.326
Mean of Logged Detects	-8.061	SD of Logged Detects	0.298

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.0988	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.2002E-4	KM Standard Error of Mean	1.7957E-5
KM SD	1.0619E-4	95% KM (BCA) UCL	3.4829E-4
95% KM (t) UCL	3.5036E-4	95% KM (Percentile Bootstrap) UCL	3.4925E-4
95% KM (z) UCL	3.4955E-4	95% KM Bootstrap t UCL	3.5073E-4
90% KM Chebyshev UCL	3.7389E-4	95% KM Chebyshev UCL	3.9829E-4
97.5% KM Chebyshev UCL	4.3216E-4	99% KM Chebyshev UCL	4.9869E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.176	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0844	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.149	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	12.23	k star (bias corrected MLE)	11.2
Theta hat (MLE)	2.6900E-5	Theta star (bias corrected MLE)	2.9372E-5
nu hat (MLE)	856.4	nu star (bias corrected)	784.3
Mean (detects)	3.2911E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.4000E-4	Mean	5.9775E-4
Maximum	0.01	Median	3.1600E-4
SD	0.00161	CV	2.701
k hat (MLE)	1.058	k star (bias corrected MLE)	0.988
Theta hat (MLE)	5.6515E-4	Theta star (bias corrected MLE)	6.0497E-4
nu hat (MLE)	76.15	nu star (bias corrected)	71.14
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (71.14, α)	52.72	Adjusted Chi Square Value (71.14, β)	52
95% Gamma Approximate UCL (use when n>=50)	8.0658E-4	95% Gamma Adjusted UCL (use when n<50)	8.1776E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.2002E-4	SD (KM)	1.0619E-4
Variance (KM)	1.1277E-8	SE of Mean (KM)	1.7957E-5

k hat (KM)	9.081	k star (KM)	8.343
nu hat (KM)	653.8	nu star (KM)	600.7
theta hat (KM)	3.5239E-5	theta star (KM)	3.8358E-5
80% gamma percentile (KM)	4.0763E-4	90% gamma percentile (KM)	4.6766E-4
95% gamma percentile (KM)	5.2133E-4	99% gamma percentile (KM)	6.3228E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (600.69, α)	544.8	Adjusted Chi Square Value (600.69, β)	542.4
95% Gamma Approximate KM-UCL (use when n>=50)	3.5282E-4	95% Gamma Adjusted KM-UCL (use when n<50)	3.5439E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.2411E-4	Mean in Log Scale	-8.081
SD in Original Scale	9.7569E-5	SD in Log Scale	0.32
95% t UCL (assumes normality of ROS data)	3.5159E-4	95% Percentile Bootstrap UCL	3.5081E-4
95% BCA Bootstrap UCL	3.4953E-4	95% Bootstrap t UCL	3.5467E-4
95% H-UCL (Log ROS)	3.5855E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.208	KM Geo Mean	2.7245E-4
KM SD (logged)	0.92	95% Critical H Value (KM-Log)	2.294
KM Standard Error of Mean (logged)	0.155	95% H-UCL (KM -Log)	5.9397E-4
KM SD (logged)	0.92	95% Critical H Value (KM-Log)	2.294
KM Standard Error of Mean (logged)	0.155		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.1999E-4	Mean in Log Scale	-8.227
SD in Original Scale	1.0777E-4	SD in Log Scale	1.043
95% t UCL (Assumes normality)	3.5034E-4	95% H-Stat UCL	7.0677E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 3.5036E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-156/157

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	0.006	Mean	0.0127
Maximum	0.0195	Median	0.0127
SD	0.00319	Std. Error of Mean	5.2497E-4
Coefficient of Variation	0.252	Skewness	0.286

Normal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0705	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0135	95% Adjusted-CLT UCL (Chen-1995)	0.0136
		95% Modified-t UCL (Johnson-1978)	0.0136

Gamma GOF Test

A-D Test Statistic	0.179	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.071	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	15.75	k star (bias corrected MLE)	14.49
Theta hat (MLE)	8.0388E-4	Theta star (bias corrected MLE)	8.7372E-4
nu hat (MLE)	1166	nu star (bias corrected)	1072
MLE Mean (bias corrected)	0.0127	MLE Sd (bias corrected)	0.00333
		Approximate Chi Square Value (0.05)	997.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	994.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0136	95% Adjusted Gamma UCL (use when n<50)	0.0137

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.082	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.116	Mean of logged Data	-4.401
Maximum of Logged Data	-3.937	SD of logged Data	0.261

Assuming Lognormal Distribution

95% H-UCL	0.0137	90% Chebyshev (MVUE) UCL	0.0143
95% Chebyshev (MVUE) UCL	0.0151	97.5% Chebyshev (MVUE) UCL	0.0161
99% Chebyshev (MVUE) UCL	0.0182		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0135	95% Jackknife UCL	0.0135
95% Standard Bootstrap UCL	0.0135	95% Bootstrap-t UCL	0.0136

95% Hall's Bootstrap UCL	0.0136	95% Percentile Bootstrap UCL	0.0135
95% BCA Bootstrap UCL	0.0135		
90% Chebyshev(Mean, Sd) UCL	0.0142	95% Chebyshev(Mean, Sd) UCL	0.015
97.5% Chebyshev(Mean, Sd) UCL	0.0159	99% Chebyshev(Mean, Sd) UCL	0.0179

Suggested UCL to Use

95% Student's-t UCL	0.0135

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-167

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.00263	Mean	0.00532
Maximum	0.00818	Median	0.00523
SD	0.00128	Std. Error of Mean	2.0967E-4
Coefficient of Variation	0.24	Skewness	0.27

Normal GOF Test

Shapiro Wilk Test Statistic	0.981	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0777	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00568	95% Adjusted-CLT UCL (Chen-1995)	0.00568
		95% Modified-t UCL (Johnson-1978)	0.00568

Gamma GOF Test

A-D Test Statistic	0.177	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0711	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	17.47	k star (bias corrected MLE)	16.07
Theta hat (MLE)	3.0464E-4	Theta star (bias corrected MLE)	3.3115E-4
nu hat (MLE)	1293	nu star (bias corrected)	1189
MLE Mean (bias corrected)	0.00532	MLE Sd (bias corrected)	0.00133
		Approximate Chi Square Value (0.05)	1110
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1107

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0057	95% Adjusted Gamma UCL (use when n<50)	0.00572

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0706	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.941	Mean of logged Data	-5.265
Maximum of Logged Data	-4.806	SD of logged Data	0.247

Assuming Lognormal Distribution

95% H-UCL	0.00573	90% Chebyshev (MVUE) UCL	0.00598
95% Chebyshev (MVUE) UCL	0.00628	97.5% Chebyshev (MVUE) UCL	0.00669
99% Chebyshev (MVUE) UCL	0.00751		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00567	95% Jackknife UCL	0.00568
95% Standard Bootstrap UCL	0.00566	95% Bootstrap-t UCL	0.00568

95% Hall's Bootstrap UCL	0.00566	95% Percentile Bootstrap UCL	0.00565
95% BCA Bootstrap UCL	0.00568		
90% Chebyshev(Mean, Sd) UCL	0.00595	95% Chebyshev(Mean, Sd) UCL	0.00624
97.5% Chebyshev(Mean, Sd) UCL	0.00663	99% Chebyshev(Mean, Sd) UCL	0.00741

Suggested UCL to Use

95% Student's-t UCL	0.00568

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-169

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
Number of Detects	14	Number of Non-Detects	23
Number of Distinct Detects	14	Number of Distinct Non-Detects	21
Minimum Detect	7.9900E-6	Minimum Non-Detect	1.4300E-6
Maximum Detect	2.0700E-4	Maximum Non-Detect	1.4200E-5
Variance Detects	2.6851E-9	Percent Non-Detects	62.16%
Mean Detects	2.7767E-5	SD Detects	5.1818E-5
Median Detects	1.3850E-5	CV Detects	N/A
Skewness Detects	3.684	Kurtosis Detects	13.69
Mean of Logged Detects	-11.04	SD of Logged Detects	0.816

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.381	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.455	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.1556E-5	KM Standard Error of Mean	5.6735E-6
KM SD	3.3237E-5	95% KM (BCA) UCL	2.2814E-5
95% KM (t) UCL	2.1135E-5	95% KM (Percentile Bootstrap) UCL	2.2162E-5
95% KM (z) UCL	2.0888E-5	95% KM Bootstrap t UCL	4.8237E-5
90% KM Chebyshev UCL	2.8577E-5	95% KM Chebyshev UCL	3.6287E-5
97.5% KM Chebyshev UCL	4.6987E-5	99% KM Chebyshev UCL	6.8007E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.438	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.759	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.362	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.235	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.043	k star (bias corrected MLE)	0.867
Theta hat (MLE)	2.6622E-5	Theta star (bias corrected MLE)	3.2021E-5
nu hat (MLE)	29.2	nu star (bias corrected)	24.28
Mean (detects)	2.7767E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	7.9900E-6	Mean	0.00623
Maximum	0.01	Median	0.01
SD	0.0049	CV	0.787
k hat (MLE)	0.344	k star (bias corrected MLE)	0.334
Theta hat (MLE)	0.0181	Theta star (bias corrected MLE)	0.0186
nu hat (MLE)	25.44	nu star (bias corrected)	24.71
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (24.71, α)	14.39	Adjusted Chi Square Value (24.71, β)	14.05
95% Gamma Approximate UCL (use when n>=50)	0.0107	95% Gamma Adjusted UCL (use when n<50)	0.011

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.1556E-5	SD (KM)	3.3237E-5
Variance (KM)	1.1047E-9	SE of Mean (KM)	5.6735E-6
k hat (KM)	0.121	k star (KM)	0.129

nu hat (KM)	8.946	nu star (KM)	9.554
theta hat (KM)	9.5595E-5	theta star (KM)	8.9511E-5
80% gamma percentile (KM)	1.0963E-5	90% gamma percentile (KM)	3.3348E-5
95% gamma percentile (KM)	6.5278E-5	99% gamma percentile (KM)	1.6103E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (9.55, α)	3.665	Adjusted Chi Square Value (9.55, β)	3.507
95% Gamma Approximate KM-UCL (use when n>=50)	3.0126E-5	95% Gamma Adjusted KM-UCL (use when n<50)	3.1479E-5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.708	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.267	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.1837E-5	Mean in Log Scale	-12.31
SD in Original Scale	3.3593E-5	SD in Log Scale	1.127
95% t UCL (assumes normality of ROS data)	2.1161E-5	95% Percentile Bootstrap UCL	2.2597E-5
95% BCA Bootstrap UCL	2.9927E-5	95% Bootstrap t UCL	5.2225E-5
95% H-UCL (Log ROS)	1.3737E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.51	KM Geo Mean	3.7003E-6
KM SD (logged)	1.268	95% Critical H Value (KM-Log)	2.713
KM Standard Error of Mean (logged)	0.22	95% H-UCL (KM -Log)	1.4677E-5
KM SD (logged)	1.268	95% Critical H Value (KM-Log)	2.713
KM Standard Error of Mean (logged)	0.22		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.2461E-5	Mean in Log Scale	-12.22
SD in Original Scale	3.3442E-5	SD in Log Scale	1.234
95% t UCL (Assumes normality)	2.1743E-5	95% H-Stat UCL	1.8359E-5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 3.6287E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

PCB-189

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	4.1400E-4	Mean	9.1978E-4
Maximum	0.00148	Median	9.0700E-4
SD	2.6022E-4	Std. Error of Mean	4.2779E-5
Coefficient of Variation	0.283	Skewness	0.432

Normal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.9201E-4	95% Adjusted-CLT UCL (Chen-1995)	9.9339E-4
		95% Modified-t UCL (Johnson-1978)	9.9251E-4

Gamma GOF Test

A-D Test Statistic	0.186	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0836	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.69	k star (bias corrected MLE)	11.68
Theta hat (MLE)	7.2504E-5	Theta star (bias corrected MLE)	7.8779E-5
nu hat (MLE)	938.8	nu star (bias corrected)	864
MLE Mean (bias corrected)	9.1978E-4	MLE Sd (bias corrected)	2.6918E-4
		Approximate Chi Square Value (0.05)	796.8
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	794

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.9738E-4	95% Adjusted Gamma UCL (use when n<50)	0.001

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0925	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.79	Mean of logged Data	-7.031
Maximum of Logged Data	-6.516	SD of logged Data	0.291

Assuming Lognormal Distribution

95% H-UCL	0.001	90% Chebyshev (MVUE) UCL	0.00105
95% Chebyshev (MVUE) UCL	0.00112	97.5% Chebyshev (MVUE) UCL	0.0012
99% Chebyshev (MVUE) UCL	0.00137		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.9015E-4	95% Jackknife UCL	9.9201E-4
95% Standard Bootstrap UCL	9.8969E-4	95% Bootstrap-t UCL	9.9219E-4

95% Hall's Bootstrap UCL	9.9491E-4	95% Percentile Bootstrap UCL	9.9041E-4
95% BCA Bootstrap UCL	9.9611E-4		
90% Chebyshev(Mean, Sd) UCL	0.00105	95% Chebyshev(Mean, Sd) UCL	0.00111
97.5% Chebyshev(Mean, Sd) UCL	0.00119	99% Chebyshev(Mean, Sd) UCL	0.00135

Suggested UCL to Use

95% Student's-t UCL 9.9201E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.12/2/17 10:41:32 AM
From File	Crab-Hep_KM_TEQ_combined_Input_for_ProUCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	2.2043E-5	Mean	9.4963E-5
Maximum	1.8335E-4	Median	9.3670E-5
SD	3.4630E-5	Std. Error of Mean	5.6932E-6
Coefficient of Variation	N/A	Skewness	0.293

Normal GOF Test

Shapiro Wilk Test Statistic	0.987	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0673	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.0457E-4	95% Adjusted-CLT UCL (Chen-1995)	1.0462E-4
		95% Modified-t UCL (Johnson-1978)	1.0462E-4

Gamma GOF Test

A-D Test Statistic	0.291	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0925	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.823	k star (bias corrected MLE)	6.288
Theta hat (MLE)	1.3918E-5	Theta star (bias corrected MLE)	1.5102E-5
nu hat (MLE)	504.9	nu star (bias corrected)	465.3
MLE Mean (bias corrected)	9.4963E-5	MLE Sd (bias corrected)	3.7870E-5
		Approximate Chi Square Value (0.05)	416.3
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	414.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.0614E-4	95% Adjusted Gamma UCL (use when n<50)	1.0666E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.72	Mean of logged Data	-9.337
Maximum of Logged Data	-8.604	SD of logged Data	0.417

Assuming Lognormal Distribution

95% H-UCL	1.0936E-4	90% Chebyshev (MVUE) UCL	1.1627E-4
95% Chebyshev (MVUE) UCL	1.2551E-4	97.5% Chebyshev (MVUE) UCL	1.3833E-4
99% Chebyshev (MVUE) UCL	1.6352E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.0433E-4	95% Jackknife UCL	1.0457E-4
95% Standard Bootstrap UCL	1.0418E-4	95% Bootstrap-t UCL	1.0451E-4
95% Hall's Bootstrap UCL	1.0459E-4	95% Percentile Bootstrap UCL	1.0447E-4
95% BCA Bootstrap UCL	1.0453E-4		
90% Chebyshev(Mean, Sd) UCL	1.1204E-4	95% Chebyshev(Mean, Sd) UCL	1.1978E-4
97.5% Chebyshev(Mean, Sd) UCL	1.3052E-4	99% Chebyshev(Mean, Sd) UCL	1.5161E-4

Suggested UCL to Use

95% Student's-t UCL 1.0457E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

KM TEQ PCB

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.9433E-6	Mean	3.8148E-5
Maximum	6.7558E-5	Median	3.9437E-5
SD	1.3403E-5	Std. Error of Mean	2.2034E-6
Coefficient of Variation	N/A	Skewness	-0.389

Normal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.111	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.1868E-5	95% Adjusted-CLT UCL (Chen-1995)	4.1622E-5
		95% Modified-t UCL (Johnson-1978)	4.1845E-5

Gamma GOF Test

A-D Test Statistic	1.62	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.171	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.237	k star (bias corrected MLE)	4.831
Theta hat (MLE)	7.2838E-6	Theta star (bias corrected MLE)	7.8969E-6
nu hat (MLE)	387.6	nu star (bias corrected)	357.5
MLE Mean (bias corrected)	3.8148E-5	MLE Sd (bias corrected)	1.7357E-5
		Approximate Chi Square Value (0.05)	314.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	312.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.3339E-5	95% Adjusted Gamma UCL (use when n<50)	4.3579E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.749	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.196	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.22	Mean of logged Data	-10.27
Maximum of Logged Data	-9.603	SD of logged Data	0.536

Assuming Lognormal Distribution

95% H-UCL	4.7452E-5	90% Chebyshev (MVUE) UCL	5.0790E-5
95% Chebyshev (MVUE) UCL	5.5799E-5	97.5% Chebyshev (MVUE) UCL	6.2752E-5
99% Chebyshev (MVUE) UCL	7.6410E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.1772E-5	95% Jackknife UCL	4.1868E-5
95% Standard Bootstrap UCL	4.1774E-5	95% Bootstrap-t UCL	4.1750E-5

95% Hall's Bootstrap UCL	4.1872E-5	95% Percentile Bootstrap UCL	4.1698E-5
95% BCA Bootstrap UCL	4.1613E-5		
90% Chebyshev(Mean, Sd) UCL	4.4758E-5	95% Chebyshev(Mean, Sd) UCL	4.7752E-5
97.5% Chebyshev(Mean, Sd) UCL	5.1908E-5	99% Chebyshev(Mean, Sd) UCL	6.0072E-5

Suggested UCL to Use

95% Student's-t UCL 4.1868E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 2:39:10 PM
From File	crb_hep2a_ndl_PCB_sum_flag_sep.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.559	Mean	1.085
Maximum	1.762	Median	1.073
SD	0.312	Std. Error of Mean	0.0513
Coefficient of Variation	0.288	Skewness	0.387

Normal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.096	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.171	95% Adjusted-CLT UCL (Chen-1995)	1.172
		95% Modified-t UCL (Johnson-1978)	1.172

Gamma GOF Test

A-D Test Statistic	0.199	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0757	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.21	k star (bias corrected MLE)	11.24
Theta hat (MLE)	0.0888	Theta star (bias corrected MLE)	0.0965
nu hat (MLE)	903.5	nu star (bias corrected)	831.6
MLE Mean (bias corrected)	1.085	MLE Sd (bias corrected)	0.324
		Approximate Chi Square Value (0.05)	765.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	763

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.178	95% Adjusted Gamma UCL (use when n<50)	1.182

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0951	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.582	Mean of logged Data	0.0396
Maximum of Logged Data	0.567	SD of logged Data	0.296

Assuming Lognormal Distribution

95% H-UCL	1.187	90% Chebyshev (MVUE) UCL	1.247
95% Chebyshev (MVUE) UCL	1.32	97.5% Chebyshev (MVUE) UCL	1.422
99% Chebyshev (MVUE) UCL	1.621		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.169	95% Jackknife UCL	1.171
95% Standard Bootstrap UCL	1.17	95% Bootstrap-t UCL	1.178
95% Hall's Bootstrap UCL	1.175	95% Percentile Bootstrap UCL	1.168
95% BCA Bootstrap UCL	1.171		
90% Chebyshev(Mean, Sd) UCL	1.238	95% Chebyshev(Mean, Sd) UCL	1.308
97.5% Chebyshev(Mean, Sd) UCL	1.405	99% Chebyshev(Mean, Sd) UCL	1.595

Suggested UCL to Use

95% Student's-t UCL	1.171

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:07:10 PM
From File	crb_hep5_PAH_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	10
Number of Detects	9	Number of Non-Detects	28
Number of Distinct Detects	9	Number of Distinct Non-Detects	3
Minimum Detect	0.0026	Minimum Non-Detect	0.0026
Maximum Detect	0.0054	Maximum Non-Detect	0.013
Variance Detects	1.2644E-6	Percent Non-Detects	75.68%
Mean Detects	0.00398	SD Detects	0.00112
Median Detects	0.0038	CV Detects	0.283
Skewness Detects	0.118	Kurtosis Detects	-1.722
Mean of Logged Detects	-5.564	SD of Logged Detects	0.291

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.886	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00298	KM Standard Error of Mean	1.5260E-4
KM SD	8.2647E-4	95% KM (BCA) UCL	0.00325
95% KM (t) UCL	0.00323	95% KM (Percentile Bootstrap) UCL	0.00324
95% KM (z) UCL	0.00323	95% KM Bootstrap t UCL	0.0033
90% KM Chebyshev UCL	0.00343	95% KM Chebyshev UCL	0.00364
97.5% KM Chebyshev UCL	0.00393	99% KM Chebyshev UCL	0.00449

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.444	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.721	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.203	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.279	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	13.72	k star (bias corrected MLE)	9.224
Theta hat (MLE)	2.8982E-4	Theta star (bias corrected MLE)	4.3124E-4
nu hat (MLE)	247	nu star (bias corrected)	166
Mean (detects)	0.00398		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0026	Mean	0.00854
Maximum	0.01	Median	0.01
SD	0.00267	CV	0.313
k hat (MLE)	6.846	k star (bias corrected MLE)	6.309
Theta hat (MLE)	0.00125	Theta star (bias corrected MLE)	0.00135

nu hat (MLE)	506.6	nu star (bias corrected)	466.8
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (466.85, α)	417.8	Adjusted Chi Square Value (466.85, β)	415.7
95% Gamma Approximate UCL (use when n>=50)	0.00954	95% Gamma Adjusted UCL (use when n<50)	0.00958

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00298	SD (KM)	8.2647E-4
Variance (KM)	6.8305E-7	SE of Mean (KM)	1.5260E-4
k hat (KM)	12.96	k star (KM)	11.93
nu hat (KM)	959.3	nu star (KM)	882.9
theta hat (KM)	2.2954E-4	theta star (KM)	2.4941E-4
80% gamma percentile (KM)	0.00367	90% gamma percentile (KM)	0.00412
95% gamma percentile (KM)	0.00452	99% gamma percentile (KM)	0.00534

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (882.89, α)	814.9	Adjusted Chi Square Value (882.89, β)	812.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.00322	95% Gamma Adjusted KM-UCL (use when n<50)	0.00324

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.891	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00211	Mean in Log Scale	-6.328
SD in Original Scale	0.0013	SD in Log Scale	0.585
95% t UCL (assumes normality of ROS data)	0.00248	95% Percentile Bootstrap UCL	0.00248
95% BCA Bootstrap UCL	0.0025	95% Bootstrap t UCL	0.00255
95% H-UCL (Log ROS)	0.00257		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.846	KM Geo Mean	0.00289
KM SD (logged)	0.225	95% Critical H Value (KM-Log)	1.747
KM Standard Error of Mean (logged)	0.0415	95% H-UCL (KM -Log)	0.00316
KM SD (logged)	0.225	95% Critical H Value (KM-Log)	1.747
KM Standard Error of Mean (logged)	0.0415		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00252	Mean in Log Scale	-6.2
SD in Original Scale	0.00188	SD in Log Scale	0.629
95% t UCL (Assumes normality)	0.00305	95% H-Stat UCL	0.00305

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.00323

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benzo(a)pyrene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	5
Number of Detects	2	Number of Non-Detects	35
Number of Distinct Detects	2	Number of Distinct Non-Detects	3
Minimum Detect	0.0039	Minimum Non-Detect	0.0026
Maximum Detect	0.0043	Maximum Non-Detect	0.013
Variance Detects	8.0000E-8	Percent Non-Detects	94.59%
Mean Detects	0.0041	SD Detects	2.8284E-4
Median Detects	0.0041	CV Detects	0.069
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-5.498	SD of Logged Detects	0.069

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00269	KM Standard Error of Mean	8.8941E-5
KM SD	3.6128E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00284	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00284	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00296	95% KM Chebyshev UCL	0.00308
97.5% KM Chebyshev UCL	0.00325	99% KM Chebyshev UCL	0.00358

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	419.9	k star (bias corrected MLE)	N/A
Theta hat (MLE)	9.7638E-6	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	1680	nu star (bias corrected)	N/A
Mean (detects)	0.0041		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00269	SD (KM)	3.6128E-4
Variance (KM)	1.3052E-7	SE of Mean (KM)	8.8941E-5
k hat (KM)	55.48	k star (KM)	51
nu hat (KM)	4105	nu star (KM)	3774
theta hat (KM)	4.8505E-5	theta star (KM)	5.2767E-5
80% gamma percentile (KM)	0.003	90% gamma percentile (KM)	0.00318
95% gamma percentile (KM)	0.00334	99% gamma percentile (KM)	0.00364

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0431
Approximate Chi Square Value (N/A, α)	3632	Adjusted Chi Square Value (N/A, β)	3626
95% Gamma Approximate KM-UCL (use when n>=50)	0.0028	95% Gamma Adjusted KM-UCL (use when n<50)	0.0028

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00232	Mean in Log Scale	-6.104
SD in Original Scale	6.7858E-4	SD in Log Scale	0.282
95% t UCL (assumes normality of ROS data)	0.00251	95% Percentile Bootstrap UCL	0.0025
95% BCA Bootstrap UCL	0.00252	95% Bootstrap t UCL	0.00253
95% H-UCL (Log ROS)	0.00253		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.925	KM Geo Mean	0.00267
KM SD (logged)	0.109	95% Critical H Value (KM-Log)	1.699
KM Standard Error of Mean (logged)	0.0268	95% H-UCL (KM -Log)	0.00277
KM SD (logged)	0.109	95% Critical H Value (KM-Log)	1.699
KM Standard Error of Mean (logged)	0.0268		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00203	Mean in Log Scale	-6.399
SD in Original Scale	0.0017	SD in Log Scale	0.547
95% t UCL (Assumes normality)	0.0025	95% H-Stat UCL	0.00231

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00284	KM H-UCL	0.00277
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	4
Number of Detects	2	Number of Non-Detects	35
Number of Distinct Detects	2	Number of Distinct Non-Detects	3
Minimum Detect	0.0027	Minimum Non-Detect	0.0026
Maximum Detect	0.0033	Maximum Non-Detect	0.013
Variance Detects	1.8000E-7	Percent Non-Detects	94.59%
Mean Detects	0.003	SD Detects	4.2426E-4
Median Detects	0.003	CV Detects	0.141
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-5.814	SD of Logged Detects	0.142

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00262	KM Standard Error of Mean	2.9710E-5
KM SD	1.2068E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00267	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00267	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00271	95% KM Chebyshev UCL	0.00275
97.5% KM Chebyshev UCL	0.00281	99% KM Chebyshev UCL	0.00292

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	99.67	k star (bias corrected MLE)	N/A
Theta hat (MLE)	3.0101E-5	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	398.7	nu star (bias corrected)	N/A
Mean (detects)	0.003		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00262	SD (KM)	1.2068E-4
Variance (KM)	1.4564E-8	SE of Mean (KM)	2.9710E-5
k hat (KM)	472.9	k star (KM)	434.5
nu hat (KM)	34992	nu star (KM)	32156
theta hat (KM)	5.5497E-6	theta star (KM)	6.0392E-6
80% gamma percentile (KM)	0.00273	90% gamma percentile (KM)	0.00279
95% gamma percentile (KM)	0.00283	99% gamma percentile (KM)	0.00293

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0431
Approximate Chi Square Value (N/A, α)	31740	Adjusted Chi Square Value (N/A, β)	31722
95% Gamma Approximate KM-UCL (use when n>=50)	0.00266	95% Gamma Adjusted KM-UCL (use when n<50)	0.00266

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00101	Mean in Log Scale	-7.061
SD in Original Scale	6.4679E-4	SD in Log Scale	0.579
95% t UCL (assumes normality of ROS data)	0.00119	95% Percentile Bootstrap UCL	0.00119
95% BCA Bootstrap UCL	0.00123	95% Bootstrap t UCL	0.00124
95% H-UCL (Log ROS)	0.00123		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.944	KM Geo Mean	0.00262
KM SD (logged)	0.0412	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0101	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0412	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0101		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00197	Mean in Log Scale	-6.416
SD in Original Scale	0.00165	SD in Log Scale	0.523
95% t UCL (Assumes normality)	0.00242	95% H-Stat UCL	0.00222

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00267	KM H-UCL	N/A
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chrysene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	16
Number of Detects	14	Number of Non-Detects	23
Number of Distinct Detects	13	Number of Distinct Non-Detects	3
Minimum Detect	0.0028	Minimum Non-Detect	0.0026
Maximum Detect	0.014	Maximum Non-Detect	0.013
Variance Detects	7.8811E-6	Percent Non-Detects	62.16%
Mean Detects	0.00544	SD Detects	0.00281
Median Detects	0.00465	CV Detects	0.516
Skewness Detects	2.403	Kurtosis Detects	6.956
Mean of Logged Detects	-5.302	SD of Logged Detects	0.408

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.744	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00375	KM Standard Error of Mean	3.7724E-4
KM SD	0.00217	95% KM (BCA) UCL	0.00444
95% KM (t) UCL	0.00438	95% KM (Percentile Bootstrap) UCL	0.00439
95% KM (z) UCL	0.00437	95% KM Bootstrap t UCL	0.00483
90% KM Chebyshev UCL	0.00488	95% KM Chebyshev UCL	0.00539
97.5% KM Chebyshev UCL	0.0061	99% KM Chebyshev UCL	0.0075

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.592	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.186	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.229	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.81	k star (bias corrected MLE)	4.612
Theta hat (MLE)	9.3685E-4	Theta star (bias corrected MLE)	0.00118
nu hat (MLE)	162.7	nu star (bias corrected)	129.1
Mean (detects)	0.00544		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0028	Mean	0.00828
Maximum	0.014	Median	0.01
SD	0.0028	CV	0.339
k hat (MLE)	6.884	k star (bias corrected MLE)	6.343
Theta hat (MLE)	0.0012	Theta star (bias corrected MLE)	0.0013
nu hat (MLE)	509.4	nu star (bias corrected)	469.4
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (469.42, α)	420.2	Adjusted Chi Square Value (469.42, β)	418.2
95% Gamma Approximate UCL (use when n>=50)	0.00925	95% Gamma Adjusted UCL (use when n<50)	0.00929

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00375	SD (KM)	0.00217
Variance (KM)	4.7254E-6	SE of Mean (KM)	3.7724E-4
k hat (KM)	2.969	k star (KM)	2.746

nu hat (KM)	219.7	nu star (KM)	203.2
theta hat (KM)	0.00126	theta star (KM)	0.00136
80% gamma percentile (KM)	0.0054	90% gamma percentile (KM)	0.00678
95% gamma percentile (KM)	0.00806	99% gamma percentile (KM)	0.0109

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (203.21, α)	171.2	Adjusted Chi Square Value (203.21, β)	170
95% Gamma Approximate KM-UCL (use when n>=50)	0.00445	95% Gamma Adjusted KM-UCL (use when n<50)	0.00448

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.927	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.159	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00317	Mean in Log Scale	-5.992
SD in Original Scale	0.00253	SD in Log Scale	0.686
95% t UCL (assumes normality of ROS data)	0.00387	95% Percentile Bootstrap UCL	0.0039
95% BCA Bootstrap UCL	0.00406	95% Bootstrap t UCL	0.00413
95% H-UCL (Log ROS)	0.004		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.688	KM Geo Mean	0.00339
KM SD (logged)	0.402	95% Critical H Value (KM-Log)	1.845
KM Standard Error of Mean (logged)	0.0706	95% H-UCL (KM -Log)	0.00415
KM SD (logged)	0.402	95% Critical H Value (KM-Log)	1.845
KM Standard Error of Mean (logged)	0.0706		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0033	Mean in Log Scale	-5.998
SD in Original Scale	0.00277	SD in Log Scale	0.74
95% t UCL (Assumes normality)	0.00407	95% H-Stat UCL	0.00424

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	0.00448	95% GROS Adjusted Gamma UCL	0.00929

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	4
Number of Detects	3	Number of Non-Detects	34
Number of Distinct Detects	3	Number of Distinct Non-Detects	3
Minimum Detect	0.0026	Minimum Non-Detect	0.0026
Maximum Detect	0.0043	Maximum Non-Detect	0.013
Variance Detects	9.1000E-7	Percent Non-Detects	91.89%
Mean Detects	0.0032	SD Detects	9.5394E-4
Median Detects	0.0027	CV Detects	0.298
Skewness Detects	1.711	Kurtosis Detects	N/A
Mean of Logged Detects	-5.772	SD of Logged Detects	0.28

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.794	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.367	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00265	KM Standard Error of Mean	6.2123E-5
KM SD	2.9138E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00276	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00276	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00284	95% KM Chebyshev UCL	0.00293
97.5% KM Chebyshev UCL	0.00304	99% KM Chebyshev UCL	0.00327

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	18.44	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.7352E-4	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	110.6	nu star (bias corrected)	N/A
Mean (detects)	0.0032		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0026	Mean	0.00945
Maximum	0.01	Median	0.01
SD	0.0019	CV	0.201
k hat (MLE)	13.36	k star (bias corrected MLE)	12.29
Theta hat (MLE)	7.0723E-4	Theta star (bias corrected MLE)	7.6850E-4
nu hat (MLE)	988.6	nu star (bias corrected)	909.8
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (909.82, α)	840.8	Adjusted Chi Square Value (909.82, β)	837.9
95% Gamma Approximate UCL (use when n>=50)	0.0102	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00265	SD (KM)	2.9138E-4
Variance (KM)	8.4904E-8	SE of Mean (KM)	6.2123E-5
k hat (KM)	83	k star (KM)	76.28

nu hat (KM)	6142	nu star (KM)	5645
theta hat (KM)	3.1984E-5	theta star (KM)	3.4798E-5
80% gamma percentile (KM)	0.00291	90% gamma percentile (KM)	0.00305
95% gamma percentile (KM)	0.00317	99% gamma percentile (KM)	0.00341

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	5471	Adjusted Chi Square Value (N/A, β)	5464
95% Gamma Approximate KM-UCL (use when n>=50)	0.00274	95% Gamma Adjusted KM-UCL (use when n<50)	0.00274

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.806	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.361	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00109	Mean in Log Scale	-7.035
SD in Original Scale	8.0747E-4	SD in Log Scale	0.65
95% t UCL (assumes normality of ROS data)	0.00131	95% Percentile Bootstrap UCL	0.0013
95% BCA Bootstrap UCL	0.00136	95% Bootstrap t UCL	0.00139
95% H-UCL (Log ROS)	0.00136		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.936	KM Geo Mean	0.00264
KM SD (logged)	0.0863	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0184	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0863	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0184		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00203	Mean in Log Scale	-6.39
SD in Original Scale	0.00168	SD in Log Scale	0.538
95% t UCL (Assumes normality)	0.00249	95% H-Stat UCL	0.00231

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00276

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	5
Number of Detects	2	Number of Non-Detects	35
Number of Distinct Detects	2	Number of Distinct Non-Detects	3
Minimum Detect	0.5	Minimum Non-Detect	0.0026
Maximum Detect	0.52	Maximum Non-Detect	0.013
Variance Detects	2.0000E-4	Percent Non-Detects	94.59%
Mean Detects	0.51	SD Detects	0.0141
Median Detects	0.51	CV Detects	0.0277
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-0.674	SD of Logged Detects	0.0277

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.03	KM Standard Error of Mean	0.0267
KM SD	0.115	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0751	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0739	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.11	95% KM Chebyshev UCL	0.146
97.5% KM Chebyshev UCL	0.197	99% KM Chebyshev UCL	0.295

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	2601	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.9610E-4	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	10403	nu star (bias corrected)	N/A
Mean (detects)	0.51		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.03	SD (KM)	0.115
Variance (KM)	0.0132	SE of Mean (KM)	0.0267
k hat (KM)	0.0685	k star (KM)	0.0809
nu hat (KM)	5.066	nu star (KM)	5.989
theta hat (KM)	0.439	theta star (KM)	0.371
80% gamma percentile (KM)	0.0146	90% gamma percentile (KM)	0.0717
95% gamma percentile (KM)	0.175	99% gamma percentile (KM)	0.529

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0431
Approximate Chi Square Value (5.99, α)	1.634	Adjusted Chi Square Value (5.99, β)	1.538
95% Gamma Approximate KM-UCL (use when n>=50)	0.11	95% Gamma Adjusted KM-UCL (use when n<50)	0.117

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.398	Mean in Log Scale	-0.928
SD in Original Scale	0.047	SD in Log Scale	0.116
95% t UCL (assumes normality of ROS data)	0.411	95% Percentile Bootstrap UCL	0.411
95% BCA Bootstrap UCL	0.411	95% Bootstrap t UCL	0.411
95% H-UCL (Log ROS)	0.411		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.667	KM Geo Mean	0.00346
KM SD (logged)	1.194	95% Critical H Value (KM-Log)	2.619
KM Standard Error of Mean (logged)	0.278	95% H-UCL (KM -Log)	0.0119
KM SD (logged)	1.194	95% Critical H Value (KM-Log)	2.619
KM Standard Error of Mean (logged)	0.278		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0294	Mean in Log Scale	-6.138
SD in Original Scale	0.117	SD in Log Scale	1.416
95% t UCL (Assumes normality)	0.0617	95% H-Stat UCL	0.0117

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0751	KM H-UCL	0.0119
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:11:15 PM
From File	crb_hep7_pest_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	6.8300E-5	Minimum Non-Detect	4.9800E-6
Maximum Detect	0.00313	Maximum Non-Detect	4.9800E-6
Variance Detects	3.1053E-7	Percent Non-Detects	2.703%
Mean Detects	3.7151E-4	SD Detects	5.5725E-4
Median Detects	2.3800E-4	CV Detects	1.5
Skewness Detects	4.186	Kurtosis Detects	18.75
Mean of Logged Detects	-8.311	SD of Logged Detects	0.776

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.458	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.6160E-4	KM Standard Error of Mean	9.0906E-5
KM SD	5.4523E-4	95% KM (BCA) UCL	5.3548E-4
95% KM (t) UCL	5.1508E-4	95% KM (Percentile Bootstrap) UCL	5.2600E-4
95% KM (z) UCL	5.1113E-4	95% KM Bootstrap t UCL	9.2778E-4
90% KM Chebyshev UCL	6.3432E-4	95% KM Chebyshev UCL	7.5786E-4
97.5% KM Chebyshev UCL	9.2931E-4	99% KM Chebyshev UCL	0.00127

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.448	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.769	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.207	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.15	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.351	k star (bias corrected MLE)	1.257
Theta hat (MLE)	2.7490E-4	Theta star (bias corrected MLE)	2.9547E-4
nu hat (MLE)	97.3	nu star (bias corrected)	90.53
Mean (detects)	3.7151E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.8300E-5	Mean	6.3174E-4
Maximum	0.01	Median	2.4300E-4
SD	0.00168	CV	2.652
k hat (MLE)	0.714	k star (bias corrected MLE)	0.674
Theta hat (MLE)	8.8496E-4	Theta star (bias corrected MLE)	9.3730E-4

nu hat (MLE)	52.83	nu star (bias corrected)	49.88
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (49.88, α)	34.66	Adjusted Chi Square Value (49.88, β)	34.11
95% Gamma Approximate UCL (use when n>=50)	9.0906E-4	95% Gamma Adjusted UCL (use when n<50)	9.2375E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.6160E-4	SD (KM)	5.4523E-4
Variance (KM)	2.9727E-7	SE of Mean (KM)	9.0906E-5
k hat (KM)	0.44	k star (KM)	0.422
nu hat (KM)	32.55	nu star (KM)	31.24
theta hat (KM)	8.2209E-4	theta star (KM)	8.5645E-4
80% gamma percentile (KM)	5.8698E-4	90% gamma percentile (KM)	0.00101
95% gamma percentile (KM)	0.00147	99% gamma percentile (KM)	0.00263

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (31.24, α)	19.47	Adjusted Chi Square Value (31.24, β)	19.07
95% Gamma Approximate KM-UCL (use when n>=50)	5.8017E-4	95% Gamma Adjusted KM-UCL (use when n<50)	5.9248E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.914	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.121	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.6246E-4	Mean in Log Scale	-8.363
SD in Original Scale	5.5220E-4	SD in Log Scale	0.826
95% t UCL (assumes normality of ROS data)	5.1573E-4	95% Percentile Bootstrap UCL	5.2625E-4
95% BCA Bootstrap UCL	6.0559E-4	95% Bootstrap t UCL	9.0336E-4
95% H-UCL (Log ROS)	4.4463E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.417	KM Geo Mean	2.2111E-4
KM SD (logged)	0.984	95% Critical H Value (KM-Log)	2.371
KM Standard Error of Mean (logged)	0.164	95% H-UCL (KM -Log)	5.2964E-4
KM SD (logged)	0.984	95% Critical H Value (KM-Log)	2.371
KM Standard Error of Mean (logged)	0.164		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.6154E-4	Mean in Log Scale	-8.436
SD in Original Scale	5.5279E-4	SD in Log Scale	1.075
95% t UCL (Assumes normality)	5.1497E-4	95% H-Stat UCL	6.0233E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 5.2964E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDE

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Number of Detects	35	Number of Non-Detects	1
Number of Distinct Detects	34	Number of Distinct Non-Detects	1
Minimum Detect	1.7900E-4	Minimum Non-Detect	9.9500E-6
Maximum Detect	0.00627	Maximum Non-Detect	9.9500E-6
Variance Detects	1.2175E-6	Percent Non-Detects	2.778%
Mean Detects	8.1406E-4	SD Detects	0.0011
Median Detects	4.8000E-4	CV Detects	1.355
Skewness Detects	4.062	Kurtosis Detects	18.42
Mean of Logged Detects	-7.472	SD of Logged Detects	0.72

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.489	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.9172E-4	KM Standard Error of Mean	1.8270E-4
KM SD	0.00108	95% KM (BCA) UCL	0.00119
95% KM (t) UCL	0.0011	95% KM (Percentile Bootstrap) UCL	0.00112
95% KM (z) UCL	0.00109	95% KM Bootstrap t UCL	0.00157
90% KM Chebyshev UCL	0.00134	95% KM Chebyshev UCL	0.00159
97.5% KM Chebyshev UCL	0.00193	99% KM Chebyshev UCL	0.00261

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.839	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.766	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.228	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.151	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.538	k star (bias corrected MLE)	1.425
Theta hat (MLE)	5.2921E-4	Theta star (bias corrected MLE)	5.7109E-4
nu hat (MLE)	107.7	nu star (bias corrected)	99.78
Mean (detects)	8.1406E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.7900E-4	Mean	0.00107
Maximum	0.01	Median	4.9300E-4
SD	0.00188	CV	1.756
k hat (MLE)	1.041	k star (bias corrected MLE)	0.973
Theta hat (MLE)	0.00103	Theta star (bias corrected MLE)	0.0011
nu hat (MLE)	74.94	nu star (bias corrected)	70.03
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (70.03, α)	51.76	Adjusted Chi Square Value (70.03, β)	51.05
95% Gamma Approximate UCL (use when n>=50)	0.00145	95% Gamma Adjusted UCL (use when n<50)	0.00147

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.9172E-4	SD (KM)	0.00108
Variance (KM)	1.1674E-6	SE of Mean (KM)	1.8270E-4

k hat (KM)	0.537	k star (KM)	0.511
nu hat (KM)	38.66	nu star (KM)	36.77
theta hat (KM)	0.00147	theta star (KM)	0.00155
80% gamma percentile (KM)	0.0013	90% gamma percentile (KM)	0.00213
95% gamma percentile (KM)	0.00302	99% gamma percentile (KM)	0.00519

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (36.77, α)	23.89	Adjusted Chi Square Value (36.77, β)	23.42
95% Gamma Approximate KM-UCL (use when n>=50)	0.00122	95% Gamma Adjusted KM-UCL (use when n<50)	0.00124

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.884	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.9424E-4	Mean in Log Scale	-7.521
SD in Original Scale	0.00109	SD in Log Scale	0.766
95% t UCL (assumes normality of ROS data)	0.0011	95% Percentile Bootstrap UCL	0.00108
95% BCA Bootstrap UCL	0.0013	95% Bootstrap t UCL	0.00159
95% H-UCL (Log ROS)	9.5834E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.585	KM Geo Mean	5.0809E-4
KM SD (logged)	0.965	95% Critical H Value (KM-Log)	2.344
KM Standard Error of Mean (logged)	0.163	95% H-UCL (KM -Log)	0.00119
KM SD (logged)	0.965	95% Critical H Value (KM-Log)	2.344
KM Standard Error of Mean (logged)	0.163		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.9158E-4	Mean in Log Scale	-7.604
SD in Original Scale	0.0011	SD in Log Scale	1.062
95% t UCL (Assumes normality)	0.0011	95% H-Stat UCL	0.00136

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 0.00119

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

2,4'-DDT

General Statistics

Total Number of Observations	37	Number of Distinct Observations	32
Number of Detects	31	Number of Non-Detects	6
Number of Distinct Detects	31	Number of Distinct Non-Detects	1
Minimum Detect	4.7900E-5	Minimum Non-Detect	1.0800E-5
Maximum Detect	0.00347	Maximum Non-Detect	1.0800E-5
Variance Detects	3.6932E-7	Percent Non-Detects	16.22%
Mean Detects	2.9247E-4	SD Detects	6.0771E-4
Median Detects	1.3900E-4	CV Detects	2.078
Skewness Detects	5.082	Kurtosis Detects	27.13
Mean of Logged Detects	-8.73	SD of Logged Detects	0.886

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.362	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.4679E-4	KM Standard Error of Mean	9.3080E-5
KM SD	5.5698E-4	95% KM (BCA) UCL	4.3252E-4
95% KM (t) UCL	4.0394E-4	95% KM (Percentile Bootstrap) UCL	4.2551E-4
95% KM (z) UCL	3.9990E-4	95% KM Bootstrap t UCL	8.0653E-4
90% KM Chebyshev UCL	5.2603E-4	95% KM Chebyshev UCL	6.5252E-4
97.5% KM Chebyshev UCL	8.2808E-4	99% KM Chebyshev UCL	0.00117

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.457	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.777	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.214	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.163	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.977	k star (bias corrected MLE)	0.904
Theta hat (MLE)	2.9939E-4	Theta star (bias corrected MLE)	3.2358E-4
nu hat (MLE)	60.57	nu star (bias corrected)	56.04
Mean (detects)	2.9247E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.7900E-5	Mean	0.00187
Maximum	0.01	Median	1.8200E-4
SD	0.00367	CV	1.966
k hat (MLE)	0.374	k star (bias corrected MLE)	0.362
Theta hat (MLE)	0.00499	Theta star (bias corrected MLE)	0.00516
nu hat (MLE)	27.7	nu star (bias corrected)	26.78
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (26.78, α)	15.98	Adjusted Chi Square Value (26.78, β)	15.62
95% Gamma Approximate UCL (use when n>=50)	0.00313	95% Gamma Adjusted UCL (use when n<50)	0.0032

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.4679E-4	SD (KM)	5.5698E-4
Variance (KM)	3.1023E-7	SE of Mean (KM)	9.3080E-5
k hat (KM)	0.196	k star (KM)	0.198

nu hat (KM)	14.53	nu star (KM)	14.68
theta hat (KM)	0.00126	theta star (KM)	0.00124
80% gamma percentile (KM)	3.2385E-4	90% gamma percentile (KM)	7.4638E-4
95% gamma percentile (KM)	0.00127	99% gamma percentile (KM)	0.00273

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (14.68, α)	7.042	Adjusted Chi Square Value (14.68, β)	6.812
95% Gamma Approximate KM-UCL (use when n>=50)	5.1460E-4	95% Gamma Adjusted KM-UCL (use when n<50)	5.3197E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.4881E-4	Mean in Log Scale	-9.053
SD in Original Scale	5.6382E-4	SD in Log Scale	1.109
95% t UCL (assumes normality of ROS data)	4.0531E-4	95% Percentile Bootstrap UCL	4.2654E-4
95% BCA Bootstrap UCL	5.5095E-4	95% Bootstrap t UCL	8.4354E-4
95% H-UCL (Log ROS)	3.4481E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.169	KM Geo Mean	1.0427E-4
KM SD (logged)	1.277	95% Critical H Value (KM-Log)	2.725
KM Standard Error of Mean (logged)	0.213	95% H-UCL (KM -Log)	4.2098E-4
KM SD (logged)	1.277	95% Critical H Value (KM-Log)	2.725
KM Standard Error of Mean (logged)	0.213		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.4592E-4	Mean in Log Scale	-9.281
SD in Original Scale	5.6504E-4	SD in Log Scale	1.506
95% t UCL (Assumes normality)	4.0275E-4	95% H-Stat UCL	6.1885E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 4.2098E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.0204	Mean	0.0992
Maximum	0.475	Median	0.0839
SD	0.0809	Std. Error of Mean	0.0133
Coefficient of Variation	0.815	Skewness	3.071

Normal GOF Test

Shapiro Wilk Test Statistic	0.712	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.208	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.122	95% Adjusted-CLT UCL (Chen-1995)	0.128
		95% Modified-t UCL (Johnson-1978)	0.123

Gamma GOF Test

A-D Test Statistic	0.625	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.757	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.484	k star (bias corrected MLE)	2.3
Theta hat (MLE)	0.0399	Theta star (bias corrected MLE)	0.0431
nu hat (MLE)	183.8	nu star (bias corrected)	170.2
MLE Mean (bias corrected)	0.0992	MLE Sd (bias corrected)	0.0654
		Approximate Chi Square Value (0.05)	141.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	139.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.12	95% Adjusted Gamma UCL (use when n<50)	0.121

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0758	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.892	Mean of logged Data	-2.525
Maximum of Logged Data	-0.744	SD of logged Data	0.637

Assuming Lognormal Distribution

95% H-UCL	0.121	90% Chebyshev (MVUE) UCL	0.13
95% Chebyshev (MVUE) UCL	0.145	97.5% Chebyshev (MVUE) UCL	0.166
99% Chebyshev (MVUE) UCL	0.206		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.121	95% Jackknife UCL	0.122
95% Standard Bootstrap UCL	0.121	95% Bootstrap-t UCL	0.136

95% Hall's Bootstrap UCL	0.219	95% Percentile Bootstrap UCL	0.122
95% BCA Bootstrap UCL	0.132		
90% Chebyshev(Mean, Sd) UCL	0.139	95% Chebyshev(Mean, Sd) UCL	0.157
97.5% Chebyshev(Mean, Sd) UCL	0.182	99% Chebyshev(Mean, Sd) UCL	0.231

Suggested UCL to Use

95% Adjusted Gamma UCL	0.121

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDE

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.108	Mean	0.283
Maximum	0.67	Median	0.272
SD	0.135	Std. Error of Mean	0.0222
Coefficient of Variation	0.476	Skewness	1.443

Normal GOF Test

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.321	95% Adjusted-CLT UCL (Chen-1995)	0.325
		95% Modified-t UCL (Johnson-1978)	0.321

Gamma GOF Test

A-D Test Statistic	0.623	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.141	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.326	k star (bias corrected MLE)	4.912
Theta hat (MLE)	0.0532	Theta star (bias corrected MLE)	0.0576
nu hat (MLE)	394.1	nu star (bias corrected)	363.5
MLE Mean (bias corrected)	0.283	MLE Sd (bias corrected)	0.128
		Approximate Chi Square Value (0.05)	320.3
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	318.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.321	95% Adjusted Gamma UCL (use when n<50)	0.323

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.226	Mean of logged Data	-1.359
Maximum of Logged Data	-0.4	SD of logged Data	0.441

Assuming Lognormal Distribution

95% H-UCL	0.325	90% Chebyshev (MVUE) UCL	0.346
95% Chebyshev (MVUE) UCL	0.375	97.5% Chebyshev (MVUE) UCL	0.415
99% Chebyshev (MVUE) UCL	0.493		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.32	95% Jackknife UCL	0.321
95% Standard Bootstrap UCL	0.318	95% Bootstrap-t UCL	0.33

95% Hall's Bootstrap UCL	0.329	95% Percentile Bootstrap UCL	0.321
95% BCA Bootstrap UCL	0.325		
90% Chebyshev(Mean, Sd) UCL	0.35	95% Chebyshev(Mean, Sd) UCL	0.38
97.5% Chebyshev(Mean, Sd) UCL	0.422	99% Chebyshev(Mean, Sd) UCL	0.504

Suggested UCL to Use

95% Adjusted Gamma UCL	0.323

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

4,4'-DDT

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	2.3400E-4	Mean	0.00175
Maximum	0.0131	Median	7.1000E-4
SD	0.00275	Std. Error of Mean	4.5134E-4
Coefficient of Variation	1.565	Skewness	3.052

Normal GOF Test

Shapiro Wilk Test Statistic	0.541	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.305	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00252	95% Adjusted-CLT UCL (Chen-1995)	0.00274
		95% Modified-t UCL (Johnson-1978)	0.00255

Gamma GOF Test

A-D Test Statistic	3.026	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.779	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.256	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.15	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.963	k star (bias corrected MLE)	0.903
Theta hat (MLE)	0.00182	Theta star (bias corrected MLE)	0.00194
nu hat (MLE)	71.29	nu star (bias corrected)	66.84
MLE Mean (bias corrected)	0.00175	MLE Sd (bias corrected)	0.00185
		Approximate Chi Square Value (0.05)	49.03
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	48.36

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00239	95% Adjusted Gamma UCL (use when n<50)	0.00242

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.894	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.36	Mean of logged Data	-6.948
Maximum of Logged Data	-4.335	SD of logged Data	0.967

Assuming Lognormal Distribution

95% H-UCL	0.00224	90% Chebyshev (MVUE) UCL	0.00233
95% Chebyshev (MVUE) UCL	0.00271	97.5% Chebyshev (MVUE) UCL	0.00323
99% Chebyshev (MVUE) UCL	0.00425		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0025	95% Jackknife UCL	0.00252
95% Standard Bootstrap UCL	0.0025	95% Bootstrap-t UCL	0.0031

95% Hall's Bootstrap UCL	0.00265	95% Percentile Bootstrap UCL	0.00255
95% BCA Bootstrap UCL	0.00271		
90% Chebyshev(Mean, Sd) UCL	0.00311	95% Chebyshev(Mean, Sd) UCL	0.00372
97.5% Chebyshev(Mean, Sd) UCL	0.00457	99% Chebyshev(Mean, Sd) UCL	0.00624

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.00372

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Alpha-Chlordane

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	36	Number of Distinct Non-Detects	1
Minimum Detect	8.5300E-4	Minimum Non-Detect	8.8300E-6
Maximum Detect	0.0115	Maximum Non-Detect	8.8300E-6
Variance Detects	1.0033E-5	Percent Non-Detects	2.703%
Mean Detects	0.00587	SD Detects	0.00317
Median Detects	0.00532	CV Detects	0.539
Skewness Detects	0.291	Kurtosis Detects	-0.988
Mean of Logged Detects	-5.321	SD of Logged Detects	0.675

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00572	KM Standard Error of Mean	5.3758E-4
KM SD	0.00322	95% KM (BCA) UCL	0.00653
95% KM (t) UCL	0.00662	95% KM (Percentile Bootstrap) UCL	0.00657
95% KM (z) UCL	0.0066	95% KM Bootstrap t UCL	0.0067
90% KM Chebyshev UCL	0.00733	95% KM Chebyshev UCL	0.00806
97.5% KM Chebyshev UCL	0.00907	99% KM Chebyshev UCL	0.0111

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.396	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0939	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.879	k star (bias corrected MLE)	2.658
Theta hat (MLE)	0.00204	Theta star (bias corrected MLE)	0.00221
nu hat (MLE)	207.3	nu star (bias corrected)	191.4
Mean (detects)	0.00587		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	8.5300E-4	Mean	0.00599
Maximum	0.0115	Median	0.00536
SD	0.0032	CV	0.534
k hat (MLE)	2.887	k star (bias corrected MLE)	2.671
Theta hat (MLE)	0.00207	Theta star (bias corrected MLE)	0.00224
nu hat (MLE)	213.7	nu star (bias corrected)	197.7
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (197.68, α)	166.1	Adjusted Chi Square Value (197.68, β)	164.9
95% Gamma Approximate UCL (use when n>=50)	0.00712	95% Gamma Adjusted UCL (use when n<50)	0.00718

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00572	SD (KM)	0.00322
Variance (KM)	1.0396E-5	SE of Mean (KM)	5.3758E-4
k hat (KM)	3.143	k star (KM)	2.906

nu hat (KM)	232.6	nu star (KM)	215.1
theta hat (KM)	0.00182	theta star (KM)	0.00197
80% gamma percentile (KM)	0.00818	90% gamma percentile (KM)	0.0102
95% gamma percentile (KM)	0.0121	99% gamma percentile (KM)	0.0162

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (215.05, α)	182.1	Adjusted Chi Square Value (215.05, β)	180.8
95% Gamma Approximate KM-UCL (use when n>=50)	0.00675	95% Gamma Adjusted KM-UCL (use when n<50)	0.0068

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.121	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00574	Mean in Log Scale	-5.366
SD in Original Scale	0.00323	SD in Log Scale	0.72
95% t UCL (assumes normality of ROS data)	0.00664	95% Percentile Bootstrap UCL	0.00658
95% BCA Bootstrap UCL	0.00663	95% Bootstrap t UCL	0.00668
95% H-UCL (Log ROS)	0.00779		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.491	KM Geo Mean	0.00412
KM SD (logged)	1.217	95% Critical H Value (KM-Log)	2.648
KM Standard Error of Mean (logged)	0.203	95% H-UCL (KM -Log)	0.0148
KM SD (logged)	1.217	95% Critical H Value (KM-Log)	2.648
KM Standard Error of Mean (logged)	0.203		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00572	Mean in Log Scale	-5.51
SD in Original Scale	0.00327	SD in Log Scale	1.331
95% t UCL (Assumes normality)	0.00662	95% H-Stat UCL	0.0182

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00662

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

cis-Nonachlor

General Statistics

Total Number of Observations	37	Number of Distinct Observations	32
		Number of Missing Observations	0
Minimum	0.00898	Mean	0.0169
Maximum	0.0409	Median	0.0167
SD	0.00589	Std. Error of Mean	9.6855E-4
Coefficient of Variation	0.349	Skewness	1.987

Normal GOF Test

Shapiro Wilk Test Statistic	0.85	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0185	95% Adjusted-CLT UCL (Chen-1995)	0.0188
		95% Modified-t UCL (Johnson-1978)	0.0186

Gamma GOF Test

A-D Test Statistic	0.535	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0985	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.31	k star (bias corrected MLE)	9.495
Theta hat (MLE)	0.00164	Theta star (bias corrected MLE)	0.00178
nu hat (MLE)	763.1	nu star (bias corrected)	702.6
MLE Mean (bias corrected)	0.0169	MLE Sd (bias corrected)	0.00547
		Approximate Chi Square Value (0.05)	642.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	639.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0185	95% Adjusted Gamma UCL (use when n<50)	0.0185

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0909	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.713	Mean of logged Data	-4.132
Maximum of Logged Data	-3.197	SD of logged Data	0.309

Assuming Lognormal Distribution

95% H-UCL	0.0185	90% Chebyshev (MVUE) UCL	0.0194
95% Chebyshev (MVUE) UCL	0.0206	97.5% Chebyshev (MVUE) UCL	0.0223
99% Chebyshev (MVUE) UCL	0.0255		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0185	95% Jackknife UCL	0.0185
95% Standard Bootstrap UCL	0.0184	95% Bootstrap-t UCL	0.0189

95% Hall's Bootstrap UCL	0.0195	95% Percentile Bootstrap UCL	0.0186
95% BCA Bootstrap UCL	0.0189		
90% Chebyshev(Mean, Sd) UCL	0.0198	95% Chebyshev(Mean, Sd) UCL	0.0211
97.5% Chebyshev(Mean, Sd) UCL	0.0229	99% Chebyshev(Mean, Sd) UCL	0.0265

Suggested UCL to Use

95% Student's-t UCL 0.0185

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Minimum	0.00455	Mean	0.0178
Maximum	0.034	Median	0.0169
SD	0.00855	Std. Error of Mean	0.00142
Coefficient of Variation	0.48	Skewness	0.118

Normal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0968	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0202	95% Adjusted-CLT UCL (Chen-1995)	0.0202
		95% Modified-t UCL (Johnson-1978)	0.0202

Gamma GOF Test

A-D Test Statistic	0.7	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.118	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.702	k star (bias corrected MLE)	3.412
Theta hat (MLE)	0.00481	Theta star (bias corrected MLE)	0.00522
nu hat (MLE)	266.5	nu star (bias corrected)	245.7
MLE Mean (bias corrected)	0.0178	MLE Sd (bias corrected)	0.00964
		Approximate Chi Square Value (0.05)	210.4
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	208.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0208	95% Adjusted Gamma UCL (use when n<50)	0.0209

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.155	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.393	Mean of logged Data	-4.169
Maximum of Logged Data	-3.381	SD of logged Data	0.579

Assuming Lognormal Distribution

95% H-UCL	0.0222	90% Chebyshev (MVUE) UCL	0.0238
95% Chebyshev (MVUE) UCL	0.0263	97.5% Chebyshev (MVUE) UCL	0.0298
99% Chebyshev (MVUE) UCL	0.0367		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0202	95% Jackknife UCL	0.0202
95% Standard Bootstrap UCL	0.0201	95% Bootstrap-t UCL	0.0202

95% Hall's Bootstrap UCL	0.0202	95% Percentile Bootstrap UCL	0.0201
95% BCA Bootstrap UCL	0.0202		
90% Chebyshev(Mean, Sd) UCL	0.0221	95% Chebyshev(Mean, Sd) UCL	0.024
97.5% Chebyshev(Mean, Sd) UCL	0.0267	99% Chebyshev(Mean, Sd) UCL	0.032

Suggested UCL to Use

95% Student's-t UCL	0.0202

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor Epoxide

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.0051	Mean	0.0117
Maximum	0.0388	Median	0.011
SD	0.00546	Std. Error of Mean	8.9795E-4
Coefficient of Variation	0.467	Skewness	3.486

Normal GOF Test

Shapiro Wilk Test Statistic	0.696	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0132	95% Adjusted-CLT UCL (Chen-1995)	0.0137
		95% Modified-t UCL (Johnson-1978)	0.0133

Gamma GOF Test

A-D Test Statistic	0.849	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.133	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.18	k star (bias corrected MLE)	6.615
Theta hat (MLE)	0.00163	Theta star (bias corrected MLE)	0.00177
nu hat (MLE)	531.3	nu star (bias corrected)	489.5
MLE Mean (bias corrected)	0.0117	MLE Sd (bias corrected)	0.00455
		Approximate Chi Square Value (0.05)	439.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	437.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.013	95% Adjusted Gamma UCL (use when n<50)	0.0131

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.941	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.279	Mean of logged Data	-4.52
Maximum of Logged Data	-3.249	SD of logged Data	0.361

Assuming Lognormal Distribution

95% H-UCL	0.013	90% Chebyshev (MVUE) UCL	0.0137
95% Chebyshev (MVUE) UCL	0.0147	97.5% Chebyshev (MVUE) UCL	0.016
99% Chebyshev (MVUE) UCL	0.0186		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0132	95% Jackknife UCL	0.0132
95% Standard Bootstrap UCL	0.0132	95% Bootstrap-t UCL	0.0142

95% Hall's Bootstrap UCL	0.0203	95% Percentile Bootstrap UCL	0.0133
95% BCA Bootstrap UCL	0.0137		
90% Chebyshev(Mean, Sd) UCL	0.0144	95% Chebyshev(Mean, Sd) UCL	0.0156
97.5% Chebyshev(Mean, Sd) UCL	0.0173	99% Chebyshev(Mean, Sd) UCL	0.0206

Suggested UCL to Use

95% Adjusted Gamma UCL 0.0131

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Hexachlorobenzene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.00139	Mean	0.00324
Maximum	0.00858	Median	0.00309
SD	0.00143	Std. Error of Mean	2.3539E-4
Coefficient of Variation	0.442	Skewness	1.634

Normal GOF Test

Shapiro Wilk Test Statistic	0.878	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00363	95% Adjusted-CLT UCL (Chen-1995)	0.00369
		95% Modified-t UCL (Johnson-1978)	0.00365

Gamma GOF Test

A-D Test Statistic	0.4	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.104	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.291	k star (bias corrected MLE)	5.799
Theta hat (MLE)	5.1463E-4	Theta star (bias corrected MLE)	5.5830E-4
nu hat (MLE)	465.5	nu star (bias corrected)	429.1
MLE Mean (bias corrected)	0.00324	MLE Sd (bias corrected)	0.00134
		Approximate Chi Square Value (0.05)	382.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	380.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00364	95% Adjusted Gamma UCL (use when n<50)	0.00365

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.104	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.578	Mean of logged Data	-5.815
Maximum of Logged Data	-4.758	SD of logged Data	0.401

Assuming Lognormal Distribution

95% H-UCL	0.00366	90% Chebyshev (MVUE) UCL	0.00388
95% Chebyshev (MVUE) UCL	0.00418	97.5% Chebyshev (MVUE) UCL	0.00459
99% Chebyshev (MVUE) UCL	0.00541		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00362	95% Jackknife UCL	0.00363
95% Standard Bootstrap UCL	0.00363	95% Bootstrap-t UCL	0.00374

95% Hall's Bootstrap UCL	0.00379	95% Percentile Bootstrap UCL	0.00361
95% BCA Bootstrap UCL	0.00371		
90% Chebyshev(Mean, Sd) UCL	0.00394	95% Chebyshev(Mean, Sd) UCL	0.00426
97.5% Chebyshev(Mean, Sd) UCL	0.00471	99% Chebyshev(Mean, Sd) UCL	0.00558

Suggested UCL to Use

95% Student's-t UCL 0.00363

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mirex

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	3.2400E-4	Mean	6.1884E-4
Maximum	0.00116	Median	6.0500E-4
SD	1.7062E-4	Std. Error of Mean	2.8050E-5
Coefficient of Variation	0.276	Skewness	0.945

Normal GOF Test

Shapiro Wilk Test Statistic	0.949	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.137	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.6619E-4	95% Adjusted-CLT UCL (Chen-1995)	6.6963E-4
		95% Modified-t UCL (Johnson-1978)	6.6692E-4

Gamma GOF Test

A-D Test Statistic	0.273	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.101	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.21	k star (bias corrected MLE)	13.08
Theta hat (MLE)	4.3545E-5	Theta star (bias corrected MLE)	4.7322E-5
nu hat (MLE)	1052	nu star (bias corrected)	967.7
MLE Mean (bias corrected)	6.1884E-4	MLE Sd (bias corrected)	1.7113E-4
		Approximate Chi Square Value (0.05)	896.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	893.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.6799E-4	95% Adjusted Gamma UCL (use when n<50)	6.7021E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0878	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-8.035	Mean of logged Data	-7.423
Maximum of Logged Data	-6.759	SD of logged Data	0.271

Assuming Lognormal Distribution

95% H-UCL	6.7103E-4	90% Chebyshev (MVUE) UCL	7.0273E-4
95% Chebyshev (MVUE) UCL	7.4071E-4	97.5% Chebyshev (MVUE) UCL	7.9343E-4
99% Chebyshev (MVUE) UCL	8.9699E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.6498E-4	95% Jackknife UCL	6.6619E-4
95% Standard Bootstrap UCL	6.6549E-4	95% Bootstrap-t UCL	6.7088E-4

95% Hall's Bootstrap UCL	6.7532E-4	95% Percentile Bootstrap UCL	6.6600E-4
95% BCA Bootstrap UCL	6.6741E-4		
90% Chebyshev(Mean, Sd) UCL	7.0299E-4	95% Chebyshev(Mean, Sd) UCL	7.4110E-4
97.5% Chebyshev(Mean, Sd) UCL	7.9401E-4	99% Chebyshev(Mean, Sd) UCL	8.9793E-4

Suggested UCL to Use

95% Student's-t UCL 6.6619E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Nonachlor, trans-

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.00556	Mean	0.0326
Maximum	0.0854	Median	0.0298
SD	0.0153	Std. Error of Mean	0.00252
Coefficient of Variation	0.471	Skewness	1.443

Normal GOF Test

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.176	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0368	95% Adjusted-CLT UCL (Chen-1995)	0.0374
		95% Modified-t UCL (Johnson-1978)	0.0369

Gamma GOF Test

A-D Test Statistic	0.685	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.998	k star (bias corrected MLE)	4.611
Theta hat (MLE)	0.00652	Theta star (bias corrected MLE)	0.00707
nu hat (MLE)	369.9	nu star (bias corrected)	341.2
MLE Mean (bias corrected)	0.0326	MLE Sd (bias corrected)	0.0152
		Approximate Chi Square Value (0.05)	299.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	297.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0371	95% Adjusted Gamma UCL (use when n<50)	0.0373

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.192	Mean of logged Data	-3.527
Maximum of Logged Data	-2.46	SD of logged Data	0.478

Assuming Lognormal Distribution

95% H-UCL	0.0383	90% Chebyshev (MVUE) UCL	0.0409
95% Chebyshev (MVUE) UCL	0.0446	97.5% Chebyshev (MVUE) UCL	0.0496
99% Chebyshev (MVUE) UCL	0.0596		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0367	95% Jackknife UCL	0.0368
95% Standard Bootstrap UCL	0.0367	95% Bootstrap-t UCL	0.0377

95% Hall's Bootstrap UCL	0.0386	95% Percentile Bootstrap UCL	0.0367
95% BCA Bootstrap UCL	0.0376		
90% Chebyshev(Mean, Sd) UCL	0.0402	95% Chebyshev(Mean, Sd) UCL	0.0436
97.5% Chebyshev(Mean, Sd) UCL	0.0483	99% Chebyshev(Mean, Sd) UCL	0.0577

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0373

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Oxychlordane

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	0.02	Mean	0.05
Maximum	0.124	Median	0.0469
SD	0.0188	Std. Error of Mean	0.00309
Coefficient of Variation	0.376	Skewness	1.864

Normal GOF Test

Shapiro Wilk Test Statistic	0.861	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.21	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0552	95% Adjusted-CLT UCL (Chen-1995)	0.0561
		95% Modified-t UCL (Johnson-1978)	0.0554

Gamma GOF Test

A-D Test Statistic	0.687	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.161	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.739	k star (bias corrected MLE)	8.049
Theta hat (MLE)	0.00572	Theta star (bias corrected MLE)	0.00621
nu hat (MLE)	646.7	nu star (bias corrected)	595.6
MLE Mean (bias corrected)	0.05	MLE Sd (bias corrected)	0.0176
		Approximate Chi Square Value (0.05)	540
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	537.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0551	95% Adjusted Gamma UCL (use when n<50)	0.0554

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.139	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.912	Mean of logged Data	-3.054
Maximum of Logged Data	-2.087	SD of logged Data	0.34

Assuming Lognormal Distribution

95% H-UCL	0.0553	90% Chebyshev (MVUE) UCL	0.0584
95% Chebyshev (MVUE) UCL	0.0623	97.5% Chebyshev (MVUE) UCL	0.0676
99% Chebyshev (MVUE) UCL	0.0782		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0551	95% Jackknife UCL	0.0552
95% Standard Bootstrap UCL	0.055	95% Bootstrap-t UCL	0.0567

95% Hall's Bootstrap UCL	0.0585	95% Percentile Bootstrap UCL	0.0553
95% BCA Bootstrap UCL	0.0565		
90% Chebyshev(Mean, Sd) UCL	0.0593	95% Chebyshev(Mean, Sd) UCL	0.0635
97.5% Chebyshev(Mean, Sd) UCL	0.0693	99% Chebyshev(Mean, Sd) UCL	0.0807

Suggested UCL to Use

95% Adjusted Gamma UCL 0.0554

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Chlordane

General Statistics

Total Number of Observations	31	Number of Distinct Observations	29
		Number of Missing Observations	6
Number of Detects	29	Number of Non-Detects	2
Number of Distinct Detects	28	Number of Distinct Non-Detects	1
Minimum Detect	4.7600E-4	Minimum Non-Detect	1.3700E-5
Maximum Detect	0.00161	Maximum Non-Detect	1.3700E-5
Variance Detects	8.3636E-8	Percent Non-Detects	6.452%
Mean Detects	8.4990E-4	SD Detects	2.8920E-4
Median Detects	7.7700E-4	CV Detects	0.34
Skewness Detects	1.137	Kurtosis Detects	1.2
Mean of Logged Detects	-7.121	SD of Logged Detects	0.318

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.9595E-4	KM Standard Error of Mean	6.2720E-5
KM SD	3.4314E-4	95% KM (BCA) UCL	8.9119E-4
95% KM (t) UCL	9.0240E-4	95% KM (Percentile Bootstrap) UCL	8.9680E-4
95% KM (z) UCL	8.9911E-4	95% KM Bootstrap t UCL	9.0798E-4
90% KM Chebyshev UCL	9.8411E-4	95% KM Chebyshev UCL	0.00107
97.5% KM Chebyshev UCL	0.00119	99% KM Chebyshev UCL	0.00142

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.348	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0892	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.162	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.04	k star (bias corrected MLE)	9.024
Theta hat (MLE)	8.4653E-5	Theta star (bias corrected MLE)	9.4180E-5
nu hat (MLE)	582.3	nu star (bias corrected)	523.4
Mean (detects)	8.4990E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.7600E-4	Mean	0.00144
Maximum	0.01	Median	8.1500E-4
SD	0.0023	CV	1.598
k hat (MLE)	1.345	k star (bias corrected MLE)	1.236
Theta hat (MLE)	0.00107	Theta star (bias corrected MLE)	0.00116
nu hat (MLE)	83.38	nu star (bias corrected)	76.65
Adjusted Level of Significance (β)	0.0413		
Approximate Chi Square Value (76.65, α)	57.48	Adjusted Chi Square Value (76.65, β)	56.56
95% Gamma Approximate UCL (use when n>=50)	0.00192	95% Gamma Adjusted UCL (use when n<50)	0.00195

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.9595E-4	SD (KM)	3.4314E-4
Variance (KM)	1.1774E-7	SE of Mean (KM)	6.2720E-5

k hat (KM)	5.381	k star (KM)	4.881
nu hat (KM)	333.6	nu star (KM)	302.6
theta hat (KM)	1.4793E-4	theta star (KM)	1.6306E-4
80% gamma percentile (KM)	0.00107	90% gamma percentile (KM)	0.00128
95% gamma percentile (KM)	0.00147	99% gamma percentile (KM)	0.00186

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (302.65, α)	263.3	Adjusted Chi Square Value (302.65, β)	261.3
95% Gamma Approximate KM-UCL (use when n>=50)	9.1473E-4	95% Gamma Adjusted KM-UCL (use when n<50)	9.2184E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0842	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.1939E-4	Mean in Log Scale	-7.17
SD in Original Scale	3.0338E-4	SD in Log Scale	0.362
95% t UCL (assumes normality of ROS data)	9.1187E-4	95% Percentile Bootstrap UCL	9.0796E-4
95% BCA Bootstrap UCL	9.2016E-4	95% Bootstrap t UCL	9.2514E-4
95% H-UCL (Log ROS)	9.2693E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.384	KM Geo Mean	6.2107E-4
KM SD (logged)	1.046	95% Critical H Value (KM-Log)	2.478
KM Standard Error of Mean (logged)	0.191	95% H-UCL (KM -Log)	0.00172
KM SD (logged)	1.046	95% Critical H Value (KM-Log)	2.478
KM Standard Error of Mean (logged)	0.191		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.9551E-4	Mean in Log Scale	-7.429
SD in Original Scale	3.4984E-4	SD in Log Scale	1.23
95% t UCL (Assumes normality)	9.0215E-4	95% H-Stat UCL	0.00233

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 9.0240E-4

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

trans-Heptachlor Epoxide

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	0.00113	Mean	0.00345
Maximum	0.00876	Median	0.00334
SD	0.00139	Std. Error of Mean	2.2797E-4
Coefficient of Variation	0.402	Skewness	1.462

Normal GOF Test

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00384	95% Adjusted-CLT UCL (Chen-1995)	0.00389
		95% Modified-t UCL (Johnson-1978)	0.00385

Gamma GOF Test

A-D Test Statistic	0.354	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.819	k star (bias corrected MLE)	6.285
Theta hat (MLE)	5.0626E-4	Theta star (bias corrected MLE)	5.4935E-4
nu hat (MLE)	504.6	nu star (bias corrected)	465.1
MLE Mean (bias corrected)	0.00345	MLE Sd (bias corrected)	0.00138
		Approximate Chi Square Value (0.05)	416.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	414

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00386	95% Adjusted Gamma UCL (use when n<50)	0.00388

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.117	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.786	Mean of logged Data	-5.744
Maximum of Logged Data	-4.738	SD of logged Data	0.401

Assuming Lognormal Distribution

95% H-UCL	0.00392	90% Chebyshev (MVUE) UCL	0.00417
95% Chebyshev (MVUE) UCL	0.00449	97.5% Chebyshev (MVUE) UCL	0.00493
99% Chebyshev (MVUE) UCL	0.0058		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00383	95% Jackknife UCL	0.00384
95% Standard Bootstrap UCL	0.00383	95% Bootstrap-t UCL	0.00389

95% Hall's Bootstrap UCL	0.00399	95% Percentile Bootstrap UCL	0.00386
95% BCA Bootstrap UCL	0.0039		
90% Chebyshev(Mean, Sd) UCL	0.00414	95% Chebyshev(Mean, Sd) UCL	0.00445
97.5% Chebyshev(Mean, Sd) UCL	0.00488	99% Chebyshev(Mean, Sd) UCL	0.00572

Suggested UCL to Use

95% Student's-t UCL 0.00384

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 4:02:50 PM
From File	crb_hep4_met_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	37	Number of Distinct Observations	22
Number of Detects	17	Number of Non-Detects	20
Number of Distinct Detects	17	Number of Distinct Non-Detects	5
Minimum Detect	6.68	Minimum Non-Detect	5.38
Maximum Detect	91.6	Maximum Non-Detect	5.6
Variance Detects	698.4	Percent Non-Detects	54.05%
Mean Detects	23.57	SD Detects	26.43
Median Detects	12.1	CV Detects	1.121
Skewness Detects	1.956	Kurtosis Detects	2.655
Mean of Logged Detects	2.763	SD of Logged Detects	0.826

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.64	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.359	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	13.74	KM Standard Error of Mean	3.321
KM SD	19.6	95% KM (BCA) UCL	19.81
95% KM (t) UCL	19.34	95% KM (Percentile Bootstrap) UCL	19.73
95% KM (z) UCL	19.2	95% KM Bootstrap t UCL	25.24
90% KM Chebyshev UCL	23.7	95% KM Chebyshev UCL	28.22
97.5% KM Chebyshev UCL	34.48	99% KM Chebyshev UCL	46.79

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.711	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.758	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.213	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.403	k star (bias corrected MLE)	1.194
Theta hat (MLE)	16.8	Theta star (bias corrected MLE)	19.74
nu hat (MLE)	47.69	nu star (bias corrected)	40.6
Mean (detects)	23.57		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	10.83
Maximum	91.6	Median	0.01
SD	21.26	CV	1.962
k hat (MLE)	0.204	k star (bias corrected MLE)	0.205
Theta hat (MLE)	53.19	Theta star (bias corrected MLE)	52.8

nu hat (MLE)	15.07	nu star (bias corrected)	15.18
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (15.18, α)	7.39	Adjusted Chi Square Value (15.18, β)	7.154
95% Gamma Approximate UCL (use when n>=50)	22.26	95% Gamma Adjusted UCL (use when n<50)	23

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	13.74	SD (KM)	19.6
Variance (KM)	384.2	SE of Mean (KM)	3.321
k hat (KM)	0.491	k star (KM)	0.469
nu hat (KM)	36.35	nu star (KM)	34.73
theta hat (KM)	27.97	theta star (KM)	29.27
80% gamma percentile (KM)	22.49	90% gamma percentile (KM)	37.65
95% gamma percentile (KM)	53.97	99% gamma percentile (KM)	94.35

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (34.73, α)	22.25	Adjusted Chi Square Value (34.73, β)	21.82
95% Gamma Approximate KM-UCL (use when n>=50)	21.44	95% Gamma Adjusted KM-UCL (use when n<50)	21.87

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.828	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	11.84	Mean in Log Scale	1.509
SD in Original Scale	20.77	SD in Log Scale	1.379
95% t UCL (assumes normality of ROS data)	17.6	95% Percentile Bootstrap UCL	17.87
95% BCA Bootstrap UCL	19.41	95% Bootstrap t UCL	23.7
95% H-UCL (Log ROS)	22.54		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.179	KM Geo Mean	8.837
KM SD (logged)	0.765	95% Critical H Value (KM-Log)	2.141
KM Standard Error of Mean (logged)	0.13	95% H-UCL (KM -Log)	15.55
KM SD (logged)	0.765	95% Critical H Value (KM-Log)	2.141
KM Standard Error of Mean (logged)	0.13		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	12.31	Mean in Log Scale	1.816
SD in Original Scale	20.52	SD in Log Scale	1.043
95% t UCL (Assumes normality)	18.01	95% H-Stat UCL	16.17

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 15.55

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.77	Mean	3.175
Maximum	6.16	Median	3.33
SD	1.035	Std. Error of Mean	0.17
Coefficient of Variation	0.326	Skewness	0.424

Normal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.119	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.462	95% Adjusted-CLT UCL (Chen-1995)	3.468
		95% Modified-t UCL (Johnson-1978)	3.464

Gamma GOF Test

A-D Test Statistic	0.569	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.114	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.589	k star (bias corrected MLE)	7.911
Theta hat (MLE)	0.37	Theta star (bias corrected MLE)	0.401
nu hat (MLE)	635.6	nu star (bias corrected)	585.4
MLE Mean (bias corrected)	3.175	MLE Sd (bias corrected)	1.129
		Approximate Chi Square Value (0.05)	530.3
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	528

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.505	95% Adjusted Gamma UCL (use when n<50)	3.52

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.127	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.261	Mean of logged Data	1.096
Maximum of Logged Data	1.818	SD of logged Data	0.372

Assuming Lognormal Distribution

95% H-UCL	3.591	90% Chebyshev (MVUE) UCL	3.804
95% Chebyshev (MVUE) UCL	4.077	97.5% Chebyshev (MVUE) UCL	4.456
99% Chebyshev (MVUE) UCL	5.201		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.455	95% Jackknife UCL	3.462
95% Standard Bootstrap UCL	3.45	95% Bootstrap-t UCL	3.483

95% Hall's Bootstrap UCL	3.471	95% Percentile Bootstrap UCL	3.469
95% BCA Bootstrap UCL	3.466		
90% Chebyshev(Mean, Sd) UCL	3.686	95% Chebyshev(Mean, Sd) UCL	3.917
97.5% Chebyshev(Mean, Sd) UCL	4.238	99% Chebyshev(Mean, Sd) UCL	4.868

Suggested UCL to Use

95% Student's-t UCL	3.462

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	36	Number of Distinct Non-Detects	1
Minimum Detect	0.165	Minimum Non-Detect	0.0455
Maximum Detect	2.99	Maximum Non-Detect	0.0455
Variance Detects	0.437	Percent Non-Detects	2.703%
Mean Detects	1.071	SD Detects	0.661
Median Detects	0.839	CV Detects	0.617
Skewness Detects	1.183	Kurtosis Detects	0.846
Mean of Logged Detects	-0.109	SD of Logged Detects	0.616

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.883	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.183	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.043	KM Standard Error of Mean	0.111
KM SD	0.664	95% KM (BCA) UCL	1.228
95% KM (t) UCL	1.23	95% KM (Percentile Bootstrap) UCL	1.232
95% KM (z) UCL	1.225	95% KM Bootstrap t UCL	1.267
90% KM Chebyshev UCL	1.375	95% KM Chebyshev UCL	1.525
97.5% KM Chebyshev UCL	1.734	99% KM Chebyshev UCL	2.144

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.508	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.981	k star (bias corrected MLE)	2.751
Theta hat (MLE)	0.359	Theta star (bias corrected MLE)	0.389
nu hat (MLE)	214.6	nu star (bias corrected)	198.1
Mean (detects)	1.071		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.042
Maximum	2.99	Median	0.838
SD	0.674	CV	0.647
k hat (MLE)	1.993	k star (bias corrected MLE)	1.849
Theta hat (MLE)	0.523	Theta star (bias corrected MLE)	0.564
nu hat (MLE)	147.5	nu star (bias corrected)	136.8
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (136.84, α)	110.8	Adjusted Chi Square Value (136.84, β)	109.8
95% Gamma Approximate UCL (use when n>=50)	1.287	95% Gamma Adjusted UCL (use when n<50)	1.299

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.043	SD (KM)	0.664
Variance (KM)	0.441	SE of Mean (KM)	0.111
k hat (KM)	2.47	k star (KM)	2.287

nu hat (KM)	182.8	nu star (KM)	169.3
theta hat (KM)	0.422	theta star (KM)	0.456
80% gamma percentile (KM)	1.537	90% gamma percentile (KM)	1.966
95% gamma percentile (KM)	2.373	99% gamma percentile (KM)	3.267

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (169.27, α)	140.2	Adjusted Chi Square Value (169.27, β)	139
95% Gamma Approximate KM-UCL (use when n>=50)	1.26	95% Gamma Adjusted KM-UCL (use when n<50)	1.27

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0717	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.047	Mean in Log Scale	-0.151
SD in Original Scale	0.667	SD in Log Scale	0.659
95% t UCL (assumes normality of ROS data)	1.232	95% Percentile Bootstrap UCL	1.24
95% BCA Bootstrap UCL	1.235	95% Bootstrap t UCL	1.263
95% H-UCL (Log ROS)	1.337		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.189	KM Geo Mean	0.828
KM SD (logged)	0.77	95% Critical H Value (KM-Log)	2.145
KM Standard Error of Mean (logged)	0.128	95% H-UCL (KM -Log)	1.465
KM SD (logged)	0.77	95% Critical H Value (KM-Log)	2.145
KM Standard Error of Mean (logged)	0.128		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.042	Mean in Log Scale	-0.208
SD in Original Scale	0.674	SD in Log Scale	0.856
95% t UCL (Assumes normality)	1.23	95% H-Stat UCL	1.612

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	1.27	95% GROS Adjusted Gamma UCL	1.299

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chromium

General Statistics

Total Number of Observations	37	Number of Distinct Observations	28
Number of Detects	26	Number of Non-Detects	11
Number of Distinct Detects	24	Number of Distinct Non-Detects	4
Minimum Detect	0.0992	Minimum Non-Detect	0.0962
Maximum Detect	0.736	Maximum Non-Detect	0.1
Variance Detects	0.0268	Percent Non-Detects	29.73%
Mean Detects	0.213	SD Detects	0.164
Median Detects	0.156	CV Detects	0.768
Skewness Detects	2.334	Kurtosis Detects	5.05
Mean of Logged Detects	-1.724	SD of Logged Detects	0.548

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.659	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.313	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.178	KM Standard Error of Mean	0.0243
KM SD	0.145	95% KM (BCA) UCL	0.225
95% KM (t) UCL	0.219	95% KM (Percentile Bootstrap) UCL	0.222
95% KM (z) UCL	0.218	95% KM Bootstrap t UCL	0.25
90% KM Chebyshev UCL	0.251	95% KM Chebyshev UCL	0.284
97.5% KM Chebyshev UCL	0.33	99% KM Chebyshev UCL	0.42

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.012	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.751	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.237	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.172	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.957	k star (bias corrected MLE)	2.642
Theta hat (MLE)	0.0721	Theta star (bias corrected MLE)	0.0807
nu hat (MLE)	153.8	nu star (bias corrected)	137.4
Mean (detects)	0.213		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.153
Maximum	0.736	Median	0.125
SD	0.166	CV	1.085
k hat (MLE)	0.84	k star (bias corrected MLE)	0.79
Theta hat (MLE)	0.182	Theta star (bias corrected MLE)	0.193
nu hat (MLE)	62.18	nu star (bias corrected)	58.47
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (58.47, α)	41.89	Adjusted Chi Square Value (58.47, β)	41.28
95% Gamma Approximate UCL (use when n>=50)	0.213	95% Gamma Adjusted UCL (use when n<50)	0.216

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.178	SD (KM)	0.145
Variance (KM)	0.0209	SE of Mean (KM)	0.0243
k hat (KM)	1.52	k star (KM)	1.414

nu hat (KM)	112.5	nu star (KM)	104.7
theta hat (KM)	0.117	theta star (KM)	0.126
80% gamma percentile (KM)	0.278	90% gamma percentile (KM)	0.377
95% gamma percentile (KM)	0.474	99% gamma percentile (KM)	0.694

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (104.67, α)	82.06	Adjusted Chi Square Value (104.67, β)	81.19
95% Gamma Approximate KM-UCL (use when n>=50)	0.228	95% Gamma Adjusted KM-UCL (use when n<50)	0.23

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.846	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.17	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.165	Mean in Log Scale	-2.098
SD in Original Scale	0.156	SD in Log Scale	0.751
95% t UCL (assumes normality of ROS data)	0.208	95% Percentile Bootstrap UCL	0.21
95% BCA Bootstrap UCL	0.219	95% Bootstrap t UCL	0.234
95% H-UCL (Log ROS)	0.212		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.907	KM Geo Mean	0.148
KM SD (logged)	0.531	95% Critical H Value (KM-Log)	1.936
KM Standard Error of Mean (logged)	0.089	95% H-UCL (KM -Log)	0.203
KM SD (logged)	0.531	95% Critical H Value (KM-Log)	1.936
KM Standard Error of Mean (logged)	0.089		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.164	Mean in Log Scale	-2.106
SD in Original Scale	0.156	SD in Log Scale	0.749
95% t UCL (Assumes normality)	0.208	95% H-Stat UCL	0.21

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.284

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	0.126	Mean	0.208
Maximum	0.371	Median	0.191
SD	0.0595	Std. Error of Mean	0.00978
Coefficient of Variation	0.287	Skewness	0.897

Normal GOF Test

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.224	95% Adjusted-CLT UCL (Chen-1995)	0.225
		95% Modified-t UCL (Johnson-1978)	0.224

Gamma GOF Test

A-D Test Statistic	0.396	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0989	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.57	k star (bias corrected MLE)	12.48
Theta hat (MLE)	0.0153	Theta star (bias corrected MLE)	0.0166
nu hat (MLE)	1004	nu star (bias corrected)	923.9
MLE Mean (bias corrected)	0.208	MLE Sd (bias corrected)	0.0587
		Approximate Chi Square Value (0.05)	854.3
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	851.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.224	95% Adjusted Gamma UCL (use when n<50)	0.225

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0963	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.071	Mean of logged Data	-1.61
Maximum of Logged Data	-0.992	SD of logged Data	0.273

Assuming Lognormal Distribution

95% H-UCL	0.225	90% Chebyshev (MVUE) UCL	0.236
95% Chebyshev (MVUE) UCL	0.249	97.5% Chebyshev (MVUE) UCL	0.266
99% Chebyshev (MVUE) UCL	0.301		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.224	95% Jackknife UCL	0.224
95% Standard Bootstrap UCL	0.224	95% Bootstrap-t UCL	0.225

95% Hall's Bootstrap UCL	0.226	95% Percentile Bootstrap UCL	0.223
95% BCA Bootstrap UCL	0.224		
90% Chebyshev(Mean, Sd) UCL	0.237	95% Chebyshev(Mean, Sd) UCL	0.25
97.5% Chebyshev(Mean, Sd) UCL	0.269	99% Chebyshev(Mean, Sd) UCL	0.305

Suggested UCL to Use

95% Student's-t UCL 0.224

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Copper

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
		Number of Missing Observations	0
Minimum	3.55	Mean	57.34
Maximum	127	Median	52.5
SD	24.58	Std. Error of Mean	4.042
Coefficient of Variation	0.429	Skewness	1.058

Normal GOF Test

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.204	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	64.16	95% Adjusted-CLT UCL (Chen-1995)	64.74
		95% Modified-t UCL (Johnson-1978)	64.28

Gamma GOF Test

A-D Test Statistic	1.398	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.157	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.618	k star (bias corrected MLE)	4.262
Theta hat (MLE)	12.41	Theta star (bias corrected MLE)	13.45
nu hat (MLE)	341.8	nu star (bias corrected)	315.4
MLE Mean (bias corrected)	57.34	MLE Sd (bias corrected)	27.77
		Approximate Chi Square Value (0.05)	275.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	273.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	65.7	95% Adjusted Gamma UCL (use when n<50)	66.09

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.754	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.174	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.267	Mean of logged Data	3.937
Maximum of Logged Data	4.844	SD of logged Data	0.569

Assuming Lognormal Distribution

95% H-UCL	72.58	90% Chebyshev (MVUE) UCL	77.76
95% Chebyshev (MVUE) UCL	85.83	97.5% Chebyshev (MVUE) UCL	97.03
99% Chebyshev (MVUE) UCL	119		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	63.98	95% Jackknife UCL	64.16
95% Standard Bootstrap UCL	63.79	95% Bootstrap-t UCL	64.72

95% Hall's Bootstrap UCL	65	95% Percentile Bootstrap UCL	64.3
95% BCA Bootstrap UCL	64.81		
90% Chebyshev(Mean, Sd) UCL	69.46	95% Chebyshev(Mean, Sd) UCL	74.95
97.5% Chebyshev(Mean, Sd) UCL	82.58	99% Chebyshev(Mean, Sd) UCL	97.55

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	74.95

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Iron

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	21.6	Mean	64.13
Maximum	277	Median	44
SD	51.58	Std. Error of Mean	8.479
Coefficient of Variation	0.804	Skewness	2.696

Normal GOF Test

Shapiro Wilk Test Statistic	0.685	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.225	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	78.44	95% Adjusted-CLT UCL (Chen-1995)	82.09
		95% Modified-t UCL (Johnson-1978)	79.07

Gamma GOF Test

A-D Test Statistic	1.698	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.185	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.715	k star (bias corrected MLE)	2.513
Theta hat (MLE)	23.62	Theta star (bias corrected MLE)	25.52
nu hat (MLE)	200.9	nu star (bias corrected)	185.9
MLE Mean (bias corrected)	64.13	MLE Sd (bias corrected)	40.46
		Approximate Chi Square Value (0.05)	155.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	154.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	76.73	95% Adjusted Gamma UCL (use when n<50)	77.34

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.162	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.073	Mean of logged Data	3.966
Maximum of Logged Data	5.624	SD of logged Data	0.578

Assuming Lognormal Distribution

95% H-UCL	75.42	90% Chebyshev (MVUE) UCL	80.81
95% Chebyshev (MVUE) UCL	89.32	97.5% Chebyshev (MVUE) UCL	101.1
99% Chebyshev (MVUE) UCL	124.3		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	78.08	95% Jackknife UCL	78.44
95% Standard Bootstrap UCL	77.46	95% Bootstrap-t UCL	86.77

95% Hall's Bootstrap UCL	90.05	95% Percentile Bootstrap UCL	78.45
95% BCA Bootstrap UCL	81.36		
90% Chebyshev(Mean, Sd) UCL	89.57	95% Chebyshev(Mean, Sd) UCL	101.1
97.5% Chebyshev(Mean, Sd) UCL	117.1	99% Chebyshev(Mean, Sd) UCL	148.5

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	101.1

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	0.0721	Minimum Non-Detect	0.0257
Maximum Detect	2.52	Maximum Non-Detect	0.0257
Variance Detects	0.325	Percent Non-Detects	2.703%
Mean Detects	0.422	SD Detects	0.571
Median Detects	0.243	CV Detects	1.353
Skewness Detects	2.82	Kurtosis Detects	7.78
Mean of Logged Detects	-1.367	SD of Logged Detects	0.92

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.59	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.289	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.411	KM Standard Error of Mean	0.0931
KM SD	0.559	95% KM (BCA) UCL	0.585
95% KM (t) UCL	0.568	95% KM (Percentile Bootstrap) UCL	0.578
95% KM (z) UCL	0.564	95% KM Bootstrap t UCL	0.689
90% KM Chebyshev UCL	0.69	95% KM Chebyshev UCL	0.817
97.5% KM Chebyshev UCL	0.993	99% KM Chebyshev UCL	1.338

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.938	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.774	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.183	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.151	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.131	k star (bias corrected MLE)	1.055
Theta hat (MLE)	0.373	Theta star (bias corrected MLE)	0.399
nu hat (MLE)	81.45	nu star (bias corrected)	75.99
Mean (detects)	0.422		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.41
Maximum	2.52	Median	0.236
SD	0.567	CV	1.38
k hat (MLE)	1.021	k star (bias corrected MLE)	0.956
Theta hat (MLE)	0.402	Theta star (bias corrected MLE)	0.429
nu hat (MLE)	75.56	nu star (bias corrected)	70.76
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (70.76, α)	52.4	Adjusted Chi Square Value (70.76, β)	51.71
95% Gamma Approximate UCL (use when n>=50)	0.554	95% Gamma Adjusted UCL (use when n<50)	0.562

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.411	SD (KM)	0.559
Variance (KM)	0.312	SE of Mean (KM)	0.0931
k hat (KM)	0.541	k star (KM)	0.515

nu hat (KM)	40.05	nu star (KM)	38.13
theta hat (KM)	0.759	theta star (KM)	0.797
80% gamma percentile (KM)	0.676	90% gamma percentile (KM)	1.105
95% gamma percentile (KM)	1.562	99% gamma percentile (KM)	2.682

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (38.13, α)	24.99	Adjusted Chi Square Value (38.13, β)	24.53
95% Gamma Approximate KM-UCL (use when n>=50)	0.627	95% Gamma Adjusted KM-UCL (use when n<50)	0.639

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.411	Mean in Log Scale	-1.429
SD in Original Scale	0.566	SD in Log Scale	0.983
95% t UCL (assumes normality of ROS data)	0.568	95% Percentile Bootstrap UCL	0.567
95% BCA Bootstrap UCL	0.6	95% Bootstrap t UCL	0.723
95% H-UCL (Log ROS)	0.572		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.429	KM Geo Mean	0.24
KM SD (logged)	0.969	95% Critical H Value (KM-Log)	2.354
KM Standard Error of Mean (logged)	0.162	95% H-UCL (KM -Log)	0.56
KM SD (logged)	0.969	95% Critical H Value (KM-Log)	2.354
KM Standard Error of Mean (logged)	0.162		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.411	Mean in Log Scale	-1.448
SD in Original Scale	0.567	SD in Log Scale	1.031
95% t UCL (Assumes normality)	0.568	95% H-Stat UCL	0.607

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	0.56

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Manganese

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	1.96	Minimum Non-Detect	0.162
Maximum Detect	52.8	Maximum Non-Detect	0.162
Variance Detects	167.5	Percent Non-Detects	2.703%
Mean Detects	9.533	SD Detects	12.94
Median Detects	3.82	CV Detects	1.358
Skewness Detects	2.401	Kurtosis Detects	5.013
Mean of Logged Detects	1.723	SD of Logged Detects	0.919

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.589	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.35	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.279	KM Standard Error of Mean	2.114
KM SD	12.68	95% KM (BCA) UCL	13.14
95% KM (t) UCL	12.85	95% KM (Percentile Bootstrap) UCL	12.85
95% KM (z) UCL	12.76	95% KM Bootstrap t UCL	14.44
90% KM Chebyshev UCL	15.62	95% KM Chebyshev UCL	18.49
97.5% KM Chebyshev UCL	22.48	99% KM Chebyshev UCL	30.31

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.783	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.775	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.308	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.151	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.077	k star (bias corrected MLE)	1.005
Theta hat (MLE)	8.854	Theta star (bias corrected MLE)	9.481
nu hat (MLE)	77.52	nu star (bias corrected)	72.39
Mean (detects)	9.533		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	9.275
Maximum	52.8	Median	3.8
SD	12.86	CV	1.386
k hat (MLE)	0.869	k star (bias corrected MLE)	0.817
Theta hat (MLE)	10.67	Theta star (bias corrected MLE)	11.35
nu hat (MLE)	64.34	nu star (bias corrected)	60.46
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (60.46, α)	43.58	Adjusted Chi Square Value (60.46, β)	42.96
95% Gamma Approximate UCL (use when n>=50)	12.87	95% Gamma Adjusted UCL (use when n<50)	13.05

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.279	SD (KM)	12.68
Variance (KM)	160.8	SE of Mean (KM)	2.114
k hat (KM)	0.536	k star (KM)	0.51

nu hat (KM)	39.63	nu star (KM)	37.75
theta hat (KM)	17.33	theta star (KM)	18.19
80% gamma percentile (KM)	15.25	90% gamma percentile (KM)	25
95% gamma percentile (KM)	35.39	99% gamma percentile (KM)	60.9

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (37.75, α)	24.68	Adjusted Chi Square Value (37.75, β)	24.22
95% Gamma Approximate KM-UCL (use when n>=50)	14.19	95% Gamma Adjusted KM-UCL (use when n<50)	14.46

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.822	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.292	Mean in Log Scale	1.664
SD in Original Scale	12.85	SD in Log Scale	0.975
95% t UCL (assumes normality of ROS data)	12.86	95% Percentile Bootstrap UCL	12.82
95% BCA Bootstrap UCL	13.93	95% Bootstrap t UCL	14.64
95% H-UCL (Log ROS)	12.46		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.627	KM Geo Mean	5.09
KM SD (logged)	1.063	95% Critical H Value (KM-Log)	2.461
KM Standard Error of Mean (logged)	0.177	95% H-UCL (KM -Log)	13.84
KM SD (logged)	1.063	95% Critical H Value (KM-Log)	2.461
KM Standard Error of Mean (logged)	0.177		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	9.277	Mean in Log Scale	1.609
SD in Original Scale	12.86	SD in Log Scale	1.143
95% t UCL (Assumes normality)	12.85	95% H-Stat UCL	15.62

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	18.49

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Mercury

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.0312	Mean	0.0685
Maximum	0.134	Median	0.0635
SD	0.0214	Std. Error of Mean	0.00352
Coefficient of Variation	0.313	Skewness	0.959

Normal GOF Test

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.167	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.0744	95% Adjusted-CLT UCL (Chen-1995)	0.0749
		95% Modified-t UCL (Johnson-1978)	0.0745

Gamma GOF Test

A-D Test Statistic	0.678	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.33	k star (bias corrected MLE)	10.43
Theta hat (MLE)	0.00604	Theta star (bias corrected MLE)	0.00656
nu hat (MLE)	838.8	nu star (bias corrected)	772.1
MLE Mean (bias corrected)	0.0685	MLE Sd (bias corrected)	0.0212
		Approximate Chi Square Value (0.05)	708.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	706

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0746	95% Adjusted Gamma UCL (use when n<50)	0.0749

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.113	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.467	Mean of logged Data	-2.726
Maximum of Logged Data	-2.01	SD of logged Data	0.301

Assuming Lognormal Distribution

95% H-UCL	0.0749	90% Chebyshev (MVUE) UCL	0.0788
95% Chebyshev (MVUE) UCL	0.0834	97.5% Chebyshev (MVUE) UCL	0.09
99% Chebyshev (MVUE) UCL	0.103		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0743	95% Jackknife UCL	0.0744
95% Standard Bootstrap UCL	0.0743	95% Bootstrap-t UCL	0.0748

95% Hall's Bootstrap UCL	0.0752	95% Percentile Bootstrap UCL	0.0745
95% BCA Bootstrap UCL	0.0749		
90% Chebyshev(Mean, Sd) UCL	0.079	95% Chebyshev(Mean, Sd) UCL	0.0838
97.5% Chebyshev(Mean, Sd) UCL	0.0905	99% Chebyshev(Mean, Sd) UCL	0.104

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0749

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Methyl Mercury

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	0.012	Mean	0.0532
Maximum	0.113	Median	0.051
SD	0.0209	Std. Error of Mean	0.00343
Coefficient of Variation	0.392	Skewness	0.908

Normal GOF Test

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.059	95% Adjusted-CLT UCL (Chen-1995)	0.0594
		95% Modified-t UCL (Johnson-1978)	0.0591

Gamma GOF Test

A-D Test Statistic	0.434	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0976	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.678	k star (bias corrected MLE)	6.154
Theta hat (MLE)	0.00797	Theta star (bias corrected MLE)	0.00865
nu hat (MLE)	494.1	nu star (bias corrected)	455.4
MLE Mean (bias corrected)	0.0532	MLE Sd (bias corrected)	0.0215
		Approximate Chi Square Value (0.05)	406.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	404.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0596	95% Adjusted Gamma UCL (use when n<50)	0.0598

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0921	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.423	Mean of logged Data	-3.01
Maximum of Logged Data	-2.18	SD of logged Data	0.413

Assuming Lognormal Distribution

95% H-UCL	0.0609	90% Chebyshev (MVUE) UCL	0.0648
95% Chebyshev (MVUE) UCL	0.0699	97.5% Chebyshev (MVUE) UCL	0.0769
99% Chebyshev (MVUE) UCL	0.0908		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0589	95% Jackknife UCL	0.059
95% Standard Bootstrap UCL	0.0587	95% Bootstrap-t UCL	0.0603

95% Hall's Bootstrap UCL	0.0594	95% Percentile Bootstrap UCL	0.0588
95% BCA Bootstrap UCL	0.0599		
90% Chebyshev(Mean, Sd) UCL	0.0635	95% Chebyshev(Mean, Sd) UCL	0.0682
97.5% Chebyshev(Mean, Sd) UCL	0.0746	99% Chebyshev(Mean, Sd) UCL	0.0873

Suggested UCL to Use

95% Student's-t UCL 0.059

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Selenium

General Statistics

Total Number of Observations	37	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	0.71	Mean	1.7
Maximum	2.58	Median	1.74
SD	0.436	Std. Error of Mean	0.0717
Coefficient of Variation	0.257	Skewness	-0.154

Normal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.821	95% Adjusted-CLT UCL (Chen-1995)	1.816
		95% Modified-t UCL (Johnson-1978)	1.821

Gamma GOF Test

A-D Test Statistic	0.626	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.1	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.68	k star (bias corrected MLE)	12.59
Theta hat (MLE)	0.124	Theta star (bias corrected MLE)	0.135
nu hat (MLE)	1012	nu star (bias corrected)	931.3
MLE Mean (bias corrected)	1.7	MLE Sd (bias corrected)	0.479
		Approximate Chi Square Value (0.05)	861.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	858.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.838	95% Adjusted Gamma UCL (use when n<50)	1.844

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.342	Mean of logged Data	0.494
Maximum of Logged Data	0.948	SD of logged Data	0.289

Assuming Lognormal Distribution

95% H-UCL	1.862	90% Chebyshev (MVUE) UCL	1.954
95% Chebyshev (MVUE) UCL	2.066	97.5% Chebyshev (MVUE) UCL	2.222
99% Chebyshev (MVUE) UCL	2.527		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.818	95% Jackknife UCL	1.821
95% Standard Bootstrap UCL	1.82	95% Bootstrap-t UCL	1.824

95% Hall's Bootstrap UCL	1.823	95% Percentile Bootstrap UCL	1.816
95% BCA Bootstrap UCL	1.818		
90% Chebyshev(Mean, Sd) UCL	1.915	95% Chebyshev(Mean, Sd) UCL	2.013
97.5% Chebyshev(Mean, Sd) UCL	2.148	99% Chebyshev(Mean, Sd) UCL	2.414

Suggested UCL to Use

95% Student's-t UCL 1.821

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Silver

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	0.0686	Mean	1.628
Maximum	3.87	Median	1.49
SD	0.76	Std. Error of Mean	0.125
Coefficient of Variation	0.467	Skewness	1.054

Normal GOF Test

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.177	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	1.838	95% Adjusted-CLT UCL (Chen-1995)	1.856
		95% Modified-t UCL (Johnson-1978)	1.842

Gamma GOF Test

A-D Test Statistic	0.952	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.124	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.747	k star (bias corrected MLE)	3.461
Theta hat (MLE)	0.434	Theta star (bias corrected MLE)	0.47
nu hat (MLE)	277.3	nu star (bias corrected)	256.1
MLE Mean (bias corrected)	1.628	MLE Sd (bias corrected)	0.875
		Approximate Chi Square Value (0.05)	220.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	218.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1.894	95% Adjusted Gamma UCL (use when n<50)	1.907

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.77	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.176	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.679	Mean of logged Data	0.348
Maximum of Logged Data	1.353	SD of logged Data	0.65

Assuming Lognormal Distribution

95% H-UCL	2.18	90% Chebyshev (MVUE) UCL	2.336
95% Chebyshev (MVUE) UCL	2.608	97.5% Chebyshev (MVUE) UCL	2.984
99% Chebyshev (MVUE) UCL	3.724		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.833	95% Jackknife UCL	1.838
95% Standard Bootstrap UCL	1.826	95% Bootstrap-t UCL	1.871

95% Hall's Bootstrap UCL	1.89	95% Percentile Bootstrap UCL	1.829
95% BCA Bootstrap UCL	1.861		
90% Chebyshev(Mean, Sd) UCL	2.002	95% Chebyshev(Mean, Sd) UCL	2.172
97.5% Chebyshev(Mean, Sd) UCL	2.407	99% Chebyshev(Mean, Sd) UCL	2.87

Suggested UCL to Use

95% Adjusted Gamma UCL 1.907

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Vanadium

General Statistics

Total Number of Observations	37	Number of Distinct Observations	36
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	0.0678	Minimum Non-Detect	0.0291
Maximum Detect	0.449	Maximum Non-Detect	0.0291
Variance Detects	0.00666	Percent Non-Detects	2.703%
Mean Detects	0.151	SD Detects	0.0816
Median Detects	0.119	CV Detects	0.542
Skewness Detects	2.098	Kurtosis Detects	5.105
Mean of Logged Detects	-2	SD of Logged Detects	0.44

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.78	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.147	KM Standard Error of Mean	0.0136
KM SD	0.0818	95% KM (BCA) UCL	0.171
95% KM (t) UCL	0.17	95% KM (Percentile Bootstrap) UCL	0.17
95% KM (z) UCL	0.17	95% KM Bootstrap t UCL	0.178
90% KM Chebyshev UCL	0.188	95% KM Chebyshev UCL	0.207
97.5% KM Chebyshev UCL	0.232	99% KM Chebyshev UCL	0.283

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.213	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.75	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.178	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.147	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.887	k star (bias corrected MLE)	4.499
Theta hat (MLE)	0.0308	Theta star (bias corrected MLE)	0.0335
nu hat (MLE)	351.9	nu star (bias corrected)	323.9
Mean (detects)	0.151		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0106	Mean	0.147
Maximum	0.449	Median	0.118
SD	0.0837	CV	0.57
k hat (MLE)	3.512	k star (bias corrected MLE)	3.245
Theta hat (MLE)	0.0418	Theta star (bias corrected MLE)	0.0452
nu hat (MLE)	259.9	nu star (bias corrected)	240.1
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (240.13, α)	205.3	Adjusted Chi Square Value (240.13, β)	203.9
95% Gamma Approximate UCL (use when n>=50)	0.172	95% Gamma Adjusted UCL (use when n<50)	0.173

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.147	SD (KM)	0.0818
Variance (KM)	0.00669	SE of Mean (KM)	0.0136
k hat (KM)	3.24	k star (KM)	2.995

nu hat (KM)	239.8	nu star (KM)	221.7
theta hat (KM)	0.0454	theta star (KM)	0.0492
80% gamma percentile (KM)	0.21	90% gamma percentile (KM)	0.261
95% gamma percentile (KM)	0.309	99% gamma percentile (KM)	0.413

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (221.66, α)	188.2	Adjusted Chi Square Value (221.66, β)	186.9
95% Gamma Approximate KM-UCL (use when n>=50)	0.173	95% Gamma Adjusted KM-UCL (use when n<50)	0.175

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.148	Mean in Log Scale	-2.029
SD in Original Scale	0.0823	SD in Log Scale	0.47
95% t UCL (assumes normality of ROS data)	0.171	95% Percentile Bootstrap UCL	0.171
95% BCA Bootstrap UCL	0.174	95% Bootstrap t UCL	0.18
95% H-UCL (Log ROS)	0.17		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.041	KM Geo Mean	0.13
KM SD (logged)	0.495	95% Critical H Value (KM-Log)	1.909
KM Standard Error of Mean (logged)	0.0826	95% H-UCL (KM -Log)	0.172
KM SD (logged)	0.495	95% Critical H Value (KM-Log)	1.909
KM Standard Error of Mean (logged)	0.0826		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.147	Mean in Log Scale	-2.06
SD in Original Scale	0.0835	SD in Log Scale	0.568
95% t UCL (Assumes normality)	0.17	95% H-Stat UCL	0.18

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.17	KM H-UCL	0.172
95% KM (BCA) UCL	0.171		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Zinc

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	22.6	Mean	42.49
Maximum	82.4	Median	34.6
SD	18.08	Std. Error of Mean	2.972
Coefficient of Variation	0.425	Skewness	0.81

Normal GOF Test

Shapiro Wilk Test Statistic	0.87	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	47.51	95% Adjusted-CLT UCL (Chen-1995)	47.81
		95% Modified-t UCL (Johnson-1978)	47.58

Gamma GOF Test

A-D Test Statistic	1.187	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.164	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.253	k star (bias corrected MLE)	5.764
Theta hat (MLE)	6.796	Theta star (bias corrected MLE)	7.372
nu hat (MLE)	462.7	nu star (bias corrected)	426.5
MLE Mean (bias corrected)	42.49	MLE Sd (bias corrected)	17.7
		Approximate Chi Square Value (0.05)	379.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	377.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	47.74	95% Adjusted Gamma UCL (use when n<50)	47.98

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.141	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.118	Mean of logged Data	3.667
Maximum of Logged Data	4.412	SD of logged Data	0.404

Assuming Lognormal Distribution

95% H-UCL	48.11	90% Chebyshev (MVUE) UCL	51.09
95% Chebyshev (MVUE) UCL	55.04	97.5% Chebyshev (MVUE) UCL	60.52
99% Chebyshev (MVUE) UCL	71.28		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	47.38	95% Jackknife UCL	47.51
95% Standard Bootstrap UCL	47.23	95% Bootstrap-t UCL	47.78

95% Hall's Bootstrap UCL	47.84	95% Percentile Bootstrap UCL	47.57
95% BCA Bootstrap UCL	47.64		
90% Chebyshev(Mean, Sd) UCL	51.41	95% Chebyshev(Mean, Sd) UCL	55.45
97.5% Chebyshev(Mean, Sd) UCL	61.05	99% Chebyshev(Mean, Sd) UCL	72.07

Suggested UCL to Use

95% Student's-t UCL	47.51	or 95% Modified-t UCL	47.58
or 95% H-UCL	48.11		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.11/29/17 2:27:58 PM
From File	crb_hep8_SVOC_wide2_flag_sep_ss.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	36	Number of Distinct Observations	23
Number of Detects	25	Number of Non-Detects	11
Number of Distinct Detects	22	Number of Distinct Non-Detects	2
Minimum Detect	0.36	Minimum Non-Detect	1.3
Maximum Detect	5.2	Maximum Non-Detect	2.6
Variance Detects	2.332	Percent Non-Detects	30.56%
Mean Detects	2.683	SD Detects	1.527
Median Detects	2.6	CV Detects	0.569
Skewness Detects	0.0431	Kurtosis Detects	-1.266
Mean of Logged Detects	0.757	SD of Logged Detects	0.783

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.938	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.136	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.086	KM Standard Error of Mean	0.268
KM SD	1.554	95% KM (BCA) UCL	2.544
95% KM (t) UCL	2.539	95% KM (Percentile Bootstrap) UCL	2.538
95% KM (z) UCL	2.527	95% KM Bootstrap t UCL	2.546
90% KM Chebyshev UCL	2.89	95% KM Chebyshev UCL	3.254
97.5% KM Chebyshev UCL	3.76	99% KM Chebyshev UCL	4.753

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.661	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.147	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.176	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.326	k star (bias corrected MLE)	2.074
Theta hat (MLE)	1.154	Theta star (bias corrected MLE)	1.294
nu hat (MLE)	116.3	nu star (bias corrected)	103.7
Mean (detects)	2.683		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.199	Mean	2.147
Maximum	5.2	Median	1.731
SD	1.527	CV	0.711
k hat (MLE)	1.786	k star (bias corrected MLE)	1.656
Theta hat (MLE)	1.202	Theta star (bias corrected MLE)	1.297

nu hat (MLE)	128.6	nu star (bias corrected)	119.2
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (119.21, α)	95	Adjusted Chi Square Value (119.21, β)	94.02
95% Gamma Approximate UCL (use when n>=50)	2.694	95% Gamma Adjusted UCL (use when n<50)	2.722

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.086	SD (KM)	1.554
Variance (KM)	2.416	SE of Mean (KM)	0.268
k hat (KM)	1.802	k star (KM)	1.67
nu hat (KM)	129.7	nu star (KM)	120.2
theta hat (KM)	1.158	theta star (KM)	1.249
80% gamma percentile (KM)	3.189	90% gamma percentile (KM)	4.235
95% gamma percentile (KM)	5.244	99% gamma percentile (KM)	7.507

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (120.24, α)	95.92	Adjusted Chi Square Value (120.24, β)	94.93
95% Gamma Approximate KM-UCL (use when n>=50)	2.615	95% Gamma Adjusted KM-UCL (use when n<50)	2.642

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.885	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.152	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.114	Mean in Log Scale	0.441
SD in Original Scale	1.545	SD in Log Scale	0.84
95% t UCL (assumes normality of ROS data)	2.549	95% Percentile Bootstrap UCL	2.537
95% BCA Bootstrap UCL	2.586	95% Bootstrap t UCL	2.588
95% H-UCL (Log ROS)	3.027		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.391	KM Geo Mean	1.479
KM SD (logged)	0.886	95% Critical H Value (KM-Log)	2.258
KM Standard Error of Mean (logged)	0.164	95% H-UCL (KM -Log)	3.069
KM SD (logged)	0.886	95% Critical H Value (KM-Log)	2.258
KM Standard Error of Mean (logged)	0.164		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.116	Mean in Log Scale	0.452
SD in Original Scale	1.542	SD in Log Scale	0.818
95% t UCL (Assumes normality)	2.55	95% H-Stat UCL	2.97

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.539

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Pyridine

General Statistics

Total Number of Observations	36	Number of Distinct Observations	9
Number of Detects	6	Number of Non-Detects	30
Number of Distinct Detects	5	Number of Distinct Non-Detects	4
Minimum Detect	0.41	Minimum Non-Detect	0.26
Maximum Detect	1.2	Maximum Non-Detect	2.6
Variance Detects	0.0709	Percent Non-Detects	83.33%
Mean Detects	0.772	SD Detects	0.266
Median Detects	0.775	CV Detects	0.345
Skewness Detects	0.451	Kurtosis Detects	0.9
Mean of Logged Detects	-0.312	SD of Logged Detects	0.362

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.218	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.601	KM Standard Error of Mean	0.114
KM SD	0.312	95% KM (BCA) UCL	0.785
95% KM (t) UCL	0.794	95% KM (Percentile Bootstrap) UCL	0.784
95% KM (z) UCL	0.789	95% KM Bootstrap t UCL	0.789
90% KM Chebyshev UCL	0.943	95% KM Chebyshev UCL	1.098
97.5% KM Chebyshev UCL	1.313	99% KM Chebyshev UCL	1.736

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.222	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.173	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.332	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.724	k star (bias corrected MLE)	4.973
Theta hat (MLE)	0.0794	Theta star (bias corrected MLE)	0.155
nu hat (MLE)	116.7	nu star (bias corrected)	59.68
Mean (detects)	0.772		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.578
Maximum	1.424	Median	0.554
SD	0.36	CV	0.624
k hat (MLE)	1.724	k star (bias corrected MLE)	1.599
Theta hat (MLE)	0.335	Theta star (bias corrected MLE)	0.361
nu hat (MLE)	124.1	nu star (bias corrected)	115.1
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (115.11, α)	91.34	Adjusted Chi Square Value (115.11, β)	90.38
95% Gamma Approximate UCL (use when n>=50)	0.728	95% Gamma Adjusted UCL (use when n<50)	0.736

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.601	SD (KM)	0.312
Variance (KM)	0.0976	SE of Mean (KM)	0.114
k hat (KM)	3.703	k star (KM)	3.413

nu hat (KM)	266.6	nu star (KM)	245.7
theta hat (KM)	0.162	theta star (KM)	0.176
80% gamma percentile (KM)	0.844	90% gamma percentile (KM)	1.037
95% gamma percentile (KM)	1.216	99% gamma percentile (KM)	1.602

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (245.71, α)	210.4	Adjusted Chi Square Value (245.71, β)	208.9
95% Gamma Approximate KM-UCL (use when n>=50)	0.702	95% Gamma Adjusted KM-UCL (use when n<50)	0.707

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.618	Mean in Log Scale	-0.62
SD in Original Scale	0.336	SD in Log Scale	0.541
95% t UCL (assumes normality of ROS data)	0.713	95% Percentile Bootstrap UCL	0.708
95% BCA Bootstrap UCL	0.72	95% Bootstrap t UCL	0.732
95% H-UCL (Log ROS)	0.744		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.657	KM Geo Mean	0.519
KM SD (logged)	0.558	95% Critical H Value (KM-Log)	1.954
KM Standard Error of Mean (logged)	0.204	95% H-UCL (KM -Log)	0.728
KM SD (logged)	0.558	95% Critical H Value (KM-Log)	1.954
KM Standard Error of Mean (logged)	0.204		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.681	Mean in Log Scale	-0.486
SD in Original Scale	0.266	SD in Log Scale	0.527
95% t UCL (Assumes normality)	0.756	95% H-Stat UCL	0.839

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.794

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Blue Crab – Muscle and Hepatopancreas

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 1:40:13 PM
From File	crb_hepmus1_dlc_wide2_flag_sep_ss_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	5.0514E-6	Mean	2.3772E-5
Maximum	4.4854E-5	Median	2.3258E-5
SD	9.1047E-6	Std. Error of Mean	1.4968E-6
Coefficient of Variation	N/A	Skewness	0.289

Normal GOF Test

Shapiro Wilk Test Statistic	0.984	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0681	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.6299E-5	95% Adjusted-CLT UCL (Chen-1995)	2.6310E-5
		95% Modified-t UCL (Johnson-1978)	2.6311E-5

Gamma GOF Test

A-D Test Statistic	0.196	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0734	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.157	k star (bias corrected MLE)	5.676
Theta hat (MLE)	3.8608E-6	Theta star (bias corrected MLE)	4.1881E-6
nu hat (MLE)	455.6	nu star (bias corrected)	420
MLE Mean (bias corrected)	2.3772E-5	MLE Sd (bias corrected)	9.9780E-6
		Approximate Chi Square Value (0.05)	373.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	371.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.6732E-5	95% Adjusted Gamma UCL (use when n<50)	2.6869E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0963	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.2	Mean of logged Data	-10.73
Maximum of Logged Data	-10.01	SD of logged Data	0.441

Assuming Lognormal Distribution

95% H-UCL	2.7666E-5	90% Chebyshev (MVUE) UCL	2.9467E-5
95% Chebyshev (MVUE) UCL	3.1926E-5	97.5% Chebyshev (MVUE) UCL	3.5339E-5
99% Chebyshev (MVUE) UCL	4.2042E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.6234E-5	95% Jackknife UCL	2.6299E-5
95% Standard Bootstrap UCL	2.6287E-5	95% Bootstrap-t UCL	2.6370E-5
95% Hall's Bootstrap UCL	2.6357E-5	95% Percentile Bootstrap UCL	2.6303E-5
95% BCA Bootstrap UCL	2.6336E-5		
90% Chebyshev(Mean, Sd) UCL	2.8263E-5	95% Chebyshev(Mean, Sd) UCL	3.0297E-5
97.5% Chebyshev(Mean, Sd) UCL	3.3120E-5	99% Chebyshev(Mean, Sd) UCL	3.8665E-5

Suggested UCL to Use

95% Student's-t UCL 2.6299E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	36	Number of Distinct Non-Detects	1
Minimum Detect	6.9870E-8	Minimum Non-Detect	3.9774E-8
Maximum Detect	1.2606E-6	Maximum Non-Detect	3.9774E-8
Variance Detects	1.003E-13	Percent Non-Detects	2.703%
Mean Detects	6.1574E-7	SD Detects	3.1673E-7
Median Detects	6.7918E-7	CV Detects	N/A
Skewness Detects	-0.442	Kurtosis Detects	-0.451
Mean of Logged Detects	-14.56	SD of Logged Detects	0.891

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.14	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.0017E-7	KM Standard Error of Mean	5.3671E-8
KM SD	3.2190E-7	95% KM (BCA) UCL	6.8130E-7
95% KM (t) UCL	6.9078E-7	95% KM (Percentile Bootstrap) UCL	6.8642E-7
95% KM (z) UCL	6.8845E-7	95% KM Bootstrap t UCL	6.8964E-7
90% KM Chebyshev UCL	7.6118E-7	95% KM Chebyshev UCL	8.3412E-7
97.5% KM Chebyshev UCL	9.3534E-7	99% KM Chebyshev UCL	1.1342E-6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.003	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.759	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.228	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.149	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.079	k star (bias corrected MLE)	1.924
Theta hat (MLE)	2.9615E-7	Theta star (bias corrected MLE)	3.1996E-7
nu hat (MLE)	149.7	nu star (bias corrected)	138.6
Mean (detects)	6.1574E-7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	6.9870E-8	Mean	2.7087E-4
Maximum	0.01	Median	6.8662E-7
SD	0.00164	CV	6.069
k hat (MLE)	0.129	k star (bias corrected MLE)	0.137
Theta hat (MLE)	0.0021	Theta star (bias corrected MLE)	0.00198
nu hat (MLE)	9.56	nu star (bias corrected)	10.12
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (10.12, α)	4.016	Adjusted Chi Square Value (10.12, β)	3.849
95% Gamma Approximate UCL (use when n>=50)	6.8249E-4	95% Gamma Adjusted UCL (use when n<50)	7.1196E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.0017E-7	SD (KM)	3.2190E-7
Variance (KM)	1.036E-13	SE of Mean (KM)	5.3671E-8
k hat (KM)	3.476	k star (KM)	3.212

nu hat (KM)	257.2	nu star (KM)	237.7
theta hat (KM)	1.7265E-7	theta star (KM)	1.8683E-7
80% gamma percentile (KM)	8.4910E-7	90% gamma percentile (KM)	1.0492E-6
95% gamma percentile (KM)	1.2353E-6	99% gamma percentile (KM)	1.6371E-6

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (237.71, α)	203	Adjusted Chi Square Value (237.71, β)	201.6
95% Gamma Approximate KM-UCL (use when n>=50)	7.0273E-7	95% Gamma Adjusted KM-UCL (use when n<50)	7.0757E-7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.74	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.276	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.0090E-7	Mean in Log Scale	-14.61
SD in Original Scale	3.2508E-7	SD in Log Scale	0.936
95% t UCL (assumes normality of ROS data)	6.9113E-7	95% Percentile Bootstrap UCL	6.8684E-7
95% BCA Bootstrap UCL	6.8365E-7	95% Bootstrap t UCL	6.8980E-7
95% H-UCL (Log ROS)	1.0015E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-14.63	KM Geo Mean	4.4427E-7
KM SD (logged)	0.955	95% Critical H Value (KM-Log)	2.338
KM Standard Error of Mean (logged)	0.159	95% H-UCL (KM -Log)	1.0170E-6
KM SD (logged)	0.955	95% Critical H Value (KM-Log)	2.338
KM Standard Error of Mean (logged)	0.159		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.9963E-7	Mean in Log Scale	-14.65
SD in Original Scale	3.2731E-7	SD in Log Scale	1.021
95% t UCL (Assumes normality)	6.9048E-7	95% H-Stat UCL	1.1079E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 6.9078E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	9.9002E-8	Mean	1.8805E-7
Maximum	2.9423E-7	Median	1.8203E-7
SD	4.4719E-8	Std. Error of Mean	7.3518E-9
Coefficient of Variation	N/A	Skewness	0.349

Normal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.0046E-7	95% Adjusted-CLT UCL (Chen-1995)	2.0059E-7
		95% Modified-t UCL (Johnson-1978)	2.0053E-7

Gamma GOF Test

A-D Test Statistic	0.4	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	18.1	k star (bias corrected MLE)	16.65
Theta hat (MLE)	1.0390E-8	Theta star (bias corrected MLE)	1.1295E-8
nu hat (MLE)	1339	nu star (bias corrected)	1232
MLE Mean (bias corrected)	1.8805E-7	MLE Sd (bias corrected)	4.6087E-8
		Approximate Chi Square Value (0.05)	1152
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1148

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.0119E-7	95% Adjusted Gamma UCL (use when n<50)	2.0178E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.13	Mean of logged Data	-15.51
Maximum of Logged Data	-15.04	SD of logged Data	0.241

Assuming Lognormal Distribution

95% H-UCL	2.0204E-7	90% Chebyshev (MVUE) UCL	2.1077E-7
95% Chebyshev (MVUE) UCL	2.2103E-7	97.5% Chebyshev (MVUE) UCL	2.3526E-7
99% Chebyshev (MVUE) UCL	2.6322E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0014E-7	95% Jackknife UCL	2.0046E-7
95% Standard Bootstrap UCL	1.9987E-7	95% Bootstrap-t UCL	2.0036E-7

95% Hall's Bootstrap UCL	2.0000E-7	95% Percentile Bootstrap UCL	2.0013E-7
95% BCA Bootstrap UCL	2.0142E-7		
90% Chebyshev(Mean, Sd) UCL	2.1010E-7	95% Chebyshev(Mean, Sd) UCL	2.2009E-7
97.5% Chebyshev(Mean, Sd) UCL	2.3396E-7	99% Chebyshev(Mean, Sd) UCL	2.6120E-7

Suggested UCL to Use

95% Student's-t UCL 2.0046E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	3.2382E-7	Mean	5.5376E-7
Maximum	8.8476E-7	Median	5.7077E-7
SD	1.3590E-7	Std. Error of Mean	2.2342E-8
Coefficient of Variation	N/A	Skewness	0.216

Normal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0939	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	5.9148E-7	95% Adjusted-CLT UCL (Chen-1995)	5.9136E-7
		95% Modified-t UCL (Johnson-1978)	5.9161E-7

Gamma GOF Test

A-D Test Statistic	0.438	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	16.68	k star (bias corrected MLE)	15.34
Theta hat (MLE)	3.3203E-8	Theta star (bias corrected MLE)	3.6090E-8
nu hat (MLE)	1234	nu star (bias corrected)	1135
MLE Mean (bias corrected)	5.5376E-7	MLE Sd (bias corrected)	1.4137E-7
		Approximate Chi Square Value (0.05)	1058
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1055

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	5.9417E-7	95% Adjusted Gamma UCL (use when n<50)	5.9599E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.94	Mean of logged Data	-14.44
Maximum of Logged Data	-13.94	SD of logged Data	0.252

Assuming Lognormal Distribution

95% H-UCL	5.9725E-7	90% Chebyshev (MVUE) UCL	6.2397E-7
95% Chebyshev (MVUE) UCL	6.5561E-7	97.5% Chebyshev (MVUE) UCL	6.9951E-7
99% Chebyshev (MVUE) UCL	7.8575E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	5.9051E-7	95% Jackknife UCL	5.9148E-7
95% Standard Bootstrap UCL	5.9044E-7	95% Bootstrap-t UCL	5.9304E-7

95% Hall's Bootstrap UCL	5.9254E-7	95% Percentile Bootstrap UCL	5.9001E-7
95% BCA Bootstrap UCL	5.8968E-7		
90% Chebyshev(Mean, Sd) UCL	6.2079E-7	95% Chebyshev(Mean, Sd) UCL	6.5115E-7
97.5% Chebyshev(Mean, Sd) UCL	6.9329E-7	99% Chebyshev(Mean, Sd) UCL	7.7606E-7

Suggested UCL to Use

95% Student's-t UCL 5.9148E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.2354E-7	Mean	1.9819E-7
Maximum	2.8843E-7	Median	1.8493E-7
SD	4.2727E-8	Std. Error of Mean	7.0242E-9
Coefficient of Variation	N/A	Skewness	0.301

Normal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.135	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.1005E-7	95% Adjusted-CLT UCL (Chen-1995)	2.1012E-7
		95% Modified-t UCL (Johnson-1978)	2.1011E-7

Gamma GOF Test

A-D Test Statistic	0.357	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.113	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	22.16	k star (bias corrected MLE)	20.38
Theta hat (MLE)	8.9457E-9	Theta star (bias corrected MLE)	9.7264E-9
nu hat (MLE)	1639	nu star (bias corrected)	1508
MLE Mean (bias corrected)	1.9819E-7	MLE Sd (bias corrected)	4.3906E-8
		Approximate Chi Square Value (0.05)	1419
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1415

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1065E-7	95% Adjusted Gamma UCL (use when n<50)	2.1121E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.91	Mean of logged Data	-15.46
Maximum of Logged Data	-15.06	SD of logged Data	0.217

Assuming Lognormal Distribution

95% H-UCL	2.1126E-7	90% Chebyshev (MVUE) UCL	2.1963E-7
95% Chebyshev (MVUE) UCL	2.2933E-7	97.5% Chebyshev (MVUE) UCL	2.4279E-7
99% Chebyshev (MVUE) UCL	2.6923E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0975E-7	95% Jackknife UCL	2.1005E-7
95% Standard Bootstrap UCL	2.0971E-7	95% Bootstrap-t UCL	2.1039E-7

95% Hall's Bootstrap UCL	2.1032E-7	95% Percentile Bootstrap UCL	2.0928E-7
95% BCA Bootstrap UCL	2.1018E-7		
90% Chebyshev(Mean, Sd) UCL	2.1927E-7	95% Chebyshev(Mean, Sd) UCL	2.2881E-7
97.5% Chebyshev(Mean, Sd) UCL	2.4206E-7	99% Chebyshev(Mean, Sd) UCL	2.6808E-7

Suggested UCL to Use

95% Student's-t UCL 2.1005E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	3.9896E-7	Mean	6.3775E-7
Maximum	9.3780E-7	Median	6.3390E-7
SD	1.5381E-7	Std. Error of Mean	2.5286E-8
Coefficient of Variation	N/A	Skewness	0.197

Normal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0808	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.8044E-7	95% Adjusted-CLT UCL (Chen-1995)	6.8022E-7
		95% Modified-t UCL (Johnson-1978)	6.8058E-7

Gamma GOF Test

A-D Test Statistic	0.408	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	17.28	k star (bias corrected MLE)	15.89
Theta hat (MLE)	3.6914E-8	Theta star (bias corrected MLE)	4.0126E-8
nu hat (MLE)	1278	nu star (bias corrected)	1176
MLE Mean (bias corrected)	6.3775E-7	MLE Sd (bias corrected)	1.5997E-7
		Approximate Chi Square Value (0.05)	1098
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1094

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	6.8344E-7	95% Adjusted Gamma UCL (use when n<50)	6.8549E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.73	Mean of logged Data	-14.29
Maximum of Logged Data	-13.88	SD of logged Data	0.248

Assuming Lognormal Distribution

95% H-UCL	6.8680E-7	90% Chebyshev (MVUE) UCL	7.1709E-7
95% Chebyshev (MVUE) UCL	7.5285E-7	97.5% Chebyshev (MVUE) UCL	8.0248E-7
99% Chebyshev (MVUE) UCL	8.9996E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.7934E-7	95% Jackknife UCL	6.8044E-7
95% Standard Bootstrap UCL	6.7899E-7	95% Bootstrap-t UCL	6.8230E-7

95% Hall's Bootstrap UCL	6.8208E-7	95% Percentile Bootstrap UCL	6.7793E-7
95% BCA Bootstrap UCL	6.7910E-7		
90% Chebyshev(Mean, Sd) UCL	7.1361E-7	95% Chebyshev(Mean, Sd) UCL	7.4797E-7
97.5% Chebyshev(Mean, Sd) UCL	7.9566E-7	99% Chebyshev(Mean, Sd) UCL	8.8934E-7

Suggested UCL to Use

95% Student's-t UCL 6.8044E-7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	9.2232E-7	Mean	1.7701E-6
Maximum	5.9471E-6	Median	1.6166E-6
SD	7.9326E-7	Std. Error of Mean	1.3041E-7
Coefficient of Variation	N/A	Skewness	4.263

Normal GOF Test

Shapiro Wilk Test Statistic	0.582	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.279	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.9903E-6	95% Adjusted-CLT UCL (Chen-1995)	2.0822E-6
		95% Modified-t UCL (Johnson-1978)	2.0055E-6

Gamma GOF Test

A-D Test Statistic	2.124	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.217	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.097	k star (bias corrected MLE)	8.378
Theta hat (MLE)	1.9457E-7	Theta star (bias corrected MLE)	2.1129E-7
nu hat (MLE)	673.2	nu star (bias corrected)	619.9
MLE Mean (bias corrected)	1.7701E-6	MLE Sd (bias corrected)	6.1155E-7
		Approximate Chi Square Value (0.05)	563.2
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	560.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.9485E-6	95% Adjusted Gamma UCL (use when n<50)	1.9566E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.857	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.184	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.9	Mean of logged Data	-13.3
Maximum of Logged Data	-12.03	SD of logged Data	0.305

Assuming Lognormal Distribution

95% H-UCL	1.9199E-6	90% Chebyshev (MVUE) UCL	2.0189E-6
95% Chebyshev (MVUE) UCL	2.1403E-6	97.5% Chebyshev (MVUE) UCL	2.3087E-6
99% Chebyshev (MVUE) UCL	2.6396E-6		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1.9846E-6	95% Jackknife UCL	1.9903E-6
95% Standard Bootstrap UCL	1.9804E-6	95% Bootstrap-t UCL	2.2085E-6

95% Hall's Bootstrap UCL	2.9126E-6	95% Percentile Bootstrap UCL	1.9990E-6
95% BCA Bootstrap UCL	2.0987E-6		
90% Chebyshev(Mean, Sd) UCL	2.1613E-6	95% Chebyshev(Mean, Sd) UCL	2.3385E-6
97.5% Chebyshev(Mean, Sd) UCL	2.5845E-6	99% Chebyshev(Mean, Sd) UCL	3.0676E-6

Suggested UCL to Use

95% Student's-t UCL	1.9903E-6	or 95% Modified-t UCL	2.0055E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	5.8172E-6	Mean	9.1425E-6
Maximum	1.5973E-5	Median	8.9780E-6
SD	1.8781E-6	Std. Error of Mean	3.0876E-7
Coefficient of Variation	N/A	Skewness	1.286

Normal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.6637E-6	95% Adjusted-CLT UCL (Chen-1995)	9.7201E-6
		95% Modified-t UCL (Johnson-1978)	9.6746E-6

Gamma GOF Test

A-D Test Statistic	0.307	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0754	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	26.54	k star (bias corrected MLE)	24.41
Theta hat (MLE)	3.4445E-7	Theta star (bias corrected MLE)	3.7456E-7
nu hat (MLE)	1964	nu star (bias corrected)	1806
MLE Mean (bias corrected)	9.1425E-6	MLE Sd (bias corrected)	1.8505E-6
		Approximate Chi Square Value (0.05)	1709
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1704

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.6653E-6	95% Adjusted Gamma UCL (use when n<50)	9.6886E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0675	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-12.05	Mean of logged Data	-11.62
Maximum of Logged Data	-11.04	SD of logged Data	0.195

Assuming Lognormal Distribution

95% H-UCL	9.6727E-6	90% Chebyshev (MVUE) UCL	1.0024E-5
95% Chebyshev (MVUE) UCL	1.0425E-5	97.5% Chebyshev (MVUE) UCL	1.0981E-5
99% Chebyshev (MVUE) UCL	1.2075E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.6503E-6	95% Jackknife UCL	9.6637E-6
95% Standard Bootstrap UCL	9.6332E-6	95% Bootstrap-t UCL	9.7434E-6

95% Hall's Bootstrap UCL	9.8472E-6	95% Percentile Bootstrap UCL	9.6957E-6
95% BCA Bootstrap UCL	9.7130E-6		
90% Chebyshev(Mean, Sd) UCL	1.0069E-5	95% Chebyshev(Mean, Sd) UCL	1.0488E-5
97.5% Chebyshev(Mean, Sd) UCL	1.1071E-5	99% Chebyshev(Mean, Sd) UCL	1.2215E-5

Suggested UCL to Use

95% Student's-t UCL 9.6637E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.1306E-6	Mean	1.9703E-6
Maximum	2.8970E-6	Median	1.9012E-6
SD	4.5779E-7	Std. Error of Mean	7.5261E-8
Coefficient of Variation	N/A	Skewness	0.467

Normal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.0974E-6	95% Adjusted-CLT UCL (Chen-1995)	2.1003E-6
		95% Modified-t UCL (Johnson-1978)	2.0983E-6

Gamma GOF Test

A-D Test Statistic	0.292	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.078	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	19.39	k star (bias corrected MLE)	17.83
Theta hat (MLE)	1.0163E-7	Theta star (bias corrected MLE)	1.1048E-7
nu hat (MLE)	1435	nu star (bias corrected)	1320
MLE Mean (bias corrected)	1.9703E-6	MLE Sd (bias corrected)	4.6657E-7
		Approximate Chi Square Value (0.05)	1236
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1233

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.1031E-6	95% Adjusted Gamma UCL (use when n<50)	2.1091E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0655	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.69	Mean of logged Data	-13.16
Maximum of Logged Data	-12.75	SD of logged Data	0.232

Assuming Lognormal Distribution

95% H-UCL	2.1096E-6	90% Chebyshev (MVUE) UCL	2.1977E-6
95% Chebyshev (MVUE) UCL	2.3007E-6	97.5% Chebyshev (MVUE) UCL	2.4436E-6
99% Chebyshev (MVUE) UCL	2.7244E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0941E-6	95% Jackknife UCL	2.0974E-6
95% Standard Bootstrap UCL	2.0925E-6	95% Bootstrap-t UCL	2.1052E-6

95% Hall's Bootstrap UCL	2.1131E-6	95% Percentile Bootstrap UCL	2.0952E-6
95% BCA Bootstrap UCL	2.0989E-6		
90% Chebyshev(Mean, Sd) UCL	2.1961E-6	95% Chebyshev(Mean, Sd) UCL	2.2983E-6
97.5% Chebyshev(Mean, Sd) UCL	2.4403E-6	99% Chebyshev(Mean, Sd) UCL	2.7191E-6

Suggested UCL to Use

95% Student's-t UCL 2.0974E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.7411E-6	Mean	4.5031E-6
Maximum	6.9351E-6	Median	4.7986E-6
SD	1.3279E-6	Std. Error of Mean	2.1830E-7
Coefficient of Variation	N/A	Skewness	-0.0965

Normal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.8716E-6	95% Adjusted-CLT UCL (Chen-1995)	4.8584E-6
		95% Modified-t UCL (Johnson-1978)	4.8710E-6

Gamma GOF Test

A-D Test Statistic	0.572	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.63	k star (bias corrected MLE)	9.784
Theta hat (MLE)	4.2371E-7	Theta star (bias corrected MLE)	4.6025E-7
nu hat (MLE)	786.4	nu star (bias corrected)	724
MLE Mean (bias corrected)	4.5031E-6	MLE Sd (bias corrected)	1.4396E-6
		Approximate Chi Square Value (0.05)	662.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	660

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.9206E-6	95% Adjusted Gamma UCL (use when n<50)	4.9395E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.15	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.26	Mean of logged Data	-12.36
Maximum of Logged Data	-11.88	SD of logged Data	0.325

Assuming Lognormal Distribution

95% H-UCL	4.9900E-6	90% Chebyshev (MVUE) UCL	5.2595E-6
95% Chebyshev (MVUE) UCL	5.5947E-6	97.5% Chebyshev (MVUE) UCL	6.0600E-6
99% Chebyshev (MVUE) UCL	6.9739E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.8621E-6	95% Jackknife UCL	4.8716E-6
95% Standard Bootstrap UCL	4.8528E-6	95% Bootstrap-t UCL	4.8714E-6

95% Hall's Bootstrap UCL	4.8473E-6	95% Percentile Bootstrap UCL	4.8523E-6
95% BCA Bootstrap UCL	4.8523E-6		
90% Chebyshev(Mean, Sd) UCL	5.1580E-6	95% Chebyshev(Mean, Sd) UCL	5.4546E-6
97.5% Chebyshev(Mean, Sd) UCL	5.8663E-6	99% Chebyshev(Mean, Sd) UCL	6.6751E-6

Suggested UCL to Use

95% Student's-t UCL 4.8716E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	6.7590E-7	Mean	4.0487E-6
Maximum	8.8550E-6	Median	3.6965E-6
SD	2.3139E-6	Std. Error of Mean	3.8040E-7
Coefficient of Variation	N/A	Skewness	0.467

Normal GOF Test

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.6909E-6	95% Adjusted-CLT UCL (Chen-1995)	4.7056E-6
		95% Modified-t UCL (Johnson-1978)	4.6958E-6

Gamma GOF Test

A-D Test Statistic	0.591	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.122	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.876	k star (bias corrected MLE)	2.661
Theta hat (MLE)	1.4079E-6	Theta star (bias corrected MLE)	1.5217E-6
nu hat (MLE)	212.8	nu star (bias corrected)	196.9
MLE Mean (bias corrected)	4.0487E-6	MLE Sd (bias corrected)	2.4821E-6
		Approximate Chi Square Value (0.05)	165.4
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	164.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.8188E-6	95% Adjusted Gamma UCL (use when n<50)	4.8555E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.21	Mean of logged Data	-12.6
Maximum of Logged Data	-11.63	SD of logged Data	0.647

Assuming Lognormal Distribution

95% H-UCL	5.1710E-6	90% Chebyshev (MVUE) UCL	5.5422E-6
95% Chebyshev (MVUE) UCL	6.1839E-6	97.5% Chebyshev (MVUE) UCL	7.0745E-6
99% Chebyshev (MVUE) UCL	8.8239E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.6744E-6	95% Jackknife UCL	4.6909E-6
95% Standard Bootstrap UCL	4.6714E-6	95% Bootstrap-t UCL	4.7584E-6

95% Hall's Bootstrap UCL	4.7083E-6	95% Percentile Bootstrap UCL	4.7053E-6
95% BCA Bootstrap UCL	4.6420E-6		
90% Chebyshev(Mean, Sd) UCL	5.1899E-6	95% Chebyshev(Mean, Sd) UCL	5.7068E-6
97.5% Chebyshev(Mean, Sd) UCL	6.4243E-6	99% Chebyshev(Mean, Sd) UCL	7.8336E-6

Suggested UCL to Use

95% Student's-t UCL 4.6909E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.9046E-7	Mean	1.2684E-6
Maximum	2.2354E-6	Median	1.2168E-6
SD	4.6778E-7	Std. Error of Mean	7.6902E-8
Coefficient of Variation	N/A	Skewness	0.288

Normal GOF Test

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.108	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.3982E-6	95% Adjusted-CLT UCL (Chen-1995)	1.3988E-6
		95% Modified-t UCL (Johnson-1978)	1.3988E-6

Gamma GOF Test

A-D Test Statistic	0.388	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.199	k star (bias corrected MLE)	6.634
Theta hat (MLE)	1.7618E-7	Theta star (bias corrected MLE)	1.9121E-7
nu hat (MLE)	532.7	nu star (bias corrected)	490.9
MLE Mean (bias corrected)	1.2684E-6	MLE Sd (bias corrected)	4.9247E-7
		Approximate Chi Square Value (0.05)	440.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	438.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.4135E-6	95% Adjusted Gamma UCL (use when n<50)	1.4201E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0992	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-14.53	Mean of logged Data	-13.65
Maximum of Logged Data	-13.01	SD of logged Data	0.392

Assuming Lognormal Distribution

95% H-UCL	1.4382E-6	90% Chebyshev (MVUE) UCL	1.5259E-6
95% Chebyshev (MVUE) UCL	1.6405E-6	97.5% Chebyshev (MVUE) UCL	1.7997E-6
99% Chebyshev (MVUE) UCL	2.1123E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.3949E-6	95% Jackknife UCL	1.3982E-6
95% Standard Bootstrap UCL	1.3917E-6	95% Bootstrap-t UCL	1.3981E-6

95% Hall's Bootstrap UCL	1.3988E-6	95% Percentile Bootstrap UCL	1.3885E-6
95% BCA Bootstrap UCL	1.3916E-6		
90% Chebyshev(Mean, Sd) UCL	1.4991E-6	95% Chebyshev(Mean, Sd) UCL	1.6036E-6
97.5% Chebyshev(Mean, Sd) UCL	1.7486E-6	99% Chebyshev(Mean, Sd) UCL	2.0336E-6

Suggested UCL to Use

95% Student's-t UCL 1.3982E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	3.0596E-8	Mean	8.0151E-8
Maximum	1.3158E-7	Median	8.2452E-8
SD	2.0835E-8	Std. Error of Mean	3.4252E-9
Coefficient of Variation	N/A	Skewness	-0.183

Normal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.5933E-8	95% Adjusted-CLT UCL (Chen-1995)	8.5674E-8
		95% Modified-t UCL (Johnson-1978)	8.5916E-8

Gamma GOF Test

A-D Test Statistic	0.854	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.145	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.05	k star (bias corrected MLE)	12.01
Theta hat (MLE)	6.1416E-9	Theta star (bias corrected MLE)	6.6735E-9
nu hat (MLE)	965.7	nu star (bias corrected)	888.8
MLE Mean (bias corrected)	8.0151E-8	MLE Sd (bias corrected)	2.3128E-8
		Approximate Chi Square Value (0.05)	820.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	817.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.6811E-8	95% Adjusted Gamma UCL (use when n<50)	8.7112E-8

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.909	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-17.3	Mean of logged Data	-16.38
Maximum of Logged Data	-15.84	SD of logged Data	0.298

Assuming Lognormal Distribution

95% H-UCL	8.8083E-8	90% Chebyshev (MVUE) UCL	9.2555E-8
95% Chebyshev (MVUE) UCL	9.8012E-8	97.5% Chebyshev (MVUE) UCL	1.0559E-7
99% Chebyshev (MVUE) UCL	1.2047E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.5785E-8	95% Jackknife UCL	8.5933E-8
95% Standard Bootstrap UCL	8.5931E-8	95% Bootstrap-t UCL	8.5939E-8

95% Hall's Bootstrap UCL	8.5868E-8	95% Percentile Bootstrap UCL	8.5898E-8
95% BCA Bootstrap UCL	8.5457E-8		
90% Chebyshev(Mean, Sd) UCL	9.0426E-8	95% Chebyshev(Mean, Sd) UCL	9.5081E-8
97.5% Chebyshev(Mean, Sd) UCL	1.0154E-7	99% Chebyshev(Mean, Sd) UCL	1.1423E-7

Suggested UCL to Use

95% Student's-t UCL 8.5933E-8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.7317E-7	Mean	3.3066E-7
Maximum	6.0526E-7	Median	2.8194E-7
SD	1.2812E-7	Std. Error of Mean	2.1063E-8
Coefficient of Variation	N/A	Skewness	0.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.6623E-7	95% Adjusted-CLT UCL (Chen-1995)	3.6789E-7
		95% Modified-t UCL (Johnson-1978)	3.6663E-7

Gamma GOF Test

A-D Test Statistic	0.891	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.31	k star (bias corrected MLE)	6.736
Theta hat (MLE)	4.5232E-8	Theta star (bias corrected MLE)	4.9092E-8
nu hat (MLE)	541	nu star (bias corrected)	498.4
MLE Mean (bias corrected)	3.3066E-7	MLE Sd (bias corrected)	1.2741E-7
		Approximate Chi Square Value (0.05)	447.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	445.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3.6817E-7	95% Adjusted Gamma UCL (use when n<50)	3.6989E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-15.57	Mean of logged Data	-14.99
Maximum of Logged Data	-14.32	SD of logged Data	0.376

Assuming Lognormal Distribution

95% H-UCL	3.7114E-7	90% Chebyshev (MVUE) UCL	3.9320E-7
95% Chebyshev (MVUE) UCL	4.2172E-7	97.5% Chebyshev (MVUE) UCL	4.6129E-7
99% Chebyshev (MVUE) UCL	5.3902E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.6531E-7	95% Jackknife UCL	3.6623E-7
95% Standard Bootstrap UCL	3.6463E-7	95% Bootstrap-t UCL	3.6860E-7

95% Hall's Bootstrap UCL	3.6787E-7	95% Percentile Bootstrap UCL	3.6431E-7
95% BCA Bootstrap UCL	3.6958E-7		
90% Chebyshev(Mean, Sd) UCL	3.9385E-7	95% Chebyshev(Mean, Sd) UCL	4.2248E-7
97.5% Chebyshev(Mean, Sd) UCL	4.6221E-7	99% Chebyshev(Mean, Sd) UCL	5.4024E-7

Suggested UCL to Use

95% Adjusted Gamma UCL 3.6989E-7

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.0116E-6	Mean	4.0628E-6
Maximum	9.5439E-6	Median	3.7358E-6
SD	2.2164E-6	Std. Error of Mean	3.6437E-7
Coefficient of Variation	N/A	Skewness	0.841

Normal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	4.6780E-6	95% Adjusted-CLT UCL (Chen-1995)	4.7160E-6
		95% Modified-t UCL (Johnson-1978)	4.6864E-6

Gamma GOF Test

A-D Test Statistic	0.326	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.103	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.519	k star (bias corrected MLE)	3.252
Theta hat (MLE)	1.1544E-6	Theta star (bias corrected MLE)	1.2494E-6
nu hat (MLE)	260.4	nu star (bias corrected)	240.6
MLE Mean (bias corrected)	4.0628E-6	MLE Sd (bias corrected)	2.2530E-6
		Approximate Chi Square Value (0.05)	205.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	204.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	4.7523E-6	95% Adjusted Gamma UCL (use when n<50)	4.7848E-6

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0943	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.8	Mean of logged Data	-12.56
Maximum of Logged Data	-11.56	SD of logged Data	0.566

Assuming Lognormal Distribution

95% H-UCL	4.9458E-6	90% Chebyshev (MVUE) UCL	5.2983E-6
95% Chebyshev (MVUE) UCL	5.8460E-6	97.5% Chebyshev (MVUE) UCL	6.6062E-6
99% Chebyshev (MVUE) UCL	8.0994E-6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	4.6622E-6	95% Jackknife UCL	4.6780E-6
95% Standard Bootstrap UCL	4.6574E-6	95% Bootstrap-t UCL	4.7390E-6

95% Hall's Bootstrap UCL	4.7639E-6	95% Percentile Bootstrap UCL	4.6684E-6
95% BCA Bootstrap UCL	4.7468E-6		
90% Chebyshev(Mean, Sd) UCL	5.1559E-6	95% Chebyshev(Mean, Sd) UCL	5.6511E-6
97.5% Chebyshev(Mean, Sd) UCL	6.3383E-6	99% Chebyshev(Mean, Sd) UCL	7.6883E-6

Suggested UCL to Use

95% Student's-t UCL 4.6780E-6

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	30	Number of Non-Detects	7
Number of Distinct Detects	30	Number of Distinct Non-Detects	7
Minimum Detect	2.1392E-8	Minimum Non-Detect	2.5054E-8
Maximum Detect	1.4067E-7	Maximum Non-Detect	6.6880E-8
Variance Detects	6.243E-16	Percent Non-Detects	18.92%
Mean Detects	6.4128E-8	SD Detects	2.4985E-8
Median Detects	5.7155E-8	CV Detects	N/A
Skewness Detects	1.419	Kurtosis Detects	2.818
Mean of Logged Detects	-16.63	SD of Logged Detects	0.374

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.877	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.927	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.159	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.8059E-8	KM Standard Error of Mean	4.4154E-9
KM SD	2.5935E-8	95% KM (BCA) UCL	6.5679E-8
95% KM (t) UCL	6.5513E-8	95% KM (Percentile Bootstrap) UCL	6.5263E-8
95% KM (z) UCL	6.5321E-8	95% KM Bootstrap t UCL	6.6638E-8
90% KM Chebyshev UCL	7.1305E-8	95% KM Chebyshev UCL	7.7305E-8
97.5% KM Chebyshev UCL	8.5633E-8	99% KM Chebyshev UCL	1.0199E-7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.814	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.746	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.145	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.16	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	7.613	k star (bias corrected MLE)	6.874
Theta hat (MLE)	8.4233E-9	Theta star (bias corrected MLE)	9.3290E-9
nu hat (MLE)	456.8	nu star (bias corrected)	412.4
Mean (detects)	6.4128E-8		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.1392E-8	Mean	0.00189
Maximum	0.01	Median	6.1498E-8
SD	0.00397	CV	2.099
k hat (MLE)	0.1	k star (bias corrected MLE)	0.11
Theta hat (MLE)	0.0188	Theta star (bias corrected MLE)	0.0172
nu hat (MLE)	7.43	nu star (bias corrected)	8.161
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (8.16, α)	2.828	Adjusted Chi Square Value (8.16, β)	2.694
95% Gamma Approximate UCL (use when n>=50)	0.00546	95% Gamma Adjusted UCL (use when n<50)	0.00573

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.8059E-8	SD (KM)	2.5935E-8
Variance (KM)	6.726E-16	SE of Mean (KM)	4.4154E-9
k hat (KM)	5.011	k star (KM)	4.623

nu hat (KM)	370.8	nu star (KM)	342.1
theta hat (KM)	1.1585E-8	theta star (KM)	1.2558E-8
80% gamma percentile (KM)	7.8732E-8	90% gamma percentile (KM)	9.4226E-8
95% gamma percentile (KM)	1.0840E-7	99% gamma percentile (KM)	1.3845E-7

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (342.11, α)	300.3	Adjusted Chi Square Value (342.11, β)	298.6
95% Gamma Approximate KM-UCL (use when n>=50)	6.6153E-8	95% Gamma Adjusted KM-UCL (use when n<50)	6.6529E-8

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.927	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.159	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.8514E-8	Mean in Log Scale	-16.74
SD in Original Scale	2.5455E-8	SD in Log Scale	0.41
95% t UCL (assumes normality of ROS data)	6.5579E-8	95% Percentile Bootstrap UCL	6.5558E-8
95% BCA Bootstrap UCL	6.6321E-8	95% Bootstrap t UCL	6.6525E-8
95% H-UCL (Log ROS)	6.6479E-8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-16.76	KM Geo Mean	5.2648E-8
KM SD (logged)	0.452	95% Critical H Value (KM-Log)	1.878
KM Standard Error of Mean (logged)	0.0801	95% H-UCL (KM -Log)	6.7196E-8
KM SD (logged)	0.452	95% Critical H Value (KM-Log)	1.878
KM Standard Error of Mean (logged)	0.0801		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.6344E-8	Mean in Log Scale	-16.82
SD in Original Scale	2.7861E-8	SD in Log Scale	0.532
95% t UCL (Assumes normality)	6.4077E-8	95% H-Stat UCL	6.7972E-8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	6.6529E-8	95% GROS Adjusted Gamma UCL	0.00573

Warning: Recommended UCL exceeds the maximum observation

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.0538E-7	Mean	2.1109E-7
Maximum	5.7782E-7	Median	1.8102E-7
SD	1.1472E-7	Std. Error of Mean	1.8861E-8
Coefficient of Variation	N/A	Skewness	1.935

Normal GOF Test

Shapiro Wilk Test Statistic	0.771	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.226	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.4293E-7	95% Adjusted-CLT UCL (Chen-1995)	2.4852E-7
		95% Modified-t UCL (Johnson-1978)	2.4393E-7

Gamma GOF Test

A-D Test Statistic	1.395	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.165	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.804	k star (bias corrected MLE)	4.433
Theta hat (MLE)	4.3938E-8	Theta star (bias corrected MLE)	4.7621E-8
nu hat (MLE)	355.5	nu star (bias corrected)	328
MLE Mean (bias corrected)	2.1109E-7	MLE Sd (bias corrected)	1.0026E-7
		Approximate Chi Square Value (0.05)	287.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	285.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.4121E-7	95% Adjusted Gamma UCL (use when n<50)	2.4261E-7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-16.07	Mean of logged Data	-15.48
Maximum of Logged Data	-14.36	SD of logged Data	0.443

Assuming Lognormal Distribution

95% H-UCL	2.4015E-7	90% Chebyshev (MVUE) UCL	2.5582E-7
95% Chebyshev (MVUE) UCL	2.7725E-7	97.5% Chebyshev (MVUE) UCL	3.0699E-7
99% Chebyshev (MVUE) UCL	3.6541E-7		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.4211E-7	95% Jackknife UCL	2.4293E-7
95% Standard Bootstrap UCL	2.4193E-7	95% Bootstrap-t UCL	2.5373E-7

95% Hall's Bootstrap UCL	2.5476E-7	95% Percentile Bootstrap UCL	2.4392E-7
95% BCA Bootstrap UCL	2.4934E-7		
90% Chebyshev(Mean, Sd) UCL	2.6767E-7	95% Chebyshev(Mean, Sd) UCL	2.9330E-7
97.5% Chebyshev(Mean, Sd) UCL	3.2887E-7	99% Chebyshev(Mean, Sd) UCL	3.9875E-7

Suggested UCL to Use

95% Student's-t UCL	2.4293E-7	or 95% Modified-t UCL	2.4393E-7
or 95% H-UCL	2.4015E-7		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

General Statistics

Total Number of Observations	12	Number of Distinct Observations	12
		Number of Missing Observations	24
Minimum	7.4574E-4	Mean	0.00166
Maximum	0.00251	Median	0.00182
SD	5.5107E-4	Std. Error of Mean	1.5908E-4
Coefficient of Variation	0.332	Skewness	-0.196

Normal GOF Test

Shapiro Wilk Test Statistic	0.949	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.243	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00195	95% Adjusted-CLT UCL (Chen-1995)	0.00191
		95% Modified-t UCL (Johnson-1978)	0.00194

Gamma GOF Test

A-D Test Statistic	0.43	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.731	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.226	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.246	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.74	k star (bias corrected MLE)	6.61
Theta hat (MLE)	1.8996E-4	Theta star (bias corrected MLE)	2.5115E-4
nu hat (MLE)	209.8	nu star (bias corrected)	158.6
MLE Mean (bias corrected)	0.00166	MLE Sd (bias corrected)	6.4572E-4
		Approximate Chi Square Value (0.05)	130.5
Adjusted Level of Significance	0.029	Adjusted Chi Square Value	126.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00202	95% Adjusted Gamma UCL (use when n<50)	0.00208

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.859	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.233	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.243	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.201	Mean of logged Data	-6.459
Maximum of Logged Data	-5.989	SD of logged Data	0.371

Assuming Lognormal Distribution

95% H-UCL	0.0021	90% Chebyshev (MVUE) UCL	0.00221
95% Chebyshev (MVUE) UCL	0.00246	97.5% Chebyshev (MVUE) UCL	0.0028
99% Chebyshev (MVUE) UCL	0.00347		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00192	95% Jackknife UCL	0.00195
95% Standard Bootstrap UCL	0.00191	95% Bootstrap-t UCL	0.00193

95% Hall's Bootstrap UCL	0.0019	95% Percentile Bootstrap UCL	0.00191
95% BCA Bootstrap UCL	0.0019		
90% Chebyshev(Mean, Sd) UCL	0.00214	95% Chebyshev(Mean, Sd) UCL	0.00235
97.5% Chebyshev(Mean, Sd) UCL	0.00265	99% Chebyshev(Mean, Sd) UCL	0.00324

Suggested UCL to Use

95% Student's-t UCL	0.00195

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.1604E-5	Mean	7.8803E-5
Maximum	1.4218E-4	Median	7.9864E-5
SD	2.3093E-5	Std. Error of Mean	3.7965E-6
Coefficient of Variation	N/A	Skewness	0.512

Normal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.5213E-5	95% Adjusted-CLT UCL (Chen-1995)	8.5389E-5
		95% Modified-t UCL (Johnson-1978)	8.5266E-5

Gamma GOF Test

A-D Test Statistic	0.408	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.08	k star (bias corrected MLE)	11.12
Theta hat (MLE)	6.5239E-6	Theta star (bias corrected MLE)	7.0881E-6
nu hat (MLE)	893.8	nu star (bias corrected)	822.7
MLE Mean (bias corrected)	7.8803E-5	MLE Sd (bias corrected)	2.3634E-5
		Approximate Chi Square Value (0.05)	757.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	754.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.5627E-5	95% Adjusted Gamma UCL (use when n<50)	8.5936E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0903	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-10.09	Mean of logged Data	-9.491
Maximum of Logged Data	-8.858	SD of logged Data	0.296

Assuming Lognormal Distribution

95% H-UCL	8.6186E-5	90% Chebyshev (MVUE) UCL	9.0532E-5
95% Chebyshev (MVUE) UCL	9.5827E-5	97.5% Chebyshev (MVUE) UCL	1.0318E-4
99% Chebyshev (MVUE) UCL	1.1761E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.5048E-5	95% Jackknife UCL	8.5213E-5
95% Standard Bootstrap UCL	8.4936E-5	95% Bootstrap-t UCL	8.5924E-5

95% Hall's Bootstrap UCL	8.5745E-5	95% Percentile Bootstrap UCL	8.4773E-5
95% BCA Bootstrap UCL	8.5464E-5		
90% Chebyshev(Mean, Sd) UCL	9.0192E-5	95% Chebyshev(Mean, Sd) UCL	9.5351E-5
97.5% Chebyshev(Mean, Sd) UCL	1.0251E-4	99% Chebyshev(Mean, Sd) UCL	1.1658E-4

Suggested UCL to Use

95% Student's-t UCL 8.5213E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00412	Mean	0.00955
Maximum	0.0157	Median	0.00985
SD	0.00293	Std. Error of Mean	4.8188E-4
Coefficient of Variation	0.307	Skewness	0.148

Normal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0886	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0104	95% Adjusted-CLT UCL (Chen-1995)	0.0104
		95% Modified-t UCL (Johnson-1978)	0.0104

Gamma GOF Test

A-D Test Statistic	0.392	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.112	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.26	k star (bias corrected MLE)	9.445
Theta hat (MLE)	9.3124E-4	Theta star (bias corrected MLE)	0.00101
nu hat (MLE)	759.1	nu star (bias corrected)	698.9
MLE Mean (bias corrected)	0.00955	MLE Sd (bias corrected)	0.00311
		Approximate Chi Square Value (0.05)	638.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	636.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0105	95% Adjusted Gamma UCL (use when n<50)	0.0105

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.492	Mean of logged Data	-4.7
Maximum of Logged Data	-4.153	SD of logged Data	0.327

Assuming Lognormal Distribution

95% H-UCL	0.0106	90% Chebyshev (MVUE) UCL	0.0112
95% Chebyshev (MVUE) UCL	0.0119	97.5% Chebyshev (MVUE) UCL	0.0129
99% Chebyshev (MVUE) UCL	0.0148		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0103	95% Jackknife UCL	0.0104
95% Standard Bootstrap UCL	0.0103	95% Bootstrap-t UCL	0.0103

95% Hall's Bootstrap UCL	0.0103	95% Percentile Bootstrap UCL	0.0103
95% BCA Bootstrap UCL	0.0103		
90% Chebyshev(Mean, Sd) UCL	0.011	95% Chebyshev(Mean, Sd) UCL	0.0117
97.5% Chebyshev(Mean, Sd) UCL	0.0126	99% Chebyshev(Mean, Sd) UCL	0.0143

Suggested UCL to Use

95% Student's-t UCL	0.0104

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.2127E-4	Mean	8.1838E-4
Maximum	0.00139	Median	8.2355E-4
SD	2.2364E-4	Std. Error of Mean	3.6767E-5
Coefficient of Variation	0.273	Skewness	0.311

Normal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.8046E-4	95% Adjusted-CLT UCL (Chen-1995)	8.8087E-4
		95% Modified-t UCL (Johnson-1978)	8.8077E-4

Gamma GOF Test

A-D Test Statistic	0.386	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.45	k star (bias corrected MLE)	12.38
Theta hat (MLE)	6.0835E-5	Theta star (bias corrected MLE)	6.6107E-5
nu hat (MLE)	995.5	nu star (bias corrected)	916.1
MLE Mean (bias corrected)	8.1838E-4	MLE Sd (bias corrected)	2.3260E-4
		Approximate Chi Square Value (0.05)	846.9
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	844

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.8531E-4	95% Adjusted Gamma UCL (use when n<50)	8.8833E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.772	Mean of logged Data	-7.146
Maximum of Logged Data	-6.578	SD of logged Data	0.282

Assuming Lognormal Distribution

95% H-UCL	8.9154E-4	90% Chebyshev (MVUE) UCL	9.3498E-4
95% Chebyshev (MVUE) UCL	9.8740E-4	97.5% Chebyshev (MVUE) UCL	0.00106
99% Chebyshev (MVUE) UCL	0.0012		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.7886E-4	95% Jackknife UCL	8.8046E-4
95% Standard Bootstrap UCL	8.7776E-4	95% Bootstrap-t UCL	8.8377E-4

95% Hall's Bootstrap UCL	8.8329E-4	95% Percentile Bootstrap UCL	8.8016E-4
95% BCA Bootstrap UCL	8.7751E-4		
90% Chebyshev(Mean, Sd) UCL	9.2868E-4	95% Chebyshev(Mean, Sd) UCL	9.7865E-4
97.5% Chebyshev(Mean, Sd) UCL	0.00105	99% Chebyshev(Mean, Sd) UCL	0.00118

Suggested UCL to Use

95% Student's-t UCL 8.8046E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.0212	Mean	0.0433
Maximum	0.0689	Median	0.042
SD	0.0118	Std. Error of Mean	0.00196
Coefficient of Variation	0.272	Skewness	0.241

Normal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0908	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0466	95% Adjusted-CLT UCL (Chen-1995)	0.0466
		95% Modified-t UCL (Johnson-1978)	0.0466

Gamma GOF Test

A-D Test Statistic	0.175	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0817	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.43	k star (bias corrected MLE)	12.33
Theta hat (MLE)	0.00322	Theta star (bias corrected MLE)	0.00351
nu hat (MLE)	967	nu star (bias corrected)	887.8
MLE Mean (bias corrected)	0.0433	MLE Sd (bias corrected)	0.0123
		Approximate Chi Square Value (0.05)	819.6
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	816.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0468	95% Adjusted Gamma UCL (use when n<50)	0.047

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0946	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.855	Mean of logged Data	-3.178
Maximum of Logged Data	-2.674	SD of logged Data	0.283

Assuming Lognormal Distribution

95% H-UCL	0.0472	90% Chebyshev (MVUE) UCL	0.0495
95% Chebyshev (MVUE) UCL	0.0524	97.5% Chebyshev (MVUE) UCL	0.0563
99% Chebyshev (MVUE) UCL	0.064		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0465	95% Jackknife UCL	0.0466
95% Standard Bootstrap UCL	0.0464	95% Bootstrap-t UCL	0.0467

95% Hall's Bootstrap UCL	0.0465	95% Percentile Bootstrap UCL	0.0462
95% BCA Bootstrap UCL	0.0465		
90% Chebyshev(Mean, Sd) UCL	0.0491	95% Chebyshev(Mean, Sd) UCL	0.0518
97.5% Chebyshev(Mean, Sd) UCL	0.0555	99% Chebyshev(Mean, Sd) UCL	0.0628

Suggested UCL to Use

95% Student's-t UCL	0.0466

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.1787E-4	Mean	7.6099E-4
Maximum	0.00125	Median	7.5624E-4
SD	2.0628E-4	Std. Error of Mean	3.3912E-5
Coefficient of Variation	0.271	Skewness	0.364

Normal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.1825E-4	95% Adjusted-CLT UCL (Chen-1995)	8.1894E-4
		95% Modified-t UCL (Johnson-1978)	8.1858E-4

Gamma GOF Test

A-D Test Statistic	0.316	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0948	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.9	k star (bias corrected MLE)	12.79
Theta hat (MLE)	5.4751E-5	Theta star (bias corrected MLE)	5.9498E-5
nu hat (MLE)	1029	nu star (bias corrected)	946.5
MLE Mean (bias corrected)	7.6099E-4	MLE Sd (bias corrected)	2.1278E-4
		Approximate Chi Square Value (0.05)	876.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	873.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.2215E-4	95% Adjusted Gamma UCL (use when n<50)	8.2491E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0945	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.78	Mean of logged Data	-7.217
Maximum of Logged Data	-6.689	SD of logged Data	0.276

Assuming Lognormal Distribution

95% H-UCL	8.2703E-4	90% Chebyshev (MVUE) UCL	8.6668E-4
95% Chebyshev (MVUE) UCL	9.1433E-4	97.5% Chebyshev (MVUE) UCL	9.8047E-4
99% Chebyshev (MVUE) UCL	0.00111		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.1677E-4	95% Jackknife UCL	8.1825E-4
95% Standard Bootstrap UCL	8.1701E-4	95% Bootstrap-t UCL	8.2611E-4

95% Hall's Bootstrap UCL	8.2142E-4	95% Percentile Bootstrap UCL	8.1458E-4
95% BCA Bootstrap UCL	8.1991E-4		
90% Chebyshev(Mean, Sd) UCL	8.6273E-4	95% Chebyshev(Mean, Sd) UCL	9.0881E-4
97.5% Chebyshev(Mean, Sd) UCL	9.7277E-4	99% Chebyshev(Mean, Sd) UCL	0.0011

Suggested UCL to Use

95% Student's-t UCL 8.1825E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	35
		Number of Missing Observations	1
Minimum	6.3256E-6	Mean	8.8497E-5
Maximum	1.5819E-4	Median	8.6614E-5
SD	2.8636E-5	Std. Error of Mean	4.7727E-6
Coefficient of Variation	N/A	Skewness	-0.167

Normal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0968	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.6561E-5	95% Adjusted-CLT UCL (Chen-1995)	9.6206E-5
		95% Modified-t UCL (Johnson-1978)	9.6539E-5

Gamma GOF Test

A-D Test Statistic	1.403	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.165	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.023	k star (bias corrected MLE)	5.54
Theta hat (MLE)	1.4693E-5	Theta star (bias corrected MLE)	1.5975E-5
nu hat (MLE)	433.7	nu star (bias corrected)	398.8
MLE Mean (bias corrected)	8.8497E-5	MLE Sd (bias corrected)	3.7600E-5
		Approximate Chi Square Value (0.05)	353.6
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	351.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.9834E-5	95% Adjusted Gamma UCL (use when n<50)	1.0038E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.688	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.198	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.97	Mean of logged Data	-9.418
Maximum of Logged Data	-8.752	SD of logged Data	0.521

Assuming Lognormal Distribution

95% H-UCL	1.1025E-4	90% Chebyshev (MVUE) UCL	1.1801E-4
95% Chebyshev (MVUE) UCL	1.2949E-4	97.5% Chebyshev (MVUE) UCL	1.4542E-4
99% Chebyshev (MVUE) UCL	1.7671E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.6348E-5	95% Jackknife UCL	9.6561E-5
95% Standard Bootstrap UCL	9.6223E-5	95% Bootstrap-t UCL	9.6340E-5

95% Hall's Bootstrap UCL	9.6756E-5	95% Percentile Bootstrap UCL	9.6234E-5
95% BCA Bootstrap UCL	9.6185E-5		
90% Chebyshev(Mean, Sd) UCL	1.0282E-4	95% Chebyshev(Mean, Sd) UCL	1.0930E-4
97.5% Chebyshev(Mean, Sd) UCL	1.1830E-4	99% Chebyshev(Mean, Sd) UCL	1.3598E-4

Suggested UCL to Use

95% Student's-t UCL 9.6561E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00175	Mean	0.00349
Maximum	0.00534	Median	0.00338
SD	8.7228E-4	Std. Error of Mean	1.4340E-4
Coefficient of Variation	0.25	Skewness	0.245

Normal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0855	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00373	95% Adjusted-CLT UCL (Chen-1995)	0.00373
		95% Modified-t UCL (Johnson-1978)	0.00373

Gamma GOF Test

A-D Test Statistic	0.205	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0894	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	16.03	k star (bias corrected MLE)	14.75
Theta hat (MLE)	2.1739E-4	Theta star (bias corrected MLE)	2.3629E-4
nu hat (MLE)	1186	nu star (bias corrected)	1092
MLE Mean (bias corrected)	0.00349	MLE Sd (bias corrected)	9.0748E-4
		Approximate Chi Square Value (0.05)	1016
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1013

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00374	95% Adjusted Gamma UCL (use when n<50)	0.00376

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0845	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.348	Mean of logged Data	-5.691
Maximum of Logged Data	-5.232	SD of logged Data	0.258

Assuming Lognormal Distribution

95% H-UCL	0.00377	90% Chebyshev (MVUE) UCL	0.00394
95% Chebyshev (MVUE) UCL	0.00414	97.5% Chebyshev (MVUE) UCL	0.00442
99% Chebyshev (MVUE) UCL	0.00498		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00372	95% Jackknife UCL	0.00373
95% Standard Bootstrap UCL	0.00372	95% Bootstrap-t UCL	0.00372

95% Hall's Bootstrap UCL	0.00373	95% Percentile Bootstrap UCL	0.00373
95% BCA Bootstrap UCL	0.00373		
90% Chebyshev(Mean, Sd) UCL	0.00392	95% Chebyshev(Mean, Sd) UCL	0.00411
97.5% Chebyshev(Mean, Sd) UCL	0.00438	99% Chebyshev(Mean, Sd) UCL	0.00491

Suggested UCL to Use

95% Student's-t UCL	0.00373

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	7.5928E-4	Mean	0.00146
Maximum	0.00226	Median	0.00146
SD	3.4433E-4	Std. Error of Mean	5.6608E-5
Coefficient of Variation	0.236	Skewness	0.243

Normal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0812	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00155	95% Adjusted-CLT UCL (Chen-1995)	0.00155
		95% Modified-t UCL (Johnson-1978)	0.00155

Gamma GOF Test

A-D Test Statistic	0.23	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0888	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	18.01	k star (bias corrected MLE)	16.56
Theta hat (MLE)	8.0972E-5	Theta star (bias corrected MLE)	8.8021E-5
nu hat (MLE)	1332	nu star (bias corrected)	1226
MLE Mean (bias corrected)	0.00146	MLE Sd (bias corrected)	3.5824E-4
		Approximate Chi Square Value (0.05)	1145
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1142

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00156	95% Adjusted Gamma UCL (use when n<50)	0.00156

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.979	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0861	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.183	Mean of logged Data	-6.559
Maximum of Logged Data	-6.093	SD of logged Data	0.243

Assuming Lognormal Distribution

95% H-UCL	0.00157	90% Chebyshev (MVUE) UCL	0.00164
95% Chebyshev (MVUE) UCL	0.00172	97.5% Chebyshev (MVUE) UCL	0.00183
99% Chebyshev (MVUE) UCL	0.00205		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00155	95% Jackknife UCL	0.00155
95% Standard Bootstrap UCL	0.00155	95% Bootstrap-t UCL	0.00156

95% Hall's Bootstrap UCL	0.00155	95% Percentile Bootstrap UCL	0.00155
95% BCA Bootstrap UCL	0.00155		
90% Chebyshev(Mean, Sd) UCL	0.00163	95% Chebyshev(Mean, Sd) UCL	0.0017
97.5% Chebyshev(Mean, Sd) UCL	0.00181	99% Chebyshev(Mean, Sd) UCL	0.00202

Suggested UCL to Use

95% Student's-t UCL	0.00155

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	14	Number of Non-Detects	23
Number of Distinct Detects	14	Number of Distinct Non-Detects	23
Minimum Detect	3.1504E-6	Minimum Non-Detect	1.4482E-6
Maximum Detect	5.4893E-5	Maximum Non-Detect	5.9046E-6
Variance Detects	1.815E-10	Percent Non-Detects	62.16%
Mean Detects	8.9891E-6	SD Detects	1.3473E-5
Median Detects	4.6777E-6	CV Detects	N/A
Skewness Detects	3.508	Kurtosis Detects	12.68
Mean of Logged Detects	-12.04	SD of Logged Detects	0.759

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.452	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.38	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.3612E-6	KM Standard Error of Mean	1.4977E-6
KM SD	8.7719E-6	95% KM (BCA) UCL	7.4140E-6
95% KM (t) UCL	6.8898E-6	95% KM (Percentile Bootstrap) UCL	7.1171E-6
95% KM (z) UCL	6.8247E-6	95% KM Bootstrap t UCL	1.2982E-5
90% KM Chebyshev UCL	8.8543E-6	95% KM Chebyshev UCL	1.0890E-5
97.5% KM Chebyshev UCL	1.3714E-5	99% KM Chebyshev UCL	1.9263E-5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.874	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.754	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.28	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.234	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.335	k star (bias corrected MLE)	1.097
Theta hat (MLE)	6.7316E-6	Theta star (bias corrected MLE)	8.1955E-6
nu hat (MLE)	37.39	nu star (bias corrected)	30.71
Mean (detects)	8.9891E-6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.1504E-6	Mean	0.00622
Maximum	0.01	Median	0.01
SD	0.00491	CV	0.79
k hat (MLE)	0.296	k star (bias corrected MLE)	0.29
Theta hat (MLE)	0.021	Theta star (bias corrected MLE)	0.0215
nu hat (MLE)	21.88	nu star (bias corrected)	21.44
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (21.44, α)	11.92	Adjusted Chi Square Value (21.44, β)	11.61
95% Gamma Approximate UCL (use when n>=50)	0.0112	95% Gamma Adjusted UCL (use when n<50)	0.0115

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.3612E-6	SD (KM)	8.7719E-6
Variance (KM)	7.695E-11	SE of Mean (KM)	1.4977E-6
k hat (KM)	0.247	k star (KM)	0.245

nu hat (KM)	18.29	nu star (KM)	18.14
theta hat (KM)	1.7643E-5	theta star (KM)	1.7789E-5
80% gamma percentile (KM)	6.2894E-6	90% gamma percentile (KM)	1.3108E-5
95% gamma percentile (KM)	2.1233E-5	99% gamma percentile (KM)	4.2921E-5

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (18.14, α)	9.494	Adjusted Chi Square Value (18.14, β)	9.222
95% Gamma Approximate KM-UCL (use when n>=50)	8.3342E-6	95% Gamma Adjusted KM-UCL (use when n<50)	8.5801E-6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.766	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.9417E-6	Mean in Log Scale	-13.24
SD in Original Scale	9.0275E-6	SD in Log Scale	1.058
95% t UCL (assumes normality of ROS data)	6.4474E-6	95% Percentile Bootstrap UCL	6.6335E-6
95% BCA Bootstrap UCL	8.2218E-6	95% Bootstrap t UCL	1.2364E-5
95% H-UCL (Log ROS)	4.8123E-6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-12.89	KM Geo Mean	2.5276E-6
KM SD (logged)	0.815	95% Critical H Value (KM-Log)	2.191
KM Standard Error of Mean (logged)	0.141	95% H-UCL (KM -Log)	4.7446E-6
KM SD (logged)	0.815	95% Critical H Value (KM-Log)	2.191
KM Standard Error of Mean (logged)	0.141		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.2952E-6	Mean in Log Scale	-12.96
SD in Original Scale	8.9171E-6	SD in Log Scale	0.917
95% t UCL (Assumes normality)	6.7702E-6	95% H-Stat UCL	5.0745E-6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 4.7446E-6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.1630E-4	Mean	2.4826E-4
Maximum	4.0419E-4	Median	2.4226E-4
SD	7.0491E-5	Std. Error of Mean	1.1589E-5
Coefficient of Variation	0.284	Skewness	0.443

Normal GOF Test

Shapiro Wilk Test Statistic	0.965	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.137	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.6782E-4	95% Adjusted-CLT UCL (Chen-1995)	2.6822E-4
		95% Modified-t UCL (Johnson-1978)	2.6796E-4

Gamma GOF Test

A-D Test Statistic	0.229	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0992	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.7	k star (bias corrected MLE)	11.69
Theta hat (MLE)	1.9547E-5	Theta star (bias corrected MLE)	2.1239E-5
nu hat (MLE)	939.8	nu star (bias corrected)	865
MLE Mean (bias corrected)	2.4826E-4	MLE Sd (bias corrected)	7.2614E-5
		Approximate Chi Square Value (0.05)	797.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	794.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.6919E-4	95% Adjusted Gamma UCL (use when n<50)	2.7013E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0903	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.059	Mean of logged Data	-8.341
Maximum of Logged Data	-7.814	SD of logged Data	0.29

Assuming Lognormal Distribution

95% H-UCL	2.7106E-4	90% Chebyshev (MVUE) UCL	2.8452E-4
95% Chebyshev (MVUE) UCL	3.0086E-4	97.5% Chebyshev (MVUE) UCL	3.2352E-4
99% Chebyshev (MVUE) UCL	3.6805E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.6732E-4	95% Jackknife UCL	2.6782E-4
95% Standard Bootstrap UCL	2.6685E-4	95% Bootstrap-t UCL	2.6847E-4

95% Hall's Bootstrap UCL	2.6790E-4	95% Percentile Bootstrap UCL	2.6753E-4
95% BCA Bootstrap UCL	2.6794E-4		
90% Chebyshev(Mean, Sd) UCL	2.8302E-4	95% Chebyshev(Mean, Sd) UCL	2.9877E-4
97.5% Chebyshev(Mean, Sd) UCL	3.2063E-4	99% Chebyshev(Mean, Sd) UCL	3.6356E-4

Suggested UCL to Use

95% Student's-t UCL 2.6782E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 1:38:39 PM
From File	Crab_Hep-Mus_combo_KM_TEQ_combined_Input_for_ProUCL_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

KM TEQ DF

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	7.2980E-6	Mean	2.7411E-5
Maximum	4.9839E-5	Median	2.7107E-5
SD	9.8950E-6	Std. Error of Mean	1.6267E-6
Coefficient of Variation	N/A	Skewness	0.269

Normal GOF Test

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0644	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3.0157E-5	95% Adjusted-CLT UCL (Chen-1995)	3.0164E-5
		95% Modified-t UCL (Johnson-1978)	3.0169E-5

Gamma GOF Test

A-D Test Statistic	0.196	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0924	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.122	k star (bias corrected MLE)	6.563
Theta hat (MLE)	3.8487E-6	Theta star (bias corrected MLE)	4.1768E-6
nu hat (MLE)	527	nu star (bias corrected)	485.6
MLE Mean (bias corrected)	2.7411E-5	MLE Sd (bias corrected)	1.0700E-5
		Approximate Chi Square Value (0.05)	435.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	433.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3.0564E-5	95% Adjusted Gamma UCL (use when n<50)	3.0709E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.115	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-11.83	Mean of logged Data	-10.58
Maximum of Logged Data	-9.907	SD of logged Data	0.404

Assuming Lognormal Distribution

95% H-UCL	3.1338E-5	90% Chebyshev (MVUE) UCL	3.3283E-5
95% Chebyshev (MVUE) UCL	3.5851E-5	97.5% Chebyshev (MVUE) UCL	3.9416E-5
99% Chebyshev (MVUE) UCL	4.6419E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	3.0087E-5	95% Jackknife UCL	3.0157E-5
95% Standard Bootstrap UCL	2.9966E-5	95% Bootstrap-t UCL	3.0286E-5
95% Hall's Bootstrap UCL	3.0195E-5	95% Percentile Bootstrap UCL	2.9898E-5
95% BCA Bootstrap UCL	3.0233E-5		
90% Chebyshev(Mean, Sd) UCL	3.2291E-5	95% Chebyshev(Mean, Sd) UCL	3.4502E-5
97.5% Chebyshev(Mean, Sd) UCL	3.7570E-5	99% Chebyshev(Mean, Sd) UCL	4.3597E-5

Suggested UCL to Use

95% Student's-t UCL 3.0157E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	1.5619E-6	Mean	1.0560E-5
Maximum	1.8761E-5	Median	1.0772E-5
SD	3.6001E-6	Std. Error of Mean	5.9186E-7
Coefficient of Variation	N/A	Skewness	-0.331

Normal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0967	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.1559E-5	95% Adjusted-CLT UCL (Chen-1995)	1.1499E-5
		95% Modified-t UCL (Johnson-1978)	1.1554E-5

Gamma GOF Test

A-D Test Statistic	1.447	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.164	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.892	k star (bias corrected MLE)	5.433
Theta hat (MLE)	1.7921E-6	Theta star (bias corrected MLE)	1.9437E-6
nu hat (MLE)	436	nu star (bias corrected)	402
MLE Mean (bias corrected)	1.0560E-5	MLE Sd (bias corrected)	4.5305E-6
		Approximate Chi Square Value (0.05)	356.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	354.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.1907E-5	95% Adjusted Gamma UCL (use when n<50)	1.1969E-5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.776	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.19	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-13.37	Mean of logged Data	-11.55
Maximum of Logged Data	-10.88	SD of logged Data	0.494

Assuming Lognormal Distribution

95% H-UCL	1.2791E-5	90% Chebyshev (MVUE) UCL	1.3666E-5
95% Chebyshev (MVUE) UCL	1.4923E-5	97.5% Chebyshev (MVUE) UCL	1.6667E-5
99% Chebyshev (MVUE) UCL	2.0093E-5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.1533E-5	95% Jackknife UCL	1.1559E-5
95% Standard Bootstrap UCL	1.1527E-5	95% Bootstrap-t UCL	1.1514E-5

95% Hall's Bootstrap UCL	1.1549E-5	95% Percentile Bootstrap UCL	1.1526E-5
95% BCA Bootstrap UCL	1.1483E-5		
90% Chebyshev(Mean, Sd) UCL	1.2335E-5	95% Chebyshev(Mean, Sd) UCL	1.3140E-5
97.5% Chebyshev(Mean, Sd) UCL	1.4256E-5	99% Chebyshev(Mean, Sd) UCL	1.6449E-5

Suggested UCL to Use

95% Student's-t UCL 1.1559E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 3:05:29 PM
From File	crb_hepmus2a_ndl_PCB_sum_flag_sep_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Total Non-DL PCBs

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.159	Mean	0.297
Maximum	0.491	Median	0.289
SD	0.084	Std. Error of Mean	0.0138
Coefficient of Variation	0.283	Skewness	0.429

Normal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0933	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.32	95% Adjusted-CLT UCL (Chen-1995)	0.32
		95% Modified-t UCL (Johnson-1978)	0.32

Gamma GOF Test

A-D Test Statistic	0.16	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0594	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.78	k star (bias corrected MLE)	11.76
Theta hat (MLE)	0.0232	Theta star (bias corrected MLE)	0.0252
nu hat (MLE)	945.5	nu star (bias corrected)	870.1
MLE Mean (bias corrected)	0.297	MLE Sd (bias corrected)	0.0865
		Approximate Chi Square Value (0.05)	802.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	799.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.321	95% Adjusted Gamma UCL (use when n<50)	0.323

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0682	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.841	Mean of logged Data	-1.255
Maximum of Logged Data	-0.712	SD of logged Data	0.288

Assuming Lognormal Distribution

95% H-UCL	0.324	90% Chebyshev (MVUE) UCL	0.34
95% Chebyshev (MVUE) UCL	0.359	97.5% Chebyshev (MVUE) UCL	0.386
99% Chebyshev (MVUE) UCL	0.439		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.319	95% Jackknife UCL	0.32
95% Standard Bootstrap UCL	0.319	95% Bootstrap-t UCL	0.321
95% Hall's Bootstrap UCL	0.321	95% Percentile Bootstrap UCL	0.32
95% BCA Bootstrap UCL	0.319		
90% Chebyshev(Mean, Sd) UCL	0.338	95% Chebyshev(Mean, Sd) UCL	0.357
97.5% Chebyshev(Mean, Sd) UCL	0.383	99% Chebyshev(Mean, Sd) UCL	0.434

Suggested UCL to Use

95% Student's-t UCL	0.32

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 3:09:10 PM
From File	crb_hepmus5_PAH_wide2_flag_sep_ss_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	15
Number of Detects	9	Number of Non-Detects	28
Number of Distinct Detects	9	Number of Distinct Non-Detects	8
Minimum Detect	0.0026	Minimum Non-Detect	0.0026
Maximum Detect	0.00333	Maximum Non-Detect	0.013
Variance Detects	8.4749E-8	Percent Non-Detects	75.68%
Mean Detects	0.00297	SD Detects	2.9112E-4
Median Detects	0.00296	CV Detects	0.0981
Skewness Detects	0.0131	Kurtosis Detects	-1.687
Mean of Logged Detects	-5.825	SD of Logged Detects	0.0986

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.888	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.19	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00273	KM Standard Error of Mean	4.9377E-5
KM SD	2.3729E-4	95% KM (BCA) UCL	0.00281
95% KM (t) UCL	0.00281	95% KM (Percentile Bootstrap) UCL	0.00281
95% KM (z) UCL	0.00281	95% KM Bootstrap t UCL	0.00283
90% KM Chebyshev UCL	0.00288	95% KM Chebyshev UCL	0.00294
97.5% KM Chebyshev UCL	0.00304	99% KM Chebyshev UCL	0.00322

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.457	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.72	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.202	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.279	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	116.3	k star (bias corrected MLE)	77.61
Theta hat (MLE)	2.5507E-5	Theta star (bias corrected MLE)	3.8225E-5
nu hat (MLE)	2093	nu star (bias corrected)	1397
Mean (detects)	0.00297		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0026	Mean	0.00829
Maximum	0.01	Median	0.01
SD	0.00306	CV	0.369
k hat (MLE)	4.747	k star (bias corrected MLE)	4.38
Theta hat (MLE)	0.00175	Theta star (bias corrected MLE)	0.00189

nu hat (MLE)	351.3	nu star (bias corrected)	324.2
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (324.16, α)	283.4	Adjusted Chi Square Value (324.16, β)	281.8
95% Gamma Approximate UCL (use when n>=50)	0.00948	95% Gamma Adjusted UCL (use when n<50)	0.00954

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00273	SD (KM)	2.3729E-4
Variance (KM)	5.6306E-8	SE of Mean (KM)	4.9377E-5
k hat (KM)	132.1	k star (KM)	121.4
nu hat (KM)	9778	nu star (KM)	8986
theta hat (KM)	2.0643E-5	theta star (KM)	2.2461E-5
80% gamma percentile (KM)	0.00293	90% gamma percentile (KM)	0.00305
95% gamma percentile (KM)	0.00315	99% gamma percentile (KM)	0.00334

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	8767	Adjusted Chi Square Value (N/A, β)	8758
95% Gamma Approximate KM-UCL (use when n>=50)	0.0028	95% Gamma Adjusted KM-UCL (use when n<50)	0.0028

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00247	Mean in Log Scale	-6.015
SD in Original Scale	3.9181E-4	SD in Log Scale	0.154
95% t UCL (assumes normality of ROS data)	0.00258	95% Percentile Bootstrap UCL	0.00257
95% BCA Bootstrap UCL	0.00259	95% Bootstrap t UCL	0.00259
95% H-UCL (Log ROS)	0.00258		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.908	KM Geo Mean	0.00272
KM SD (logged)	0.0816	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.017	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0816	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.017		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00269	Mean in Log Scale	-6.077
SD in Original Scale	0.00158	SD in Log Scale	0.567
95% t UCL (Assumes normality)	0.00313	95% H-Stat UCL	0.00325

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.00281

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	10
Number of Detects	2	Number of Non-Detects	35
Number of Distinct Detects	2	Number of Distinct Non-Detects	8
Minimum Detect	0.00301	Minimum Non-Detect	0.0026
Maximum Detect	0.00304	Maximum Non-Detect	0.013
Variance Detects	4.500E-10	Percent Non-Detects	94.59%
Mean Detects	0.00303	SD Detects	2.1213E-5
Median Detects	0.00303	CV Detects	0.00701
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-5.8	SD of Logged Detects	0.00701

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00263	KM Standard Error of Mean	3.1579E-5
KM SD	1.1386E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00269	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00268	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00273	95% KM Chebyshev UCL	0.00277
97.5% KM Chebyshev UCL	0.00283	99% KM Chebyshev UCL	0.00295

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	40723	k star (bias corrected MLE)	N/A
Theta hat (MLE)	7.4332E-8	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	162892	nu star (bias corrected)	N/A
Mean (detects)	0.00303		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00263	SD (KM)	1.1386E-4
Variance (KM)	1.2964E-8	SE of Mean (KM)	3.1579E-5
k hat (KM)	534.7	k star (KM)	491.4
nu hat (KM)	39569	nu star (KM)	36362
theta hat (KM)	4.9239E-6	theta star (KM)	5.3581E-6
80% gamma percentile (KM)	0.00273	90% gamma percentile (KM)	0.00279
95% gamma percentile (KM)	0.00283	99% gamma percentile (KM)	0.00292

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0431
Approximate Chi Square Value (N/A, α)	35919	Adjusted Chi Square Value (N/A, β)	35900
95% Gamma Approximate KM-UCL (use when n>=50)	0.00267	95% Gamma Adjusted KM-UCL (use when n<50)	0.00267

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00286	Mean in Log Scale	-5.856
SD in Original Scale	6.9243E-5	SD in Log Scale	0.0241
95% t UCL (assumes normality of ROS data)	0.00288	95% Percentile Bootstrap UCL	0.00288
95% BCA Bootstrap UCL	0.00288	95% Bootstrap t UCL	0.00288
95% H-UCL (Log ROS)	N/A		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.941	KM Geo Mean	0.00263
KM SD (logged)	0.0405	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0112	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0405	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0112		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00238	Mean in Log Scale	-6.23
SD in Original Scale	0.00166	SD in Log Scale	0.588
95% t UCL (Assumes normality)	0.00284	95% H-Stat UCL	0.00284

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00269	KM H-UCL	N/A
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	37	Number of Distinct Observations	9
Number of Detects	2	Number of Non-Detects	35
Number of Distinct Detects	2	Number of Distinct Non-Detects	8
Minimum Detect	0.00263	Minimum Non-Detect	0.0026
Maximum Detect	0.00278	Maximum Non-Detect	0.013
Variance Detects	1.2168E-8	Percent Non-Detects	94.59%
Mean Detects	0.0027	SD Detects	1.1031E-4
Median Detects	0.0027	CV Detects	0.0408
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-5.913	SD of Logged Detects	0.0408

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00261	KM Standard Error of Mean	9.8176E-6
KM SD	3.5210E-5	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00262	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00262	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00264	95% KM Chebyshev UCL	0.00265
97.5% KM Chebyshev UCL	0.00267	99% KM Chebyshev UCL	0.00271

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1201	k star (bias corrected MLE)	N/A
Theta hat (MLE)	2.2506E-6	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	4806	nu star (bias corrected)	N/A
Mean (detects)	0.0027		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00261	SD (KM)	3.5210E-5
Variance (KM)	1.2397E-9	SE of Mean (KM)	9.8176E-6
k hat (KM)	5488	k star (KM)	5043
nu hat (KM)	406113	nu star (KM)	373186
theta hat (KM)	4.7529E-7	theta star (KM)	5.1722E-7
80% gamma percentile (KM)	0.00264	90% gamma percentile (KM)	0.00266
95% gamma percentile (KM)	0.00267	99% gamma percentile (KM)	0.00269

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0431
Approximate Chi Square Value (N/A, α)	371766	Adjusted Chi Square Value (N/A, β)	371705
95% Gamma Approximate KM-UCL (use when n>=50)	0.00262	95% Gamma Adjusted KM-UCL (use when n<50)	0.00262

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00226	Mean in Log Scale	-6.097
SD in Original Scale	1.8233E-4	SD in Log Scale	0.0794
95% t UCL (assumes normality of ROS data)	0.00231	95% Percentile Bootstrap UCL	0.00231
95% BCA Bootstrap UCL	0.00231	95% Bootstrap t UCL	0.00231
95% H-UCL (Log ROS)	N/A		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.949	KM Geo Mean	0.00261
KM SD (logged)	0.0131	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.00365	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0131	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.00365		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00237	Mean in Log Scale	-6.236
SD in Original Scale	0.00165	SD in Log Scale	0.584
95% t UCL (Assumes normality)	0.00282	95% H-Stat UCL	0.00281

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00262	KM H-UCL	N/A
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	21
Number of Detects	14	Number of Non-Detects	23
Number of Distinct Detects	13	Number of Distinct Non-Detects	8
Minimum Detect	0.00273	Minimum Non-Detect	0.0026
Maximum Detect	0.0107	Maximum Non-Detect	0.013
Variance Detects	4.3288E-6	Percent Non-Detects	62.16%
Mean Detects	0.0039	SD Detects	0.00208
Median Detects	0.00322	CV Detects	0.534
Skewness Detects	3.09	Kurtosis Detects	10.11
Mean of Logged Detects	-5.625	SD of Logged Detects	0.362

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.553	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.367	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00318	KM Standard Error of Mean	2.4878E-4
KM SD	0.00141	95% KM (BCA) UCL	0.00366
95% KM (t) UCL	0.0036	95% KM (Percentile Bootstrap) UCL	0.00361
95% KM (z) UCL	0.00359	95% KM Bootstrap t UCL	0.00432
90% KM Chebyshev UCL	0.00393	95% KM Chebyshev UCL	0.00427
97.5% KM Chebyshev UCL	0.00474	99% KM Chebyshev UCL	0.00566

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.904	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.737	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.318	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.229	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.535	k star (bias corrected MLE)	5.182
Theta hat (MLE)	5.9673E-4	Theta star (bias corrected MLE)	7.5250E-4
nu hat (MLE)	183	nu star (bias corrected)	145.1
Mean (detects)	0.0039		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.00273	Mean	0.00769
Maximum	0.0107	Median	0.01
SD	0.00325	CV	0.422
k hat (MLE)	4.205	k star (bias corrected MLE)	3.882
Theta hat (MLE)	0.00183	Theta star (bias corrected MLE)	0.00198
nu hat (MLE)	311.2	nu star (bias corrected)	287.3
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (287.30, α)	249	Adjusted Chi Square Value (287.30, β)	247.5
95% Gamma Approximate UCL (use when n>=50)	0.00887	95% Gamma Adjusted UCL (use when n<50)	0.00893

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00318	SD (KM)	0.00141
Variance (KM)	1.9796E-6	SE of Mean (KM)	2.4878E-4
k hat (KM)	5.114	k star (KM)	4.718

nu hat (KM)	378.5	nu star (KM)	349.1
theta hat (KM)	6.2216E-4	theta star (KM)	6.7447E-4
80% gamma percentile (KM)	0.0043	90% gamma percentile (KM)	0.00514
95% gamma percentile (KM)	0.00591	99% gamma percentile (KM)	0.00753

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (349.10, α)	306.8	Adjusted Chi Square Value (349.10, β)	305.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.00362	95% Gamma Adjusted KM-UCL (use when n<50)	0.00364

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.699	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.286	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00264	Mean in Log Scale	-6.066
SD in Original Scale	0.00168	SD in Log Scale	0.48
95% t UCL (assumes normality of ROS data)	0.0031	95% Percentile Bootstrap UCL	0.00313
95% BCA Bootstrap UCL	0.0033	95% Bootstrap t UCL	0.00345
95% H-UCL (Log ROS)	0.00303		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.801	KM Geo Mean	0.00303
KM SD (logged)	0.273	95% Critical H Value (KM-Log)	1.771
KM Standard Error of Mean (logged)	0.0495	95% H-UCL (KM -Log)	0.0034
KM SD (logged)	0.273	95% Critical H Value (KM-Log)	1.771
KM Standard Error of Mean (logged)	0.0495		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00313	Mean in Log Scale	-5.948
SD in Original Scale	0.00202	SD in Log Scale	0.607
95% t UCL (Assumes normality)	0.00369	95% H-Stat UCL	0.00384

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0036	KM H-UCL	0.0034
95% KM (BCA) UCL	0.00366		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	9
Number of Detects	3	Number of Non-Detects	34
Number of Distinct Detects	3	Number of Distinct Non-Detects	8
Minimum Detect	0.0026	Minimum Non-Detect	0.0026
Maximum Detect	0.00304	Maximum Non-Detect	0.013
Variance Detects	6.1516E-8	Percent Non-Detects	91.89%
Mean Detects	0.00276	SD Detects	2.4802E-4
Median Detects	0.00263	CV Detects	0.09
Skewness Detects	1.711	Kurtosis Detects	N/A
Mean of Logged Detects	-5.897	SD of Logged Detects	0.0879

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.794	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.367	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00262	KM Standard Error of Mean	2.0417E-5
KM SD	8.4923E-5	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00265	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00265	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00268	95% KM Chebyshev UCL	0.00271
97.5% KM Chebyshev UCL	0.00275	99% KM Chebyshev UCL	0.00282

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	191.2	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.4415E-5	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	1147	nu star (bias corrected)	N/A
Mean (detects)	0.00276		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0026	Mean	0.00941
Maximum	0.01	Median	0.01
SD	0.00201	CV	0.213
k hat (MLE)	11.48	k star (bias corrected MLE)	10.57
Theta hat (MLE)	8.1980E-4	Theta star (bias corrected MLE)	8.9061E-4
nu hat (MLE)	849.6	nu star (bias corrected)	782.1
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (782.09, α)	718.2	Adjusted Chi Square Value (782.09, β)	715.5
95% Gamma Approximate UCL (use when n>=50)	0.0103	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00262	SD (KM)	8.4923E-5
Variance (KM)	7.2120E-9	SE of Mean (KM)	2.0417E-5
k hat (KM)	950.6	k star (KM)	873.6

nu hat (KM)	70347	nu star (KM)	64645
theta hat (KM)	2.7544E-6	theta star (KM)	2.9973E-6
80% gamma percentile (KM)	0.00269	90% gamma percentile (KM)	0.00273
95% gamma percentile (KM)	0.00277	99% gamma percentile (KM)	0.00283

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	64054	Adjusted Chi Square Value (N/A, β)	64029
95% Gamma Approximate KM-UCL (use when n>=50)	0.00264	95% Gamma Adjusted KM-UCL (use when n<50)	0.00264

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.797	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.365	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00215	Mean in Log Scale	-6.152
SD in Original Scale	2.8489E-4	SD in Log Scale	0.129
95% t UCL (assumes normality of ROS data)	0.00223	95% Percentile Bootstrap UCL	0.00222
95% BCA Bootstrap UCL	0.00223	95% Bootstrap t UCL	0.00224
95% H-UCL (Log ROS)	0.00223		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.946	KM Geo Mean	0.00262
KM SD (logged)	0.0302	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.00725	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0302	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.00725		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00241	Mean in Log Scale	-6.215
SD in Original Scale	0.00164	SD in Log Scale	0.583
95% t UCL (Assumes normality)	0.00286	95% H-Stat UCL	0.00287

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.00265

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	10
Number of Detects	2	Number of Non-Detects	35
Number of Distinct Detects	2	Number of Distinct Non-Detects	8
Minimum Detect	0.132	Minimum Non-Detect	0.0026
Maximum Detect	0.137	Maximum Non-Detect	0.013
Variance Detects	1.3520E-5	Percent Non-Detects	94.59%
Mean Detects	0.135	SD Detects	0.00368
Median Detects	0.135	CV Detects	0.0273
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-2.006	SD of Logged Detects	0.0273

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00973	KM Standard Error of Mean	0.00694
KM SD	0.0298	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0214	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0211	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0305	95% KM Chebyshev UCL	0.04
97.5% KM Chebyshev UCL	0.0531	99% KM Chebyshev UCL	0.0788

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	2677	k star (bias corrected MLE)	N/A
Theta hat (MLE)	5.0258E-5	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	10707	nu star (bias corrected)	N/A
Mean (detects)	0.135		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00973	SD (KM)	0.0298
Variance (KM)	8.9027E-4	SE of Mean (KM)	0.00694
k hat (KM)	0.106	k star (KM)	0.116
nu hat (KM)	7.871	nu star (KM)	8.566
theta hat (KM)	0.0915	theta star (KM)	0.0841
80% gamma percentile (KM)	0.00819	90% gamma percentile (KM)	0.0273
95% gamma percentile (KM)	0.0558	99% gamma percentile (KM)	0.144

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0431
Approximate Chi Square Value (8.57, α)	3.067	Adjusted Chi Square Value (8.57, β)	2.925
95% Gamma Approximate KM-UCL (use when n>=50)	0.0272	95% Gamma Adjusted KM-UCL (use when n<50)	0.0285

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.105	Mean in Log Scale	-2.256
SD in Original Scale	0.011	SD in Log Scale	0.102
95% t UCL (assumes normality of ROS data)	0.108	95% Percentile Bootstrap UCL	0.108
95% BCA Bootstrap UCL	0.109	95% Bootstrap t UCL	0.109
95% H-UCL (Log ROS)	0.108		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.739	KM Geo Mean	0.00322
KM SD (logged)	0.892	95% Critical H Value (KM-Log)	2.27
KM Standard Error of Mean (logged)	0.207	95% H-UCL (KM -Log)	0.00672
KM SD (logged)	0.892	95% Critical H Value (KM-Log)	2.27
KM Standard Error of Mean (logged)	0.207		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00949	Mean in Log Scale	-6.025
SD in Original Scale	0.0304	SD in Log Scale	1.133
95% t UCL (Assumes normality)	0.0179	95% H-Stat UCL	0.00743

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0214	KM H-UCL	0.00672
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 3:14:23 PM
From File	crb_hepmus7_pest_wide2_flag_sep_ss_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2,4'-DDD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	36	Number of Distinct Non-Detects	1
Minimum Detect	2.0711E-5	Minimum Non-Detect	4.9800E-6
Maximum Detect	8.9150E-4	Maximum Non-Detect	4.9800E-6
Variance Detects	2.4939E-8	Percent Non-Detects	2.703%
Mean Detects	1.0880E-4	SD Detects	1.5792E-4
Median Detects	7.5192E-5	CV Detects	1.452
Skewness Detects	4.181	Kurtosis Detects	18.79
Mean of Logged Detects	-9.521	SD of Logged Detects	0.762

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.464	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.338	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.0599E-4	KM Standard Error of Mean	2.5762E-5
KM SD	1.5451E-4	95% KM (BCA) UCL	1.6070E-4
95% KM (t) UCL	1.4949E-4	95% KM (Percentile Bootstrap) UCL	1.5403E-4
95% KM (z) UCL	1.4837E-4	95% KM Bootstrap t UCL	2.5340E-4
90% KM Chebyshev UCL	1.8328E-4	95% KM Chebyshev UCL	2.1829E-4
97.5% KM Chebyshev UCL	2.6688E-4	99% KM Chebyshev UCL	3.6232E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.363	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.768	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.213	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.15	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.411	k star (bias corrected MLE)	1.312
Theta hat (MLE)	7.7132E-5	Theta star (bias corrected MLE)	8.2956E-5
nu hat (MLE)	101.6	nu star (bias corrected)	94.43
Mean (detects)	1.0880E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.0711E-5	Mean	3.7613E-4
Maximum	0.01	Median	7.9098E-5
SD	0.00163	CV	4.343
k hat (MLE)	0.433	k star (bias corrected MLE)	0.416
Theta hat (MLE)	8.6949E-4	Theta star (bias corrected MLE)	9.0518E-4

nu hat (MLE)	32.01	nu star (bias corrected)	30.75
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (30.75, α)	19.08	Adjusted Chi Square Value (30.75, β)	18.68
95% Gamma Approximate UCL (use when n>=50)	6.0608E-4	95% Gamma Adjusted UCL (use when n<50)	6.1905E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.0599E-4	SD (KM)	1.5451E-4
Variance (KM)	2.3875E-8	SE of Mean (KM)	2.5762E-5
k hat (KM)	0.471	k star (KM)	0.45
nu hat (KM)	34.82	nu star (KM)	33.33
theta hat (KM)	2.2525E-4	theta star (KM)	2.3532E-4
80% gamma percentile (KM)	1.7301E-4	90% gamma percentile (KM)	2.9285E-4
95% gamma percentile (KM)	4.2251E-4	99% gamma percentile (KM)	7.4463E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (33.33, α)	21.13	Adjusted Chi Square Value (33.33, β)	20.71
95% Gamma Approximate KM-UCL (use when n>=50)	1.6719E-4	95% Gamma Adjusted KM-UCL (use when n<50)	1.7060E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.128	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.0616E-4	Mean in Log Scale	-9.571
SD in Original Scale	1.5653E-4	SD in Log Scale	0.811
95% t UCL (assumes normality of ROS data)	1.4961E-4	95% Percentile Bootstrap UCL	1.4963E-4
95% BCA Bootstrap UCL	1.7327E-4	95% Bootstrap t UCL	2.5520E-4
95% H-UCL (Log ROS)	1.3026E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-9.593	KM Geo Mean	6.8183E-5
KM SD (logged)	0.86	95% Critical H Value (KM-Log)	2.237
KM Standard Error of Mean (logged)	0.143	95% H-UCL (KM -Log)	1.3598E-4
KM SD (logged)	0.86	95% Critical H Value (KM-Log)	2.237
KM Standard Error of Mean (logged)	0.143		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.0592E-4	Mean in Log Scale	-9.612
SD in Original Scale	1.5669E-4	SD in Log Scale	0.935
95% t UCL (Assumes normality)	1.4941E-4	95% H-Stat UCL	1.4859E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.3598E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Number of Detects	35	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	5.2282E-5	Minimum Non-Detect	9.9500E-6
Maximum Detect	0.00172	Maximum Non-Detect	9.9500E-6
Variance Detects	9.0904E-8	Percent Non-Detects	2.778%
Mean Detects	2.3535E-4	SD Detects	3.0150E-4
Median Detects	1.4182E-4	CV Detects	1.281
Skewness Detects	4.029	Kurtosis Detects	18.14
Mean of Logged Detects	-8.679	SD of Logged Detects	0.685

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.493	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.325	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.2909E-4	KM Standard Error of Mean	4.9942E-5
KM SD	2.9534E-4	95% KM (BCA) UCL	3.2741E-4
95% KM (t) UCL	3.1347E-4	95% KM (Percentile Bootstrap) UCL	3.1358E-4
95% KM (z) UCL	3.1124E-4	95% KM Bootstrap t UCL	4.3347E-4
90% KM Chebyshev UCL	3.7892E-4	95% KM Chebyshev UCL	4.4678E-4
97.5% KM Chebyshev UCL	5.4098E-4	99% KM Chebyshev UCL	7.2601E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.947	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.764	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.229	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.151	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.686	k star (bias corrected MLE)	1.56
Theta hat (MLE)	1.3960E-4	Theta star (bias corrected MLE)	1.5083E-4
nu hat (MLE)	118	nu star (bias corrected)	109.2
Mean (detects)	2.3535E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	5.2282E-5	Mean	5.0659E-4
Maximum	0.01	Median	1.5123E-4
SD	0.00165	CV	3.266
k hat (MLE)	0.627	k star (bias corrected MLE)	0.594
Theta hat (MLE)	8.0749E-4	Theta star (bias corrected MLE)	8.5341E-4
nu hat (MLE)	45.17	nu star (bias corrected)	42.74
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (42.74, α)	28.75	Adjusted Chi Square Value (42.74, β)	28.23
95% Gamma Approximate UCL (use when n>=50)	7.5307E-4	95% Gamma Adjusted UCL (use when n<50)	7.6700E-4

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.2909E-4	SD (KM)	2.9534E-4
Variance (KM)	8.7226E-8	SE of Mean (KM)	4.9942E-5

k hat (KM)	0.602	k star (KM)	0.57
nu hat (KM)	43.32	nu star (KM)	41.04
theta hat (KM)	3.8075E-4	theta star (KM)	4.0187E-4
80% gamma percentile (KM)	3.7754E-4	90% gamma percentile (KM)	6.0266E-4
95% gamma percentile (KM)	8.3968E-4	99% gamma percentile (KM)	0.00142

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (41.04, α)	27.36	Adjusted Chi Square Value (41.04, β)	26.85
95% Gamma Approximate KM-UCL (use when n>=50)	3.4365E-4	95% Gamma Adjusted KM-UCL (use when n<50)	3.5015E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.151	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.2974E-4	Mean in Log Scale	-8.725
SD in Original Scale	2.9907E-4	SD in Log Scale	0.728
95% t UCL (assumes normality of ROS data)	3.1395E-4	95% Percentile Bootstrap UCL	3.1574E-4
95% BCA Bootstrap UCL	3.5807E-4	95% Bootstrap t UCL	4.2218E-4
95% H-UCL (Log ROS)	2.7440E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.758	KM Geo Mean	1.5716E-4
KM SD (logged)	0.813	95% Critical H Value (KM-Log)	2.184
KM Standard Error of Mean (logged)	0.137	95% H-UCL (KM -Log)	2.9529E-4
KM SD (logged)	0.813	95% Critical H Value (KM-Log)	2.184
KM Standard Error of Mean (logged)	0.137		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.2895E-4	Mean in Log Scale	-8.778
SD in Original Scale	2.9963E-4	SD in Log Scale	0.896
95% t UCL (Assumes normality)	3.1333E-4	95% H-Stat UCL	3.2469E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 4.4678E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	32
Number of Detects	31	Number of Non-Detects	6
Number of Distinct Detects	31	Number of Distinct Non-Detects	1
Minimum Detect	1.8930E-5	Minimum Non-Detect	1.0800E-5
Maximum Detect	0.00103	Maximum Non-Detect	1.0800E-5
Variance Detects	3.2164E-8	Percent Non-Detects	16.22%
Mean Detects	9.0356E-5	SD Detects	1.7934E-4
Median Detects	4.4132E-5	CV Detects	N/A
Skewness Detects	5.128	Kurtosis Detects	27.5
Mean of Logged Detects	-9.827	SD of Logged Detects	0.803

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.352	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.347	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.7455E-5	KM Standard Error of Mean	2.7429E-5
KM SD	1.6413E-4	95% KM (BCA) UCL	1.3104E-4
95% KM (t) UCL	1.2376E-4	95% KM (Percentile Bootstrap) UCL	1.3061E-4
95% KM (z) UCL	1.2257E-4	95% KM Bootstrap t UCL	2.4929E-4
90% KM Chebyshev UCL	1.5974E-4	95% KM Chebyshev UCL	1.9701E-4
97.5% KM Chebyshev UCL	2.4875E-4	99% KM Chebyshev UCL	3.5037E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.876	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.773	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.249	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.162	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.107	k star (bias corrected MLE)	1.021
Theta hat (MLE)	8.1638E-5	Theta star (bias corrected MLE)	8.8481E-5
nu hat (MLE)	68.62	nu star (bias corrected)	63.31
Mean (detects)	9.0356E-5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.8930E-5	Mean	0.0017
Maximum	0.01	Median	5.9472E-5
SD	0.00371	CV	2.184
k hat (MLE)	0.27	k star (bias corrected MLE)	0.266
Theta hat (MLE)	0.00629	Theta star (bias corrected MLE)	0.00639
nu hat (MLE)	19.96	nu star (bias corrected)	19.67
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (19.67, α)	10.61	Adjusted Chi Square Value (19.67, β)	10.32
95% Gamma Approximate UCL (use when n>=50)	0.00315	95% Gamma Adjusted UCL (use when n<50)	0.00324

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.7455E-5	SD (KM)	1.6413E-4
Variance (KM)	2.6939E-8	SE of Mean (KM)	2.7429E-5
k hat (KM)	0.223	k star (KM)	0.223

nu hat (KM)	16.48	nu star (KM)	16.48
theta hat (KM)	3.4780E-4	theta star (KM)	3.4786E-4
80% gamma percentile (KM)	1.0746E-4	90% gamma percentile (KM)	2.3391E-4
95% gamma percentile (KM)	3.8768E-4	99% gamma percentile (KM)	8.0397E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (16.48, α)	8.3	Adjusted Chi Square Value (16.48, β)	8.047
95% Gamma Approximate KM-UCL (use when n>=50)	1.5377E-4	95% Gamma Adjusted KM-UCL (use when n<50)	1.5859E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.142	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.156	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.7258E-5	Mean in Log Scale	-10.11
SD in Original Scale	1.6648E-4	SD in Log Scale	0.997
95% t UCL (assumes normality of ROS data)	1.2346E-4	95% Percentile Bootstrap UCL	1.3090E-4
95% BCA Bootstrap UCL	1.5950E-4	95% Bootstrap t UCL	2.4725E-4
95% H-UCL (Log ROS)	9.8823E-5		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-10.09	KM Geo Mean	4.1569E-5
KM SD (logged)	0.935	95% Critical H Value (KM-Log)	2.316
KM Standard Error of Mean (logged)	0.156	95% H-UCL (KM -Log)	9.2351E-5
KM SD (logged)	0.935	95% Critical H Value (KM-Log)	2.316
KM Standard Error of Mean (logged)	0.156		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.6579E-5	Mean in Log Scale	-10.2
SD in Original Scale	1.6677E-4	SD in Log Scale	1.13
95% t UCL (Assumes normality)	1.2287E-4	95% H-Stat UCL	1.1356E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 9.2351E-5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00872	Mean	0.029
Maximum	0.134	Median	0.0231
SD	0.0225	Std. Error of Mean	0.0037
Coefficient of Variation	0.776	Skewness	3.087

Normal GOF Test

Shapiro Wilk Test Statistic	0.709	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0352	95% Adjusted-CLT UCL (Chen-1995)	0.0371
		95% Modified-t UCL (Johnson-1978)	0.0356

Gamma GOF Test

A-D Test Statistic	0.694	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.126	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.782	k star (bias corrected MLE)	2.575
Theta hat (MLE)	0.0104	Theta star (bias corrected MLE)	0.0113
nu hat (MLE)	205.9	nu star (bias corrected)	190.5
MLE Mean (bias corrected)	0.029	MLE Sd (bias corrected)	0.0181
		Approximate Chi Square Value (0.05)	159.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	158.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0346	95% Adjusted Gamma UCL (use when n<50)	0.0349

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.079	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.742	Mean of logged Data	-3.731
Maximum of Logged Data	-2.009	SD of logged Data	0.59

Assuming Lognormal Distribution

95% H-UCL	0.0347	90% Chebyshev (MVUE) UCL	0.0372
95% Chebyshev (MVUE) UCL	0.0411	97.5% Chebyshev (MVUE) UCL	0.0467
99% Chebyshev (MVUE) UCL	0.0575		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0351	95% Jackknife UCL	0.0352
95% Standard Bootstrap UCL	0.035	95% Bootstrap-t UCL	0.0389

95% Hall's Bootstrap UCL	0.0636	95% Percentile Bootstrap UCL	0.0357
95% BCA Bootstrap UCL	0.0381		
90% Chebyshev(Mean, Sd) UCL	0.0401	95% Chebyshev(Mean, Sd) UCL	0.0451
97.5% Chebyshev(Mean, Sd) UCL	0.0521	99% Chebyshev(Mean, Sd) UCL	0.0658

Suggested UCL to Use

95% Adjusted Gamma UCL	0.0349

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.0333	Mean	0.0831
Maximum	0.191	Median	0.0757
SD	0.0374	Std. Error of Mean	0.00615
Coefficient of Variation	0.45	Skewness	1.501

Normal GOF Test

Shapiro Wilk Test Statistic	0.849	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0935	95% Adjusted-CLT UCL (Chen-1995)	0.0949
		95% Modified-t UCL (Johnson-1978)	0.0938

Gamma GOF Test

A-D Test Statistic	0.679	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.132	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.126	k star (bias corrected MLE)	5.648
Theta hat (MLE)	0.0136	Theta star (bias corrected MLE)	0.0147
nu hat (MLE)	453.3	nu star (bias corrected)	417.9
MLE Mean (bias corrected)	0.0831	MLE Sd (bias corrected)	0.035
		Approximate Chi Square Value (0.05)	371.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	369.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.0935	95% Adjusted Gamma UCL (use when n<50)	0.094

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.401	Mean of logged Data	-2.571
Maximum of Logged Data	-1.657	SD of logged Data	0.405

Assuming Lognormal Distribution

95% H-UCL	0.094	90% Chebyshev (MVUE) UCL	0.0998
95% Chebyshev (MVUE) UCL	0.108	97.5% Chebyshev (MVUE) UCL	0.118
99% Chebyshev (MVUE) UCL	0.139		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0932	95% Jackknife UCL	0.0935
95% Standard Bootstrap UCL	0.093	95% Bootstrap-t UCL	0.0958

95% Hall's Bootstrap UCL	0.0959	95% Percentile Bootstrap UCL	0.0933
95% BCA Bootstrap UCL	0.0958		
90% Chebyshev(Mean, Sd) UCL	0.102	95% Chebyshev(Mean, Sd) UCL	0.11
97.5% Chebyshev(Mean, Sd) UCL	0.122	99% Chebyshev(Mean, Sd) UCL	0.144

Suggested UCL to Use

95% Adjusted Gamma UCL	0.094

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	6.7796E-5	Mean	5.3608E-4
Maximum	0.00367	Median	2.5314E-4
SD	7.5411E-4	Std. Error of Mean	1.2568E-4
Coefficient of Variation	1.407	Skewness	3.012

Normal GOF Test

Shapiro Wilk Test Statistic	0.566	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.291	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.4843E-4	95% Adjusted-CLT UCL (Chen-1995)	8.1023E-4
		95% Modified-t UCL (Johnson-1978)	7.5895E-4

Gamma GOF Test

A-D Test Statistic	2.703	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.774	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.249	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.151	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.137	k star (bias corrected MLE)	1.061
Theta hat (MLE)	4.7156E-4	Theta star (bias corrected MLE)	5.0545E-4
nu hat (MLE)	81.85	nu star (bias corrected)	76.36
MLE Mean (bias corrected)	5.3608E-4	MLE Sd (bias corrected)	5.2054E-4
		Approximate Chi Square Value (0.05)	57.23
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	56.48

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.1525E-4	95% Adjusted Gamma UCL (use when n<50)	7.2477E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.187	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.599	Mean of logged Data	-8.032
Maximum of Logged Data	-5.608	SD of logged Data	0.893

Assuming Lognormal Distribution

95% H-UCL	6.8172E-4	90% Chebyshev (MVUE) UCL	7.1828E-4
95% Chebyshev (MVUE) UCL	8.2757E-4	97.5% Chebyshev (MVUE) UCL	9.7924E-4
99% Chebyshev (MVUE) UCL	0.00128		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	7.4281E-4	95% Jackknife UCL	7.4843E-4
95% Standard Bootstrap UCL	7.4439E-4	95% Bootstrap-t UCL	9.1751E-4

95% Hall's Bootstrap UCL	7.8574E-4	95% Percentile Bootstrap UCL	7.4669E-4
95% BCA Bootstrap UCL	8.5739E-4		
90% Chebyshev(Mean, Sd) UCL	9.1313E-4	95% Chebyshev(Mean, Sd) UCL	0.00108
97.5% Chebyshev(Mean, Sd) UCL	0.00132	99% Chebyshev(Mean, Sd) UCL	0.00179

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 0.00108

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	3.8014E-4	Mean	0.00176
Maximum	0.00385	Median	0.00154
SD	9.5328E-4	Std. Error of Mean	1.5672E-4
Coefficient of Variation	0.541	Skewness	0.525

Normal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00203	95% Adjusted-CLT UCL (Chen-1995)	0.00203
		95% Modified-t UCL (Johnson-1978)	0.00203

Gamma GOF Test

A-D Test Statistic	0.277	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0803	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.222	k star (bias corrected MLE)	2.979
Theta hat (MLE)	5.4667E-4	Theta star (bias corrected MLE)	5.9130E-4
nu hat (MLE)	238.5	nu star (bias corrected)	220.5
MLE Mean (bias corrected)	0.00176	MLE Sd (bias corrected)	0.00102
		Approximate Chi Square Value (0.05)	187.1
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	185.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00208	95% Adjusted Gamma UCL (use when n<50)	0.00209

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0793	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.875	Mean of logged Data	-6.505
Maximum of Logged Data	-5.558	SD of logged Data	0.612

Assuming Lognormal Distribution

95% H-UCL	0.00221	90% Chebyshev (MVUE) UCL	0.00237
95% Chebyshev (MVUE) UCL	0.00263	97.5% Chebyshev (MVUE) UCL	0.003
99% Chebyshev (MVUE) UCL	0.00371		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00202	95% Jackknife UCL	0.00203
95% Standard Bootstrap UCL	0.00202	95% Bootstrap-t UCL	0.00204

95% Hall's Bootstrap UCL	0.00203	95% Percentile Bootstrap UCL	0.00202
95% BCA Bootstrap UCL	0.00205		
90% Chebyshev(Mean, Sd) UCL	0.00223	95% Chebyshev(Mean, Sd) UCL	0.00244
97.5% Chebyshev(Mean, Sd) UCL	0.00274	99% Chebyshev(Mean, Sd) UCL	0.00332

Suggested UCL to Use

95% Student's-t UCL 0.00203

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00255	Mean	0.00482
Maximum	0.0115	Median	0.00468
SD	0.00162	Std. Error of Mean	2.6658E-4
Coefficient of Variation	0.337	Skewness	1.983

Normal GOF Test

Shapiro Wilk Test Statistic	0.859	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00527	95% Adjusted-CLT UCL (Chen-1995)	0.00535
		95% Modified-t UCL (Johnson-1978)	0.00528

Gamma GOF Test

A-D Test Statistic	0.384	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0824	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11	k star (bias corrected MLE)	10.12
Theta hat (MLE)	4.3804E-4	Theta star (bias corrected MLE)	4.7585E-4
nu hat (MLE)	813.7	nu star (bias corrected)	749.1
MLE Mean (bias corrected)	0.00482	MLE Sd (bias corrected)	0.00151
		Approximate Chi Square Value (0.05)	686.6
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	684

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00526	95% Adjusted Gamma UCL (use when n<50)	0.00528

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0696	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.971	Mean of logged Data	-5.382
Maximum of Logged Data	-4.468	SD of logged Data	0.3

Assuming Lognormal Distribution

95% H-UCL	0.00526	90% Chebyshev (MVUE) UCL	0.00553
95% Chebyshev (MVUE) UCL	0.00586	97.5% Chebyshev (MVUE) UCL	0.00631
99% Chebyshev (MVUE) UCL	0.0072		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00526	95% Jackknife UCL	0.00527
95% Standard Bootstrap UCL	0.00525	95% Bootstrap-t UCL	0.00541

95% Hall's Bootstrap UCL	0.00557	95% Percentile Bootstrap UCL	0.00528
95% BCA Bootstrap UCL	0.00534		
90% Chebyshev(Mean, Sd) UCL	0.00562	95% Chebyshev(Mean, Sd) UCL	0.00598
97.5% Chebyshev(Mean, Sd) UCL	0.00648	99% Chebyshev(Mean, Sd) UCL	0.00747

Suggested UCL to Use

95% Student's-t UCL 0.00527

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.00176	Mean	0.00547
Maximum	0.00938	Median	0.00516
SD	0.00233	Std. Error of Mean	3.8812E-4
Coefficient of Variation	0.426	Skewness	0.113

Normal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.088	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00613	95% Adjusted-CLT UCL (Chen-1995)	0.00612
		95% Modified-t UCL (Johnson-1978)	0.00613

Gamma GOF Test

A-D Test Statistic	0.48	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0915	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.937	k star (bias corrected MLE)	4.544
Theta hat (MLE)	0.00111	Theta star (bias corrected MLE)	0.0012
nu hat (MLE)	355.4	nu star (bias corrected)	327.2
MLE Mean (bias corrected)	0.00547	MLE Sd (bias corrected)	0.00257
		Approximate Chi Square Value (0.05)	286.2
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	284.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00626	95% Adjusted Gamma UCL (use when n<50)	0.00629

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.345	Mean of logged Data	-5.313
Maximum of Logged Data	-4.669	SD of logged Data	0.49

Assuming Lognormal Distribution

95% H-UCL	0.00651	90% Chebyshev (MVUE) UCL	0.00695
95% Chebyshev (MVUE) UCL	0.0076	97.5% Chebyshev (MVUE) UCL	0.00849
99% Chebyshev (MVUE) UCL	0.0102		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00611	95% Jackknife UCL	0.00613
95% Standard Bootstrap UCL	0.00609	95% Bootstrap-t UCL	0.00616

95% Hall's Bootstrap UCL	0.00611	95% Percentile Bootstrap UCL	0.0061
95% BCA Bootstrap UCL	0.0061		
90% Chebyshev(Mean, Sd) UCL	0.00664	95% Chebyshev(Mean, Sd) UCL	0.00716
97.5% Chebyshev(Mean, Sd) UCL	0.0079	99% Chebyshev(Mean, Sd) UCL	0.00933

Suggested UCL to Use

95% Student's-t UCL	0.00613

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00143	Mean	0.0032
Maximum	0.0105	Median	0.00297
SD	0.00148	Std. Error of Mean	2.4325E-4
Coefficient of Variation	0.462	Skewness	3.483

Normal GOF Test

Shapiro Wilk Test Statistic	0.696	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00361	95% Adjusted-CLT UCL (Chen-1995)	0.00375
		95% Modified-t UCL (Johnson-1978)	0.00364

Gamma GOF Test

A-D Test Statistic	0.875	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.12	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.331	k star (bias corrected MLE)	6.755
Theta hat (MLE)	4.3677E-4	Theta star (bias corrected MLE)	4.7404E-4
nu hat (MLE)	542.5	nu star (bias corrected)	499.9
MLE Mean (bias corrected)	0.0032	MLE Sd (bias corrected)	0.00123
		Approximate Chi Square Value (0.05)	449
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	446.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.00356	95% Adjusted Gamma UCL (use when n<50)	0.00358

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.101	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.549	Mean of logged Data	-5.814
Maximum of Logged Data	-4.552	SD of logged Data	0.357

Assuming Lognormal Distribution

95% H-UCL	0.00355	90% Chebyshev (MVUE) UCL	0.00375
95% Chebyshev (MVUE) UCL	0.00401	97.5% Chebyshev (MVUE) UCL	0.00437
99% Chebyshev (MVUE) UCL	0.00508		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0036	95% Jackknife UCL	0.00361
95% Standard Bootstrap UCL	0.00361	95% Bootstrap-t UCL	0.00385

95% Hall's Bootstrap UCL	0.00557	95% Percentile Bootstrap UCL	0.00364
95% BCA Bootstrap UCL	0.00382		
90% Chebyshev(Mean, Sd) UCL	0.00393	95% Chebyshev(Mean, Sd) UCL	0.00426
97.5% Chebyshev(Mean, Sd) UCL	0.00472	99% Chebyshev(Mean, Sd) UCL	0.00562

Suggested UCL to Use

95% Adjusted Gamma UCL 0.00358

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.6722E-4	Mean	9.8556E-4
Maximum	0.00246	Median	9.1514E-4
SD	4.0665E-4	Std. Error of Mean	6.6852E-5
Coefficient of Variation	0.413	Skewness	1.571

Normal GOF Test

Shapiro Wilk Test Statistic	0.877	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0011	95% Adjusted-CLT UCL (Chen-1995)	0.00111
		95% Modified-t UCL (Johnson-1978)	0.0011

Gamma GOF Test

A-D Test Statistic	0.541	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.111	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.238	k star (bias corrected MLE)	6.669
Theta hat (MLE)	1.3617E-4	Theta star (bias corrected MLE)	1.4778E-4
nu hat (MLE)	535.6	nu star (bias corrected)	493.5
MLE Mean (bias corrected)	9.8556E-4	MLE Sd (bias corrected)	3.8164E-4
		Approximate Chi Square Value (0.05)	443
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	440.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0011	95% Adjusted Gamma UCL (use when n<50)	0.0011

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.669	Mean of logged Data	-6.993
Maximum of Logged Data	-6.006	SD of logged Data	0.371

Assuming Lognormal Distribution

95% H-UCL	0.0011	90% Chebyshev (MVUE) UCL	0.00117
95% Chebyshev (MVUE) UCL	0.00125	97.5% Chebyshev (MVUE) UCL	0.00137
99% Chebyshev (MVUE) UCL	0.00159		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0011	95% Jackknife UCL	0.0011
95% Standard Bootstrap UCL	0.00109	95% Bootstrap-t UCL	0.00112

95% Hall's Bootstrap UCL	0.00114	95% Percentile Bootstrap UCL	0.0011
95% BCA Bootstrap UCL	0.00111		
90% Chebyshev(Mean, Sd) UCL	0.00119	95% Chebyshev(Mean, Sd) UCL	0.00128
97.5% Chebyshev(Mean, Sd) UCL	0.0014	99% Chebyshev(Mean, Sd) UCL	0.00165

Suggested UCL to Use

95% Student's-t UCL 0.0011

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	33	Number of Distinct Observations	33
		Number of Missing Observations	4
Minimum	1.1139E-4	Mean	1.8869E-4
Maximum	2.8731E-4	Median	1.8733E-4
SD	4.2925E-5	Std. Error of Mean	7.4723E-6
Coefficient of Variation	0.227	Skewness	0.0041

Normal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.931	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0892	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.152	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.0135E-4	95% Adjusted-CLT UCL (Chen-1995)	2.0099E-4
		95% Modified-t UCL (Johnson-1978)	2.0135E-4

Gamma GOF Test

A-D Test Statistic	0.391	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.153	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	18.8	k star (bias corrected MLE)	17.11
Theta hat (MLE)	1.0037E-5	Theta star (bias corrected MLE)	1.1027E-5
nu hat (MLE)	1241	nu star (bias corrected)	1129
MLE Mean (bias corrected)	1.8869E-4	MLE Sd (bias corrected)	4.5615E-5
		Approximate Chi Square Value (0.05)	1052
Adjusted Level of Significance	0.0419	Adjusted Chi Square Value	1048

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.0250E-4	95% Adjusted Gamma UCL (use when n<50)	2.0324E-4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.931	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.134	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.152	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.102	Mean of logged Data	-8.602
Maximum of Logged Data	-8.155	SD of logged Data	0.24

Assuming Lognormal Distribution

95% H-UCL	2.0380E-4	90% Chebyshev (MVUE) UCL	2.1287E-4
95% Chebyshev (MVUE) UCL	2.2373E-4	97.5% Chebyshev (MVUE) UCL	2.3880E-4
99% Chebyshev (MVUE) UCL	2.6839E-4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.0098E-4	95% Jackknife UCL	2.0135E-4
95% Standard Bootstrap UCL	2.0060E-4	95% Bootstrap-t UCL	2.0178E-4

95% Hall's Bootstrap UCL	2.0168E-4	95% Percentile Bootstrap UCL	2.0062E-4
95% BCA Bootstrap UCL	2.0029E-4		
90% Chebyshev(Mean, Sd) UCL	2.1111E-4	95% Chebyshev(Mean, Sd) UCL	2.2126E-4
97.5% Chebyshev(Mean, Sd) UCL	2.3535E-4	99% Chebyshev(Mean, Sd) UCL	2.6304E-4

Suggested UCL to Use

95% Student's-t UCL 2.0135E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00208	Mean	0.00919
Maximum	0.0237	Median	0.00848
SD	0.00425	Std. Error of Mean	6.9832E-4
Coefficient of Variation	0.462	Skewness	1.426

Normal GOF Test

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.138	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0104	95% Adjusted-CLT UCL (Chen-1995)	0.0105
		95% Modified-t UCL (Johnson-1978)	0.0104

Gamma GOF Test

A-D Test Statistic	0.474	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0908	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.347	k star (bias corrected MLE)	4.932
Theta hat (MLE)	0.00172	Theta star (bias corrected MLE)	0.00186
nu hat (MLE)	395.7	nu star (bias corrected)	364.9
MLE Mean (bias corrected)	0.00919	MLE Sd (bias corrected)	0.00414
		Approximate Chi Square Value (0.05)	321.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	319.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0104	95% Adjusted Gamma UCL (use when n<50)	0.0105

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0929	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-6.174	Mean of logged Data	-4.786
Maximum of Logged Data	-3.74	SD of logged Data	0.452

Assuming Lognormal Distribution

95% H-UCL	0.0106	90% Chebyshev (MVUE) UCL	0.0113
95% Chebyshev (MVUE) UCL	0.0123	97.5% Chebyshev (MVUE) UCL	0.0136
99% Chebyshev (MVUE) UCL	0.0163		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0103	95% Jackknife UCL	0.0104
95% Standard Bootstrap UCL	0.0103	95% Bootstrap-t UCL	0.0105

95% Hall's Bootstrap UCL	0.0107	95% Percentile Bootstrap UCL	0.0103
95% BCA Bootstrap UCL	0.0105		
90% Chebyshev(Mean, Sd) UCL	0.0113	95% Chebyshev(Mean, Sd) UCL	0.0122
97.5% Chebyshev(Mean, Sd) UCL	0.0135	99% Chebyshev(Mean, Sd) UCL	0.0161

Suggested UCL to Use

95% Student's-t UCL 0.0104

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.00584	Mean	0.0141
Maximum	0.0345	Median	0.0134
SD	0.00518	Std. Error of Mean	8.5214E-4
Coefficient of Variation	0.368	Skewness	1.9

Normal GOF Test

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0155	95% Adjusted-CLT UCL (Chen-1995)	0.0158
		95% Modified-t UCL (Johnson-1978)	0.0156

Gamma GOF Test

A-D Test Statistic	0.779	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.153	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	9.215	k star (bias corrected MLE)	8.485
Theta hat (MLE)	0.00153	Theta star (bias corrected MLE)	0.00166
nu hat (MLE)	681.9	nu star (bias corrected)	627.9
MLE Mean (bias corrected)	0.0141	MLE Sd (bias corrected)	0.00483
		Approximate Chi Square Value (0.05)	570.8
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	568.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0155	95% Adjusted Gamma UCL (use when n<50)	0.0156

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-5.143	Mean of logged Data	-4.318
Maximum of Logged Data	-3.366	SD of logged Data	0.329

Assuming Lognormal Distribution

95% H-UCL	0.0155	90% Chebyshev (MVUE) UCL	0.0164
95% Chebyshev (MVUE) UCL	0.0174	97.5% Chebyshev (MVUE) UCL	0.0189
99% Chebyshev (MVUE) UCL	0.0218		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0155	95% Jackknife UCL	0.0155
95% Standard Bootstrap UCL	0.0155	95% Bootstrap-t UCL	0.0159

95% Hall's Bootstrap UCL	0.0165	95% Percentile Bootstrap UCL	0.0155
95% BCA Bootstrap UCL	0.0159		
90% Chebyshev(Mean, Sd) UCL	0.0166	95% Chebyshev(Mean, Sd) UCL	0.0178
97.5% Chebyshev(Mean, Sd) UCL	0.0194	99% Chebyshev(Mean, Sd) UCL	0.0226

Suggested UCL to Use

95% Student's-t UCL	0.0155	or 95% Modified-t UCL	0.0156
or 95% H-UCL	0.0155		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

General Statistics

Total Number of Observations	30	Number of Distinct Observations	29
		Number of Missing Observations	7
Number of Detects	28	Number of Non-Detects	2
Number of Distinct Detects	28	Number of Distinct Non-Detects	1
Minimum Detect	1.3390E-4	Minimum Non-Detect	1.3700E-5
Maximum Detect	4.2874E-4	Maximum Non-Detect	1.3700E-5
Variance Detects	5.5816E-9	Percent Non-Detects	6.667%
Mean Detects	2.3996E-4	SD Detects	7.4710E-5
Median Detects	2.2707E-4	CV Detects	0.311
Skewness Detects	0.976	Kurtosis Detects	0.855
Mean of Logged Detects	-8.379	SD of Logged Detects	0.298

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.144	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.164	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.2487E-4	KM Standard Error of Mean	1.6845E-5
KM SD	9.0603E-5	95% KM (BCA) UCL	2.5038E-4
95% KM (t) UCL	2.5350E-4	95% KM (Percentile Bootstrap) UCL	2.5130E-4
95% KM (z) UCL	2.5258E-4	95% KM Bootstrap t UCL	2.5340E-4
90% KM Chebyshev UCL	2.7541E-4	95% KM Chebyshev UCL	2.9830E-4
97.5% KM Chebyshev UCL	3.3007E-4	99% KM Chebyshev UCL	3.9248E-4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.28	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.108	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.165	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	11.62	k star (bias corrected MLE)	10.4
Theta hat (MLE)	2.0648E-5	Theta star (bias corrected MLE)	2.3073E-5
nu hat (MLE)	650.8	nu star (bias corrected)	582.4
Mean (detects)	2.3996E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.3390E-4	Mean	8.9063E-4
Maximum	0.01	Median	2.3019E-4
SD	0.00248	CV	2.781
k hat (MLE)	0.565	k star (bias corrected MLE)	0.531
Theta hat (MLE)	0.00158	Theta star (bias corrected MLE)	0.00168
nu hat (MLE)	33.9	nu star (bias corrected)	31.84
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (31.84, α)	19.95	Adjusted Chi Square Value (31.84, β)	19.4
95% Gamma Approximate UCL (use when n>=50)	0.00142	95% Gamma Adjusted UCL (use when n<50)	0.00146

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.2487E-4	SD (KM)	9.0603E-5
Variance (KM)	8.2088E-9	SE of Mean (KM)	1.6845E-5

k hat (KM)	6.16	k star (KM)	5.566
nu hat (KM)	369.6	nu star (KM)	334
theta hat (KM)	3.6504E-5	theta star (KM)	4.0398E-5
80% gamma percentile (KM)	2.9872E-4	90% gamma percentile (KM)	3.5238E-4
95% gamma percentile (KM)	4.0107E-4	99% gamma percentile (KM)	5.0345E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (333.99, α)	292.6	Adjusted Chi Square Value (333.99, β)	290.4
95% Gamma Approximate KM-UCL (use when n>=50)	2.5664E-4	95% Gamma Adjusted KM-UCL (use when n<50)	2.5861E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0883	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.164	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.3148E-4	Mean in Log Scale	-8.426
SD in Original Scale	7.9004E-5	SD in Log Scale	0.34
95% t UCL (assumes normality of ROS data)	2.5598E-4	95% Percentile Bootstrap UCL	2.5542E-4
95% BCA Bootstrap UCL	2.5613E-4	95% Bootstrap t UCL	2.5894E-4
95% H-UCL (Log ROS)	2.6055E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-8.567	KM Geo Mean	1.9035E-4
KM SD (logged)	0.758	95% Critical H Value (KM-Log)	2.195
KM Standard Error of Mean (logged)	0.141	95% H-UCL (KM -Log)	3.4553E-4
KM SD (logged)	0.758	95% Critical H Value (KM-Log)	2.195
KM Standard Error of Mean (logged)	0.141		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.2442E-4	Mean in Log Scale	-8.613
SD in Original Scale	9.3244E-5	SD in Log Scale	0.936
95% t UCL (Assumes normality)	2.5334E-4	95% H-Stat UCL	4.2759E-4

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.5350E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	4.0924E-4	Mean	0.00104
Maximum	0.00254	Median	9.7900E-4
SD	3.8893E-4	Std. Error of Mean	6.3940E-5
Coefficient of Variation	0.375	Skewness	1.601

Normal GOF Test

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.00115	95% Adjusted-CLT UCL (Chen-1995)	0.00116
		95% Modified-t UCL (Johnson-1978)	0.00115

Gamma GOF Test

A-D Test Statistic	0.318	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0857	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.221	k star (bias corrected MLE)	7.573
Theta hat (MLE)	1.2623E-4	Theta star (bias corrected MLE)	1.3705E-4
nu hat (MLE)	608.4	nu star (bias corrected)	560.4
MLE Mean (bias corrected)	0.00104	MLE Sd (bias corrected)	3.7713E-4
		Approximate Chi Square Value (0.05)	506.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	504.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.00115	95% Adjusted Gamma UCL (use when n<50)	0.00115

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0967	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.801	Mean of logged Data	-6.933
Maximum of Logged Data	-5.975	SD of logged Data	0.357

Assuming Lognormal Distribution

95% H-UCL	0.00116	90% Chebyshev (MVUE) UCL	0.00123
95% Chebyshev (MVUE) UCL	0.00131	97.5% Chebyshev (MVUE) UCL	0.00143
99% Chebyshev (MVUE) UCL	0.00166		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00114	95% Jackknife UCL	0.00115
95% Standard Bootstrap UCL	0.00114	95% Bootstrap-t UCL	0.00117

95% Hall's Bootstrap UCL	0.00121	95% Percentile Bootstrap UCL	0.00115
95% BCA Bootstrap UCL	0.00116		
90% Chebyshev(Mean, Sd) UCL	0.00123	95% Chebyshev(Mean, Sd) UCL	0.00132
97.5% Chebyshev(Mean, Sd) UCL	0.00144	99% Chebyshev(Mean, Sd) UCL	0.00167

Suggested UCL to Use

95% Student's-t UCL 0.00115

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 3:07:28 PM
From File	crb_hepmus4_met_wide2_flag_sep_ss_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	36	Number of Distinct Observations	32
		Number of Missing Observations	1
Number of Detects	17	Number of Non-Detects	19
Number of Distinct Detects	17	Number of Distinct Non-Detects	15
Minimum Detect	5.836	Minimum Non-Detect	5.385
Maximum Detect	27.8	Maximum Non-Detect	5.584
Variance Detects	46.79	Percent Non-Detects	52.78%
Mean Detects	10.15	SD Detects	6.84
Median Detects	7.127	CV Detects	0.674
Skewness Detects	1.961	Kurtosis Detects	2.675
Mean of Logged Detects	2.174	SD of Logged Detects	0.5

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.638	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.364	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.637	KM Standard Error of Mean	0.884
KM SD	5.145	95% KM (BCA) UCL	9.168
95% KM (t) UCL	9.13	95% KM (Percentile Bootstrap) UCL	9.144
95% KM (z) UCL	9.091	95% KM Bootstrap t UCL	10.42
90% KM Chebyshev UCL	10.29	95% KM Chebyshev UCL	11.49
97.5% KM Chebyshev UCL	13.16	99% KM Chebyshev UCL	16.43

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.181	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.744	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.306	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.21	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.624	k star (bias corrected MLE)	3.024
Theta hat (MLE)	2.802	Theta star (bias corrected MLE)	3.358
nu hat (MLE)	123.2	nu star (bias corrected)	102.8
Mean (detects)	10.15		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.801
Maximum	27.8	Median	0.01
SD	6.912	CV	1.44
k hat (MLE)	0.24	k star (bias corrected MLE)	0.239

Theta hat (MLE)	19.97	Theta star (bias corrected MLE)	20.09
nu hat (MLE)	17.31	nu star (bias corrected)	17.2
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (17.20, α)	8.817	Adjusted Chi Square Value (17.20, β)	8.544
95% Gamma Approximate UCL (use when n>=50)	9.366	95% Gamma Adjusted UCL (use when n<50)	9.666

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.637	SD (KM)	5.145
Variance (KM)	26.47	SE of Mean (KM)	0.884
k hat (KM)	2.204	k star (KM)	2.039
nu hat (KM)	158.7	nu star (KM)	146.8
theta hat (KM)	3.465	theta star (KM)	3.746
80% gamma percentile (KM)	11.41	90% gamma percentile (KM)	14.79
95% gamma percentile (KM)	18.01	99% gamma percentile (KM)	25.14

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (146.78, α)	119.8	Adjusted Chi Square Value (146.78, β)	118.7
95% Gamma Approximate KM-UCL (use when n>=50)	9.359	95% Gamma Adjusted KM-UCL (use when n<50)	9.446

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.743	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.265	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.074	Mean in Log Scale	1.486
SD in Original Scale	6.066	SD in Log Scale	0.751
95% t UCL (assumes normality of ROS data)	7.783	95% Percentile Bootstrap UCL	7.719
95% BCA Bootstrap UCL	8.417	95% Bootstrap t UCL	8.539
95% H-UCL (Log ROS)	7.676		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.915	KM Geo Mean	6.787
KM SD (logged)	0.413	95% Critical H Value (KM-Log)	1.85
KM Standard Error of Mean (logged)	0.071	95% H-UCL (KM -Log)	8.412
KM SD (logged)	0.413	95% Critical H Value (KM-Log)	1.85
KM Standard Error of Mean (logged)	0.071		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	6.24	Mean in Log Scale	1.558
SD in Original Scale	5.958	SD in Log Scale	0.681
95% t UCL (Assumes normality)	7.918	95% H-Stat UCL	7.585

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	9.13	KM H-UCL	8.412
95% KM (BCA) UCL	9.168		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	1.505	Mean	2.636
Maximum	3.992	Median	2.538
SD	0.606	Std. Error of Mean	0.101
Coefficient of Variation	0.23	Skewness	0.404

Normal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0895	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.806	95% Adjusted-CLT UCL (Chen-1995)	2.809
		95% Modified-t UCL (Johnson-1978)	2.807

Gamma GOF Test

A-D Test Statistic	0.17	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.074	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	19.55	k star (bias corrected MLE)	17.93
Theta hat (MLE)	0.135	Theta star (bias corrected MLE)	0.147
nu hat (MLE)	1407	nu star (bias corrected)	1291
MLE Mean (bias corrected)	2.636	MLE Sd (bias corrected)	0.622
		Approximate Chi Square Value (0.05)	1209
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	1205

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.815	95% Adjusted Gamma UCL (use when n<50)	2.824

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.061	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.409	Mean of logged Data	0.943
Maximum of Logged Data	1.384	SD of logged Data	0.232

Assuming Lognormal Distribution

95% H-UCL	2.825	90% Chebyshev (MVUE) UCL	2.945
95% Chebyshev (MVUE) UCL	3.084	97.5% Chebyshev (MVUE) UCL	3.278
99% Chebyshev (MVUE) UCL	3.659		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2.802	95% Jackknife UCL	2.806
95% Standard Bootstrap UCL	2.799	95% Bootstrap-t UCL	2.817

95% Hall's Bootstrap UCL	2.809	95% Percentile Bootstrap UCL	2.8
95% BCA Bootstrap UCL	2.823		
90% Chebyshev(Mean, Sd) UCL	2.939	95% Chebyshev(Mean, Sd) UCL	3.076
97.5% Chebyshev(Mean, Sd) UCL	3.267	99% Chebyshev(Mean, Sd) UCL	3.641

Suggested UCL to Use

95% Student's-t UCL	2.806

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cadmium

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.131	Mean	0.34
Maximum	0.811	Median	0.276
SD	0.185	Std. Error of Mean	0.0309
Coefficient of Variation	0.545	Skewness	0.964

Normal GOF Test

Shapiro Wilk Test Statistic	0.872	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.189	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.392	95% Adjusted-CLT UCL (Chen-1995)	0.396
		95% Modified-t UCL (Johnson-1978)	0.393

Gamma GOF Test

A-D Test Statistic	0.891	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.126	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.148	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.889	k star (bias corrected MLE)	3.583
Theta hat (MLE)	0.0873	Theta star (bias corrected MLE)	0.0948
nu hat (MLE)	280	nu star (bias corrected)	258
MLE Mean (bias corrected)	0.34	MLE Sd (bias corrected)	0.179
		Approximate Chi Square Value (0.05)	221.8
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	220.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.395	95% Adjusted Gamma UCL (use when n<50)	0.398

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.033	Mean of logged Data	-1.214
Maximum of Logged Data	-0.209	SD of logged Data	0.518

Assuming Lognormal Distribution

95% H-UCL	0.402	90% Chebyshev (MVUE) UCL	0.43
95% Chebyshev (MVUE) UCL	0.472	97.5% Chebyshev (MVUE) UCL	0.53
99% Chebyshev (MVUE) UCL	0.644		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.39	95% Jackknife UCL	0.392
95% Standard Bootstrap UCL	0.39	95% Bootstrap-t UCL	0.401

95% Hall's Bootstrap UCL	0.395	95% Percentile Bootstrap UCL	0.389
95% BCA Bootstrap UCL	0.392		
90% Chebyshev(Mean, Sd) UCL	0.432	95% Chebyshev(Mean, Sd) UCL	0.474
97.5% Chebyshev(Mean, Sd) UCL	0.532	99% Chebyshev(Mean, Sd) UCL	0.647

Suggested UCL to Use

95% Adjusted Gamma UCL	0.398

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Number of Detects	25	Number of Non-Detects	11
Number of Distinct Detects	25	Number of Distinct Non-Detects	11
Minimum Detect	0.0984	Minimum Non-Detect	0.0962
Maximum Detect	0.483	Maximum Non-Detect	0.0997
Variance Detects	0.00793	Percent Non-Detects	30.56%
Mean Detects	0.161	SD Detects	0.0891
Median Detects	0.124	CV Detects	0.555
Skewness Detects	2.349	Kurtosis Detects	6.352
Mean of Logged Detects	-1.93	SD of Logged Detects	0.421

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.695	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.282	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.141	KM Standard Error of Mean	0.0134
KM SD	0.0785	95% KM (BCA) UCL	0.166
95% KM (t) UCL	0.163	95% KM (Percentile Bootstrap) UCL	0.164
95% KM (z) UCL	0.163	95% KM Bootstrap t UCL	0.178
90% KM Chebyshev UCL	0.181	95% KM Chebyshev UCL	0.199
97.5% KM Chebyshev UCL	0.224	99% KM Chebyshev UCL	0.274

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.023	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.747	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.273	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.175	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.104	k star (bias corrected MLE)	4.518
Theta hat (MLE)	0.0315	Theta star (bias corrected MLE)	0.0355
nu hat (MLE)	255.2	nu star (bias corrected)	225.9
Mean (detects)	0.161		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.115
Maximum	0.483	Median	0.109
SD	0.101	CV	0.882
k hat (MLE)	1.045	k star (bias corrected MLE)	0.976
Theta hat (MLE)	0.11	Theta star (bias corrected MLE)	0.118
nu hat (MLE)	75.23	nu star (bias corrected)	70.29
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (70.29, α)	51.99	Adjusted Chi Square Value (70.29, β)	51.28
95% Gamma Approximate UCL (use when n>=50)	0.156	95% Gamma Adjusted UCL (use when n<50)	0.158

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.141	SD (KM)	0.0785
Variance (KM)	0.00617	SE of Mean (KM)	0.0134

k hat (KM)	3.222	k star (KM)	2.972
nu hat (KM)	232	nu star (KM)	214
theta hat (KM)	0.0437	theta star (KM)	0.0474
80% gamma percentile (KM)	0.201	90% gamma percentile (KM)	0.251
95% gamma percentile (KM)	0.297	99% gamma percentile (KM)	0.396

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (213.96, α)	181.1	Adjusted Chi Square Value (213.96, β)	179.7
95% Gamma Approximate KM-UCL (use when n>=50)	0.166	95% Gamma Adjusted KM-UCL (use when n<50)	0.168

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.82	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.256	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.129	Mean in Log Scale	-2.215
SD in Original Scale	0.0882	SD in Log Scale	0.559
95% t UCL (assumes normality of ROS data)	0.154	95% Percentile Bootstrap UCL	0.154
95% BCA Bootstrap UCL	0.16	95% Bootstrap t UCL	0.165
95% H-UCL (Log ROS)	0.153		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.056	KM Geo Mean	0.128
KM SD (logged)	0.393	95% Critical H Value (KM-Log)	1.836
KM Standard Error of Mean (logged)	0.0668	95% H-UCL (KM -Log)	0.156
KM SD (logged)	0.393	95% Critical H Value (KM-Log)	1.836
KM Standard Error of Mean (logged)	0.0668		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.126	Mean in Log Scale	-2.263
SD in Original Scale	0.0904	SD in Log Scale	0.617
95% t UCL (Assumes normality)	0.152	95% H-Stat UCL	0.155

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.163	KM H-UCL	0.156
95% KM (BCA) UCL	0.166		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.0471	Mean	0.0782
Maximum	0.233	Median	0.0675
SD	0.0365	Std. Error of Mean	0.00608
Coefficient of Variation	0.466	Skewness	3.128

Normal GOF Test

Shapiro Wilk Test Statistic	0.636	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.234	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0885	95% Adjusted-CLT UCL (Chen-1995)	0.0916
		95% Modified-t UCL (Johnson-1978)	0.089

Gamma GOF Test

A-D Test Statistic	2.197	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.758	k star (bias corrected MLE)	7.13
Theta hat (MLE)	0.0101	Theta star (bias corrected MLE)	0.011
nu hat (MLE)	558.6	nu star (bias corrected)	513.3
MLE Mean (bias corrected)	0.0782	MLE Sd (bias corrected)	0.0293
		Approximate Chi Square Value (0.05)	461.8
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	459.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.087	95% Adjusted Gamma UCL (use when n<50)	0.0874

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.839	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.13	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.055	Mean of logged Data	-2.614
Maximum of Logged Data	-1.457	SD of logged Data	0.332

Assuming Lognormal Distribution

95% H-UCL	0.0856	90% Chebyshev (MVUE) UCL	0.0904
95% Chebyshev (MVUE) UCL	0.0963	97.5% Chebyshev (MVUE) UCL	0.105
99% Chebyshev (MVUE) UCL	0.121		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0882	95% Jackknife UCL	0.0885
95% Standard Bootstrap UCL	0.0883	95% Bootstrap-t UCL	0.097

95% Hall's Bootstrap UCL	0.142	95% Percentile Bootstrap UCL	0.0888
95% BCA Bootstrap UCL	0.0935		
90% Chebyshev(Mean, Sd) UCL	0.0965	95% Chebyshev(Mean, Sd) UCL	0.105
97.5% Chebyshev(Mean, Sd) UCL	0.116	99% Chebyshev(Mean, Sd) UCL	0.139

Suggested UCL to Use

95% Student's-t UCL	0.0885	or 95% Modified-t UCL	0.089
or 95% H-UCL	0.0856		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Copper

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	15.79	Mean	26.35
Maximum	54.97	Median	25.89
SD	7.876	Std. Error of Mean	1.313
Coefficient of Variation	0.299	Skewness	1.593

Normal GOF Test

Shapiro Wilk Test Statistic	0.885	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	28.57	95% Adjusted-CLT UCL (Chen-1995)	28.88
		95% Modified-t UCL (Johnson-1978)	28.63

Gamma GOF Test

A-D Test Statistic	0.449	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.115	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.48	k star (bias corrected MLE)	12.37
Theta hat (MLE)	1.955	Theta star (bias corrected MLE)	2.13
nu hat (MLE)	970.4	nu star (bias corrected)	890.9
MLE Mean (bias corrected)	26.35	MLE Sd (bias corrected)	7.491
		Approximate Chi Square Value (0.05)	822.6
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	819.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	28.54	95% Adjusted Gamma UCL (use when n<50)	28.64

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.101	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.759	Mean of logged Data	3.234
Maximum of Logged Data	4.007	SD of logged Data	0.271

Assuming Lognormal Distribution

95% H-UCL	28.54	90% Chebyshev (MVUE) UCL	29.91
95% Chebyshev (MVUE) UCL	31.55	97.5% Chebyshev (MVUE) UCL	33.82
99% Chebyshev (MVUE) UCL	38.28		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	28.51	95% Jackknife UCL	28.57
95% Standard Bootstrap UCL	28.48	95% Bootstrap-t UCL	28.98

95% Hall's Bootstrap UCL	29.39	95% Percentile Bootstrap UCL	28.55
95% BCA Bootstrap UCL	28.89		
90% Chebyshev(Mean, Sd) UCL	30.29	95% Chebyshev(Mean, Sd) UCL	32.07
97.5% Chebyshev(Mean, Sd) UCL	34.55	99% Chebyshev(Mean, Sd) UCL	39.41

Suggested UCL to Use

95% Adjusted Gamma UCL	28.64

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	8.939	Mean	25.41
Maximum	99.47	Median	19.57
SD	18.41	Std. Error of Mean	3.068
Coefficient of Variation	0.724	Skewness	2.671

Normal GOF Test

Shapiro Wilk Test Statistic	0.694	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	30.59	95% Adjusted-CLT UCL (Chen-1995)	31.92
		95% Modified-t UCL (Johnson-1978)	30.82

Gamma GOF Test

A-D Test Statistic	1.517	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.175	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.148	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.26	k star (bias corrected MLE)	3.007
Theta hat (MLE)	7.794	Theta star (bias corrected MLE)	8.45
nu hat (MLE)	234.7	nu star (bias corrected)	216.5
MLE Mean (bias corrected)	25.41	MLE Sd (bias corrected)	14.65
		Approximate Chi Square Value (0.05)	183.5
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	182.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	29.99	95% Adjusted Gamma UCL (use when n<50)	30.22

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.132	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.19	Mean of logged Data	3.074
Maximum of Logged Data	4.6	SD of logged Data	0.527

Assuming Lognormal Distribution

95% H-UCL	29.52	90% Chebyshev (MVUE) UCL	31.61
95% Chebyshev (MVUE) UCL	34.72	97.5% Chebyshev (MVUE) UCL	39.03
99% Chebyshev (MVUE) UCL	47.5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	30.46	95% Jackknife UCL	30.59
95% Standard Bootstrap UCL	30.46	95% Bootstrap-t UCL	33.78

95% Hall's Bootstrap UCL	38.67	95% Percentile Bootstrap UCL	30.52
95% BCA Bootstrap UCL	32.13		
90% Chebyshev(Mean, Sd) UCL	34.61	95% Chebyshev(Mean, Sd) UCL	38.78
97.5% Chebyshev(Mean, Sd) UCL	44.57	99% Chebyshev(Mean, Sd) UCL	55.94

Suggested UCL to Use

95% H-UCL 29.52

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.0396	Mean	0.151
Maximum	0.904	Median	0.0982
SD	0.18	Std. Error of Mean	0.03
Coefficient of Variation	1.196	Skewness	3.13

Normal GOF Test

Shapiro Wilk Test Statistic	0.579	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.284	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.201	95% Adjusted-CLT UCL (Chen-1995)	0.217
		95% Modified-t UCL (Johnson-1978)	0.204

Gamma GOF Test

A-D Test Statistic	2.119	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.766	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.194	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.15	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.545	k star (bias corrected MLE)	1.435
Theta hat (MLE)	0.0974	Theta star (bias corrected MLE)	0.105
nu hat (MLE)	111.3	nu star (bias corrected)	103.3
MLE Mean (bias corrected)	0.151	MLE Sd (bias corrected)	0.126
		Approximate Chi Square Value (0.05)	80.88
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	79.97

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.192	95% Adjusted Gamma UCL (use when n<50)	0.195

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.23	Mean of logged Data	-2.25
Maximum of Logged Data	-0.101	SD of logged Data	0.755

Assuming Lognormal Distribution

95% H-UCL	0.184	90% Chebyshev (MVUE) UCL	0.196
95% Chebyshev (MVUE) UCL	0.222	97.5% Chebyshev (MVUE) UCL	0.259
99% Chebyshev (MVUE) UCL	0.33		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.2	95% Jackknife UCL	0.201
95% Standard Bootstrap UCL	0.198	95% Bootstrap-t UCL	0.259

95% Hall's Bootstrap UCL	0.392	95% Percentile Bootstrap UCL	0.203
95% BCA Bootstrap UCL	0.217		
90% Chebyshev(Mean, Sd) UCL	0.241	95% Chebyshev(Mean, Sd) UCL	0.281
97.5% Chebyshev(Mean, Sd) UCL	0.338	99% Chebyshev(Mean, Sd) UCL	0.449

Suggested UCL to Use

95% H-UCL	0.184

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Manganese

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	1.099	Mean	6.015
Maximum	27	Median	4.446
SD	5.347	Std. Error of Mean	0.891
Coefficient of Variation	0.889	Skewness	2.318

Normal GOF Test

Shapiro Wilk Test Statistic	0.739	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.273	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.145	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	7.521	95% Adjusted-CLT UCL (Chen-1995)	7.849
		95% Modified-t UCL (Johnson-1978)	7.578

Gamma GOF Test

A-D Test Statistic	1.038	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.76	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.177	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.149	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.975	k star (bias corrected MLE)	1.829
Theta hat (MLE)	3.045	Theta star (bias corrected MLE)	3.288
nu hat (MLE)	142.2	nu star (bias corrected)	131.7
MLE Mean (bias corrected)	6.015	MLE Sd (bias corrected)	4.447
		Approximate Chi Square Value (0.05)	106.2
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	105.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	7.46	95% Adjusted Gamma UCL (use when n<50)	7.534

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.0941	Mean of logged Data	1.52
Maximum of Logged Data	3.296	SD of logged Data	0.718

Assuming Lognormal Distribution

95% H-UCL	7.625	90% Chebyshev (MVUE) UCL	8.16
95% Chebyshev (MVUE) UCL	9.199	97.5% Chebyshev (MVUE) UCL	10.64
99% Chebyshev (MVUE) UCL	13.48		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	7.481	95% Jackknife UCL	7.521
95% Standard Bootstrap UCL	7.5	95% Bootstrap-t UCL	8.207

95% Hall's Bootstrap UCL	8.344	95% Percentile Bootstrap UCL	7.577
95% BCA Bootstrap UCL	7.833		
90% Chebyshev(Mean, Sd) UCL	8.688	95% Chebyshev(Mean, Sd) UCL	9.899
97.5% Chebyshev(Mean, Sd) UCL	11.58	99% Chebyshev(Mean, Sd) UCL	14.88

Suggested UCL to Use

95% H-UCL 7.625

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Mercury

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	0
Minimum	0.0475	Mean	0.143
Maximum	0.224	Median	0.138
SD	0.0335	Std. Error of Mean	0.00551
Coefficient of Variation	0.235	Skewness	-0.0274

Normal GOF Test

Shapiro Wilk Test Statistic	0.978	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.152	95% Adjusted-CLT UCL (Chen-1995)	0.152
		95% Modified-t UCL (Johnson-1978)	0.152

Gamma GOF Test

A-D Test Statistic	0.477	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0898	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	16.28	k star (bias corrected MLE)	14.98
Theta hat (MLE)	0.00877	Theta star (bias corrected MLE)	0.00954
nu hat (MLE)	1205	nu star (bias corrected)	1108
MLE Mean (bias corrected)	0.143	MLE Sd (bias corrected)	0.0369
		Approximate Chi Square Value (0.05)	1032
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1029

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.153	95% Adjusted Gamma UCL (use when n<50)	0.154

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.894	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.112	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.048	Mean of logged Data	-1.977
Maximum of Logged Data	-1.497	SD of logged Data	0.268

Assuming Lognormal Distribution

95% H-UCL	0.155	90% Chebyshev (MVUE) UCL	0.163
95% Chebyshev (MVUE) UCL	0.171	97.5% Chebyshev (MVUE) UCL	0.183
99% Chebyshev (MVUE) UCL	0.207		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.152	95% Jackknife UCL	0.152
95% Standard Bootstrap UCL	0.152	95% Bootstrap-t UCL	0.152

95% Hall's Bootstrap UCL	0.152	95% Percentile Bootstrap UCL	0.152
95% BCA Bootstrap UCL	0.152		
90% Chebyshev(Mean, Sd) UCL	0.159	95% Chebyshev(Mean, Sd) UCL	0.167
97.5% Chebyshev(Mean, Sd) UCL	0.177	99% Chebyshev(Mean, Sd) UCL	0.198

Suggested UCL to Use

95% Student's-t UCL	0.152

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

General Statistics

Total Number of Observations	34	Number of Distinct Observations	34
		Number of Missing Observations	3
Minimum	0.0383	Mean	0.157
Maximum	0.267	Median	0.156
SD	0.0525	Std. Error of Mean	0.009
Coefficient of Variation	0.334	Skewness	0.223

Normal GOF Test

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.933	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.15	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.172	95% Adjusted-CLT UCL (Chen-1995)	0.172
		95% Modified-t UCL (Johnson-1978)	0.173

Gamma GOF Test

A-D Test Statistic	0.444	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.12	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.151	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.037	k star (bias corrected MLE)	7.347
Theta hat (MLE)	0.0196	Theta star (bias corrected MLE)	0.0214
nu hat (MLE)	546.5	nu star (bias corrected)	499.6
MLE Mean (bias corrected)	0.157	MLE Sd (bias corrected)	0.058
		Approximate Chi Square Value (0.05)	448.8
Adjusted Level of Significance	0.0422	Adjusted Chi Square Value	446.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.175	95% Adjusted Gamma UCL (use when n<50)	0.176

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.933	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.145	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.15	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.261	Mean of logged Data	-1.913
Maximum of Logged Data	-1.32	SD of logged Data	0.387

Assuming Lognormal Distribution

95% H-UCL	0.18	90% Chebyshev (MVUE) UCL	0.191
95% Chebyshev (MVUE) UCL	0.206	97.5% Chebyshev (MVUE) UCL	0.226
99% Chebyshev (MVUE) UCL	0.266		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.172	95% Jackknife UCL	0.172
95% Standard Bootstrap UCL	0.172	95% Bootstrap-t UCL	0.174

95% Hall's Bootstrap UCL	0.172	95% Percentile Bootstrap UCL	0.172
95% BCA Bootstrap UCL	0.172		
90% Chebyshev(Mean, Sd) UCL	0.184	95% Chebyshev(Mean, Sd) UCL	0.196
97.5% Chebyshev(Mean, Sd) UCL	0.213	99% Chebyshev(Mean, Sd) UCL	0.247

Suggested UCL to Use

95% Student's-t UCL	0.172

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.657	Mean	1.084
Maximum	1.427	Median	1.102
SD	0.177	Std. Error of Mean	0.0294
Coefficient of Variation	0.163	Skewness	-0.255

Normal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0928	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1.134	95% Adjusted-CLT UCL (Chen-1995)	1.131
		95% Modified-t UCL (Johnson-1978)	1.134

Gamma GOF Test

A-D Test Statistic	0.359	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0987	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	36.51	k star (bias corrected MLE)	33.48
Theta hat (MLE)	0.0297	Theta star (bias corrected MLE)	0.0324
nu hat (MLE)	2628	nu star (bias corrected)	2411
MLE Mean (bias corrected)	1.084	MLE Sd (bias corrected)	0.187
		Approximate Chi Square Value (0.05)	2298
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	2293

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.137	95% Adjusted Gamma UCL (use when n<50)	1.14

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0974	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.42	Mean of logged Data	0.0669
Maximum of Logged Data	0.356	SD of logged Data	0.171

Assuming Lognormal Distribution

95% H-UCL	1.14	90% Chebyshev (MVUE) UCL	1.178
95% Chebyshev (MVUE) UCL	1.22	97.5% Chebyshev (MVUE) UCL	1.279
99% Chebyshev (MVUE) UCL	1.395		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	1.132	95% Jackknife UCL	1.134
95% Standard Bootstrap UCL	1.131	95% Bootstrap-t UCL	1.132

95% Hall's Bootstrap UCL	1.131	95% Percentile Bootstrap UCL	1.132
95% BCA Bootstrap UCL	1.132		
90% Chebyshev(Mean, Sd) UCL	1.172	95% Chebyshev(Mean, Sd) UCL	1.212
97.5% Chebyshev(Mean, Sd) UCL	1.268	99% Chebyshev(Mean, Sd) UCL	1.377

Suggested UCL to Use

95% Student's-t UCL	1.134

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	0.279	Mean	0.709
Maximum	1.599	Median	0.653
SD	0.258	Std. Error of Mean	0.043
Coefficient of Variation	0.364	Skewness	1.414

Normal GOF Test

Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.14	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.781	95% Adjusted-CLT UCL (Chen-1995)	0.79
		95% Modified-t UCL (Johnson-1978)	0.783

Gamma GOF Test

A-D Test Statistic	0.327	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0988	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	8.795	k star (bias corrected MLE)	8.08
Theta hat (MLE)	0.0806	Theta star (bias corrected MLE)	0.0877
nu hat (MLE)	633.2	nu star (bias corrected)	581.8
MLE Mean (bias corrected)	0.709	MLE Sd (bias corrected)	0.249
		Approximate Chi Square Value (0.05)	526.8
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	524.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.783	95% Adjusted Gamma UCL (use when n<50)	0.786

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.991	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0873	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.277	Mean of logged Data	-0.402
Maximum of Logged Data	0.47	SD of logged Data	0.343

Assuming Lognormal Distribution

95% H-UCL	0.787	90% Chebyshev (MVUE) UCL	0.832
95% Chebyshev (MVUE) UCL	0.888	97.5% Chebyshev (MVUE) UCL	0.966
99% Chebyshev (MVUE) UCL	1.119		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.779	95% Jackknife UCL	0.781
95% Standard Bootstrap UCL	0.779	95% Bootstrap-t UCL	0.8

95% Hall's Bootstrap UCL	0.804	95% Percentile Bootstrap UCL	0.781
95% BCA Bootstrap UCL	0.79		
90% Chebyshev(Mean, Sd) UCL	0.838	95% Chebyshev(Mean, Sd) UCL	0.896
97.5% Chebyshev(Mean, Sd) UCL	0.977	99% Chebyshev(Mean, Sd) UCL	1.136

Suggested UCL to Use

95% Student's-t UCL 0.781

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Number of Detects	35	Number of Non-Detects	1
Number of Distinct Detects	35	Number of Distinct Non-Detects	1
Minimum Detect	0.0408	Minimum Non-Detect	0.0295
Maximum Detect	0.161	Maximum Non-Detect	0.0295
Variance Detects	7.1221E-4	Percent Non-Detects	2.778%
Mean Detects	0.0667	SD Detects	0.0267
Median Detects	0.0593	CV Detects	0.4
Skewness Detects	2.181	Kurtosis Detects	5.131
Mean of Logged Detects	-2.766	SD of Logged Detects	0.323

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.761	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0656	KM Standard Error of Mean	0.00451
KM SD	0.0266	95% KM (BCA) UCL	0.0737
95% KM (t) UCL	0.0733	95% KM (Percentile Bootstrap) UCL	0.0732
95% KM (z) UCL	0.0731	95% KM Bootstrap t UCL	0.0759
90% KM Chebyshev UCL	0.0792	95% KM Chebyshev UCL	0.0853
97.5% KM Chebyshev UCL	0.0938	99% KM Chebyshev UCL	0.11

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.449	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.749	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.149	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	8.814	k star (bias corrected MLE)	8.077
Theta hat (MLE)	0.00756	Theta star (bias corrected MLE)	0.00825
nu hat (MLE)	617	nu star (bias corrected)	565.4
Mean (detects)	0.0667		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0176	Mean	0.0653
Maximum	0.161	Median	0.0579
SD	0.0275	CV	0.422
k hat (MLE)	7.051	k star (bias corrected MLE)	6.482
Theta hat (MLE)	0.00926	Theta star (bias corrected MLE)	0.0101
nu hat (MLE)	507.7	nu star (bias corrected)	466.7
Adjusted Level of Significance (β)	0.0428		
Approximate Chi Square Value (466.73, α)	417.6	Adjusted Chi Square Value (466.73, β)	415.5
95% Gamma Approximate UCL (use when n>=50)	0.073	95% Gamma Adjusted UCL (use when n<50)	0.0734

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0656	SD (KM)	0.0266
Variance (KM)	7.0987E-4	SE of Mean (KM)	0.00451

k hat (KM)	6.07	k star (KM)	5.582
nu hat (KM)	437	nu star (KM)	401.9
theta hat (KM)	0.0108	theta star (KM)	0.0118
80% gamma percentile (KM)	0.0872	90% gamma percentile (KM)	0.103
95% gamma percentile (KM)	0.117	99% gamma percentile (KM)	0.147

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (401.92, α)	356.5	Adjusted Chi Square Value (401.92, β)	354.5
95% Gamma Approximate KM-UCL (use when n>=50)	0.074	95% Gamma Adjusted KM-UCL (use when n<50)	0.0744

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.934	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.148	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0656	Mean in Log Scale	-2.788
SD in Original Scale	0.0271	SD in Log Scale	0.345
95% t UCL (assumes normality of ROS data)	0.0732	95% Percentile Bootstrap UCL	0.0735
95% BCA Bootstrap UCL	0.0748	95% Bootstrap t UCL	0.0758
95% H-UCL (Log ROS)	0.0726		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.787	KM Geo Mean	0.0616
KM SD (logged)	0.338	95% Critical H Value (KM-Log)	1.804
KM Standard Error of Mean (logged)	0.0572	95% H-UCL (KM -Log)	0.0723
KM SD (logged)	0.338	95% Critical H Value (KM-Log)	1.804
KM Standard Error of Mean (logged)	0.0572		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0652	Mean in Log Scale	-2.806
SD in Original Scale	0.0277	SD in Log Scale	0.4
95% t UCL (Assumes normality)	0.073	95% H-Stat UCL	0.0742

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	0.0726	KM H-UCL	0.0723

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Zinc

General Statistics

Total Number of Observations	36	Number of Distinct Observations	36
		Number of Missing Observations	1
Minimum	29.56	Mean	44.37
Maximum	57.99	Median	44.78
SD	8.014	Std. Error of Mean	1.336
Coefficient of Variation	0.181	Skewness	-0.0306

Normal GOF Test

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	46.63	95% Adjusted-CLT UCL (Chen-1995)	46.56
		95% Modified-t UCL (Johnson-1978)	46.62

Gamma GOF Test

A-D Test Statistic	0.373	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	30.55	k star (bias corrected MLE)	28.02
Theta hat (MLE)	1.452	Theta star (bias corrected MLE)	1.583
nu hat (MLE)	2200	nu star (bias corrected)	2018
MLE Mean (bias corrected)	44.37	MLE Sd (bias corrected)	8.381
		Approximate Chi Square Value (0.05)	1914
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	1910

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	46.76	95% Adjusted Gamma UCL (use when n<50)	46.88

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.386	Mean of logged Data	3.776
Maximum of Logged Data	4.06	SD of logged Data	0.186

Assuming Lognormal Distribution

95% H-UCL	46.89	90% Chebyshev (MVUE) UCL	48.54
95% Chebyshev (MVUE) UCL	50.42	97.5% Chebyshev (MVUE) UCL	53.03
99% Chebyshev (MVUE) UCL	58.17		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	46.57	95% Jackknife UCL	46.63
95% Standard Bootstrap UCL	46.54	95% Bootstrap-t UCL	46.63

95% Hall's Bootstrap UCL	46.53	95% Percentile Bootstrap UCL	46.47
95% BCA Bootstrap UCL	46.49		
90% Chebyshev(Mean, Sd) UCL	48.38	95% Chebyshev(Mean, Sd) UCL	50.19
97.5% Chebyshev(Mean, Sd) UCL	52.71	99% Chebyshev(Mean, Sd) UCL	57.66

Suggested UCL to Use

95% Student's-t UCL 46.63

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/27/17 3:16:34 PM
From File	crb_hepmus8_SVOC_wide2_flag_sep_ss_fixweighting.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	35	Number of Distinct Observations	27
		Number of Missing Observations	2
Number of Detects	24	Number of Non-Detects	11
Number of Distinct Detects	24	Number of Distinct Non-Detects	4
Minimum Detect	0.286	Minimum Non-Detect	0.538
Maximum Detect	2.314	Maximum Non-Detect	1.638
Variance Detects	0.431	Percent Non-Detects	31.43%
Mean Detects	1.191	SD Detects	0.657
Median Detects	1.232	CV Detects	0.551
Skewness Detects	0.0819	Kurtosis Detects	-1.387
Mean of Logged Detects	-0.0155	SD of Logged Detects	0.679

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.927	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.916	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.177	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1	KM Standard Error of Mean	0.114
KM SD	0.627	95% KM (BCA) UCL	1.194
95% KM (t) UCL	1.192	95% KM (Percentile Bootstrap) UCL	1.188
95% KM (z) UCL	1.187	95% KM Bootstrap t UCL	1.208
90% KM Chebyshev UCL	1.341	95% KM Chebyshev UCL	1.495
97.5% KM Chebyshev UCL	1.71	99% KM Chebyshev UCL	2.13

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.714	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.13	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.179	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.783	k star (bias corrected MLE)	2.463
Theta hat (MLE)	0.428	Theta star (bias corrected MLE)	0.484
nu hat (MLE)	133.6	nu star (bias corrected)	118.2
Mean (detects)	1.191		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.286	Mean	1.015
Maximum	2.314	Median	0.789
SD	0.614	CV	0.605
k hat (MLE)	2.765	k star (bias corrected MLE)	2.547

Theta hat (MLE)	0.367	Theta star (bias corrected MLE)	0.399
nu hat (MLE)	193.5	nu star (bias corrected)	178.3
Adjusted Level of Significance (β)	0.0425		
Approximate Chi Square Value (178.27, α)	148.4	Adjusted Chi Square Value (178.27, β)	147.1
95% Gamma Approximate UCL (use when n>=50)	1.22	95% Gamma Adjusted UCL (use when n<50)	1.23

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1	SD (KM)	0.627
Variance (KM)	0.393	SE of Mean (KM)	0.114
k hat (KM)	2.547	k star (KM)	2.348
nu hat (KM)	178.3	nu star (KM)	164.4
theta hat (KM)	0.393	theta star (KM)	0.426
80% gamma percentile (KM)	1.469	90% gamma percentile (KM)	1.874
95% gamma percentile (KM)	2.257	99% gamma percentile (KM)	3.098

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (164.36, α)	135.7	Adjusted Chi Square Value (164.36, β)	134.5
95% Gamma Approximate KM-UCL (use when n>=50)	1.211	95% Gamma Adjusted KM-UCL (use when n<50)	1.222

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.916	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.159	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.177	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1	Mean in Log Scale	-0.197
SD in Original Scale	0.621	SD in Log Scale	0.649
95% t UCL (assumes normality of ROS data)	1.178	95% Percentile Bootstrap UCL	1.182
95% BCA Bootstrap UCL	1.189	95% Bootstrap t UCL	1.2
95% H-UCL (Log ROS)	1.277		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.218	KM Geo Mean	0.804
KM SD (logged)	0.68	95% Critical H Value (KM-Log)	2.104
KM Standard Error of Mean (logged)	0.13	95% H-UCL (KM -Log)	1.296
KM SD (logged)	0.68	95% Critical H Value (KM-Log)	2.104
KM Standard Error of Mean (logged)	0.13		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.003	Mean in Log Scale	-0.188
SD in Original Scale	0.615	SD in Log Scale	0.638
95% t UCL (Assumes normality)	1.178	95% H-Stat UCL	1.273

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.192

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics

Total Number of Observations	35	Number of Distinct Observations	13
		Number of Missing Observations	2
Number of Detects	6	Number of Non-Detects	29
Number of Distinct Detects	6	Number of Distinct Non-Detects	7
Minimum Detect	0.299	Minimum Non-Detect	0.26
Maximum Detect	1.035	Maximum Non-Detect	1.638
Variance Detects	0.0651	Percent Non-Detects	82.86%
Mean Detects	0.541	SD Detects	0.255
Median Detects	0.488	CV Detects	0.472
Skewness Detects	1.876	Kurtosis Detects	4.201
Mean of Logged Detects	-0.69	SD of Logged Detects	0.409

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.791	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.36	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data Not Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.411	KM Standard Error of Mean	0.0558
KM SD	0.185	95% KM (BCA) UCL	0.508
95% KM (t) UCL	0.505	95% KM (Percentile Bootstrap) UCL	0.496
95% KM (z) UCL	0.502	95% KM Bootstrap t UCL	0.512
90% KM Chebyshev UCL	0.578	95% KM Chebyshev UCL	0.654
97.5% KM Chebyshev UCL	0.759	99% KM Chebyshev UCL	0.966

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.5	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.315	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.333	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.75	k star (bias corrected MLE)	3.486
Theta hat (MLE)	0.0802	Theta star (bias corrected MLE)	0.155
nu hat (MLE)	81	nu star (bias corrected)	41.83
Mean (detects)	0.541		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.356
Maximum	1.035	Median	0.329
SD	0.227	CV	0.637
k hat (MLE)	1.972	k star (bias corrected MLE)	1.822
Theta hat (MLE)	0.18	Theta star (bias corrected MLE)	0.195
nu hat (MLE)	138	nu star (bias corrected)	127.5
Adjusted Level of Significance (β)	0.0425		
Approximate Chi Square Value (127.54, α)	102.5	Adjusted Chi Square Value (127.54, β)	101.4
95% Gamma Approximate UCL (use when n>=50)	0.443	95% Gamma Adjusted UCL (use when n<50)	0.447

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.411	SD (KM)	0.185
Variance (KM)	0.0341	SE of Mean (KM)	0.0558

k hat (KM)	4.939	k star (KM)	4.535
nu hat (KM)	345.7	nu star (KM)	317.4
theta hat (KM)	0.0831	theta star (KM)	0.0906
80% gamma percentile (KM)	0.558	90% gamma percentile (KM)	0.669
95% gamma percentile (KM)	0.77	99% gamma percentile (KM)	0.986

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (317.42, α)	277.1	Adjusted Chi Square Value (317.42, β)	275.4
95% Gamma Approximate KM-UCL (use when n>=50)	0.47	95% Gamma Adjusted KM-UCL (use when n<50)	0.473

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.291	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.388	Mean in Log Scale	-1.044
SD in Original Scale	0.186	SD in Log Scale	0.439
95% t UCL (assumes normality of ROS data)	0.441	95% Percentile Bootstrap UCL	0.439
95% BCA Bootstrap UCL	0.448	95% Bootstrap t UCL	0.453
95% H-UCL (Log ROS)	0.447		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.968	KM Geo Mean	0.38
KM SD (logged)	0.376	95% Critical H Value (KM-Log)	1.851
KM Standard Error of Mean (logged)	0.125	95% H-UCL (KM -Log)	0.459
KM SD (logged)	0.376	95% Critical H Value (KM-Log)	1.851
KM Standard Error of Mean (logged)	0.125		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.503	Mean in Log Scale	-0.807
SD in Original Scale	0.217	SD in Log Scale	0.541
95% t UCL (Assumes normality)	0.565	95% H-Stat UCL	0.62

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.505

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Appendix D-2

APPENDIX D-2
USE OF EPA'S ADVANCED KM, TEQ, AND ISM
UCL CALCULATOR AND OUTPUT SHEETS

EPA's Advanced KM, TEQ, and ISM UCL calculator was used to calculate total equivalent concentrations (TEQs) of dioxin-like compounds. The following congeners were included in these calculations:

Dioxins and Furans		Dioxin-Like Polychlorinated Biphenyls (PCBs)	
2,3,7,8-TCDD	2,3,7,8-TCDF	PCB-77	PCB-126
1,2,3,7,8-PCDD	1,2,3,7,8-PCDF	PCB-81	PCB-156
1,2,3,4,7,8-HxCDD	2,3,4,7,8-PCDF	PCB-105	PCB-157
1,2,3,6,7,8-HxCDD	1,2,3,4,7,8-HxCDF	PCB-114	PCB-167
1,2,3,7,8,9-HxCDD	1,2,3,6,7,8-HxCDF	PCB-118	PCB-169
1,2,3,4,6,7,8-HpCDD	1,2,3,7,8,9-HxCDF	PCB-123	PCB-189
OCDD	2,3,4,6,7,8-HxCDF		
	1,2,3,4,6,7,8-HpCDF		
	1,2,3,4,7,8,9-HpCDF		
	OCDF		

Congener concentrations were imported into the calculator using the "Data Import" sheet, and were then transferred to the "Data Entry & Output" sheet. During the import process, the following issues were identified and resolved.

1. When a user transfers data into the "Data Entry & Output" sheet, the Calculator automatically populates each "row A" in that sheet (Figure 1). Rows B and C are then populated when the user clicks on the "Calculate TEQs" button. Typically, the value in each cell in row B is the same as that found in the corresponding cell in row A, minus the qualifier, if any. However, whenever a value in row A is in scientific notation and is followed by any qualifier, be it U or J, the exponent is lost in row B. For example, "5.32E-07 J" in row A becomes "5.32" in row B, instead of "5.32E-07". This does not happen when the value in row A has no qualifier attached to it. To resolve this issue, the units were changed prior to importing them (i.e., instead of 5.32E-07 mg/kg, the value was changed to 0.532 ng/kg), which negated the need for scientific notation. Once the KM TEQ values were calculated, the values were converted back to mg/kg.

EPA Advanced KM TEQ Calculator

Advanced KM TEQ calculator for performing quasi-sensitivity analyses

Project Name: Tierra - Newark Bay HHRA
Matrix: Fish
Units: mg/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Sort Chemicals | Calculate TEQs | Add Samples | Remove Samples

Sample notes	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1,4-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDF	1,4,6-HpCDF	OCDF	PCB 77
	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	0.0001
	NB03FAEC-COMP01: Row A	5.80E-06	5.32E-07 J	2.25E-07 J	1.29E-06 J	2.54E-07 J	1.42E-06 J	1.23E-05 J	1.81E-07 U	1.1E-06 J	1.57E-06 J	1.35E-06 J	1.65E-06 J	8.01E-08 U	1.92E-07 J	4.38E-08 J	2.62E-07 J	5.77E-07 J	
	value to use: Row B	5.8E-06	5.32	2.25	1.29	2.54	1.42	1.23	1.81	1.1	1.57	1.35	1.65	8.01	1.92	4.38	2.62	6.77	
1	congener TEC: Row C	0.0000058	5.32	0.225	0.129	0.254	0.0142	0.000369	0.181	0.033	0.471	0.135	0.165	0.801	0.192	0.0438	0.0262	0.002031	
	donor value to use: Row D																		
	donor TEC: Row E																		
	NB03FAEC-COMP02: Row A	4.34E-06	4E-07 J	1.06E-07 J	8.19E-07 J	8.14E-08 J	1.46E-07 J	7.07E-07 J	1.45E-07 U	3.91E-07 J	1.06E-06 J	7.85E-07 J	1.09E-06 J	1.54E-07 J	9.69E-08 J	3.21E-06 J	1.1E-07 U	1.88E-07 J	
	value to use: Row B	4.34E-06	4	1.06	8.19	8.14	1.46	7.07	1.45	3.91	1.06	7.85	1.09	1.54	9.69	3.21	1.1	1.88	
2	congener TEC: Row C	4.34E-06	4	0.106	0.819	0.814	0.0146	0.002121	0.145	0.1173	0.318	0.785	0.109	0.154	9.69	0.0321	0.011	0.000564	
	donor value to use: Row D																		
	donor TEC: Row E																		
	NB03FAEC-COMP03: Row A	7.38E-06	4.02E-07 J	2.18E-07 J	1.33E-06 J	1.5E-07 J	4.8E-07 J	7.55E-07 J	1.62E-07 U	1.14E-06 J	1.27E-06 J	9.03E-07 J	1.76E-06 J	1.19E-07 J	1.79E-07 J	2.77E-06 J	1.19E-07 U	1.41E-07 J	
	value to use: Row B	7.38E-06	4.02	2.18	1.33	1.5	4.8	7.55	1.62	1.14	1.27	9.03	1.76	1.19	1.79	2.77	1.19	1.41	
3	congener TEC: Row C	7.38E-06	4.02	0.218	0.133	0.15	0.048	0.002265	0.162	0.0342	0.381	0.903	0.176	0.119	0.179	0.0277	0.0119	0.000423	
	donor value to use: Row D																		
	donor TEC: Row E																		
	NB03FAEC076: Row A	1.40E-05	1.18E-06 J	3.88E-07 J	2.4E-06 J	4.51E-07 J	1.91E-06 J	2.37E-06 J	1.69E-07 U	1.51E-06 J	5.27E-06 J	4.17E-06 J	2.35E-06 J	7.26E-08 U	5.85E-07 J	4.85E-06 J	1.28E-07 U	2.8E-07 J	
	value to use: Row B	1.4E-05	1.18	3.88	2.4	4.51	1.91	2.37	1.69	1.51	5.27	4.17	2.35	7.26	5.85	4.85	1.28	2.8	
4	congener TEC: Row C	0.000014	1.18	0.388	0.24	0.451	0.0191	0.000711	0.169	0.0453	1.581	0.417	0.235	0.726	0.585	0.0465	0.0128	0.00084	
	donor value to use: Row D																		
	donor TEC: Row E																		

Figure D2-1. KM TEQ calculator scientific notation issue

2. Of the 12 dioxin-like PCBs, PCB-156 and PCB-157 coelute. The total concentration is reported by the laboratory as a single result under “PCB-156/157.” In and of itself, this is not an issue, because both congeners have the same toxic equivalency factor (TEF). However, the CAS number in the data set is also listed as “PCB-156/157”. When importing the data for dioxin-like PCBs, the Calculator does not recognize CAS number “PCB-156/157”. As a result, the “Congener Abbreviation” and “Congener Order” fields were both populated with “#N/A”. Replacing the CAS number “PCB-156/157” with the CAS number for either PCB-156 (38380-08-4) or PCB-157 (69782-90-7) resolved the issue. The concentration was listed under the PCB whose CAS was used. For the sake of consistency, we assigned all values for “PCB-156/157” to PCB-156, CAS 38380-08-4.

3. The KM TEQ calculator gives an error message when the number of records is not equal to the number of samples multiplied by the number of congeners. In fact, the instructions for the Data Import worksheet state, “Note that all samples to be imported into the calculator must have the same number of congeners and that only one result should be entered for each congener/ sample. Otherwise, an error message will be displayed, and the data transfer routine will be terminated. If multiple results for the same congener are present in the data set, the user should choose the appropriate result and remove the other result(s).” The same error occurs when data are missing for one or more congeners for a particular sample (e.g., as a result of data validation). To resolve the issue, samples with missing data for a given congener were identified, and empty records were created (i.e., the result and qualifier fields were left blank).

The method for calculating TEQs is described in the sheet “KM Discussion” of the KM TEQ Calculator workbook and is as follows:

> Step 1: Calculate the toxic equivalent concentration (TEC) for each congener by multiplying the results for individual congeners by their congener-specific TEFs. For non-detect congeners, the reporting limit or DL should be multiplied by the TEF.
>
> Step 2: Calculate the intermediate “mean” for each sample. If all the congeners are detected, then calculate the intermediate value as the arithmetic mean. If non-detects are present and at least three results are detected, then calculate the intermediate value using an approach similar to Helsel KM’s Excel spreadsheet model.

Step 3: Calculate the total TEQ using: Total TEQ = Intermediate “mean” TEC × n, where n is the number of congeners in the calculation.

The output from the KM TEQ calculator is provided in Attachment D-2A.

Attachment D-2A

KM TEQ Calculator Output Sheets

EPA Advanced KM TEQ Calculator

Sediment Screening TCDD TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	Summary of Sensitivity Analysis (relative percent difference)								
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDF	1,4,9-HpCDF	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03SED-CHM136: Row A	110 J	4.51 J	4.66 J	16.3 J	10.8 J	291 J	2970 J	17.3 J	10.4 J	22.9 J	133 J	27.8 J	0.31 U	13 J	504 J	18.4 J	886 J									
	value to use: Row B	110	4.51	4.66	16.3	10.8	291	2970	17.3	10.4	22.9	133	27.8	0.31	13	504	18.4	886									
1	congener TEC: Row C	110	4.51	0.466	1.63	1.08	2.91	0.891	1.73	0.312	6.87	13.3	2.78	0.031	1.3	5.04	0.184	0.2658	0%	153.2688	153.2843	153.2998	153.2998	J	Section 1	**153.2998**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM140: Row A	100 J	5.02 J	3.91 J	9.65 J	5.42 J	100 J	920 J	11.1 J	34.5 J	45.8 J	433 J	95.2 J	0.0893 U	29.4 J	1880 J	37.1 J	2660 J									
	value to use: Row B	100	5.02	3.91	9.65	5.42	100	920	11.1	34.5	45.8	433	95.2	0.0893	29.4	1880	37.1	2660									
2	congener TEC: Row C	100	5.02	0.391	0.965	0.542	1	0.276	1.11	1.035	13.74	43.3	9.52	0.00893	2.94	18.8	0.371	0.798	0%	199.8080	199.8125	199.8169	199.8169	J	Section 1	**199.8169**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM142: Row A	14.3 J	0.999 J	1.07 J	3.53 J	2.2 J	58.3 J	729 J	4.01 J	2.21 J	3.73 J	11 J	3.38 J	0.0438 U	2.97 J	45.1 J	1.95 J	66.7 J									
	value to use: Row B	14.3	0.999	1.07	3.53	2.2	58.3	729	4.01	2.21	3.73	11	3.38	0.0438	2.97	45.1	1.95	66.7									
3	congener TEC: Row C	14.3	0.999	0.107	0.353	0.22	0.583	0.2187	0.401	0.0663	1.119	1.1	0.338	0.00438	0.297	0.451	0.0195	0.02001	0%	20.5925	20.5947	20.5969	20.5969	J	Section 1	**20.5969**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM143: Row A	77.6 J	4.66 J	4.4 J	19.6 J	11.4 J	329 J	3470 J	13.4 J	8.59 J	18.2 J	71.9 J	18.7 J	1.09 U	12.7 J	345 J	12.6 J	472 J									
	value to use: Row B	77.6	4.66	4.4	19.6	11.4	329	3470	13.4	8.59	18.2	71.9	18.7	1.09	12.7	345	12.6	472									
4	congener TEC: Row C	77.6	4.66	0.44	1.96	1.14	3.29	1.041	1.34	0.2577	5.46	7.19	1.87	0.109	1.27	3.45	0.126	0.1416	0%	111.2363	111.2908	111.3453	111.3453	J	Section 1	**111.3453**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM145: Row A	53.6 J	2.62 J	2.66 J	11.3 J	6.9 J	201 J	1890 J	9.84 J	5.49 J	8.11 J	28.7 J	9.12 J	0.0535 U	4.72 J	132 J	6.19 J	215 J									
	value to use: Row B	53.6	2.62	2.66	11.3	6.9	201	1890	9.84	5.49	8.11	28.7	9.12	0.0535	4.72	132	6.19	215									
5	congener TEC: Row C	53.6	2.62	0.266	1.13	0.69	2.01	0.567	0.984	0.1647	2.433	2.87	0.912	0.00535	0.472	1.32	0.0619	0.0645	0%	70.1651	70.167775	70.17045	70.1704	J	Section 1	**70.1704**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM149: Row A	58.3 J	7.03 J	6.61 J	21.8 J	13.2 J	382 J	3600 J	25.5 J	18 J	29.4 J	46 J	27.3 J	1.36 J	24.8 J	212 J	12.8 J	315 J									
	value to use: Row B	58.3	7.03	6.61	21.8	13.2	382	3600	25.5	18	29.4	46	27.3	1.36	24.8	212	12.8	315									
6	congener TEC: Row C	58.3	7.03	0.661	2.18	1.32	3.82	1.08	2.55	0.54	8.82	4.6	2.73	0.136	2.48	2.12	0.128	0.0945	No difference	98.5895	98.5895	98.5895	98.5895	J	Section 1	**98.5895**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM155: Row A	5.62 J	0.404 J	0.405 J	1.68 J	1.05 J	27.7 J	303 J	1.68 J	0.901 J	1.57 J	3.23 J	1.22 J	0.452 J	1.18 J	16.8 J	1.04 J	26.6 J									
	value to use: Row B	5.62	0.404	0.405	1.68	1.05	27.7	303	1.68	0.901	1.57	3.23	1.22	0.452	1.18	16.8	1.04	26.6									
7	congener TEC: Row C	5.62	0.404	0.0405	0.168	0.105	0.277	0.0909	0.168	0.02703	0.471	0.323	0.122	0.0452	0.118	0.168	0.0104	0.00798	No difference	8.1660	8.1660	8.1660	8.1660	J	Section 1	**8.1660**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM160: Row A	83.9 J	6.63 J	3.37 J	21.4 J	11.9 J	257 J	2210 J	14.4 J	6.95 J	15.4 J	48.5 J	14.4 J	0.188 U	7.94 J	221 J	7.94 J	305 J									
	value to use: Row B	83.9	6.63	3.37	21.4	11.9	257	2210	14.4	6.95	15.4	48.5	14.4	0.188	7.94	221	7.94	305									
8	congener TEC: Row C	83.9	6.63	0.337	2.14	1.19	2.57	0.663	1.44	0.2085	4.62	4.85	1.44	0.0188	0.794	2.21	0.0794	0.0915	0%	113.1634	113.1728	113.1822	113.1822	J	Section 1	**113.1822**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM161: Row A	137 J	7.68 J	6.82 J	24.2 J	21.9 J	486 J	5740 J	19.7 J	9.92 J	20.5 J	101 J	24.3 J	4.86 J	12.4 J	405 J	16.1 J	650 J									
	value to use: Row B	137	7.68	6.82	24.2	21.9	486	5740	19.7	9.92	20.5	101	24.3	4.86	12.4	405	16.1	650									
9	congener TEC: Row C	137	7.68	0.682	2.42	2.19	4.86	1.722	1.97	0.2976	6.15	10.1	2.43	0.486	1.24	4.05	0.161	0.195	No difference	183.6336	183.6336	183.6336	183.6336	J	Section 1	**183.6336**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM164: Row A	48.2	1.39 J	1.44 J	5.42	3.39 J	83.1 J	922 J	6.72 J	4.99 J	10 J	50.7 J	11.6 J	2.03 J	5.06 J	176 J	5.48 J	266 J									
	value to use: Row B	48.2	1.39	1.44	5.42	3.39	83.1	922	6.72	4.99	10	50.7	11.6	2.03	5.06	176	5.48	266									
10	congener TEC: Row C	48.2	1.39	0.144	0.542	0.339	0.831	0.2766	0.672	0.1497	3	5.07	1.16	0.203	0.506	1.76	0.0548	0.0798	No difference	64.3779	64.3779	64.3779	64.3779	none	Section 1	**64.3779**	**none**
	donor value to use: Row D																									Qualified	24%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM166: Row A	94.6 J	4.53 J	4.44 J	16.9 J	10.6 J	275 J	2950 J	16.5 J	10.4 J	24.1 J	137 J	27.6 J	0.262 U	14.1 J	485 J	18.9 J	781 J									
	value to use: Row B	94.6	4.53	4.44	16.9	10.6	275	2950	16.5	10.4	24.1	137	27.6	0.262	14.1	485	18.9	781									
11	congener TEC: Row C	94.6	4.53	0.444	1.69	1.06	2.75	0.885	1.65	0.312	7.23	13.7	2.76	0.0262	1.41	4.85	0.189	0.2343	0%	138.2943	138.3074	138.3205	138.3205	J	Section 1	**138.3205**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM167: Row A	9.98	0.466 J	0.633 J	1.97 J	1.23 J	44.2 J	435 J	2.1 J	1.19 J	1.97 J	8.06 J	2.15 J	0.505 J	1.47 J	31.9 J	1.33 J	50.2 J									
	value to use: Row B	9.98	0.466	0.633	1.97	1.23	44.2	435	2.1	1.19	1.97	8.06	2.15	0.505	1.47	31.9	1.33	50.2									
12	congener TEC: Row C	9.98	0.466	0.0633	0.197	0.123	0.442	0.1305	0.21	0.0357	0.591	0.806	0.215	0.0505	0.147	0.319	0.0133	0.01506	No difference	13.8044	13.8044	13.8044	13.8044	none	Section 1	**13.8044**	**none**
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM168: Row A	91.4 J	2.99 J	3.21 J	12.5 J	8.01 J	202 J	2060 J	13.5 J	6.8 J	14.2 J	59.9 J	15.1 J	0.179 U	7.8 J	233 J	9.36 J	356 J									
	value to use: Row B	91.4	2.99	3.21	12.5	8.01	202	2060	13.5	6.8	14.2	59.9	15.1	0.179	7.8	233	9.36	356									
13	congener TEC: Row C	91.4	2.99	0.321	1.25	0.801	2.02	0.618	1.35	0.204	4.26	5.99	1.51	0.0179	0.78	2.33	0.0936	0.1068	0%	116.0244	116.03335	116.0423	116.0423	J	Section 1	**116.0423**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM169: Row A	48.6	2.07 J	2.06 J	7.43	4.4 J	140 J	1520 J	7.19 J	3.87 J	7.47 J	31.5 J	7.34 J	1.87 J	4.16 J	123 J	5.59	215 J									
	value to use: Row B	48.6	2.07	2.06	7.43	4.4	140	1520	7.19	3.87	7.47	31.5	7.34	1.87	4.16	123	5.59	215									
14	congener TEC: Row C	48.6	2.07	0.206	0.743	0.44	1.4	0.456	0.719	0.1161	2.241	3.15	0.734	0.187	0.416	1.23	0.0559	0.0645	No difference	62.8285	62.8285	62.8285	62.8285	none	Section 1	**62.8285**	**none**
	donor value to use: Row D																									Qualified	21%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM170: Row A	53.8	3.39 J	3.37 J	14.7	8.37 J	263 J	2650 J	12.9 J	6.88 J	11.6 J	43.3 J	11.9 J	2.63 J	6.52 J	179 J	7.82	286 J									
	value to use: Row B	53.8	3.39	3.37	14.7	8.37	263	2650	12.9	6.88	11.6	43.3	11.9	2.63	6.52	179	7.82	286									
15	congener TEC: Row C	53.8	3.39	0.337	1.47	0.837	2.63	0.795	1.29	0.2064	3.48	4.33	1.19	0.263	0.652	1.79	0.0782	0.0858	No difference	76.6244	76.6244	76.6244	76.6244	none	Section 1	**76.6244**	**none**
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM171: Row A	38.8	3.12 J	2.97 J	10.2	6.35 J	187 J	1780 J	9.75 J	5.19 J	8.49 J	27.9 J	8.31 J	2.06 J	5.66 J	126 J	5.59	193 J									
	value to use: Row B	38.8	3.12	2.97	10.2	6.35	187	1780	9.75	5.19	8.49	27.9	8.31	2.06	5.66	126	5.59	193									
16	congener TEC: Row C	38.8	3.12	0.297	1.02	0.635	1.87	0.534	0.975	0.1557	2.547	2.79	0.831	0.206	0.566	1.26	0.0559	0.0579	No difference	55.7205	55.7205	55.7205	55.7205	none	Section 1	**55.7205**	**none**
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM172: Row A	49.2 J	4.28 J	4.26 J	17.3 J	9.02 J	252 J	2410 J	20.7 J	9.95 J	14.8 J	39.3 J	15.1 J	3.86 J	10.1 J	189 J	8.97 J	266 J									
	value to use: Row B	49.2	4.28	4.26	17.3	9.02	252	2410	20.7	9.95	14.8	39.3	15.1	3.86	10.1	189	8.97	266									
17	congener TEC: Row C	49.2	4.28	0.426	1.73	0.902	2.52	0.723	2.07	0.2985	4.44	3.93	1.51	0.386	1.01	1.89	0.0897	0.0798	No difference	75.4850	75.4850	75.4850	75.4850	J	Section 1	**75.4850**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM173: Row A	261 J	5.22 J	4.24 J	21.9 J	10.4 J	339 J	3170 J	15.6 J	9.61 J	22 J	62.8 J	20.9 J	0.543 U	11.6 J	394 J	14 J	449 J									
	value to use: Row B	261	5.22	4.24	21.9	10.4	339	3170	15.6	9.61	22	62.8	20.9	0.543	11.6	394	14	449									
18	congener TEC: Row C	261	5.22	0.424	2.19	1.04	3.39	0.951	1.56	0.2883	6.6	6.28	2.09	0.0543	1.16	3.94	0.14	0.1347	0%	296.4080	296.4352	296.4623	296.4623	J	Section 1	**296.4623**	**J**
	donor value to use: Row D																									Qualified	100%

EPA Advanced KM TEQ Calculator

Sediment Screening TCDD TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**									
	Sample ID: **(must enter on Row A)**	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDL**	**OCDD**	**TCDF**	**1-PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDF**	**1,4,9-HpCDF**	**OCDF**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	donor TEC: Row E																									Dioxin/Furan	100%
19	**NB03SED-CHM174: Row A**	20.3 J	2.88 J	3.23 J	14.2 J	9 J	244 J	2520 J	15.6 J	6.56 J	9.65 J	26.1 J	9.32 J	2.28 J	5.21 J	134 J	6.63 J	211 J									
	value to use: Row B	20.3	2.88	3.23	14.2	9	244	2520	15.6	6.56	9.65	26.1	9.32	2.28	5.21	134	6.63	211									
	congener TEC: Row C	**20.3**	**2.88**	**0.323**	**1.42**	**0.9**	**2.44**	**0.756**	**1.56**	**0.1968**	**2.895**	**2.61**	**0.932**	**0.228**	**0.521**	**1.34**	**0.0663**	**0.0633**	No difference	39.4314	39.4314	39.4314	39.4314	J	**Section 1**	**39.4314**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
20	**NB03SED-CHM175: Row A**	1.76 J	0.222 J	0.32 J	1.23 J	0.685 J	20 J	212 J	1.28 J	0.728 J	1.04 J	2.14 J	1.21 J	0.473 J	1.05 J	11.2 J	2.78 J	18.9 J									
	value to use: Row B	1.76	0.222	0.32	1.23	0.685	20	212	1.28	0.728	1.04	2.14	1.21	0.473	1.05	11.2	2.78	18.9									
	congener TEC: Row C	**1.76**	**0.222**	**0.032**	**0.123**	**0.0685**	**0.2**	**0.0636**	**0.128**	**0.02184**	**0.312**	**0.214**	**0.121**	**0.0473**	**0.105**	**0.112**	**0.0278**	**0.00567**	No difference	3.5637	3.5637	3.5637	3.5637	J	**Section 1**	**3.5637**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
21	**NB03SED-CHM176: Row A**	50.4 J	6.58 J	6.82 J	31.2 J	16 J	503 J	4780 J	29.2 J	16.9 J	23.5 J	62.3 J	26.9 J	0.142 U	17 J	308 J	22.8 J	551 J									
	value to use: Row B	50.4	6.58	6.82	31.2	16	503	4780	29.2	16.9	23.5	62.3	26.9	0.142	17	308	22.8	551									
	congener TEC: Row C	**50.4**	**6.58**	**0.682**	**3.12**	**1.6**	**5.03**	**1.434**	**2.92**	**0.507**	**7.05**	**6.23**	**2.69**	**0.0142**	**1.7**	**3.08**	**0.228**	**0.1653**	0%	93.4163	93.4234	93.4305	93.4305	J	**Section 1**	**93.4305**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
22	**NB03SED-CHM177: Row A**	6.12 J	1.59 J	2.09 J	4.84 J	4.58 J	98.3 J	1450 J	3.63 J	2.1 J	3.56 J	4.42 J	2.09 J	0.0495 U	2.45 J	23.4 J	1.57 J	32.3 J									
	value to use: Row B	6.12	1.59	2.09	4.84	4.58	98.3	1450	3.63	2.1	3.56	4.42	2.09	0.0495	2.45	23.4	1.57	32.3									
	congener TEC: Row C	**6.12**	**1.59**	**0.209**	**0.484**	**0.458**	**0.983**	**0.435**	**0.363**	**0.063**	**1.068**	**0.442**	**0.209**	**0.00495**	**0.245**	**0.234**	**0.0157**	**0.00969**	0%	12.92839	12.930865	12.93334	12.9333	J	**Section 1**	**12.9333**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
23	**NB03SED-CHM178: Row A**	2.53 J	1.12 J	1.18 J	3.22 J	2.42 J	75.9 J	1580 J	5.94 J	3.47 J	4.1 J	5.93 J	3.56 J	1.25 J	3.47 J	26.8 J	2.53 J	61.9 J									
	value to use: Row B	2.53	1.12	1.18	3.22	2.42	75.9	1580	5.94	3.47	4.1	5.93	3.56	1.25	3.47	26.8	2.53	61.9									
	congener TEC: Row C	**2.53**	**1.12**	**0.118**	**0.322**	**0.242**	**0.759**	**0.474**	**0.594**	**0.1041**	**1.23**	**0.593**	**0.356**	**0.125**	**0.347**	**0.268**	**0.0253**	**0.01857**	No difference	9.2260	9.2260	9.2260	9.2260	J	**Section 1**	**9.2260**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
24	**NB03SED-DUP-01: Row A**	129 J	4.66 J	3.65 J	14 J	8.64 J	233 J	2330 J	13.1 J	8.43 J	14.7 J	64.5 J	17.2 J	3.43 J	8.1 J	258 J	10.2 J	391 J									
	value to use: Row B	129	4.66	3.65	14	8.64	233	2330	13.1	8.43	14.7	64.5	17.2	3.43	8.1	258	10.2	391									
	congener TEC: Row C	**129**	**4.66**	**0.365**	**1.4**	**0.864**	**2.33**	**0.699**	**1.31**	**0.2529**	**4.41**	**6.45**	**1.72**	**0.343**	**0.81**	**2.58**	**0.102**	**0.1173**	No difference	157.4132	157.4132	157.4132	157.4132	J	**Section 1**	**157.4132**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
25	**NB03SED122A: Row A**	31.7 J	1.64 J	1.32 J	3.85 J	2.64 J	52.8 J	637 J	5.23 J	5.82 J	11.6 J	59.4 J	14.3 J	2.28 J	5.84 J	212 J	5.78 J	274 J									
	value to use: Row B	31.7	1.64	1.32	3.85	2.64	52.8	637	5.23	5.82	11.6	59.4	14.3	2.28	5.84	212	5.78	274									
	congener TEC: Row C	**31.7**	**1.64**	**0.132**	**0.385**	**0.264**	**0.528**	**0.1911**	**0.523**	**0.1746**	**3.48**	**5.94**	**1.43**	**0.228**	**0.584**	**2.12**	**0.0578**	**0.0822**	No difference	49.4597	49.4597	49.4597	49.4597	J	**Section 1**	**49.4597**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
26	**NB03SED122B: Row A**	12.3 J	0.876 J	0.844 J	2.25 J	1.59 J	29.6 J	379 J	2.65 J	2.3 J	4.83 J	20.8 J	5.89 J	0.105 U	3.24 J	75.3 J	2.41 J	99.9 J									
	value to use: Row B	12.3	0.876	0.844	2.25	1.59	29.6	379	2.65	2.3	4.83	20.8	5.89	0.105	3.24	75.3	2.41	99.9									
	congener TEC: Row C	**12.3**	**0.876**	**0.0844**	**0.225**	**0.159**	**0.296**	**0.1137**	**0.265**	**0.069**	**1.449**	**2.08**	**0.589**	**0.0105**	**0.324**	**0.753**	**0.0241**	**0.02997**	0%	19.6372	19.6424	19.6477	19.6477	J	**Section 1**	**19.6477**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
27	**NB03SED122C: Row A**	17.8 J	1.03 J	0.829 J	2.95 J	1.96 J	44.8 J	611 J	4.47 J	3.1 J	5.92 J	28 J	7.08 J	1.17 J	4.06 J	101 J	3.29 J	130 J									
	value to use: Row B	17.8	1.03	0.829	2.95	1.96	44.8	611	4.47	3.1	5.92	28	7.08	1.17	4.06	101	3.29	130									
	congener TEC: Row C	**17.8**	**1.03**	**0.0829**	**0.295**	**0.196**	**0.448**	**0.1833**	**0.447**	**0.093**	**1.776**	**2.8**	**0.708**	**0.117**	**0.406**	**1.01**	**0.0329**	**0.039**	No difference	27.4641	27.4641	27.4641	27.4641	J	**Section 1**	**27.4641**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
28	**NB03SED123A: Row A**	13.3 J	0.985 J	1.17 J	3.62 J	2.37 J	58.9 J	560 J	4.03 J	2.24 J	4.62 J	14.6 J	4.29 J	0.883 J	3.45 J	59 J	2.26 J	81.2 J									
	value to use: Row B	13.3	0.985	1.17	3.62	2.37	58.9	560	4.03	2.24	4.62	14.6	4.29	0.883	3.45	59	2.26	81.2									
	congener TEC: Row C	**13.3**	**0.985**	**0.117**	**0.362**	**0.237**	**0.589**	**0.168**	**0.403**	**0.0672**	**1.386**	**1.46**	**0.429**	**0.0883**	**0.345**	**0.59**	**0.0226**	**0.02436**	No difference	20.5735	20.5735	20.5735	20.5735	J	**Section 1**	**20.5735**	**J**
	donor value to use: Row D																									Qualified	97%
	donor TEC: Row E																									Dioxin/Furan	100%
29	**NB03SED123B: Row A**	6.11 J	0.576 J	0.554 J	1.51 J	1.03 J	24.8 J	335 J	1.33 J	0.936 J	2.32 J	5.83 J	1.92 J	0.531 J	1.41 J	22.6 J	0.937 J	33.2 J									
	value to use: Row B	6.11	0.576	0.554	1.51	1.03	24.8	335	1.33	0.936	2.32	5.83	1.92	0.531	1.41	22.6	0.937	33.2									
	congener TEC: Row C	**6.11**	**0.576**	**0.0554**	**0.151**	**0.103**	**0.248**	**0.1005**	**0.133**	**0.02808**	**0.696**	**0.583**	**0.192**	**0.0531**	**0.141**	**0.226**	**0.00937**	**0.00996**	No difference	9.41541	9.41541	9.41541	9.4154	J	**Section 1**	**9.4154**	**J**
	donor value to use: Row D																									Qualified	97%
	donor TEC: Row E																									Dioxin/Furan	100%
30	**NB03SED125: Row A**	5.43	0.788 J	0.864 J	1.93 J	1.11 J	24.3 J	600 J	1.8 J	2.76 J	5.86 J		9.1 J	0.0996 U	4.21 J	140 J	2.66 J	183 J									
	value to use: Row B	5.43	0.788	0.864	1.93	1.11	24.3	600	1.8	2.76	5.86		9.1	0.0996	4.21	140	2.66	183									
	congener TEC: Row C	**5.43**	**0.788**	**0.0864**	**0.193**	**0.111**	**0.243**	**0.18**	**0.18**	**0.0828**	**1.758**		**0.91**	**0.00996**	**0.421**	**1.4**	**0.0266**	**0.0549**	0%	11.8647	11.86968	11.87466	11.8747	J	**Section 1**	**11.8747**	**J**
	donor value to use: Row D																									Qualified	54%
	donor TEC: Row E																									Dioxin/Furan	100%
31	**NB03SED127A: Row A**	3.93 J	0.443 J	0.507 J	2.56 J	1.01 J	53.7	656 J	1.37 J	0.753 J	1.66 J	3.16 J	1.44 J	0.0761 U	1.25 J	18.4 J	0.883 J	29.4 J									
	value to use: Row B	3.93	0.443	0.507	2.56	1.01	53.7	656	1.37	0.753	1.66	3.16	1.44	0.0761	1.25	18.4	0.883	29.4									
	congener TEC: Row C	**3.93**	**0.443**	**0.0507**	**0.256**	**0.101**	**0.537**	**0.1968**	**0.137**	**0.02259**	**0.498**	**0.316**	**0.144**	**0.00761**	**0.125**	**0.184**	**0.00883**	**0.00882**	0%	6.9587	6.9625	6.9664	6.9664	J	**Section 1**	**6.9664**	**J**
	donor value to use: Row D																									Qualified	92%
	donor TEC: Row E																									Dioxin/Furan	100%
32	**NB03SED127B: Row A**	90.7 J	4.22 J	3.64 J	15.7 J	8.34 J	218	2140 J	10.3 J	6.24 J	11.9 J	40 J	14.1 J	3.2 J	7.77 J	228 J	8.57 J	331 J									
	value to use: Row B	90.7	4.22	3.64	15.7	8.34	218	2140	10.3	6.24	11.9	40	14.1	3.2	7.77	228	8.57	331									
	congener TEC: Row C	**90.7**	**4.22**	**0.364**	**1.57**	**0.834**	**2.18**	**0.642**	**1.03**	**0.1872**	**3.57**	**4**	**1.41**	**0.32**	**0.777**	**2.28**	**0.0857**	**0.0993**	No difference	114.2692	114.2692	114.2692	114.2692	J	**Section 1**	**114.2692**	**J**
	donor value to use: Row D																									Qualified	98%
	donor TEC: Row E																									Dioxin/Furan	100%
33	**NB03SED129: Row A**	271	13.8	12.4	49.8	27.4	1170 J	11700 J	50.3 J	36.5 J	49 J	93.3 J	49.7 J	0.658 U	38.3 J	478 J	30.7	732 J									
	value to use: Row B	271	13.8	12.4	49.8	27.4	1170	11700	50.3	36.5	49	93.3	49.7	0.658	38.3	478	30.7	732									
	congener TEC: Row C	**271**	**13.8**	**1.24**	**4.98**	**2.74**	**11.7**	**3.51**	**5.03**	**1.095**	**14.7**	**9.33**	**4.97**	**0.0658**	**3.83**	**4.78**	**0.307**	**0.2196**	0%	353.2316	353.2645	353.2974	353.2974	none	**Section 1**	**353.2974**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
34	**NB03SED130: Row A**	26.2 J	2.77 J	2.48 J	10.4 J	5.74 J	227 J	2230 J	12.6 J	6.16 J	9.24 J		6.84 J	2.27 J	5.51 J	80.2 J	5.46 J	149 J									
	value to use: Row B	26.2	2.77	2.48	10.4	5.74	227	2230	12.6	6.16	9.24		6.84	2.27	5.51	80.2	5.46	149									
	congener TEC: Row C	**26.2**	**2.77**	**0.248**	**1.04**	**0.574**	**2.27**	**0.669**	**1.26**	**0.1848**	**2.772**		**0.684**	**0.227**	**0.551**	**0.802**	**0.0546**	**0.0447**	No difference	40.3511	40.3511	40.3511	40.3511	J	**Section 1**	**40.3511**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
35	**NB03SED131A: Row A**	4.62	0.425 J	0.298 J	1.35 J	0.952 J	27.2 J	288 J	1.77 J	0.611 J	1.66 J	3 J	1.18 J	0.394 J	1.1 J	15.3 J	0.96 J	30.3 J									
	value to use: Row B	4.62	0.425	0.298	1.35	0.952	27.2	288	1.77	0.611	1.66	3	1.18	0.394	1.1	15.3	0.96	30.3									
	congener TEC: Row C	**4.62**	**0.425**	**0.0298**	**0.135**	**0.0952**	**0.272**	**0.0864**	**0.177**	**0.01833**	**0.498**	**0.3**	**0.118**	**0.0394**	**0.11**	**0.153**	**0.0096**	**0.00909**	No difference	7.0958	7.0958	7.0958	7.0958	none	**Section 1**	**7.0958**	**none**
	donor value to use: Row D																									Qualified	35%
	donor TEC: Row E																									Dioxin/Furan	100%
36	**NB03SED131B: Row A**	2.83	0.274 J	0.299 J	1.15 J	0.764 J	21.3 J	226 J	0.916 J	0.481 J	0.79 J	1.84 J	0.83 J	0.171 J	0.783 J	10.3 J	0.618 J	16.4 J									
	value to use: Row B	2.83	0.274	0.299	1.15	0.764	21.3	226	0.916	0.481	0.79	1.84	0.83	0.171	0.783	10.3	0.618	16.4									
	congener TEC: Row C	**2.83**	**0.274**	**0.0299**	**0.115**	**0.0764**	**0.213**	**0.0678**	**0.0916**	**0.01443**	**0.237**	**0.184**	**0.083**	**0.0171**	**0.0783**	**0.103**	**0.00618**	**0.00492**	No difference	4.4256	4.4256	4.4256	4.4256	none	**Section 1**	**4.4256**	**none**
	donor value to use: Row D																									Qualified	36%
	donor TEC: Row E																									Dioxin/Furan	100%
37	**NB03SED132A: Row A**	84.5	2.19 J	1.78 J	9.08	5.06 J	132 J	1170 J	6.38 J	4.38 J	8.65 J	38.4 J	10.4 J	1.97 J		165 J	5.58	249 J									
	value to use: Row B	84.5	2.19	1.78	9.08	5.06	132	1170	6.38	4.38	8.65	38.4	10.4	1.97		165	5.58	249									
	congener TEC: Row C	**84.5**	**2.19**	**0.178**	**0.908**	**0.506**	**1.32**	**0.351**	**0.638**	**0.1314**	**2.595**	**3.84**	**1.04**	**0.197**		**1.65**	**0.0558**	**0.0747**	No difference	100.1749	100.1749	100.1749	100.1749	none	**Section 1**	**100.1749**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
38	**NB03SED133: Row A**	97.1 J	2.94 J	1.99 J	6.21 J	3.67 J	85.2	956 J	6.04 J	6.44 J	10.2 J	59.3 J	14 J	0.131 U	5.32 J	268 J	6.85 J	392 J									
	value to use: Row B	97.1	2.94	1.99	6.21	3.67	85.2	956	6.04	6.44	10.2	59.3	14	0.131	5.32	268	6.85	392									
	congener TEC: Row C	**97.1**	**2.94**	**0.199**	**0.621**	**0.367**	**0.852**	**0.2868**	**0.604**	**0.1932**	**3.06**	**5.93**	**1.4**	**0.0131**	**0.532**	**2.68**	**0.0685**	**0.1176**	0%	116.9511	116.95765	116.9642	116.9642	J	**Section 1**	**116.9642**	**J**
	donor value to use: Row D																									Qualified	99%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED134: Row A	12.8	4.74 J	4.5 J	20.5	10.3 J	393 J	4150 J	13.4 J	7.35	10.6 J		11.8 J	0.205 U	12.1 J	823 J	11.6 J	505 J									

EPA Advanced KM TEQ Calculator

Sediment Screening TCDD TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**									
	Sample ID:	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDF	1,4,9-HpCDF	OCDF									
	(must enter on Row A)																			U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
39	value to use: Row B	12.8	4.74	4.5	20.5	10.3	393	4150	13.4	7.35	10.6		11.8	0.205	12.1	823	11.6	505	0%	41.8730	41.8833	41.8935	41.8935	J	**Section 1**	**41.8935**	**J**
	congener TEC: Row C	**12.8**	**4.74**	**0.45**	**2.05**	**1.03**	**3.93**	**1.245**	**1.34**	**0.2205**	**3.18**		**1.18**	**0.0205**	**1.21**	**8.23**	**0.116**	**0.1515**								Qualified	64%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
	NB03SED135: Row A	12.3 J	2.21 J	1.32 J	7.24 J	3.29 J	97.4 J	848 J	13	5.85 J	11.1 J	11.8	6.97 J	0.471 U	4.44 J	52.6 J	4.43 J	118 J									
	value to use: Row B	12.3	2.21	1.32	7.24	3.29	97.4	848	13	5.85	11.1	11.8	6.97	0.471	4.44	52.6	4.43	118									
40	**congener TEC: Row C**	**12.3**	**2.21**	**0.132**	**0.724**	**0.329**	**0.974**	**0.2544**	**1.3**	**0.1755**	**3.33**	**1.18**	**0.697**	**0.0471**	**0.444**	**0.526**	**0.0443**	**0.0354**	0%	24.6556	24.6792	24.7027	24.6955	J	**Section 1**	**24.6955**	**J**
	donor value to use: Row D																									Qualified	90%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SEDDUP-01: Row A	5.6	0.38 J	0.463 J	1.88 J	0.989 J	27 J	306 J	1.82 J	1.08 J	1.84 J	3.51 J	1.21 J	0.134 U	1.08 J	17.4 J	0.938 J	28.2 J									
	value to use: Row B	5.6	0.38	0.463	1.88	0.989	27	306	1.82	1.08	1.84	3.51	1.21	0.134	1.08	17.4	0.938	28.2									
41	**congener TEC: Row C**	**5.6**	**0.38**	**0.0463**	**0.188**	**0.0989**	**0.27**	**0.0918**	**0.182**	**0.0324**	**0.552**	**0.351**	**0.121**	**0.0134**	**0.108**	**0.174**	**0.00938**	**0.00846**	0%	8.2132	8.2199	8.2266	8.2222	none	**Section 1**	**8.2222**	**none**
	donor value to use: Row D																									Qualified	32%
	donor TEC: Row E																									Dioxin/Furan	100%

DATA LIST

List of TEQ results to copy and paste into other spreadsheets. such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03SED-CHM136	153.2998	J
Line #2	NB03SED-CHM140	199.8169	J
Line #3	NB03SED-CHM142	20.5969	J
Line #4	NB03SED-CHM143	111.3453	J
Line #5	NB03SED-CHM145	70.1704	J
Line #6	NB03SED-CHM149	98.5895	J
Line #7	NB03SED-CHM155	8.1660	J
Line #8	NB03SED-CHM160	113.1822	J
Line #9	NB03SED-CHM161	183.6336	J
Line #10	NB03SED-CHM164	64.3779	
Line #11	NB03SED-CHM166	138.3205	J
Line #12	NB03SED-CHM167	13.8044	
Line #13	NB03SED-CHM168	116.0423	J
Line #14	NB03SED-CHM169	62.8285	
Line #15	NB03SED-CHM170	76.6244	
Line #16	NB03SED-CHM171	55.7205	
Line #17	NB03SED-CHM172	75.4850	J
Line #18	NB03SED-CHM173	296.4623	J
Line #19	NB03SED-CHM174	39.4314	J
Line #20	NB03SED-CHM175	3.5637	J
Line #21	NB03SED-CHM176	93.4305	J
Line #22	NB03SED-CHM177	12.93334	J
Line #23	NB03SED-CHM178	9.22597	J
Line #24	NB03SED-DUP-01	157.4132	J
Line #25	NB03SED122A	49.4597	J
Line #26	NB03SED122B	19.64767	J
Line #27	NB03SED122C	27.4641	J
Line #28	NB03SED123A	20.57346	J
Line #29	NB03SED123B	9.41541	J
Line #30	NB03SED125	11.87466	J
Line #31	NB03SED127A	6.96635	J
Line #32	NB03SED127B	114.2692	J
Line #33	NB03SED129	353.2974	
Line #34	NB03SED130	40.3511	J
Line #35	NB03SED131A	7.09582	
Line #36	NB03SED131B	4.42563	
Line #37	NB03SED132A	100.1749	
Line #38	NB03SED133	116.9642	J
Line #39	NB03SED134	41.8935	J
Line #40	NB03SED135	24.69545	J
Line #41	NB03SEDDUP-01	8.22216	

EPA Advanced KM TEQ Calculator

Sediment Screening PCB TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2			
															Highest TEC value is a DETECT, and there are no rejected ("R") values						Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values					
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003													
	NB03SED-CHM136: Row A	1630	206 U	3710	191 J	8720	214	101 J	1040		372	206 U	97.8 J													
	value to use: Row B	1630	206	3710	191	8720	214	101	1040		372	206	97.8													
1	congener TEC: Row C	0.163	0.0618	0.1113	0.00573	0.2616	0.00642	10.1	0.0312		0.01116	6.18	0.002934	45%	10.6933	13.8142	16.9351	10.7720	J	Section 1	10.7720	J				
	donor value to use: Row D																				Qualified	97%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM140: Row A	1200	144 U	144 U	176	5670	140 J	64.2 J	781		295	144 U	144 U													
	value to use: Row B	1200	144	144	176	5670	140	64.2	781		295	144	144													
2	congener TEC: Row C	0.12	0.0432	0.00432	0.00528	0.1701	0.0042	6.42	0.02343		0.00885	4.32	0.00432	49%	6.7519	8.9378	11.1237	6.8074	J	Section 1	6.8074	J				
	donor value to use: Row D																				Qualified	97%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM142: Row A	383	119 U	1480	79.9 J	3650	88.5 J	44.6 J	487		187	119 U	36.8 J													
	value to use: Row B	383	119	1480	79.9	3650	88.5	44.6	487		187	119	36.8													
3	congener TEC: Row C	0.0383	0.0357	0.0444	0.002397	0.1095	0.002655	4.46	0.01461		0.00561	3.57	0.001104	56%	4.6786	6.4814	8.2843	4.7087	J	Section 1	4.7087	J				
	donor value to use: Row D																				Qualified	97%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM143: Row A	1990	142 U	6170	273	16200	320	188	2290		868	142 U	206													
	value to use: Row B	1990	142	6170	273	16200	320	188	2290		868	142	206													
4	congener TEC: Row C	0.199	0.0426	0.1851	0.00819	0.486	0.0096	18.8	0.0687		0.02604	4.26	0.00618	20%	19.7888	21.9401	24.0914	19.9126	none	Section 1	19.9126	none				
	donor value to use: Row D																				Qualified	18%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM145: Row A	1920	64.2 J	6080	136 U	14700	338	152	2040		676	136 U	143													
	value to use: Row B	1920	64.2	6080	136	14700	338	152	2040		676	136	143													
5	congener TEC: Row C	0.192	0.01926	0.1824	0.00408	0.441	0.01014	15.2	0.0612		0.02028	4.08	0.00429	22%	16.13057	18.17261	20.21465	16.2385	none	Section 1	16.2385	none				
	donor value to use: Row D																				Qualified	20%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM149: Row A	2670	80.8 J	7350	432	19800	460	188	2410		835	164 U	210													
	value to use: Row B	2670	80.8	7350	432	19800	460	188	2410		835	164	210													
6	congener TEC: Row C	0.267	0.02424	0.2205	0.01296	0.594	0.0138	18.8	0.0723		0.02505	4.92	0.0063	22%	20.03615	22.49615	24.95615	20.1735	none	Section 1	20.1735	none				
	donor value to use: Row D																				Qualified	20%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM155: Row A	318	121 U	895	57.1 J	2090	56.6 J	121 U	216 J		81.6 J	121 U	121 U													
	value to use: Row B	318	121	895	57.1	2090	56.6	121	216		81.6	121	121													
7	congener TEC: Row C	0.0318	0.0363	0.02685	0.001713	0.0627	0.001698	12.1	0.00648		0.002448	3.63	0.00363	197%	0.1337	8.0187	15.9036	12.2623	J	Section 2, Treatment 1			12.2623	J	12.2623	J
	donor value to use: Row D																						Qualified	99%	Qualified	99%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM160: Row A	3390	117 J	22700	1430	57100 J	1130	176 U	11200		3290	176 U	540													
	value to use: Row B	3390	117	22700	1430	57100	1130	176	11200		3290	176	540													
8	congener TEC: Row C	0.339	0.0351	0.681	0.0429	1.713	0.0339	17.6	0.336		0.0987	5.28	0.0162	155%	3.2958	14.7358	26.1758	21.2620	J	Section 2, Treatment 1			21.2620	J	21.2620	J
	donor value to use: Row D																						Qualified	94%	Qualified	94%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM161: Row A	2630	213 U	6540	381	18500	408	198 J	3000		1090	213 U	399													
	value to use: Row B	2630	213	6540	381	18500	408	198	3000		1090	213	399													
9	congener TEC: Row C	0.263	0.0639	0.1962	0.01143	0.555	0.01224	19.8	0.09		0.0327	6.39	0.01197	27%	20.9725	24.1995	27.4264	21.1218	J	Section 1	21.1218	J				
	donor value to use: Row D																				Qualified	96%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM164: Row A	1150 J	133 U	2420	146 J	6430	139 J	58.7 J	784		271	133 U	74.6 J													
	value to use: Row B	1150	133	2420	146	6430	139	58.7	784		271	133	74.6													
10	congener TEC: Row C	0.115	0.0399	0.0726	0.00438	0.1929	0.00417	5.87	0.02352		0.00813	3.99	0.002238	49%	6.2929	8.3079	10.3228	6.3494	J	Section 1	6.3494	J				
	donor value to use: Row D																				Qualified	97%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM166: Row A	2720	222 U	6040	318	16000	385	222 U	1950		708	222 U	188 J													
	value to use: Row B	2720	222	6040	318	16000	385	222	1950		708	222	188													
11	congener TEC: Row C	0.272	0.0666	0.1812	0.00954	0.48	0.01155	22.2	0.0585		0.02124	6.66	0.00564	187%	1.0397	15.5030	29.9663	23.3788	J	Section 2, Treatment 1			23.3788	J	23.3788	J
	donor value to use: Row D																						Qualified	97%	Qualified	97%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM167: Row A	284	99.9 U	813	99.9 U	2030	57.5 J	99.9 U	273		99.1 J	99.9 U	99.9 U													
	value to use: Row B	284	99.9	813	99.9	2030	57.5	99.9	273		99.1	99.9	99.9													
12	congener TEC: Row C	0.0284	0.02997	0.02439	0.002997	0.0609	0.001725	9.99	0.00819		0.002973	2.997	0.002997	196%	0.1266	6.6381	13.1495	10.1470	J	Section 2, Treatment 1			10.1470	J	10.1470	J
	donor value to use: Row D																						Qualified	99%	Qualified	99%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM168: Row A	2330 J	69.2 J	5810 J	335	14900 J	318	151 U	1760		602	151 U	138 J													
	value to use: Row B	2330	69.2	5810	335	14900	318	151	1760		602	151	138													
13	congener TEC: Row C	0.233	0.02076	0.1743	0.01005	0.447	0.00954	15.1	0.0528		0.01806	4.53	0.00414	182%	0.96965	10.78465	20.59965	16.1774	J	Section 2, Treatment 1			16.1774	J	16.1774	J
	donor value to use: Row D																						Qualified	100%	Qualified	100%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM169: Row A	1130	116 U	2970	157	7400	159	90.3 J	1140		349	116 U	86.8 J													
	value to use: Row B	1130	116	2970	157	7400	159	90.3	1140		349	116	86.8													
14	congener TEC: Row C	0.113	0.0348	0.0891	0.00471	0.222	0.00477	9.03	0.0342		0.01047	3.48	0.002604	31%	9.510854	11.268254	13.025654	9.5769	J	Section 1	9.5769	J				
	donor value to use: Row D																				Qualified	96%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM170: Row A	1940	69.4 J	5740	325	14900	323	152 U	1830		614	152 U	142 J													
	value to use: Row B	1940	69.4	5740	325	14900	323	152	1830		614	152	142													
15	congener TEC: Row C	0.194	0.02082	0.1722	0.00975	0.447	0.00969	15.2	0.0549		0.01842	4.56	0.00426	183%	0.9310	10.8110	20.6910	16.2345	J	Section 2, Treatment 1			16.2345	J	16.2345	J
	donor value to use: Row D																						Qualified	96%	Qualified	96%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM171: Row A	1210 J	127 U	3850 J	204 J	9760 J	196 J	127 U	1210 J		423 J	127 U	90.3 J													
	value to use: Row B	1210	127	3850	204	9760	196	127	1210		423	127	90.3													
16	congener TEC: Row C	0.121	0.0381	0.1155	0.00612	0.2928	0.00588	12.7	0.0363		0.01269	3.81	0.002709	187%	0.5930	8.8670	17.1411	13.3730	J	Section 2, Treatment 1			13.3730	J	13.3730	J
	donor value to use: Row D																						Qualified	100%	Qualified	100%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM172: Row A	3310	149 U	23900	1240	79400 J	1560	149 U	10800		3830	149 U	643													
	value to use: Row B	3310	149	23900	1240	79400	1560	149	10800		3830	149	643													
17	congener TEC: Row C	0.331	0.0447	0.717	0.0372	2.382	0.0468	14.9	0.324		0.1149	4.47	0.01929	142%	3.9722	13.6795	23.3869	19.3449	J	Section 2, Treatment 1			19.3449	J	19.3449	J
	donor value to use: Row D																						Qualified	93%	Qualified	93%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
	NB03SED-CHM173: Row A	3430	132 U	6920	368	16500	387	175	2700		884	132 U	206													
	value to use: Row B	3430	132	6920	368	16500	387	175	2700		884	132	206													
18	congener TEC: Row C	0.343	0.0396	0.2076	0.01104	0.495	0.01161	17.5	0.081		0.02652	3.96	0.00618	19%	18.6820	20.6818	22.6816	18.8287	none	Section 1	18.8287	none				
	donor value to use: Row D																				Qualified	18%				
	donor TEC: Row E																				Dioxin/Furan					
	NB03SED-CHM174: Row A	2260	69.2 J	5050	309	16400	358	188 U	1830		698	188 U	132 J													
	value to use: Row B	2260	69.2	5050	309	16400	358	188	1830		698	188	132													

EPA Advanced KM TEQ Calculator

Sediment Screening PCB TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values		(Quasi) Sensitivity Analysis SECTION 2 Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003													
19	congener TEC: Row C	0.226	0.02076	0.1515	0.00927	0.492	0.01074	18.8	0.0549		0.02094	5.64	0.00396	185%	0.9901	13.2101	25.4301	19.9001	J	Section 2, Treatment 1			**19.9001** Qualified Dioxin/Furan	J 96%	19.9001 Qualified Dioxin/Furan	J 96%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM175: Row A	114 J	121 U	236	121 U	667	121 U	121 U	79.9 J		121 U	121 U	121 U													
	value to use: Row B	114	121	236	121	667	121	121	79.9		121	121	121													
20	congener TEC: Row C	0.0114	0.0363	0.00708	0.00363	0.02001	0.00363	12.1	0.002397		0.00363	3.63	0.00363	199%	0.0409	7.9313	15.8217	12.1631	J	Section 2, Treatment 1			**12.1631** Qualified Dioxin/Furan	J 100%	12.1631 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM176: Row A	4370	147 J	11100	684	27800	679	179 U	3440		1170	179 U	319													
	value to use: Row B	4370	147	11100	684	27800	679	179	3440		1170	179	319													
21	congener TEC: Row C	0.437	0.0441	0.333	0.02052	0.834	0.02037	17.9	0.1032		0.0351	5.37	0.00957	173%	1.83686	13.47186	25.10686	19.9410	J	Section 2, Treatment 1			**19.9410** Qualified Dioxin/Furan	J 93%	19.9410 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM177: Row A	343	252 U	1380	81.7 J	3240	252 U	252 U	476 J		168 J	252 U	252 U													
	value to use: Row B	343	252	1380	81.7	3240	252	252	476		168	252	252													
22	congener TEC: Row C	0.0343	0.0756	0.0414	0.002451	0.0972	0.00756	25.2	0.01428		0.00504	7.56	0.00756	198%	0.194671	16.620031	33.045391	25.4413	J	Section 2, Treatment 1			**25.4413** Qualified Dioxin/Furan	J 99%	25.4413 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM178: Row A	145 J	164 U	307	164 U	941	164 U	164 U	113 J		164 U	164 U	164 U													
	value to use: Row B	145	164	307	164	941	164	164	113		164	164	164													
23	congener TEC: Row C	0.0145	0.0492	0.00921	0.00492	0.02823	0.00492	16.4	0.00339		0.00492	4.92	0.00492	199%	0.0553	10.7498	21.4442	16.4861	J	Section 2, Treatment 1			**16.4861** Qualified Dioxin/Furan	J 100%	16.4861 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-DUP-01: Row A	526 J	156 U	1390 J	77.6 J	3510 J	76.1 J	156 U	405		138 J	156 U	156 U													
	value to use: Row B	526	156	1390	77.6	3510	76.1	156	405		138	156	156													
24	congener TEC: Row C	0.0526	0.0468	0.0417	0.002328	0.1053	0.002283	15.6	0.01215		0.00414	4.68	0.00468	196%	0.2205	10.3862	20.5520	15.8604	J	Section 2, Treatment 1			**15.8604** Qualified Dioxin/Furan	J 100%	15.8604 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED122A: Row A	583	108 U	1410	81.4 J	3420	81.2 J	108 U	415		148	108 U	47.7 J													
	value to use: Row B	583	108	1410	81.4	3420	81.2	108	415		148	108	47.7													
25	congener TEC: Row C	0.0583	0.0324	0.0423	0.002442	0.1026	0.002436	10.8	0.01245		0.00444	3.24	0.001431	194%	0.2264	7.2626	14.2988	11.0567	J	Section 2, Treatment 1			**11.0567** Qualified Dioxin/Furan	J 98%	11.0567 Qualified Dioxin/Furan	J 98%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED122B: Row A	271	83.1 U	698	40.3 J	1700	36.9 J	83.1 U	236		88.7	83.1 U	34.2 J													
	value to use: Row B	271	83.1	698	40.3	1700	36.9	83.1	236		88.7	83.1	34.2													
26	congener TEC: Row C	0.0271	0.02493	0.02094	0.001209	0.051	0.001107	8.31	0.00708		0.002661	2.493	0.001026	196%	0.1121	5.5261	10.9401	8.4409	J	Section 2, Treatment 1			**8.4409** Qualified Dioxin/Furan	J 99%	8.4409 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED122C: Row A	546	105 U	1150	105 U	3010	82.5 J	105 U	408		196	105 U	98.3 J													
	value to use: Row B	546	105	1150	105	3010	82.5	105	408		196	105	98.3													
27	congener TEC: Row C	0.0546	0.0315	0.0345	0.00315	0.0903	0.002475	10.5	0.01224		0.00588	3.15	0.002949	194%	0.2029	7.0453	13.8876	10.7343	J	Section 2, Treatment 1			**10.7343** Qualified Dioxin/Furan	J 99%	10.7343 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED123A: Row A	4900	159	8560	491	17500	617	133	1090		406	95.4 U	94.5 J													
	value to use: Row B	4900	159	8560	491	17500	617	133	1090		406	95.4	94.5													
28	congener TEC: Row C	0.49	0.0477	0.2568	0.01473	0.525	0.01851	13.3	0.0327		0.01218	2.862	0.002835	18%	14.7005	16.1315	17.5625	14.8561	none	Section 1	**14.8561** Qualified Dioxin/Furan	**none** 16%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED123B: Row A	314	115 U	653	115 U	1860	115 U	115 U	252		119	115 U	33.6 J													
	value to use: Row B	314	115	653	115	1860	115	115	252		119	115	33.6													
29	congener TEC: Row C	0.0314	0.0345	0.01959	0.00345	0.0558	0.00345	11.5	0.00756		0.00357	3.45	0.001008	197%	0.118928	7.614628	15.110328	11.6447	J	Section 2, Treatment 1			**11.6447** Qualified Dioxin/Furan	J 99%	11.6447 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED125: Row A	226	86.6 U	863	40.9 J	2030	46.6 J	86.6 U	269		102	86.6 U	86.6 U													
	value to use: Row B	226	86.6	863	40.9	2030	46.6	86.6	269		102	86.6	86.6													
30	congener TEC: Row C	0.0226	0.02598	0.02589	0.001227	0.0609	0.001398	8.66	0.00807		0.00306	2.598	0.002598	196%	0.123145	5.766434	11.409723	8.8084	J	Section 2, Treatment 1			**8.8084** Qualified Dioxin/Furan	J 99%	8.8084 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED127A: Row A	169	116 U	668	36.7 J	1630	41.7 J	116 U	281		104 J	116 U	116 U													
	value to use: Row B	169	116	668	36.7	1630	41.7	116	281		104	116	116													
31	congener TEC: Row C	0.0169	0.0348	0.02004	0.001101	0.0489	0.001251	11.6	0.00843		0.00312	3.48	0.00348	197%	0.0997	7.6589	15.2180	11.7212	J	Section 2, Treatment 1			**11.7212** Qualified Dioxin/Furan	J 99%	11.7212 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED127B: Row A	5340	122 J	15100	753	40000 J	961	125 U	5790		2040	125 U	364													
	value to use: Row B	5340	122	15100	753	40000	961	125	5790		2040	125	364													
32	congener TEC: Row C	0.534	0.0366	0.453	0.02259	1.2	0.02883	12.5	0.1737		0.0612	3.75	0.01092	153%	2.5208	10.6458	18.7708	15.3009	J	Section 2, Treatment 1			**15.3009** Qualified Dioxin/Furan	J 93%	15.3009 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED129: Row A	10300	401	35800	2110	83000 J	2230	360	12500		4160	183 U	811													
	value to use: Row B	10300	401	35800	2110	83000	2230	360	12500		4160	183	811													
33	congener TEC: Row C	1.03	0.1203	1.074	0.0633	2.49	0.0669	36	0.375		0.1248	5.49	0.02433	12%	41.3686	44.1136	46.8586	41.9651	none	Section 1	**41.9651** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED130: Row A	2630	93 J	8010	403	18600	539	123 U	2720		880	123 U	199													
	value to use: Row B	2630	93	8010	403	18600	539	123	2720		880	123	199													
34	congener TEC: Row C	0.263	0.0279	0.2403	0.01209	0.558	0.01617	12.3	0.0816		0.0264	3.69	0.00597	173%	1.2314	9.2264	17.2214	13.6683	J	Section 2, Treatment 1			**13.6683** Qualified Dioxin/Furan	J 93%	13.6683 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED131A: Row A	286	97.7 U	741	40.4 J	1760	97.7 U	97.7 U	190 J		74.8 J	97.7 U	97.7 U													
	value to use: Row B	286	97.7	741	40.4	1760	97.7	97.7	190		74.8	97.7	97.7													
35	congener TEC: Row C	0.0286	0.02931	0.02223	0.001212	0.0528	0.002931	9.77	0.0057		0.002244	2.931	0.002931	197%	0.1128	6.4809	12.8490	9.9092	J	Section 2, Treatment 1			**9.9092** Qualified Dioxin/Furan	J 99%	9.9092 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED131B: Row A	161	91.5 U	552	91.5 U	1290	91.5 U	91.5 U	161 J		56 J	91.5 U	91.5 U													
	value to use: Row B	161	91.5	552	91.5	1290	91.5	91.5	161		56	91.5	91.5													
36	congener TEC: Row C	0.0161	0.02745	0.01656	0.002745	0.0387	0.002745	9.15	0.00483		0.00168	2.745	0.002745	197%	0.0779	6.0432	12.0086	9.2491	J	Section 2, Treatment 1			**9.2491** Qualified Dioxin/Furan	J 99%	9.2491 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED132A: Row A	1720	36.1 J	7430	383	19100	428	92.6 U	2820		890	92.6 U	163													
	value to use: Row B	1720	36.1	7430	383	19100	428	92.6	2820		890	92.6	163													
37	congener TEC: Row C	0.172	0.01083	0.2229	0.01149	0.573	0.01284	9.26	0.0846		0.0267	2.778	0.00489	169%	1.11925	7.13825	13.15725	10.5036	J	Section 2, Treatment 1			**10.5036** Qualified Dioxin/Furan	J 92%	10.5036 Qualified Dioxin/Furan	J 92%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED133: Row A	467	113 U	1320	67.9 J	3230	81.6 J	113 U	514		199	113 U	70.4 J													
	value to use: Row B	467	113	1320	67.9	3230	81.6	113	514		199	113	70.4													
38	congener TEC: Row C	0.0467	0.0339	0.0396	0.002037	0.0969	0.002448	11.3	0.01542		0.00597	3.39	0.002112	194%	0.211187	7.573137	14.935087	11.5409	J	Section 2, Treatment 1			**11.5409** Qualified Dioxin/Furan	J 99%	11.5409 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED134: Row A	694	186 U	2630	117 J	7790	255	186 U	1650		772	186 U	311													
	value to use: Row B	694	186	2630	117	7790	255	186	1650		772	186	311													
39	congener TEC: Row C	0.0694	0.0558	0.0789	0.00351	0.2337	0.00765	18.6	0.0495		0.02316	5.58	0.00933	192%	0.4752	12.5931	24.7110	19.1486	J	Section 2, Treatment 1			**19.1486** Qualified Dioxin/Furan	J 98%	19.1486 Qualified Dioxin/Furan	J 98%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED135: Row A	43400 J	1540	67700 J	3380	128000 J	4750	1100	8010		2440	118 U	431													

EPA Advanced KM TEQ Calculator

Sediment Screening PCB TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29										
WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003										
Sample notes	**Sample ID: (must enter on Row A)**	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	**Summary of Sensitivity Analysis (relative percent difference)**	**TEQs from Substitution**			**KM Method**			**(Quasi) Sensitivity Analysis SECTION 1**		**(Quasi) Sensitivity Analysis SECTION 2**			
																					Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
																			Treatment 1		**Treatment 1: Make highest U value a D**		**Treatment 2: Substitute comparable "donor" value for highest U**	
															U = 0 & sum	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
40	value to use: Row B	43400	1540	67700	3380	128000	4750	1100	8010		2440	118	431													
	congener TEC: Row C	**4.34**	**0.462**	**2.031**	**0.1014**	**3.84**	**0.1425**	**110**	**0.2403**		**0.0732**	**3.54**	**0.01293**	3%	121.2433	123.0133	124.7833	121.6809	none	**Section 1**	**121.6809** Qualified Dioxin/Furan	**none** 11%				
	donor value to use: Row D																									
	donor TEC: Row E																									
41	**NB03SEDDUP-01: Row A**	376	95.8 U	982	50.1 J	2490	71.7 J	95.8 U	432		159	95.8 U	78.9 J													
	value to use: Row B	376	95.8	982	50.1	2490	71.7	95.8	432		159	95.8	78.9													
	congener TEC: Row C	**0.0376**	**0.02874**	**0.02946**	**0.001503**	**0.0747**	**0.002151**	**9.58**	**0.01296**		**0.00477**	**2.874**	**0.002367**	195%	0.1655	6.4069	12.6483	9.7692	J	**Section 2, Treatment 1**			**9.7692** Qualified Dioxin/Furan	**J** 99%	9.7692 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03SED-CHM136	10.7720	J
Line #2	NB03SED-CHM140	6.8074	J
Line #3	NB03SED-CHM142	4.7087	J
Line #4	NB03SED-CHM143	19.9126	
Line #5	NB03SED-CHM145	16.2385	
Line #6	NB03SED-CHM149	20.1735	
Line #7	NB03SED-CHM155	12.2623	J
Line #8	NB03SED-CHM160	21.2620	J
Line #9	NB03SED-CHM161	21.1218	J
Line #10	NB03SED-CHM164	6.3494	J
Line #11	NB03SED-CHM166	23.3788	J
Line #12	NB03SED-CHM167	10.1470	J
Line #13	NB03SED-CHM168	16.1774	J
Line #14	NB03SED-CHM169	9.5769	J
Line #15	NB03SED-CHM170	16.2345	J
Line #16	NB03SED-CHM171	13.3730	J
Line #17	NB03SED-CHM172	19.3449	J
Line #18	NB03SED-CHM173	18.8287	
Line #19	NB03SED-CHM174	19.9001	J
Line #20	NB03SED-CHM175	12.1631	J
Line #21	NB03SED-CHM176	19.940956	J
Line #22	NB03SED-CHM177	25.441285	J
Line #23	NB03SED-CHM178	16.486113	J
Line #24	NB03SED-DUP-01	15.860375	J
Line #25	NB03SED122A	11.05671	J
Line #26	NB03SED122B	8.4408817	J
Line #27	NB03SED122C	10.734341	J
Line #28	NB03SED123A	14.856061	
Line #29	NB03SED123B	11.644723	J
Line #30	NB03SED125	8.8083746	J
Line #31	NB03SED127A	11.721211	J
Line #32	NB03SED127B	15.300933	J
Line #33	NB03SED129	41.965144	
Line #34	NB03SED130	13.668256	J
Line #35	NB03SED131A	9.9092279	J
Line #36	NB03SED131B	9.2491397	J
Line #37	NB03SED132A	10.503611	J
Line #38	NB03SED133	11.540872	J
Line #39	NB03SED134	19.148644	J
Line #40	NB03SED135	121.68095	
Line #41	NB03SEDDUP-01	9.7691791	J

EPA Advanced KM TEQ Calculator

Sediment EPC TCDD TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1,2-PeCDF	2,4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDF	1,4,9-HpCDF	OCDF									
1	NB03SED-CHM136: Row A	110 J	4.51 J	4.66 J	16.3 J	10.8 J	291 J	2970 J	17.3 J	10.4 J	22.9 J	133 J	27.8 J	0.31 U	13 J	504 J	18.4 J	886 J									
	value to use: Row B	110	4.51	4.66	16.3	10.8	291	2970	17.3	10.4	22.9	133	27.8	0.31	13	504	18.4	886									
	congener TEC: Row C	110	4.51	0.466	1.63	1.08	2.91	0.891	1.73	0.312	6.87	13.3	2.78	0.031	1.3	5.04	0.184	0.2658	0%	153.2688	153.2843	153.2998	153.2998	J	Section 1	153.2998	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
2	NB03SED-CHM140: Row A	100 J	5.02 J	3.91 J	9.65 J	5.42 J	100 J	920 J	11.1 J	34.5 J	45.8 J	433 J	95.2 J	0.0893 U	29.4 J	1880 J	37.1 J	2660 J									
	value to use: Row B	100	5.02	3.91	9.65	5.42	100	920	11.1	34.5	45.8	433	95.2	0.0893	29.4	1880	37.1	2660									
	congener TEC: Row C	100	5.02	0.391	0.965	0.542	1	0.276	1.11	1.035	13.74	43.3	9.52	0.00893	2.94	18.8	0.371	0.798	0%	199.8080	199.8125	199.8169	199.8169	J	Section 1	199.8169	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
3	NB03SED-CHM142: Row A	14.3 J	0.999 J	1.07 J	3.53 J	2.2 J	58.3 J	729 J	4.01 J	2.21 J	3.73 J	11 J	3.38 J	0.0438 U	2.97 J	45.1 J	1.95 J	66.7 J									
	value to use: Row B	14.3	0.999	1.07	3.53	2.2	58.3	729	4.01	2.21	3.73	11	3.38	0.0438	2.97	45.1	1.95	66.7									
	congener TEC: Row C	14.3	0.999	0.107	0.353	0.22	0.583	0.2187	0.401	0.0663	1.119	1.1	0.338	0.00438	0.297	0.451	0.0195	0.02001	0%	20.5925	20.5947	20.5969	20.5969	J	Section 1	20.5969	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
4	NB03SED-CHM143: Row A	77.6 J	4.66 J	4.4 J	19.6 J	11.4 J	329 J	3470 J	13.4 J	8.59 J	18.2 J	71.9 J	18.7 J	1.09 U	12.7 J	345 J	12.6 J	472 J									
	value to use: Row B	77.6	4.66	4.4	19.6	11.4	329	3470	13.4	8.59	18.2	71.9	18.7	1.09	12.7	345	12.6	472									
	congener TEC: Row C	77.6	4.66	0.44	1.96	1.14	3.29	1.041	1.34	0.2577	5.46	7.19	1.87	0.109	1.27	3.45	0.126	0.1416	0%	111.2363	111.2908	111.3453	111.3453	J	Section 1	111.3453	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
5	NB03SED-CHM145: Row A	53.6 J	2.62 J	2.66 J	11.3 J	6.9 J	201 J	1890 J	9.84 J	5.49 J	8.11 J	28.7 J	9.12 J	0.0535 U	4.72 J	132 J	6.19 J	215 J									
	value to use: Row B	53.6	2.62	2.66	11.3	6.9	201	1890	9.84	5.49	8.11	28.7	9.12	0.0535	4.72	132	6.19	215									
	congener TEC: Row C	53.6	2.62	0.266	1.13	0.69	2.01	0.567	0.984	0.1647	2.433	2.87	0.912	0.00535	0.472	1.32	0.0619	0.0645	0%	70.1651	70.167775	70.17045	70.1704	J	Section 1	70.1704	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
6	NB03SED-CHM149: Row A	58.3 J	7.03 J	6.61 J	21.8 J	13.2 J	382 J	3600 J	25.5 J	18 J	29.4 J	46 J	27.3 J	1.36 J	24.8 J	212 J	12.8 J	315 J									
	value to use: Row B	58.3	7.03	6.61	21.8	13.2	382	3600	25.5	18	29.4	46	27.3	1.36	24.8	212	12.8	315									
	congener TEC: Row C	58.3	7.03	0.661	2.18	1.32	3.82	1.08	2.55	0.54	8.82	4.6	2.73	0.136	2.48	2.12	0.128	0.0945	No difference	98.5895	98.5895	98.5895	98.5895	J	Section 1	98.5895	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
7	NB03SED-CHM155: Row A	5.62 J	0.404 J	0.405 J	1.68 J	1.05 J	27.7 J	303 J	1.68 J	0.901 J	1.57 J	3.23 J	1.22 J	0.452 J	1.18 J	16.8 J	1.04 J	26.6 J									
	value to use: Row B	5.62	0.404	0.405	1.68	1.05	27.7	303	1.68	0.901	1.57	3.23	1.22	0.452	1.18	16.8	1.04	26.6									
	congener TEC: Row C	5.62	0.404	0.0405	0.168	0.105	0.277	0.0909	0.168	0.02703	0.471	0.323	0.122	0.0452	0.118	0.168	0.0104	0.00798	No difference	8.1660	8.1660	8.1660	8.1660	J	Section 1	8.1660	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
8	NB03SED-CHM160: Row A	83.9 J	6.63 J	3.37 J	21.4 J	11.9 J	257 J	2210 J	14.4 J	6.95 J	15.4 J	48.5 J	14.4 J	0.188 U	7.94 J	221 J	7.94 J	305 J									
	value to use: Row B	83.9	6.63	3.37	21.4	11.9	257	2210	14.4	6.95	15.4	48.5	14.4	0.188	7.94	221	7.94	305									
	congener TEC: Row C	83.9	6.63	0.337	2.14	1.19	2.57	0.663	1.44	0.2085	4.62	4.85	1.44	0.0188	0.794	2.21	0.0794	0.0915	0%	113.1634	113.1728	113.1822	113.1822	J	Section 1	113.1822	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
9	NB03SED-CHM161: Row A	137 J	7.68 J	6.82 J	24.2 J	21.9 J	486 J	5740 J	19.7 J	9.92 J	20.5 J	101 J	24.3 J	4.86 J	12.4 J	405 J	16.1 J	650 J									
	value to use: Row B	137	7.68	6.82	24.2	21.9	486	5740	19.7	9.92	20.5	101	24.3	4.86	12.4	405	16.1	650									
	congener TEC: Row C	137	7.68	0.682	2.42	2.19	4.86	1.722	1.97	0.2976	6.15	10.1	2.43	0.486	1.24	4.05	0.161	0.195	No difference	183.6336	183.6336	183.6336	183.6336	J	Section 1	183.6336	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
10	NB03SED-CHM164: Row A	48.2	1.39 J	1.44 J	5.42	3.39 J	83.1 J	922 J	6.72 J	4.99 J	10 J	50.7 J	11.6 J	2.03 J	5.06 J	176 J	5.48 J	266 J									
	value to use: Row B	48.2	1.39	1.44	5.42	3.39	83.1	922	6.72	4.99	10	50.7	11.6	2.03	5.06	176	5.48	266									
	congener TEC: Row C	48.2	1.39	0.144	0.542	0.339	0.831	0.2766	0.672	0.1497	3	5.07	1.16	0.203	0.506	1.76	0.0548	0.0798	No difference	64.3779	64.3779	64.3779	64.3779	none	Section 1	64.3779	none
	donor value to use: Row D																									Qualified	24%
	donor TEC: Row E																									Dioxin/Furan	100%
11	NB03SED-CHM166: Row A	94.6 J	4.53 J	4.44 J	16.9 J	10.6 J	275 J	2950 J	16.5 J	10.4 J	24.1 J	137 J	27.6 J	0.262 U	14.1 J	485 J	18.9 J	781 J									
	value to use: Row B	94.6	4.53	4.44	16.9	10.6	275	2950	16.5	10.4	24.1	137	27.6	0.262	14.1	485	18.9	781									
	congener TEC: Row C	94.6	4.53	0.444	1.69	1.06	2.75	0.885	1.65	0.312	7.23	13.7	2.76	0.0262	1.41	4.85	0.189	0.2343	0%	138.2943	138.3074	138.3205	138.3205	J	Section 1	138.3205	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
12	NB03SED-CHM167: Row A	9.98	0.466 J	0.633 J	1.97 J	1.23 J	44.2 J	435 J	2.1 J	1.19 J	1.97 J	8.06 J	2.15 J	0.505 J	1.47 J	31.9 J	1.33 J	50.2 J									
	value to use: Row B	9.98	0.466	0.633	1.97	1.23	44.2	435	2.1	1.19	1.97	8.06	2.15	0.505	1.47	31.9	1.33	50.2									
	congener TEC: Row C	9.98	0.466	0.0633	0.197	0.123	0.442	0.1305	0.21	0.0357	0.591	0.806	0.215	0.0505	0.147	0.319	0.0133	0.01506	No difference	13.8044	13.8044	13.8044	13.8044	none	Section 1	13.8044	none
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
13	NB03SED-CHM168: Row A	110.2 J	3.825 J	3.43 J	13.25 J	8.325 J	217.5 J	2195 J	13.3 J	7.615 J	14.45 J	62.2 J	16.15 J	3.43 J	7.95 J	245.5 J	9.78 J	373.5 J									
	value to use: Row B	110.2	3.825	3.43	13.25	8.325	217.5	2195	13.3	7.615	14.45	62.2	16.15	3.43	7.95	245.5	9.78	373.5									
	congener TEC: Row C	110.2	3.825	0.343	1.325	0.8325	2.175	0.6585	1.33	0.22845	4.335	6.22	1.615	0.343	0.795	2.455	0.0978	0.11205	No difference	136.8903	136.8903	136.8903	136.8903	J	Section 1	136.8903	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
14	NB03SED-CHM169: Row A	48.6	2.07 J	2.06 J	7.43	4.4 J	140 J	1520 J	7.19 J	3.87 J	7.47 J	31.5 J	7.34 J	1.87 J	4.16 J	123 J	5.59	215 J									
	value to use: Row B	48.6	2.07	2.06	7.43	4.4	140	1520	7.19	3.87	7.47	31.5	7.34	1.87	4.16	123	5.59	215									
	congener TEC: Row C	48.6	2.07	0.206	0.743	0.44	1.4	0.456	0.719	0.1161	2.241	3.15	0.734	0.187	0.416	1.23	0.0559	0.0645	No difference	62.8285	62.8285	62.8285	62.8285	none	Section 1	62.8285	none
	donor value to use: Row D																									Qualified	21%
	donor TEC: Row E																									Dioxin/Furan	100%
15	NB03SED-CHM170: Row A	53.8	3.39 J	3.37 J	14.7	8.37 J	263 J	2650 J	12.9 J	6.88 J	11.6 J	43.3 J	11.9 J	2.63 J	6.52 J	179 J	7.82	286 J									
	value to use: Row B	53.8	3.39	3.37	14.7	8.37	263	2650	12.9	6.88	11.6	43.3	11.9	2.63	6.52	179	7.82	286									
	congener TEC: Row C	53.8	3.39	0.337	1.47	0.837	2.63	0.795	1.29	0.2064	3.48	4.33	1.19	0.263	0.652	1.79	0.0782	0.0858	No difference	76.6244	76.6244	76.6244	76.6244	none	Section 1	76.6244	none
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
16	NB03SED-CHM171: Row A	38.8	3.12 J	2.97 J	10.2	6.35 J	187 J	1780 J	9.75 J	5.19 J	8.49 J	27.9 J	8.31 J	2.06 J	5.66 J	126 J	5.59	193 J									
	value to use: Row B	38.8	3.12	2.97	10.2	6.35	187	1780	9.75	5.19	8.49	27.9	8.31	2.06	5.66	126	5.59	193									
	congener TEC: Row C	38.8	3.12	0.297	1.02	0.635	1.87	0.534	0.975	0.1557	2.547	2.79	0.831	0.206	0.566	1.26	0.0559	0.0579	No difference	55.7205	55.7205	55.7205	55.7205	none	Section 1	55.7205	none
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
17	NB03SED-CHM172: Row A	49.2 J	4.28 J	4.26 J	17.3 J	9.02 J	252 J	2410 J	20.7 J	9.95 J	14.8 J	39.3 J	15.1 J	3.86 J	10.1 J	189 J	8.97 J	266 J									
	value to use: Row B	49.2	4.28	4.26	17.3	9.02	252	2410	20.7	9.95	14.8	39.3	15.1	3.86	10.1	189	8.97	266									
	congener TEC: Row C	49.2	4.28	0.426	1.73	0.902	2.52	0.723	2.07	0.2985	4.44	3.93	1.51	0.386	1.01	1.89	0.0897	0.0798	No difference	75.4850	75.4850	75.4850	75.4850	J	Section 1	75.4850	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM173: Row A	261 J	5.22 J	4.24 J	21.9 J	10.4 J	339 J	3170 J	15.6 J	9.61 J	22 J	62.8 J	20.9 J	0.543 U	11.6 J	394 J	14 J	449 J									
	value to use: Row B	261	5.22	4.24	21.9	10.4	339	3170	15.6	9.61	22	62.8	20.9	0.543	11.6	394	14	449									

EPA Advanced KM TEQ Calculator

Sediment EPC TCDD TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**Treatment 1**	
	Sample ID:	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDL**	**OCDD**	**TCDF**	**1,PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDF**	**1,4,9-HpCDF**	**OCDF**								**KM TEQ**	**Qualifier and Qualifier Fractions**
18	**congener TEC: Row C**	**261**	**5.22**	**0.424**	**2.19**	**1.04**	**3.39**	**0.951**	**1.56**	**0.2883**	**6.6**	**6.28**	**2.09**	**0.0543**	**1.16**	**3.94**	**0.14**	**0.1347**	0%	296.4080	296.4352	296.4623	296.4623	J	**Section 1**	**296.4623**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM174: Row A	20.3 J	2.88 J	3.23 J	14.2 J	9 J	244 J	2520 J	15.6 J	6.56 J	9.65 J	26.1 J	9.32 J	2.28 J	5.21 J	134 J	6.63 J	211 J									
	value to use: Row B	20.3	2.88	3.23	14.2	9	244	2520	15.6	6.56	9.65	26.1	9.32	2.28	5.21	134	6.63	211									
19	**congener TEC: Row C**	**20.3**	**2.88**	**0.323**	**1.42**	**0.9**	**2.44**	**0.756**	**1.56**	**0.1968**	**2.895**	**2.61**	**0.932**	**0.228**	**0.521**	**1.34**	**0.0663**	**0.0633**	No difference	39.4314	39.4314	39.4314	39.4314	J	**Section 1**	**39.4314**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM175: Row A	1.76 J	0.222 J	0.32 J	1.23 J	0.685 J	20 J	212 J	1.28 J	0.728 J	1.04 J	2.14 J	1.21 J	0.473 J	1.05 J	11.2 J	2.78 J	18.9 J									
	value to use: Row B	1.76	0.222	0.32	1.23	0.685	20	212	1.28	0.728	1.04	2.14	1.21	0.473	1.05	11.2	2.78	18.9									
20	**congener TEC: Row C**	**1.76**	**0.222**	**0.032**	**0.123**	**0.0685**	**0.2**	**0.0636**	**0.128**	**0.02184**	**0.312**	**0.214**	**0.121**	**0.0473**	**0.105**	**0.112**	**0.0278**	**0.00567**	No difference	3.5637	3.5637	3.5637	3.5637	J	**Section 1**	**3.5637**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM176: Row A	50.4 J	6.58 J	6.82 J	31.2 J	16 J	503 J	4780 J	29.2 J	16.9 J	23.5 J	62.3 J	26.9 J	0.142 U	17 J	308 J	22.8 J	551 J									
	value to use: Row B	50.4	6.58	6.82	31.2	16	503	4780	29.2	16.9	23.5	62.3	26.9	0.142	17	308	22.8	551									
21	**congener TEC: Row C**	**50.4**	**6.58**	**0.682**	**3.12**	**1.6**	**5.03**	**1.434**	**2.92**	**0.507**	**7.05**	**6.23**	**2.69**	**0.0142**	**1.7**	**3.08**	**0.228**	**0.1653**	0%	93.4163	93.4234	93.4305	93.4305	J	**Section 1**	**93.4305**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM177: Row A	6.12 J	1.59 J	2.09 J	4.84 J	4.58 J	98.3 J	1450 J	3.63 J	2.1 J	3.56 J	4.42 J	2.09 J	0.0495 U	2.45 J	23.4 J	1.57 J	32.3 J									
	value to use: Row B	6.12	1.59	2.09	4.84	4.58	98.3	1450	3.63	2.1	3.56	4.42	2.09	0.0495	2.45	23.4	1.57	32.3									
22	**congener TEC: Row C**	**6.12**	**1.59**	**0.209**	**0.484**	**0.458**	**0.983**	**0.435**	**0.363**	**0.063**	**1.068**	**0.442**	**0.209**	**0.00495**	**0.245**	**0.234**	**0.0157**	**0.00969**	0%	12.92839	12.930865	12.93334	12.9333	J	**Section 1**	**12.9333**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED-CHM178: Row A	2.53 J	1.12 J	1.18 J	3.22 J	2.42 J	75.9 J	1580 J	5.94 J	3.47 J	4.1 J	5.93 J	3.56 J	1.25 J	3.47 J	26.8 J	2.53 J	61.9 J									
	value to use: Row B	2.53	1.12	1.18	3.22	2.42	75.9	1580	5.94	3.47	4.1	5.93	3.56	1.25	3.47	26.8	2.53	61.9									
23	**congener TEC: Row C**	**2.53**	**1.12**	**0.118**	**0.322**	**0.242**	**0.759**	**0.474**	**0.594**	**0.1041**	**1.23**	**0.593**	**0.356**	**0.125**	**0.347**	**0.268**	**0.0253**	**0.01857**	No difference	9.2260	9.2260	9.2260	9.2260	J	**Section 1**	**9.2260**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED122A: Row A	31.7 J	1.64 J	1.32 J	3.85 J	2.64 J	52.8 J	637 J	5.23 J	5.82 J	11.6 J	59.4 J	14.3 J	2.28 J	5.84 J	212 J	5.78 J	274 J									
	value to use: Row B	31.7	1.64	1.32	3.85	2.64	52.8	637	5.23	5.82	11.6	59.4	14.3	2.28	5.84	212	5.78	274									
24	**congener TEC: Row C**	**31.7**	**1.64**	**0.132**	**0.385**	**0.264**	**0.528**	**0.1911**	**0.523**	**0.1746**	**3.48**	**5.94**	**1.43**	**0.228**	**0.584**	**2.12**	**0.0578**	**0.0822**	No difference	49.4597	49.4597	49.4597	49.4597	J	**Section 1**	**49.4597**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED122B: Row A	12.3 J	0.876 J	0.844 J	2.25 J	1.59 J	29.6 J	379 J	2.65 J	2.3 J	4.83 J	20.8 J	5.89 J	0.105 U	3.24 J	75.3 J	2.41 J	99.9 J									
	value to use: Row B	12.3	0.876	0.844	2.25	1.59	29.6	379	2.65	2.3	4.83	20.8	5.89	0.105	3.24	75.3	2.41	99.9									
25	**congener TEC: Row C**	**12.3**	**0.876**	**0.0844**	**0.225**	**0.159**	**0.296**	**0.1137**	**0.265**	**0.069**	**1.449**	**2.08**	**0.589**	**0.0105**	**0.324**	**0.753**	**0.0241**	**0.02997**	0%	19.6372	19.6424	19.6477	19.6477	J	**Section 1**	**19.6477**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED122C: Row A	17.8 J	1.03 J	0.829 J	2.95 J	1.96 J	44.8 J	611 J	4.47 J	3.1 J	5.92 J	28 J	7.08 J	1.17 J	4.06 J	101 J	3.29 J	130 J									
	value to use: Row B	17.8	1.03	0.829	2.95	1.96	44.8	611	4.47	3.1	5.92	28	7.08	1.17	4.06	101	3.29	130									
26	**congener TEC: Row C**	**17.8**	**1.03**	**0.0829**	**0.295**	**0.196**	**0.448**	**0.1833**	**0.447**	**0.093**	**1.776**	**2.8**	**0.708**	**0.117**	**0.406**	**1.01**	**0.0329**	**0.039**	No difference	27.4641	27.4641	27.4641	27.4641	J	**Section 1**	**27.4641**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED123A: Row A	13.3 J	0.985 J	1.17 J	3.62 J	2.37 J	58.9	560 J	4.03 J	2.24 J	4.62 J	14.6 J	4.29 J	0.883 J	3.45 J	59 J	2.26 J	81.2 J									
	value to use: Row B	13.3	0.985	1.17	3.62	2.37	58.9	560	4.03	2.24	4.62	14.6	4.29	0.883	3.45	59	2.26	81.2									
27	**congener TEC: Row C**	**13.3**	**0.985**	**0.117**	**0.362**	**0.237**	**0.589**	**0.168**	**0.403**	**0.0672**	**1.386**	**1.46**	**0.429**	**0.0883**	**0.345**	**0.59**	**0.0226**	**0.02436**	No difference	20.5735	20.5735	20.5735	20.5735	J	**Section 1**	**20.5735**	**J**
	donor value to use: Row D																									Qualified	97%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED123B: Row A	6.11 J	0.576 J	0.554 J	1.51 J	1.03 J	24.8	335 J	1.33 J	0.936 J	2.32 J	5.83 J	1.92 J	0.531 J	1.41 J	22.6 J	0.937 J	33.2 J									
	value to use: Row B	6.11	0.576	0.554	1.51	1.03	24.8	335	1.33	0.936	2.32	5.83	1.92	0.531	1.41	22.6	0.937	33.2									
28	**congener TEC: Row C**	**6.11**	**0.576**	**0.0554**	**0.151**	**0.103**	**0.248**	**0.1005**	**0.133**	**0.02808**	**0.696**	**0.583**	**0.192**	**0.0531**	**0.141**	**0.226**	**0.00937**	**0.00996**	No difference	9.4154	9.4154	9.4154	9.4154	J	**Section 1**	**9.4154**	**J**
	donor value to use: Row D																									Qualified	97%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED125: Row A	5.43	0.788 J	0.864 J	1.93 J	1.11 J	24.3 J	600 J	1.8 J	2.76 J	5.86 J		9.1 J	0.0996 U	4.21 J	140 J	2.66 J	183 J									
	value to use: Row B	5.43	0.788	0.864	1.93	1.11	24.3	600	1.8	2.76	5.86		9.1	0.0996	4.21	140	2.66	183									
29	**congener TEC: Row C**	**5.43**	**0.788**	**0.0864**	**0.193**	**0.111**	**0.243**	**0.18**	**0.18**	**0.0828**	**1.758**		**0.91**	**0.00996**	**0.421**	**1.4**	**0.0266**	**0.0549**	0%	11.8647	11.86968	11.87466	11.8747	J	**Section 1**	**11.8747**	**J**
	donor value to use: Row D																									Qualified	54%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED127A: Row A	3.93 J	0.443 J	0.507 J	2.56 J	1.01 J	53.7	656 J	1.37 J	0.753 J	1.66 J	3.16 J	1.44 J	0.0761 U	1.25 J	18.4 J	0.883 J	29.4 J									
	value to use: Row B	3.93	0.443	0.507	2.56	1.01	53.7	656	1.37	0.753	1.66	3.16	1.44	0.0761	1.25	18.4	0.883	29.4									
30	**congener TEC: Row C**	**3.93**	**0.443**	**0.0507**	**0.256**	**0.101**	**0.537**	**0.1968**	**0.137**	**0.02259**	**0.498**	**0.316**	**0.144**	**0.00761**	**0.125**	**0.184**	**0.00883**	**0.00882**	0%	6.95874	6.962545	6.96635	6.9664	J	**Section 1**	**6.9664**	**J**
	donor value to use: Row D																									Qualified	92%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED127B: Row A	90.7 J	4.22 J	3.64 J	15.7 J	8.34 J	218	2140 J	10.3 J	6.24 J	11.9 J	40 J	14.1 J	3.2 J	7.77 J	228 J	8.57 J	331 J									
	value to use: Row B	90.7	4.22	3.64	15.7	8.34	218	2140	10.3	6.24	11.9	40	14.1	3.2	7.77	228	8.57	331									
31	**congener TEC: Row C**	**90.7**	**4.22**	**0.364**	**1.57**	**0.834**	**2.18**	**0.642**	**1.03**	**0.1872**	**3.57**	**4**	**1.41**	**0.32**	**0.777**	**2.28**	**0.0857**	**0.0993**	No difference	114.2692	114.2692	114.2692	114.2692	J	**Section 1**	**114.2692**	**J**
	donor value to use: Row D																									Qualified	98%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED129: Row A	271	13.8	12.4	49.8	27.4	1170 J	11700 J	50.3 J	36.5 J	49 J	93.3 J	49.7 J	0.658 U	38.3 J	478 J	30.7	732 J									
	value to use: Row B	271	13.8	12.4	49.8	27.4	1170	11700	50.3	36.5	49	93.3	49.7	0.658	38.3	478	30.7	732									
32	**congener TEC: Row C**	**271**	**13.8**	**1.24**	**4.98**	**2.74**	**11.7**	**3.51**	**5.03**	**1.095**	**14.7**	**9.33**	**4.97**	**0.0658**	**3.83**	**4.78**	**0.307**	**0.2196**	0%	353.2316	353.2645	353.2974	353.2974	none	**Section 1**	**353.2974**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED130: Row A	26.2 J	2.77 J	2.48 J	10.4 J	5.74 J	227 J	2230 J	12.6 J	6.16 J	9.24 J		6.84 J	2.27 J	5.51 J	80.2 J	5.46 J	149 J									
	value to use: Row B	26.2	2.77	2.48	10.4	5.74	227	2230	12.6	6.16	9.24		6.84	2.27	5.51	80.2	5.46	149									
33	**congener TEC: Row C**	**26.2**	**2.77**	**0.248**	**1.04**	**0.574**	**2.27**	**0.669**	**1.26**	**0.1848**	**2.772**		**0.684**	**0.227**	**0.551**	**0.802**	**0.0546**	**0.0447**	No difference	40.3511	40.3511	40.3511	40.3511	J	**Section 1**	**40.3511**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED131A: Row A	5.11	0.4025 J	0.3805 J	1.615 J	0.9705 J	27.1 J	297 J	1.795 J	0.8455 J	1.75 J	3.255 J	1.195 J	0.394 J	1.09 J	16.35 J	0.949 J	29.25 J									
	value to use: Row B	5.11	0.4025	0.3805	1.615	0.9705	27.1	297	1.795	0.8455	1.75	3.255	1.195	0.394	1.09	16.35	0.949	29.25									
34	**congener TEC: Row C**	**5.11**	**0.4025**	**0.03805**	**0.1615**	**0.09705**	**0.271**	**0.0891**	**0.1795**	**0.025365**	**0.525**	**0.3255**	**0.1195**	**0.0394**	**0.109**	**0.1635**	**0.00949**	**0.008775**	No difference	7.6742	7.6742	7.6742	7.6742	none	**Section 1**	**7.6742**	**none**
	donor value to use: Row D																									Qualified	33%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED131B: Row A	2.83	0.274 J	0.299 J	1.15 J	0.764 J	21.3 J	226 J	0.916 J	0.481 J	0.79 J	1.84 J	0.83 J	0.171 J	0.783 J	10.3 J	0.618 J	16.4 J									
	value to use: Row B	2.83	0.274	0.299	1.15	0.764	21.3	226	0.916	0.481	0.79	1.84	0.83	0.171	0.783	10.3	0.618	16.4									
35	**congener TEC: Row C**	**2.83**	**0.274**	**0.0299**	**0.115**	**0.0764**	**0.213**	**0.0678**	**0.0916**	**0.01443**	**0.237**	**0.184**	**0.083**	**0.0171**	**0.0783**	**0.103**	**0.00618**	**0.00492**	No difference	4.4256	4.4256	4.4256	4.4256	none	**Section 1**	**4.4256**	**none**
	donor value to use: Row D																									Qualified	36%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED132A: Row A	84.5	2.19 J	1.78 J	9.08	5.06 J	132 J	1170 J	6.38 J	4.38 J	8.65 J	38.4 J	10.4 J	1.97 J		165 J	5.58	249 J									
	value to use: Row B	84.5	2.19	1.78	9.08	5.06	132	1170	6.38	4.38	8.65	38.4	10.4	1.97		165	5.58	249									
36	**congener TEC: Row C**	**84.5**	**2.19**	**0.178**	**0.908**	**0.506**	**1.32**	**0.351**	**0.638**	**0.1314**	**2.595**	**3.84**	**1.04**	**0.197**		**1.65**	**0.0558**	**0.0747**	No difference	100.1749	100.1749	100.1749	100.1749	none	**Section 1**	**100.1749**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED133: Row A	97.1 J	2.94 J	1.99 J	6.21 J	3.67 J	85.2	956 J	6.04 J	6.44 J	10.2 J	59.3 J	14 J	0.131 U	5.32 J	268 J	6.85 J	392 J									
	value to use: Row B	97.1	2.94	1.99	6.21	3.67	85.2	956	6.04	6.44	10.2	59.3	14	0.131	5.32	268	6.85	392									
37	**congener TEC: Row C**	**97.1**	**2.94**	**0.199**	**0.621**	**0.367**	**0.852**	**0.2868**	**0.604**	**0.1932**	**3.06**	**5.93**	**1.4**	**0.0131**	**0.532**	**2.68**	**0.0685**	**0.1176**	0%	116.9511	116.95765	116.9642	116.9642	J	**Section 1**	**116.9642**	**J**
	donor value to use: Row D																									Qualified	99%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03SED134: Row A	12.8	4.74 J	4.5 J	20.5	10.3 J	393 J	4150 J	13.4 J	7.35	10.6 J		11.8 J	0.205 U	12.1 J	823 J	11.6 J	505 J									

EPA Advanced KM TEQ Calculator

Sediment EPC TCDD TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**								**Treatment 1**	
	Sample ID:	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDL**	**OCDD**	**TCDF**	**1,PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDı**	**1,4,9-HpCDı**	**OCDF**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	(must enter on Row A)																										
38	value to use: Row B	12.8	4.74	4.5	20.5	10.3	393	4150	13.4	7.35	10.6		11.8	0.205	12.1	823	11.6	505									
	congener TEC: Row C	**12.8**	**4.74**	**0.45**	**2.05**	**1.03**	**3.93**	**1.245**	**1.34**	**0.2205**	**3.18**		**1.18**	**0.0205**	**1.21**	**8.23**	**0.116**	**0.1515**	0%	41.873	41.88325	41.8935	41.8935	J	**Section 1**	**41.8935**	**J**
	donor value to use: Row D																								Qualified	64%
	donor TEC: Row E																								Dioxin/Furan	100%
	NB03SED135: Row A	12.3 J	2.21 J	1.32 J	7.24 J	3.29 J	97.4 J	848 J	13	5.85 J	11.1 J	11.8	6.97 J	0.471 U	4.44 J	52.6 J	4.43 J	118 J									
	value to use: Row B	12.3	2.21	1.32	7.24	3.29	97.4	848	13	5.85	11.1	11.8	6.97	0.471	4.44	52.6	4.43	118									
39	**congener TEC: Row C**	**12.3**	**2.21**	**0.132**	**0.724**	**0.329**	**0.974**	**0.2544**	**1.3**	**0.1755**	**3.33**	**1.18**	**0.697**	**0.0471**	**0.444**	**0.526**	**0.0443**	**0.0354**	0%	24.6556	24.6792	24.7027	24.6955	J	**Section 1**	**24.6955**	**J**
	donor value to use: Row D																								Qualified	90%
	donor TEC: Row E																								Dioxin/Furan	100%

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03SED-CHM136	153.2998	J
Line #2	NB03SED-CHM140	199.8169	J
Line #3	NB03SED-CHM142	20.5969	J
Line #4	NB03SED-CHM143	111.3453	J
Line #5	NB03SED-CHM145	70.1704	J
Line #6	NB03SED-CHM149	98.5895	J
Line #7	NB03SED-CHM155	8.1660	J
Line #8	NB03SED-CHM160	113.1822	J
Line #9	NB03SED-CHM161	183.6336	J
Line #10	NB03SED-CHM164	64.3779	
Line #11	NB03SED-CHM166	138.3205	J
Line #12	NB03SED-CHM167	13.8044	
Line #13	NB03SED-CHM168	136.8903	J
Line #14	NB03SED-CHM169	62.8285	
Line #15	NB03SED-CHM170	76.6244	
Line #16	NB03SED-CHM171	55.7205	
Line #17	NB03SED-CHM172	75.4850	J
Line #18	NB03SED-CHM173	296.4623	J
Line #19	NB03SED-CHM174	39.4314	J
Line #20	NB03SED-CHM175	3.5637	J
Line #21	NB03SED-CHM176	93.4305	J
Line #22	NB03SED-CHM177	12.93334	J
Line #23	NB03SED-CHM178	9.22597	J
Line #24	NB03SED122A	49.4597	J
Line #25	NB03SED122B	19.64767	J
Line #26	NB03SED122C	27.4641	J
Line #27	NB03SED123A	20.57346	J
Line #28	NB03SED123B	9.41541	J
Line #29	NB03SED125	11.87466	J
Line #30	NB03SED127A	6.96635	J
Line #31	NB03SED127B	114.2692	J
Line #32	NB03SED129	353.2974	
Line #33	NB03SED130	40.3511	J
Line #34	NB03SED131A	7.67423	
Line #35	NB03SED131B	4.42563	
Line #36	NB03SED132A	100.1749	
Line #37	NB03SED133	116.9642	J
Line #38	NB03SED134	41.8935	J
Line #39	NB03SED135	24.69545	J

EPA Advanced KM TEQ Calculator

Sediment EPC PCB TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values		(Quasi) Sensitivity Analysis SECTION 2 Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**													
	Sample ID:	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03SED-CHM136: Row A	1630	206 U	3710	191 J	8720	214	101 J	1040		372	206 U	97.8 J													
	value to use: Row B	1630	206	3710	191	8720	214	101	1040		372	206	97.8													
1	**congener TEC: Row C**	**0.163**	**0.0618**	**0.1113**	**0.00573**	**0.2616**	**0.00642**	**10.1**	**0.0312**		**0.01116**	**6.18**	**0.002934**	45%	10.6933	13.8142	16.9351	10.7720	J	**Section 1**	**10.7720** Qualified Dioxin/Furan	**J** 97%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM140: Row A	1200	144 U	144 U	176	5670	140 J	64.2 J	781		295	144 U	144 U													
	value to use: Row B	1200	144	144	176	5670	140	64.2	781		295	144	144													
2	**congener TEC: Row C**	**0.12**	**0.0432**	**0.00432**	**0.00528**	**0.1701**	**0.0042**	**6.42**	**0.02343**		**0.00885**	**4.32**	**0.00432**	49%	6.7519	8.9378	11.1237	6.8074	J	**Section 1**	**6.8074** Qualified Dioxin/Furan	**J** 97%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM142: Row A	383	119 U	1480	79.9 J	3650	88.5 J	44.6 J	487		187	119 U	36.8 J													
	value to use: Row B	383	119	1480	79.9	3650	88.5	44.6	487		187	119	36.8													
3	**congener TEC: Row C**	**0.0383**	**0.0357**	**0.0444**	**0.002397**	**0.1095**	**0.002655**	**4.46**	**0.01461**		**0.00561**	**3.57**	**0.001104**	56%	4.6786	6.4814	8.2843	4.7087	J	**Section 1**	**4.7087** Qualified Dioxin/Furan	**J** 97%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM143: Row A	1990	142 U	6170	273	16200	320	188	2290		868	142 U	206													
	value to use: Row B	1990	142	6170	273	16200	320	188	2290		868	142	206													
4	**congener TEC: Row C**	**0.199**	**0.0426**	**0.1851**	**0.00819**	**0.486**	**0.0096**	**18.8**	**0.0687**		**0.02604**	**4.26**	**0.00618**	20%	19.7888	21.9401	24.0914	19.9126	none	**Section 1**	**19.9126** Qualified Dioxin/Furan	**none** 18%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM145: Row A	1920	64.2 J	6080	136 U	14700	338	152	2040		676	136 U	143													
	value to use: Row B	1920	64.2	6080	136	14700	338	152	2040		676	136	143													
5	**congener TEC: Row C**	**0.192**	**0.01926**	**0.1824**	**0.00408**	**0.441**	**0.01014**	**15.2**	**0.0612**		**0.02028**	**4.08**	**0.00429**	22%	16.13057	18.17261	20.21465	16.2385	none	**Section 1**	**16.2385** Qualified Dioxin/Furan	**none** 20%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM149: Row A	2670	80.8 J	7350	432	19800	460	188	2410		835	164 U	210													
	value to use: Row B	2670	80.8	7350	432	19800	460	188	2410		835	164	210													
6	**congener TEC: Row C**	**0.267**	**0.02424**	**0.2205**	**0.01296**	**0.594**	**0.0138**	**18.8**	**0.0723**		**0.02505**	**4.92**	**0.0063**	22%	20.03615	22.49615	24.95615	20.1735	none	**Section 1**	**20.1735** Qualified Dioxin/Furan	**none** 20%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM155: Row A	318	121 U	895	57.1 J	2090	56.6 J	121 U	216 J		81.6 J	121 U	121 U													
	value to use: Row B	318	121	895	57.1	2090	56.6	121	216		81.6	121	121													
7	**congener TEC: Row C**	**0.0318**	**0.0363**	**0.02685**	**0.001713**	**0.0627**	**0.001698**	**12.1**	**0.00648**		**0.002448**	**3.63**	**0.00363**	197%	0.1337	8.0187	15.9036	12.2623	J	**Section 2, Treatment 1**			**12.2623** Qualified Dioxin/Furan	**J** 99%	12.2623 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM160: Row A	3390	117 J	22700	1430	57100 J	1130	176 U	11200		3290	176 U	540													
	value to use: Row B	3390	117	22700	1430	57100	1130	176	11200		3290	176	540													
8	**congener TEC: Row C**	**0.339**	**0.0351**	**0.681**	**0.0429**	**1.713**	**0.0339**	**17.6**	**0.336**		**0.0987**	**5.28**	**0.0162**	155%	3.2958	14.7358	26.1758	21.2620	J	**Section 2, Treatment 1**			**21.2620** Qualified Dioxin/Furan	**J** 94%	21.2620 Qualified Dioxin/Furan	J 94%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM161: Row A	2630	213 U	6540	381	18500	408	198 J	3000		1090	213 U	399													
	value to use: Row B	2630	213	6540	381	18500	408	198	3000		1090	213	399													
9	**congener TEC: Row C**	**0.263**	**0.0639**	**0.1962**	**0.01143**	**0.555**	**0.01224**	**19.8**	**0.09**		**0.0327**	**6.39**	**0.01197**	27%	20.9725	24.1995	27.4264	21.1218	J	**Section 1**	**21.1218** Qualified Dioxin/Furan	**J** 96%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM164: Row A	1150 J	133 U	2420	146 J	6430	139 J	58.7 J	784		271	133 U	74.6 J													
	value to use: Row B	1150	133	2420	146	6430	139	58.7	784		271	133	74.6													
10	**congener TEC: Row C**	**0.115**	**0.0399**	**0.0726**	**0.00438**	**0.1929**	**0.00417**	**5.87**	**0.02352**		**0.00813**	**3.99**	**0.002238**	49%	6.2929	8.3079	10.3228	6.3494	J	**Section 1**	**6.3494** Qualified Dioxin/Furan	**J** 97%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM166: Row A	2720	222 U	6040	318	16000	385	222 U	1950		708	222 U	188 J													
	value to use: Row B	2720	222	6040	318	16000	385	222	1950		708	222	188													
11	**congener TEC: Row C**	**0.272**	**0.0666**	**0.1812**	**0.00954**	**0.48**	**0.01155**	**22.2**	**0.0585**		**0.02124**	**6.66**	**0.00564**	187%	1.0397	15.5030	29.9663	23.3788	J	**Section 2, Treatment 1**			**23.3788** Qualified Dioxin/Furan	**J** 97%	23.3788 Qualified Dioxin/Furan	J 97%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM167: Row A	284	99.9 U	813	99.9 U	2030	57.5 J	99.9 U	273		99.1 J	99.9 U	99.9 U													
	value to use: Row B	284	99.9	813	99.9	2030	57.5	99.9	273		99.1	99.9	99.9													
12	**congener TEC: Row C**	**0.0284**	**0.02997**	**0.02439**	**0.002997**	**0.0609**	**0.001725**	**9.99**	**0.00819**		**0.002973**	**2.997**	**0.002997**	196%	0.1266	6.6381	13.1495	10.1470	J	**Section 2, Treatment 1**			**10.1470** Qualified Dioxin/Furan	**J** 99%	10.1470 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM168: Row A	1428 J	69.2 J	3600 J	206.3 J	9205 J	197.05 J	153.5 U	1082.5		370 J	153.5 U	138 J													
	value to use: Row B	1428	69.2	3600	206.3	9205	197.05	153.5	1082.5		370	153.5	138													
13	**congener TEC: Row C**	**0.1428**	**0.02076**	**0.108**	**0.006189**	**0.27615**	**0.0059115**	**15.35**	**0.032475**		**0.0111**	**4.605**	**0.00414**	189%	0.6075255	10.585026	20.5625255	16.0250	J	**Section 2, Treatment 1**			**16.0250** Qualified Dioxin/Furan	**J** 100%	16.0250 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM169: Row A	1130	116 U	2970	157	7400	159	90.3 J	1140		349	116 U	86.8 J													
	value to use: Row B	1130	116	2970	157	7400	159	90.3	1140		349	116	86.8													
14	**congener TEC: Row C**	**0.113**	**0.0348**	**0.0891**	**0.00471**	**0.222**	**0.00477**	**9.03**	**0.0342**		**0.01047**	**3.48**	**0.002604**	31%	9.510854	11.268254	13.025654	9.5769	J	**Section 1**	**9.5769** Qualified Dioxin/Furan	**J** 96%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM170: Row A	1940	69.4 J	5740	325	14900	323	152 U	1830		614	152 U	142 J													
	value to use: Row B	1940	69.4	5740	325	14900	323	152	1830		614	152	142													
15	**congener TEC: Row C**	**0.194**	**0.02082**	**0.1722**	**0.00975**	**0.447**	**0.00969**	**15.2**	**0.0549**		**0.01842**	**4.56**	**0.00426**	183%	0.9310	10.8110	20.6910	16.2345	J	**Section 2, Treatment 1**			**16.2345** Qualified Dioxin/Furan	**J** 96%	16.2345 Qualified Dioxin/Furan	J 96%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM171: Row A	1210 J	127 U	3850 J	204 J	9760 J	196 J	127 U	1210 J		423 J	127 U	90.3 J													
	value to use: Row B	1210	127	3850	204	9760	196	127	1210		423	127	90.3													
16	**congener TEC: Row C**	**0.121**	**0.0381**	**0.1155**	**0.00612**	**0.2928**	**0.00588**	**12.7**	**0.0363**		**0.01269**	**3.81**	**0.002709**	187%	0.5930	8.8670	17.1411	13.3730	J	**Section 2, Treatment 1**			**13.3730** Qualified Dioxin/Furan	**J** 100%	13.3730 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM172: Row A	3310	149 U	23900	1240	79400 J	1560	149 U	10800		3830	149 U	643													
	value to use: Row B	3310	149	23900	1240	79400	1560	149	10800		3830	149	643													
17	**congener TEC: Row C**	**0.331**	**0.0447**	**0.717**	**0.0372**	**2.382**	**0.0468**	**14.9**	**0.324**		**0.1149**	**4.47**	**0.01929**	142%	3.9722	13.6795	23.3869	19.3449	J	**Section 2, Treatment 1**			**19.3449** Qualified Dioxin/Furan	**J** 93%	19.3449 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM173: Row A	3430	132 U	6920	368	16500	387	175	2700		884	132 U	206													
	value to use: Row B	3430	132	6920	368	16500	387	175	2700		884	132	206													
18	**congener TEC: Row C**	**0.343**	**0.0396**	**0.2076**	**0.01104**	**0.495**	**0.01161**	**17.5**	**0.081**		**0.02652**	**3.96**	**0.00618**	19%	18.6820	20.6818	22.6816	18.8287	none	**Section 1**	**18.8287** Qualified Dioxin/Furan	**none** 18%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM174: Row A	2260	69.2 J	5050	309	16400	358	188 U	1830		698	188 U	132 J													
	value to use: Row B	2260	69.2	5050	309	16400	358	188	1830		698	188	132													

EPA Advanced KM TEQ Calculator

Sediment EPC PCB TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1		(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
																							Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003													
	Sample ID:	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 157	PCB 169	PCB 189	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03SED-CHM175: Row A	114 J	121 U	236	121 U	667	121 U	121 U	79.9 J		121 U	121 U	121 U													
	value to use: Row B	114	121	236	121	667	121	121	79.9		121	121	121													
20	**congener TEC: Row C**	0.0114	0.0363	0.00708	0.00363	0.02001	0.00363	12.1	0.002397		0.00363	3.63	0.00363	199%	0.0409	7.9313	15.8217	12.1631	J	Section 2, Treatment 1			**12.1631** Qualified Dioxin/Furan	**J** 100%	12.1631 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM176: Row A	4370	147 J	11100	684	27800	679	179 U	3440		1170	179 U	319													
	value to use: Row B	4370	147	11100	684	27800	679	179	3440		1170	179	319													
21	**congener TEC: Row C**	0.437	0.0441	0.333	0.02052	0.834	0.02037	17.9	0.1032		0.0351	5.37	0.00957	173%	1.83686	13.47186	25.10686	19.9410	J	Section 2, Treatment 1			**19.9410** Qualified Dioxin/Furan	**J** 93%	19.9410 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM177: Row A	343	252 U	1380	81.7 J	3240	252 U	252 U	476 J		168 J	252 U	252 U													
	value to use: Row B	343	252	1380	81.7	3240	252	252	476		168	252	252													
22	**congener TEC: Row C**	0.0343	0.0756	0.0414	0.002451	0.0972	0.00756	25.2	0.01428		0.00504	7.56	0.00756	198%	0.194671	16.620031	33.045391	25.4413	J	Section 2, Treatment 1			**25.4413** Qualified Dioxin/Furan	**J** 99%	25.4413 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED-CHM178: Row A	145 J	164 U	307	164 U	941	164 U	164 U	113 J		164 U	164 U	164 U													
	value to use: Row B	145	164	307	164	941	164	164	113		164	164	164													
23	**congener TEC: Row C**	0.0145	0.0492	0.00921	0.00492	0.02823	0.00492	16.4	0.00339		0.00492	4.92	0.00492	199%	0.0553	10.7498	21.4442	16.4861	J	Section 2, Treatment 1			**16.4861** Qualified Dioxin/Furan	**J** 100%	16.4861 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED122A: Row A	583	108 U	1410	81.4 J	3420	81.2 J	108 U	415		148	108 U	47.7 J													
	value to use: Row B	583	108	1410	81.4	3420	81.2	108	415		148	108	47.7													
24	**congener TEC: Row C**	0.0583	0.0324	0.0423	0.002442	0.1026	0.002436	10.8	0.01245		0.00444	3.24	0.001431	194%	0.2264	7.2626	14.2988	11.0567	J	Section 2, Treatment 1			**11.0567** Qualified Dioxin/Furan	**J** 98%	11.0567 Qualified Dioxin/Furan	J 98%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED122B: Row A	271	83.1 U	698	40.3 J	1700	36.9 J	83.1 U	236		88.7	83.1 U	34.2 J													
	value to use: Row B	271	83.1	698	40.3	1700	36.9	83.1	236		88.7	83.1	34.2													
25	**congener TEC: Row C**	0.0271	0.02493	0.02094	0.001209	0.051	0.001107	8.31	0.00708		0.002661	2.493	0.001026	196%	0.1121	5.5261	10.9401	8.4409	J	Section 2, Treatment 1			**8.4409** Qualified Dioxin/Furan	**J** 99%	8.4409 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED122C: Row A	546	105 U	1150	105 U	3010	82.5 J	105 U	408		196	105 U	98.3 J													
	value to use: Row B	546	105	1150	105	3010	82.5	105	408		196	105	98.3													
26	**congener TEC: Row C**	0.0546	0.0315	0.0345	0.00315	0.0903	0.002475	10.5	0.01224		0.00588	3.15	0.002949	194%	0.2029	7.0453	13.8876	10.7343	J	Section 2, Treatment 1			**10.7343** Qualified Dioxin/Furan	**J** 99%	10.7343 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED123A: Row A	4900	159	8560	491	17500	617	133	1090		406	95.4 U	94.5 J													
	value to use: Row B	4900	159	8560	491	17500	617	133	1090		406	95.4	94.5													
27	**congener TEC: Row C**	0.49	0.0477	0.2568	0.01473	0.525	0.01851	13.3	0.0327		0.01218	2.862	0.002835	18%	14.7005	16.1315	17.5625	14.8561	none	Section 1	**14.8561** Qualified Dioxin/Furan	**none** 16%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED123B: Row A	314	115 U	653	115 U	1860	115 U	115 U	252		119	115 U	33.6 J													
	value to use: Row B	314	115	653	115	1860	115	115	252		119	115	33.6													
28	**congener TEC: Row C**	0.0314	0.0345	0.01959	0.00345	0.0558	0.00345	11.5	0.00756		0.00357	3.45	0.001008	197%	0.1189	7.6146	15.1103	11.6447	J	Section 2, Treatment 1			**11.6447** Qualified Dioxin/Furan	**J** 99%	11.6447 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED125: Row A	226	86.6 U	863	40.9 J	2030	46.6 J	86.6 U	269		102	86.6 U	86.6 U													
	value to use: Row B	226	86.6	863	40.9	2030	46.6	86.6	269		102	86.6	86.6													
29	**congener TEC: Row C**	0.0226	0.02598	0.02589	0.001227	0.0609	0.001398	8.66	0.00807		0.00306	2.598	0.002598	196%	0.123145	5.766434	11.409723	8.8084	J	Section 2, Treatment 1			**8.8084** Qualified Dioxin/Furan	**J** 99%	8.8084 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED127A: Row A	169	116 U	668	36.7 J	1630	41.7 J	116 U	281		104 J	116 U	116 U													
	value to use: Row B	169	116	668	36.7	1630	41.7	116	281		104	116	116													
30	**congener TEC: Row C**	0.0169	0.0348	0.02004	0.001101	0.0489	0.001251	11.6	0.00843		0.00312	3.48	0.00348	197%	0.099742	7.658882	15.218022	11.7212	J	Section 2, Treatment 1			**11.7212** Qualified Dioxin/Furan	**J** 99%	11.7212 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED127B: Row A	5340	122 J	15100	753	40000 J	961	125 U	5790		2040	125 U	364													
	value to use: Row B	5340	122	15100	753	40000	961	125	5790		2040	125	364													
31	**congener TEC: Row C**	0.534	0.0366	0.453	0.02259	1.2	0.02883	12.5	0.1737		0.0612	3.75	0.01092	153%	2.5208	10.6458	18.7708	15.3009	J	Section 2, Treatment 1			**15.3009** Qualified Dioxin/Furan	**J** 93%	15.3009 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED129: Row A	10300	401	35800	2110	83000 J	2230	360	12500		4160	183 U	811													
	value to use: Row B	10300	401	35800	2110	83000	2230	360	12500		4160	183	811													
32	**congener TEC: Row C**	1.03	0.1203	1.074	0.0633	2.49	0.0669	36	0.375		0.1248	5.49	0.02433	12%	41.3686	44.1136	46.8586	41.9651	none	Section 1	**41.9651** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED130: Row A	2630	93 J	8010	403	18600	539	123 U	2720		880	123 U	199													
	value to use: Row B	2630	93	8010	403	18600	539	123	2720		880	123	199													
33	**congener TEC: Row C**	0.263	0.0279	0.2403	0.01209	0.558	0.01617	12.3	0.0816		0.0264	3.69	0.00597	173%	1.2314	9.2264	17.2214	13.6683	J	Section 2, Treatment 1			**13.6683** Qualified Dioxin/Furan	**J** 93%	13.6683 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED131A: Row A	331	96.75 U	861.5	45.25 J	2125	71.7 J	96.75 U	311 J		116.9 J	96.75 U	78.9 J													
	value to use: Row B	331	96.75	861.5	45.25	2125	71.7	96.75	311		116.9	96.75	78.9													
34	**congener TEC: Row C**	0.0331	0.029025	0.025845	0.0013575	0.06375	0.002151	9.675	0.00933		0.003507	2.9025	0.002367	196%	0.1414	6.4447	12.7479	9.8404	J	Section 2, Treatment 1			**9.8404** Qualified Dioxin/Furan	**J** 99%	9.8404 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED131B: Row A	161	91.5 U	552	91.5 U	1290	91.5 U	91.5 U	161 J		56 J	91.5 U	91.5 U													
	value to use: Row B	161	91.5	552	91.5	1290	91.5	91.5	161		56	91.5	91.5													
35	**congener TEC: Row C**	0.0161	0.02745	0.01656	0.002745	0.0387	0.002745	9.15	0.00483		0.00168	2.745	0.002745	197%	0.0779	6.0432	12.0086	9.2491	J	Section 2, Treatment 1			**9.2491** Qualified Dioxin/Furan	**J** 99%	9.2491 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED132A: Row A	1720	36.1 J	7430	383	19100	428	92.6 U	2820		890	92.6 U	163													
	value to use: Row B	1720	36.1	7430	383	19100	428	92.6	2820		890	92.6	163													
36	**congener TEC: Row C**	0.172	0.01083	0.2229	0.01149	0.573	0.01284	9.26	0.0846		0.0267	2.778	0.00489	169%	1.1193	7.1383	13.1573	10.5036	J	Section 2, Treatment 1			**10.5036** Qualified Dioxin/Furan	**J** 92%	10.5036 Qualified Dioxin/Furan	J 92%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED133: Row A	467	113 U	1320	67.9 J	3230	81.6 J	113 U	514		199	113 U	70.4 J													
	value to use: Row B	467	113	1320	67.9	3230	81.6	113	514		199	113	70.4													
37	**congener TEC: Row C**	0.0467	0.0339	0.0396	0.002037	0.0969	0.002448	11.3	0.01542		0.00597	3.39	0.002112	194%	0.211187	7.573137	14.935087	11.5409	J	Section 2, Treatment 1			**11.5409** Qualified Dioxin/Furan	**J** 99%	11.5409 Qualified Dioxin/Furan	J 99%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED134: Row A	694	186 U	2630	117 J	7790	255	186 U	1650		772	186 U	311													
	value to use: Row B	694	186	2630	117	7790	255	186	1650		772	186	311													
38	**congener TEC: Row C**	0.0694	0.0558	0.0789	0.00351	0.2337	0.00765	18.6	0.0495		0.02316	5.58	0.00933	192%	0.47515	12.59305	24.71095	19.1486	J	Section 2, Treatment 1			**19.1486** Qualified Dioxin/Furan	**J** 98%	19.1486 Qualified Dioxin/Furan	J 98%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03SED135: Row A	43400 J	1540	67700 J	3380	128000 J	4750	1100	8010		2440	118 U	431													
	value to use: Row B	43400	1540	67700	3380	128000	4750	1100	8010		2440	118	431													
39	**congener TEC: Row C**	4.34	0.462	2.031	0.1014	3.84	0.1425	110	0.2403		0.0732	3.54	0.01293	3%	121.2433	123.0133	124.7833	121.6809	none	Section 1	**121.6809** Qualified Dioxin/Furan	**none** 11%				
	donor value to use: Row D																									
	donor TEC: Row E																									

EPA Advanced KM TEQ Calculator

Sediment EPC PCB TEQ

Project Name: GSH Newark Bay HHRA
Matrix: Sediment
Units: ng/kg
Data entered by: Francis Loko
Date entered: 8/15/18

protect/unprotect sheet password = dioxin

SITE DATA

| | | |

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2		(Quasi) Sensitivity Analysis SECTIO	
																											Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values		"ND") may or may not be present.	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**	**0.0001**								**Treatment 1**		**Treatment 1: Make highest U value a D**		**Treatment 2: Substitute comparable "donor" value for highest U**		
	Sample ID:	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDL**	**OCDD**	**TCDF**	**1-PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDs**	**1,4,9-HpCDs**	**OCDF**	**PCB-77**	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**Comment**
	N02-CE01-TNBE: Row A	1.29 J	.402 U	.38 U	.383 U	.912 J	5.92 J	77.8	.293 U	.342 U	.3 U	3.34 J	.655 J	.375 U	.267 U	13.4 J	.445 U	28 J															
	value to use: Row B	1.29	0.402	0.38	0.383	0.912	5.92	77.8	0.293	0.342	0.3	3.34	0.655	0.375	0.267	13.4	0.445	28															
1	**congener TEC: Row C**	**1.29**	**0.402**	**0.038**	**0.0383**	**0.0912**	**0.0592**	**0.02334**	**0.0293**	**0.01026**	**0.09**	**0.334**	**0.0655**	**0.0375**	**0.0267**	**0.134**	**0.00445**	**0.0084**		29%	2.0056	2.3439	2.6822	2.1432	J	**Section 1**	**2.1432**	**J**						Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE01-TNBN: Row A	5.31 J	.557 J	.445 U	.556 J	1.03 J	7.25 U	104	.408 J	.374 U	.595 J	2.59 J	.651 J	.491 U	.515 J	11 J	.648 U	20 J															
	value to use: Row B	5.31	0.557	0.445	0.556	1.03	7.25	104	0.408	0.374	0.595	2.59	0.651	0.491	0.515	11	0.648	20															
2	**congener TEC: Row C**	**5.31**	**0.557**	**0.0445**	**0.0556**	**0.103**	**0.0725**	**0.0312**	**0.0408**	**0.01122**	**0.1785**	**0.259**	**0.0651**	**0.0491**	**0.0515**	**0.11**	**0.00648**	**0.006**		3%	6.7677	6.8596	6.9515	6.8455	J	**Section 1**	**6.8455**	**J**						
	donor value to use: Row D																										Qualified	100%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE01-TNBS: Row A	.659 J	.647 U	.591 U	.588 U	1.12 U	4.59 J	59.3	.429 U	.445 U	.457 J	1.11 J	.391 U	.648 U	.434 U	4.95 J	.862 U	8.16 J															
	value to use: Row B	0.659	0.647	0.591	0.588	1.12	4.59	59.3	0.429	0.445	0.457	1.11	0.391	0.648	0.434	4.95	0.862	8.16															
3	**congener TEC: Row C**	**0.659**	**0.647**	**0.0591**	**0.0588**	**0.112**	**0.0459**	**0.01779**	**0.0429**	**0.01335**	**0.1371**	**0.111**	**0.0391**	**0.0648**	**0.0434**	**0.0495**	**0.00862**	**0.002448**		69%	1.0227	1.5673	2.1118	1.1462	J	**Section 1**	**1.1462**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE01-TNNE: Row A	2.28 J	.509 U	.555 U	.526 U	1.25 J	10.6 J	127	.58 J	.488 U	.673 J	2.65 J	.786 J	.421 U	.557 J	12.3 J	.631 U	21.6 J															
	value to use: Row B	2.28	0.509	0.555	0.526	1.25	10.6	127	0.58	0.488	0.673	2.65	0.786	0.421	0.557	12.3	0.631	21.6															
4	**congener TEC: Row C**	**2.28**	**0.509**	**0.0555**	**0.0526**	**0.125**	**0.106**	**0.0381**	**0.058**	**0.01464**	**0.2019**	**0.265**	**0.0786**	**0.0421**	**0.0557**	**0.123**	**0.00631**	**0.00648**		18%	3.3378	3.6779	4.0179	3.4677	J	**Section 1**	**3.4677**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE02-TNBE: Row A	.89 J	.385 U	.436 U	.424 U	.58 U	4.55 J	52.5	.244 U	.252 U	.242 U	1.2 J	.293 U	.508 U	.344 U	5.81 J	.717 U	9.53 J															
	value to use: Row B	0.89	0.385	0.436	0.424	0.58	4.55	52.5	0.244	0.252	0.242	1.2	0.293	0.508	0.344	5.81	0.717	9.53															
5	**congener TEC: Row C**	**0.89**	**0.385**	**0.0436**	**0.0424**	**0.058**	**0.0455**	**0.01575**	**0.0244**	**0.00756**	**0.0726**	**0.12**	**0.0293**	**0.0508**	**0.0344**	**0.0581**	**0.00717**	**0.002859**		50%	1.132209	1.509824	1.887439	1.2229	J	**Section 1**	**1.2229**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE02-TNBN: Row A	.542 J	.427 U	.517 U	.525 U	1.38 U	6.71 U	75.3	.359 U	.309 J	.492 J	1.43 J	.296 U	.495 J	.472 J	5.74 U	.702 J	11.6 J															
	value to use: Row B	0.542	0.427	0.517	0.525	1.38	6.71	75.3	0.359	0.309	0.492	1.43	0.296	0.495	0.472	5.74	0.702	11.6															
6	**congener TEC: Row C**	**0.542**	**0.427**	**0.0517**	**0.0525**	**0.138**	**0.0671**	**0.02259**	**0.0359**	**0.00927**	**0.1476**	**0.143**	**0.0296**	**0.0495**	**0.0472**	**0.0574**	**0.00702**	**0.00348**		61%	0.97166	1.40126	1.83086	1.1297	J	**Section 1**	**1.1297**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE02-TNBS: Row A	.673 U	.606 U	.608 U	.585 U	.769 U	3.42 J	38.9 J	.436 U	.614 U	.516 U	.297 U	.301 U	.449 U	.308 U	2.97 J	.898 U	5.02 J															
	value to use: Row B	0.673	0.606	0.608	0.585	0.769	3.42	38.9	0.436	0.614	0.516	0.297	0.301	0.449	0.308	2.97	0.898	5.02															
7	**congener TEC: Row C**	**0.673**	**0.606**	**0.0608**	**0.0585**	**0.0769**	**0.0342**	**0.01167**	**0.0436**	**0.01842**	**0.1548**	**0.0297**	**0.0301**	**0.0449**	**0.0308**	**0.0297**	**0.00898**	**0.001506**		185%	0.0771	0.9953	1.9136	0.8622	J	**Section 2, Treatment 1**			**0.8622**	**J**	0.8622	J		
	donor value to use: Row D																										Qualified	100%	Qualified	100%			
	donor TEC: Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%			
	N02-CE02-TNNE: Row A	.592 U	.689 U	.659 U	.643 U	.782 U	6.06 J	84.4	.573 U	.629 U	.554 U	1.79 J	.448 U	.678 U	.406 U	6.99 J	.887 U	13.4 J															
	value to use: Row B	0.592	0.689	0.659	0.643	0.782	6.06	84.4	0.573	0.629	0.554	1.79	0.448	0.678	0.406	6.99	0.887	13.4															
8	**congener TEC: Row C**	**0.592**	**0.689**	**0.0659**	**0.0643**	**0.0782**	**0.0606**	**0.02532**	**0.0573**	**0.01887**	**0.1662**	**0.179**	**0.0448**	**0.0678**	**0.0406**	**0.0699**	**0.00887**	**0.00402**		147%	0.3388	1.2858	2.2327	1.1825	J	**Section 2, Treatment 1**			**1.1825**	**J**	1.1825	J		
	donor value to use: Row D																										Qualified	99%	Qualified	99%			
	donor TEC: Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%			
	N02-CE03-TNBE: Row A	.669 J	.36 U	.38 U	.387 U	1.06 J	4.68 J	51	.259 U	.263 U	.233 U	.995 J	.255 U	.42 U	.272 U	4.74 J	.495 U	7.3 J															
	value to use: Row B	0.669	0.36	0.38	0.387	1.06	4.68	51	0.259	0.263	0.233	0.995	0.255	0.42	0.272	4.74	0.495	7.3															
9	**congener TEC: Row C**	**0.669**	**0.36**	**0.038**	**0.0387**	**0.106**	**0.0468**	**0.0153**	**0.0259**	**0.00789**	**0.0699**	**0.0995**	**0.0255**	**0.042**	**0.0272**	**0.0474**	**0.00495**	**0.00219**		49%	0.9862	1.3062	1.6262	1.0602	J	**Section 1**	**1.0602**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE03-TNBN: Row A	1.54 U	1.57 U	2.02 U	2.14 U	2.67 U	7.45 U	44.4 J	1.1 U	1.39 U	1.22 U	1.48 U	1.34 U	2.54 U	1.56 U	4.88 U	2.9 U	9.93 U															
	value to use: Row B	1.54	1.57	2.02	2.14	2.67	7.45	44.4	1.1	1.39	1.22	1.48	1.34	2.54	1.56	4.88	2.9	9.93															Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
10	**congener TEC: Row C**	**1.54**	**1.57**	**0.202**	**0.214**	**0.267**	**0.0745**	**0.01332**	**0.11**	**0.0417**	**0.366**	**0.148**	**0.134**	**0.254**	**0.156**	**0.0488**	**0.029**	**0.002979**		199%	0.0133	2.5923	5.1713	Not calculated		**Insufficient Data**								
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE03-TNBS: Row A	.556 U	.436 U	.591 U	.568 U	1.01 U	3.97 J	47.8 J	.346 U	.397 U	.35 U	.561 J	.257 U	.443 U	.286 U	2.97 J	.644 U	5.77 J															
	value to use: Row B	0.556	0.436	0.591	0.568	1.01	3.97	47.8	0.346	0.397	0.35	0.561	0.257	0.443	0.286	2.97	0.644	5.77															
11	**congener TEC: Row C**	**0.556**	**0.436**	**0.0591**	**0.0568**	**0.101**	**0.0397**	**0.01434**	**0.0346**	**0.01191**	**0.105**	**0.0561**	**0.0257**	**0.0443**	**0.0286**	**0.0297**	**0.00644**	**0.001731**		168%	0.1416	0.8743	1.6070	0.8107	J	**Section 2, Treatment 1**			**0.8107**	**J**	0.8107	J		
	donor value to use: Row D																										Qualified	100%	Qualified	100%			
	donor TEC: Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%			
	N02-CE03-TNNE: Row A	1.79 J	.605 U	.506 U	.461 U	.589 U	6.1 J	74.1	.434 U	.444 U	.393 U	1.58 J	.37 U	.502 U	.38 U	7.39 J	.991 U	13.1 J															
	value to use: Row B	1.79	0.605	0.506	0.461	0.589	6.1	74.1	0.434	0.444	0.393	1.58	0.37	0.502	0.38	7.39	0.991	13.1															
12	**congener TEC: Row C**	**1.79**	**0.605**	**0.0506**	**0.0461**	**0.0589**	**0.061**	**0.02223**	**0.0434**	**0.01332**	**0.1179**	**0.158**	**0.037**	**0.0502**	**0.038**	**0.0739**	**0.00991**	**0.00393**		40%	2.1091	2.6442	3.1794	2.2210	J	**Section 1**	**2.2210**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE04-TNBE: Row A	.755 J	.461 U	.496 U	.488 U	.948 U	6.12 U	59.4	.398 U	.379 U	.36 U	1.35 J	.25 U	.383 U	.278 U	6.1 J	.535 U	10.5 J															
	value to use: Row B	0.755	0.461	0.496	0.488	0.948	6.12	59.4	0.398	0.379	0.36	1.35	0.25	0.383	0.278	6.1	0.535	10.5															
13	**congener TEC: Row C**	**0.755**	**0.461**	**0.0496**	**0.0488**	**0.0948**	**0.0612**	**0.01782**	**0.0398**	**0.01137**	**0.108**	**0.135**	**0.025**	**0.0383**	**0.0278**	**0.061**	**0.00535**	**0.00315**		67%	0.97197	1.45748	1.94299	1.0744	J	**Section 1**	**1.0744**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE04-TNBN: Row A	2.01 J	.746 U	.821 U	.807 U	1.04 U	7.08 U	95.8	.549 U	.642 U	.579 U	2.33 J	.492 U	.725 U	.514 U	9.96 J	.934 U	18 J															
	value to use: Row B	2.01	0.746	0.821	0.807	1.04	7.08	95.8	0.549	0.642	0.579	2.33	0.492	0.725	0.514	9.96	0.934	18															
14	**congener TEC: Row C**	**2.01**	**0.746**	**0.0821**	**0.0807**	**0.104**	**0.0708**	**0.02874**	**0.0549**	**0.01926**	**0.1737**	**0.233**	**0.0492**	**0.0725**	**0.0514**	**0.0996**	**0.00934**	**0.0054**		48%	2.37674	3.13369	3.89064	2.5363	J	**Section 1**	**2.5363**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE04-TNBS: Row A	.553 J	.385 U	.416 U	.429 U	1.03 U	3.62 J	34.4 J	.328 U	.305 U	.279 U	.678 J	.266 U	.417 U	.297 U	3.47 J	.375 U	6.17 J															
	value to use: Row B	0.553	0.385	0.416	0.429	1.03	3.62	34.4	0.328	0.305	0.279	0.678	0.266	0.417	0.297	3.47	0.375	6.17															
15	**congener TEC: Row C**	**0.553**	**0.385**	**0.0416**	**0.0429**	**0.103**	**0.0362**	**0.01032**	**0.0328**	**0.00915**	**0.0837**	**0.0678**	**0.0266**	**0.0417**	**0.0297**	**0.0347**	**0.00375**	**0.001851**		72%	0.7039	1.1038	1.5038	0.7984	J	**Section 1**	**0.7984**	**J**						
	donor value to use: Row D																										Qualified	100%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N02-CE04-TNNE: Row A	1.28 J	.495 U	.585 U	.583 U	1.1 J	8.38 J	100	.396 J	.4 U	.455 J	2.43 J	.506 J	.63 U	.435 U	11.3 J	.943 U	19.1 J															
	value to use: Row B	1.28	0.495	0.585	0.583	1.1	8.38	100	0.396	0.4	0.455	2.43	0.506	0.63	0.435	11.3	0.943	19.1															
16	**congener TEC: Row C**	**1.28**	**0.495**	**0.0585**	**0.0583**	**0.11**	**0.0838**	**0.03**	**0.0396**	**0.012**	**0.1365**	**0.243**	**0.0506**	**0.063**	**0.0435**	**0.113**	**0.00943**	**0.00573**		30%	2.0922	2.4621	2.8320	2.2479	J	**Section 1**	**2.2479**	**J**						
	donor value to use: Row D																										Qualified	99%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N03-CE01-TNBE: Row A	.913 J	.684 U	.659 U	.742 U	.708 U	4.04 J	41.9 J	.518 U	.5 U	.452 U	.835 J	.51 U	.624 U	.149 J	3.45 J	.694 U	4.89 J															
	value to use: Row B	0.913	0.684	0.659	0.742	0.708	4.04	41.9	0.518	0.5	0.452	0.835	0.51	0.624	0.149	3.45	0.694	4.89															
17	**congener TEC: Row C**	**0.913**	**0.684**	**0.0659**	**0.0742**	**0.0708**	**0.0404**	**0.01257**	**0.0518**	**0.015**	**0.1356**	**0.0835**	**0.051**	**0.0624**	**0.0149**	**0.0345**	**0.00694**	**0.001467**		71%	1.1003	1.7092	2.3180	1.2481	J	**Section 1**	**1.2481**	**J**						
	donor value to use: Row D																										Qualified	100%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N03-CE01-TNBN: Row A	2.31 U	1.3 U	1.05 U	1.08 U	1.11 U	7.81 J	78.4	.825 U	.856 U	.815 U	2.03 J	.666 J	.918 U	.512 J	10.8 J	1.16 U	13.3 J															
	value to use: Row B	2.31	1.3	1.05	1.08	1.11	7.81	78.4	0.825	0.856	0.815	2.03	0.666	0.918	0.512	10.8	1.16	13.3															
18	**congener TEC: Row C**	**2.31**	**1.3**	**0.105**	**0.108**	**0.111**	**0.0781**	**0.02352**	**0.0825**	**0.02568**	**0.2445**	**0.203**	**0.0666**	**0.0918**	**0.0512**	**0.108**	**0.0116**	**0.00399**		161%	0.5344	2.7295	4.9245	3.1386	J	**Section 2, Treatment 1**			**3.1386**	**J**	3.1386	J		
	donor value to use: Row D																										Qualified	100%	Qualified	100%			
	donor TEC: Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%			
	N03-CE01-TNBS: Row A	.879 J	.831 U	.834 U	.803 U	.874 U	3.06 J	30 J	.608 U	.788 U	.731 U	.652 U	.654 U	.777 U	.65 U	2.74 J	.841 U	4.99 J															
	value to use: Row B	0.879	0.831	0.834	0.803	0.874	3.06	30	0.608	0.788	0.731	0.652	0.654	0.777	0.65	2.74	0.841	4.99															
19	**congener TEC: Row C**	**0.879**	**0.831**	**0.0834**	**0.0803**	**0.0874**	**0.0306**	**0.009**	**0.0608**	**0.02364**	**0.2193**	**0.0652**	**0.0654**	**0.0777**	**0.065**	**0.0274**	**0.00841**	**0.001497**		94%	0.9475	1.7813	2.6150	1.0763	J	**Section 1**	**1.0763**	**J**						
	donor value to use: Row D																										Qualified	100%					
	donor TEC: Row E																										Dioxin/Furan	100%					
	N03-CE01-TNNE: Row A	2 U	1.37 U	1.41 U	1.48 U	1.64 U	6.44 J	94	1.19 U	1.16 U	1.04 U	2.44 J	.325 J	1.49 U	1.27 U	8.83 J	1.27 U	13.3 J															
	value to use: Row B	2	1.37	1.41	1.48	1.64	6.44	94	1.19	1.16	1.04	2.44	0.325	1.49	1.27	8.83	1.27	13.3															
20	**congener TEC: Row C**	**2**	**1.37**	**0.141**	**0.148**	**0.164**	**0.0644**	**0.0282**	**0.119**	**0.0348**	**0.312**	**0.244**	**0.0325**	**0.149**	**0.127**	**0.0883**	**0.0127**	**0.00399**		166%	0.4614	2.7501	5.0389	2.7852	J	**Section 2, Treatment 1**			**2.7852**	**J**	2.7852	J		
	donor value to use: Row D																										Qualified	99%	Qualified	99%			
	donor TEC: Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%			
	N03-CE01-TNNW: Row A	1.82 J	1.05 U	.836 U	.825 U	.918 U	7.39 U	64.7 J	.828 U	.929 U	.85 U	1.67 J	.647 U	.859 U	.655 U	7.52 U	1.14 U	9.96 U															
	value to use: Row B	1.82	1.05	0.836	0.825	0.918	7.39	64.7	0.828	0.929	0.85	1.67	0.647	0.859	0.655	7.52	1.14	9.96															
21	**congener TEC: Row C**	**1.82**	**1.05**	**0.0836**	**0.0825**	**0.0918**	**0.0739**	**0.01941**	**0.0828**	**0.02787**	**0.255**	**0.167**	**0.0647**	**0.0859**	**0.0655**	**0.0752**	**0.0114**	**0.002988**		68%	2.00641	3.032989	4.059568	2.1366	J	**Section 1**	**2.1366**	**J**						
	donor value to use: Row D																										Qualified	100%					
	donor TEC: Row E																										Dioxin/Furan	100%					

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2		(Quasi) Sensitivity Analysis SECTIO	
		Highest TEC value is a DETECT, and there are no rejected ("R") values																									Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.	
		WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	0.0001							Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U		
	Sample ID:	(must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDs	1,4,9-HpCDs	OCDF	PCB 77		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	Comment
22	**N03-CE02-TNBE: Row A**		1.87 U	1.94 U	1.63 U	1.62 U	1.79 U	2.32 U	10.5 U	1.64 U	1.72 U	1.51 U	1.26 U	1.16 U	1.4 U	1.13 U	1.29 U	2.03 U	4.59 U														
	value to use:	Row B	1.87	1.94	1.63	1.62	1.79	2.32	10.5	1.64	1.72	1.51	1.26	1.16	1.4	1.13	1.29	2.03	4.59														Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	congener TEC:	Row C	1.87	1.94	0.163	0.162	0.179	0.0232	0.00315	0.164	0.0516	0.453	0.126	0.116	0.14	0.113	0.0129	0.0203	0.001377		200%		2.7692635	5.538527	Not calculated		Insufficient Data						
	donor value to use:	Row D																														
	donor TEC:	Row E																														
23	**N03-CE02-TNBN: Row A**		1.69 J	1.36 U	1.31 U	1.44 U	1.41 U	3.86 J	60	.809 U	.968 U	.843 U	1.02 J	.87 U	1.05 U	.663 U	4.59 J	1.12 U	7.35 J														
	value to use:	Row B	1.69	1.36	1.31	1.44	1.41	3.86	60	0.809	0.968	0.843	1.02	0.87	1.05	0.663	4.59	1.12	7.35														
	congener TEC:	Row C	1.69	1.36	0.131	0.144	0.141	0.0386	0.018	0.0809	0.02904	0.2529	0.102	0.087	0.105	0.0663	0.0459	0.0112	0.002205		78%	1.8967	3.1009	4.3050	2.1277	J	Section 1	2.1277	J						
	donor value to use:	Row D																										Qualified	100%					
	donor TEC:	Row E																										Dioxin/Furan	100%					
24	**N03-CE02-TNBS: Row A**		.313 J	.85 U	.657 U	.656 U	1.02 U	2.59 U	26.5 J	.537 U	.568 U	.506 U	.588 U	.564 U	.675 U	.604 U	.824 J	.87 U	2.93 J														
	value to use:	Row B	0.313	0.85	0.657	0.656	1.02	2.59	26.5	0.537	0.568	0.506	0.588	0.564	0.675	0.604	0.824	0.87	2.93														
	congener TEC:	Row C	0.313	0.85	0.0657	0.0656	0.102	0.0259	0.00795	0.0537	0.01704	0.1518	0.0588	0.0564	0.0675	0.0604	0.00824	0.0087	0.000879		141%	0.3301	1.1218	1.9136	1.2483	J	Section 2, Treatment 1			1.2483	J	1.2483	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
25	**N03-CE02-TNNE: Row A**		1.48 J	1.71 U	1.68 U	1.75 U	1.8 U	5.83 J	68.6	1.06 U	1.18 U	1.04 U	1.75 J	.862 U	1.1 U	.66 U	5.25 J	1.16 U	8.87 J														
	value to use:	Row B	1.48	1.71	1.68	1.75	1.8	5.83	68.6	1.06	1.18	1.04	1.75	0.862	1.1	0.66	5.25	1.16	8.87														
	congener TEC:	Row C	1.48	1.71	0.168	0.175	0.18	0.0583	0.02058	0.106	0.0354	0.312	0.175	0.0862	0.11	0.066	0.0525	0.0116	0.002661		91%	1.7890	3.2691	4.7492	3.7273	J	Section 2, Treatment 1			3.7273	J	3.7273	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
26	**N03-CE02-TNNW: Row A**		1.64 J	1.39 U	1.18 U	1.27 U	1.22 U	7.09 J	80	.839 U	.872 U	.745 U	1.16 J	.857 U	.953 U	.822 U	6.93 J	1.28 U	11.2 J														
	value to use:	Row B	1.64	1.39	1.18	1.27	1.22	7.09	80	0.839	0.872	0.745	1.16	0.857	0.953	0.822	6.93	1.28	11.2														
	congener TEC:	Row C	1.64	1.39	0.118	0.127	0.122	0.0709	0.024	0.0839	0.02616	0.2235	0.116	0.0857	0.0953	0.0822	0.0693	0.0128	0.00336		76%	1.9236	3.1068	4.2901	2.2479	J	Section 1	2.2479	J						
	donor value to use:	Row D																										Qualified	99%					
	donor TEC:	Row E																										Dioxin/Furan	100%					
27	**N03-CE03-TNBE: Row A**		1.66 U	1.72 U	1.86 U	1.95 U	2.06 U	2.37 U	12.9 U	1.85 U	1.52 U	1.43 U	1.02 U	.975 U	1.32 U	1.04 U	1.09 U	1.74 U	6.13 U														
	value to use:	Row B	1.66	1.72	1.86	1.95	2.06	2.37	12.9	1.85	1.52	1.43	1.02	0.975	1.32	1.04	1.09	1.74	6.13														Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	congener TEC:	Row C	1.66	1.72	0.186	0.195	0.206	0.0237	0.00387	0.185	0.0456	0.429	0.102	0.0975	0.132	0.104	0.0109	0.0174	0.001839		200%		2.5599	5.1198	Not calculated		Insufficient Data						
	donor value to use:	Row D																														
	donor TEC:	Row E																														
28	**N03-CE03-TNBN: Row A**		.241 U	1.12 U	1.14 U	1.13 U	1.1 U	2.51 J	33.1 J	.747 U	.688 U	.628 U	.922 U	.847 U	1.03 U	.855 U	2.34 J	.922 U	4.23 J														
	value to use:	Row B	0.241	1.12	1.14	1.13	1.1	2.51	33.1	0.747	0.688	0.628	0.922	0.847	1.03	0.855	2.34	0.922	4.23														
	congener TEC:	Row C	0.241	1.12	0.114	0.113	0.11	0.0251	0.00993	0.0747	0.02064	0.1884	0.0922	0.0847	0.103	0.0855	0.0234	0.00922	0.001269		190%	0.0597	1.2379	2.4161	1.2937	J	Section 2, Treatment 1			1.2937	J	1.2937	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
29	**N03-CE03-TNBS: Row A**		.978 U	.966 U	.921 U	.889 U	.96 U	2.4 U	17.4 U	.886 U	.856 U	.802 U	.612 U	.562 U	.739 U	.594 U	1.19 U	.989 U	3.03 U														
	value to use:	Row B	0.978	0.966	0.921	0.889	0.96	2.4	17.4	0.886	0.856	0.802	0.612	0.562	0.739	0.594	1.19	0.989	3.03														Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	congener TEC:	Row C	0.978	0.966	0.0921	0.0889	0.096	0.024	0.00522	0.0886	0.02568	0.2406	0.0612	0.0562	0.0739	0.0594	0.0119	0.00989	0.000909		200%		1.4392495	2.878499	Not calculated		Insufficient Data						
	donor value to use:	Row D																														
	donor TEC:	Row E																														
30	**N03-CE03-TNNE: Row A**		.809 J	1.3 U	1.03 U	1.15 U	1.02 U	3.32 J	36.5 J	.812 U	.882 U	.782 U	1.18 J	.764 U	.866 U	.732 U	3.28 J	1.19 U	4.99 J														
	value to use:	Row B	0.809	1.3	1.03	1.15	1.02	3.32	36.5	0.812	0.882	0.782	1.18	0.764	0.866	0.732	3.28	1.19	4.99														
	congener TEC:	Row C	0.809	1.3	0.103	0.115	0.102	0.0332	0.01095	0.0812	0.02646	0.2346	0.118	0.0764	0.0866	0.0732	0.0328	0.0119	0.001497		105%	1.005447	2.110627	3.215807	2.4464	J	Section 2, Treatment 1			2.4464	J	2.4464	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
31	**N03-CE03-TNNW: Row A**		1.52 U	1.69 U	1.42 U	1.38 U	1.51 U	10.5 U	74.9 J	1.48 U	1.24 U	1.12 U	1.72 J	1.88 J	1.05 U	3.61 U	13.9 U	1.45 J	15.2 U														
	value to use:	Row B	1.52	1.69	1.42	1.38	1.51	10.5	74.9	1.48	1.24	1.12	1.72	1.88	1.05	3.61	13.9	1.45	15.2														
	congener TEC:	Row C	1.52	1.69	0.142	0.138	0.151	0.105	0.02247	0.148	0.0372	0.336	0.172	0.188	0.105	0.361	0.139	0.0145	0.00456		172%	0.3970	2.8354	5.2737	2.1519	J	Section 2, Treatment 1			2.1519	J	2.1519	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
32	**N03-CE04-TNBE: Row A**		2.09 J	1.19 U	1.26 U	1.25 U	1.23 U	7.25 J	80.1	.913 U	.878 U	.758 U	1.68 J	.822 U	1.01 U	.863 U	6.44 J	1.09 U	8.62 J														
	value to use:	Row B	2.09	1.19	1.26	1.25	1.23	7.25	80.1	0.913	0.878	0.758	1.68	0.822	1.01	0.863	6.44	1.09	8.62														
	congener TEC:	Row C	2.09	1.19	0.126	0.125	0.123	0.0725	0.02403	0.0913	0.02634	0.2274	0.168	0.0822	0.101	0.0863	0.0644	0.0109	0.002586		62%	2.4215	3.5162	4.6110	2.7174	J	Section 1	2.7174	J						
	donor value to use:	Row D																										Qualified	99%					
	donor TEC:	Row E																										Dioxin/Furan	100%					
33	**N03-CE04-TNBS: Row A**		.43 J	.924 U	.799 U	.893 U	.95 J	1.68 J	26.2 J	.611 U	.671 U	.572 U	.451 J	.563 U	.701 U	.587 U	1.48 J	1.05 U	2.78 J														
	value to use:	Row B	0.43	0.924	0.799	0.893	0.95	1.68	26.2	0.611	0.671	0.572	0.451	0.563	0.701	0.587	1.48	1.05	2.78														
	congener TEC:	Row C	0.43	0.924	0.0799	0.0893	0.095	0.0168	0.00786	0.0611	0.02013	0.1716	0.0451	0.0563	0.0701	0.0587	0.0148	0.0105	0.000834		112%	0.6104	1.3812	2.1520	1.6521	J	Section 2, Treatment 1			1.6521	J	1.6521	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
34	**N03-CE04-TNNE: Row A**		1.44 J	.591 U	.612 U	.631 U	1.11 J	6.62 U	74.9 J	.576 U	.527 U	.465 U	1.23 J	.361 U	.481 U	.464 U	4.66 U	.706 U	8.43 U														
	value to use:	Row B	1.44	0.591	0.612	0.631	1.11	6.62	74.9	0.576	0.527	0.465	1.23	0.361	0.481	0.464	4.66	0.706	8.43														
	congener TEC:	Row C	1.44	0.591	0.0612	0.0631	0.111	0.0662	0.02247	0.0576	0.01581	0.1395	0.123	0.0361	0.0481	0.0464	0.0466	0.00706	0.002529		52%	1.6965	2.2871	2.8777	1.8105	J	Section 1	1.8105	J						
	donor value to use:	Row D																										Qualified	100%					
	donor TEC:	Row E																										Dioxin/Furan	100%					
35	**N03-CE04-TNNW: Row A**		4.69 J	.706 J	.669 U	.765 J	1.39 J	10.8 U	109	.582 U	.491 U	.448 U	2.21 J	.942 J	.537 U	.418 U	9.91 U	.828 J	15.2 U														
	value to use:	Row B	4.69	0.706	0.669	0.765	1.39	10.8	109	0.582	0.491	0.448	2.21	0.942	0.537	0.418	9.91	0.828	15.2														
	congener TEC:	Row C	4.69	0.706	0.0669	0.0765	0.139	0.108	0.0327	0.0582	0.01473	0.1344	0.221	0.0942	0.0537	0.0418	0.0991	0.00828	0.00456		9%	5.9677	6.2584	6.5491	6.1130	J	Section 1	6.1130	J						
	donor value to use:	Row D																										Qualified	100%					
	donor TEC:	Row E																										Dioxin/Furan	100%					
36	**N04-CE11-TNBE: Row A**		1.19 U	.967 U	1.03 U	1.04 U	1.08 U	3.6 J	40.7 U	.814 U	.629 U	.591 U	.568 U	.6 U	.721 U	.601 U	1.48 J	.847 U	2.46 J														
	value to use:	Row B	1.19	0.967	1.03	1.04	1.08	3.6	40.7	0.814	0.629	0.591	0.568	0.6	0.721	0.601	1.48	0.847	2.46														
	congener TEC:	Row C	1.19	0.967	0.103	0.104	0.108	0.036	0.01221	0.0814	0.01887	0.1773	0.0568	0.06	0.0721	0.0601	0.0148	0.00847	0.000738		193%	0.0515	1.5612	3.0708	1.3427	J	Section 2, Treatment 1			1.3427	J	1.3427	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
37	**N04-CE11-TNBN: Row A**		1.32 J	1.29 U	1.47 U	1.41 U	1.49 U	5.78 J	53.6	.864 U	.684 U	.638 U	1.18 J	.919 U	1.04 U	.84 U	6.23 J	.839 U	11.1 J														
	value to use:	Row B	1.32	1.29	1.47	1.41	1.49	5.78	53.6	0.864	0.684	0.638	1.18	0.919	1.04	0.84	6.23	0.839	11.1														
	congener TEC:	Row C	1.32	1.29	0.147	0.141	0.149	0.0578	0.01608	0.0864	0.02052	0.1914	0.118	0.0919	0.104	0.084	0.0623	0.00839	0.00333		85%	1.57751	2.734315	3.89112	1.8563	J	Section 1	1.8563	J						
	donor value to use:	Row D																										Qualified	100%					
	donor TEC:	Row E																										Dioxin/Furan	100%					
38	**N04-CE11-TNBS: Row A**		1.06 U	.904 U	1.18 U	1.2 U	1.33 U	4.05 J	36 U	.751 U	.747 U	.689 U	.723 J	.651 U	.751 U	.665 U	1.58 J	.82 U	3.64 J														
	value to use:	Row B	1.06	0.904	1.18	1.2	1.33	4.05	36	0.751	0.747	0.689	0.723	0.651	0.751	0.665	1.58	0.82	3.64														
	congener TEC:	Row C	1.06	0.904	0.118	0.12	0.133	0.0405	0.0108	0.0751	0.02241	0.2067	0.0723	0.0651	0.0751	0.0665	0.0158	0.0082	0.001092		183%	0.129692	1.562147	2.994602	1.3411	J	Section 2, Treatment 1			1.3411	J	1.3411	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
39	**N04-CE11-TNNW: Row A**		.815 U	.615 U	.718 U	.715 U	.733 U	3.19 J	32.8 J	.648 U	.538 U	.518 U	.514 U	.517 U	.588 U	.499 U	3.07 J	.557 U	4.48 J														
	value to use:	Row B	0.815	0.615	0.718	0.715	0.733	3.19	32.8	0.648	0.538	0.518	0.514	0.517	0.588	0.499	3.07	0.557	4.48														
	congener TEC:	Row C	0.815	0.615	0.0718	0.0715	0.0733	0.0319	0.00984	0.0648	0.01614	0.1554	0.0514	0.0517	0.0588	0.0499	0.0307	0.00557	0.001344		187%	0.0738	1.1239	2.1741	1.0265	J	Section 2, Treatment 1			1.0265	J	1.0265	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
40	**N04-CE12-TNBE: Row A**		1.02 U	.758 U	1.08 U	1.09 U	1.18 U	3.93 J	43 J	.826 U	.709 U	.628 U	.678 U	.616 U	.672 U	.604 U	2.89 J	.798 U	4 J														
	value to use:	Row B	1.02	0.758	1.08	1.09	1.18	3.93	43	0.826	0.709	0.628	0.678	0.616	0.672	0.604	2.89	0.798	4														
	congener TEC:	Row C	1.02	0.758	0.108	0.109	0.118	0.0393	0.0129	0.0826	0.02127	0.1884	0.0678	0.0616	0.0672	0.0604	0.0289	0.00798	0.0012		188%	0.0823	1.4174	2.7526	1.2563	J	Section 2, Treatment 1			1.2563	J	1.2563	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		
41	**N04-CE12-TNBN: Row A**		.843 U	.922 U	.734 U	.763 U	.893 J	3.03 J	30.7 J	.642 U	.516 U	.501 U	.636 U	.609 U	.67 U	.584 U	2.22 J	.742 U	3.57 J														
	value to use:	Row B	0.843	0.922	0.734	0.763	0.893	3.03	30.7	0.642	0.516	0.501	0.636	0.609	0.67	0.584	2.22	0.742	3.57														
	congener TEC:	Row C	0.843	0.922	0.0734	0.0763	0.0893	0.0303	0.00921	0.0642	0.01548	0.1503	0.0636	0.0609	0.067	0.0584	0.0222	0.00742	0.001071		178%	0.1521	1.3531	2.5541	1.1915	J	Section 2, Treatment 1			1.1915	J	1.1915	J		
	donor value to use:	Row D																										Qualified	100%	Qualified	100%		
	donor TEC:	Row E																										Dioxin/Furan	100%	Dioxin/Furan	100%		

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Sample ID: (must enter on Row A)	2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	OCDF	PCB-77	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1: KM TEQ	Treatment 1: Qualifier and Qualifier Fractions	(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values — Treatment 1: Make highest U value a D: KM TEQ	Treatment 1: Make highest U value a D: Qualifier and Qualifier Fractions	Treatment 2: Substitute comparable "donor" value for highest U: KM TEQ	Treatment 2: Substitute comparable "donor" value for highest U: Qualifier and Qualifier Fractions	(Quasi) Sensitivity Analysis SECTION 3 — "ND") may or may not be present. — Comment
	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	0.0001													
	N04-CE12-TNBS: Row A	.823 U	.623 U	.563 U	.582 U	.624 U	2.99 J	28.8 J	.483 U	.433 U	.392 U	.398 U	.4 U	.499 U	.426 U	1.45 J	.456 U	2.24 J															
	value to use: Row B	0.823	0.623	0.563	0.582	0.624	2.99	28.8	0.483	0.433	0.392	0.398	0.4	0.499	0.426	1.45	0.456	2.24															
42	congener TEC: Row C	0.823	0.623	0.0563	0.0582	0.0624	0.0299	0.00864	0.0483	0.01299	0.1176	0.0398	0.04	0.0499	0.0426	0.0145	0.00456	0.000672		190%	0.0537	1.0430	2.0324	0.9769	J	Section 2, Treatment 1			0.9769	J	0.9769	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE12-TNNE: Row A	1.28 U	.965 U	.923 U	.905 U	.926 U	2.96 J	45.8 J	.91 U	.805 U	.729 U	.917 J	.623 U	.723 U	.688 U	2.75 J	.683 U	4.66 J															
	value to use: Row B	1.28	0.965	0.923	0.905	0.926	2.96	45.8	0.91	0.805	0.729	0.917	0.623	0.723	0.688	2.75	0.683	4.66															
43	congener TEC: Row C	1.28	0.965	0.0923	0.0905	0.0926	0.0296	0.01374	0.091	0.02415	0.2187	0.0917	0.0623	0.0723	0.0688	0.0275	0.00683	0.001398		181%	0.1639	1.6962	3.2284	1.5957	J	Section 2, Treatment 1			1.5957	J	1.5957	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE12-TNNW: Row A	.753 U	.764 U	.873 U	.99 U	1.03 U	2.15 J	20.7 J	.604 U	.502 U	.5 U	.467 U	.441 U	.496 U	.44 U	1.04 J	.705 U	2.51 J															
	value to use: Row B	0.753	0.764	0.873	0.99	1.03	2.15	20.7	0.604	0.502	0.5	0.467	0.441	0.496	0.44	1.04	0.705	2.51															
44	congener TEC: Row C	0.753	0.764	0.0873	0.099	0.103	0.0215	0.00621	0.0604	0.01506	0.15	0.0467	0.0441	0.0496	0.044	0.0104	0.00705	0.000753		193%	0.0389	1.1505	2.2621	0.8908	J	Section 2, Treatment 1			0.8908	J	0.8908	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE20-TNBE: Row A	1.25 J	.995 U	1.12 U	1.06 U	1.16 U	3.51 J	43.1 J	.854 U	.749 U	.758 U	.74 U	.7 U	.839 U	.727 U	3.26 J	.943 U	4.81 J															
	value to use: Row B	1.25	0.995	1.12	1.06	1.16	3.51	43.1	0.854	0.749	0.758	0.74	0.7	0.839	0.727	3.26	0.943	4.81															
45	congener TEC: Row C	1.25	0.995	0.112	0.106	0.116	0.0351	0.01293	0.0854	0.02247	0.2274	0.074	0.07	0.0839	0.0727	0.0326	0.00943	0.001443		85%	1.332073	2.319223	3.306373	1.4868	J	Section 1	1.4868	J							
	donor value to use: Row D																												Qualified	100%				
	donor TEC: Row E																												Dioxin/Furan	100%				
	N04-CE20-TNBN: Row A	.958 U	.907 U	.861 U	.871 U	.881 U	6.63 J	72.1	.718 U	.61 U	.528 U	1.19 J	.53 U	.613 U	.552 U	5.37 J	.64 U	8.29 J															
	value to use: Row B	0.958	0.907	0.861	0.871	0.881	6.63	72.1	0.718	0.61	0.528	1.19	0.53	0.613	0.552	5.37	0.64	8.29															
46	congener TEC: Row C	0.958	0.907	0.0861	0.0871	0.0881	0.0663	0.02163	0.0718	0.0183	0.1584	0.119	0.053	0.0613	0.0552	0.0537	0.0064	0.002487		166%	0.263117	1.538467	2.813817	1.4017	J	Section 2, Treatment 1			1.4017	J	1.4017	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE20-TNBS: Row A	1.04 U	1.09 U	1.13 U	1.09 U	1.12 U	3.98 J	40.8 J	.957 U	.731 U	.689 U	.647 U	.656 U	.819 U	.696 U	2.99 J	.699 U	3.51 J															
	value to use: Row B	1.04	1.09	1.13	1.09	1.12	3.98	40.8	0.957	0.731	0.689	0.647	0.656	0.819	0.696	2.99	0.699	3.51															
47	congener TEC: Row C	1.04	1.09	0.113	0.109	0.112	0.0398	0.01224	0.0957	0.02193	0.2067	0.0647	0.0656	0.0819	0.0696	0.0299	0.00699	0.001053		190%	0.0830	1.6216	3.1601	1.3269	J	Section 2, Treatment 1			1.3269	J	1.3269	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE20-TNNE: Row A	1.1 U	1.09 U	.908 U	.935 U	.879 U	6.79 J	65.6	.867 U	.72 U	.726 U	1.57 J	.703 U	.793 U	.66 U	6.75 J	.672 U	10.6 J															
	value to use: Row B	1.1	1.09	0.908	0.935	0.879	6.79	65.6	0.867	0.72	0.726	1.57	0.703	0.793	0.66	6.75	0.672	10.6															
48	congener TEC: Row C	1.1	1.09	0.0908	0.0935	0.0879	0.0679	0.01968	0.0867	0.0216	0.2178	0.157	0.0703	0.0793	0.066	0.0675	0.00672	0.00318		165%	0.3153	1.8206	3.3259	1.6589	J	Section 2, Treatment 1			1.6589	J	1.6589	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE20-TNNW: Row A	3.05 J	.696 U	.833 U	.86 U	.954 U	16.2 J	153	.759 U	.561 U	.992 J	3.32 J	.752 J	.604 U	.518 U	15.7 J	.577 U	28.4 J															
	value to use: Row B	3.05	0.696	0.833	0.86	0.954	16.2	153	0.759	0.561	0.992	3.32	0.752	0.604	0.518	15.7	0.577	28.4															
49	congener TEC: Row C	3.05	0.696	0.0833	0.086	0.0954	0.162	0.0459	0.0759	0.01683	0.2976	0.332	0.0752	0.0604	0.0518	0.157	0.00577	0.00852		25%	4.1282	4.7139	5.2996	4.3572	J	Section 1	4.3572	J							
	donor value to use: Row D																												Qualified	99%				
	donor TEC: Row E																												Dioxin/Furan	100%				
	N04-CE21-TNBE: Row A	1.37 U	1.3 U	1.27 U	1.33 U	1.33 U	3.22 U	38.3 J	1.35 U	.986 U	.944 U	.906 U	.844 U	1.03 U	.885 U	2.17 J	1.06 U	4.01 J															
	value to use: Row B	1.37	1.3	1.27	1.33	1.33	3.22	38.3	1.35	0.986	0.944	0.906	0.844	1.03	0.885	2.17	1.06	4.01															
50	congener TEC: Row C	1.37	1.3	0.127	0.133	0.133	0.0322	0.01149	0.135	0.02958	0.2832	0.0906	0.0844	0.103	0.0885	0.0217	0.0106	0.001203		197%	0.0344	1.9944	3.9545	1.5124	J	Section 2, Treatment 1			1.5124	J	1.5124	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE21-TNBN: Row A	.963 U	.993 U	1.04 U	1.1 U	1.07 U	3.09 U	28.5 U	.734 U	.773 U	.694 U	.664 U	.641 U	.759 U	.641 U	2.4 J	.708 U	4.12 J															
	value to use: Row B	0.963	0.993	1.04	1.1	1.07	3.09	28.5	0.734	0.773	0.694	0.664	0.641	0.759	0.641	2.4	0.708	4.12															
51	congener TEC: Row C	0.963	0.993	0.104	0.11	0.107	0.0309	0.00855	0.0734	0.02319	0.2082	0.0664	0.0641	0.0759	0.0641	0.024	0.00708	0.001236		197%	0.0252	1.4746	2.9241	Not calculated		Insufficient Data								Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																
	donor TEC: Row E																																
	N04-CE21-TNBS: Row A	.964 U	.976 U	1.09 U	1.1 U	1.19 U	7.12 U	70.2	.71 U	.783 U	.728 U	.608 U	.608 U	.751 U	.623 U	2.64 J	.993 U	3.77 J															
	value to use: Row B	0.964	0.976	1.09	1.1	1.19	7.12	70.2	0.71	0.783	0.728	0.608	0.608	0.751	0.623	2.64	0.993	3.77															
52	congener TEC: Row C	0.964	0.976	0.109	0.11	0.119	0.0712	0.02106	0.071	0.02349	0.2184	0.0608	0.0608	0.0751	0.0623	0.0264	0.00993	0.001131		194%	0.0486	1.5141	2.9796	1.1600	J	Section 2, Treatment 1			1.1600	J	1.1600	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE21-TNNE: Row A	.902 U	1.01 U	1 U	1.11 U	1.02 U	3.13 U	37.2 J	.768 U	.937 U	.836 U	.916 U	.85 U	1.05 U	.9 U	1.92 J	1.04 U	3.62 J															
	value to use: Row B	0.902	1.01	1	1.11	1.02	3.13	37.2	0.768	0.937	0.836	0.916	0.85	1.05	0.9	1.92	1.04	3.62															
53	congener TEC: Row C	0.902	1.01	0.1	0.111	0.102	0.0313	0.01116	0.0768	0.02811	0.2508	0.0916	0.085	0.105	0.09	0.0192	0.0104	0.001086		196%	0.0314	1.5285	3.0255	1.1401	J	Section 2, Treatment 1			1.1401	J	1.1401	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N04-CE21-TNNW: Row A	1.22 U	1.32 U	1.43 U	1.46 U	1.56 U	4.68 U	48.8 J	1.18 U	1.02 U	.932 U	.96 U	.996 U	1.07 U	1.03 U	2.91 J	1.21 U	4.86 J															
	value to use: Row B	1.22	1.32	1.43	1.46	1.56	4.68	48.8	1.18	1.02	0.932	0.96	0.996	1.07	1.03	2.91	1.21	4.86															
54	congener TEC: Row C	1.22	1.32	0.143	0.146	0.156	0.0468	0.01464	0.118	0.0306	0.2796	0.096	0.0996	0.107	0.103	0.0291	0.0121	0.001458		195%	0.0452	1.9840	3.9229	1.5066	J	Section 2, Treatment 1			1.5066	J	1.5066	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N05-CE01-TNBE: Row A	2.1 U	1.87 U	1.79 U	1.78 U	1.91 U	2.43 U	19.4 J	1.56 U	1.28 U	1.23 U	1.23 U	1.2 U	1.54 U	1.23 U	2.06 J	1.46 U	3.29 U															
	value to use: Row B	2.1	1.87	1.79	1.78	1.91	2.43	19.4	1.56	1.28	1.23	1.23	1.2	1.54	1.23	2.06	1.46	3.29															
55	congener TEC: Row C	2.1	1.87	0.179	0.178	0.191	0.0243	0.00582	0.156	0.0384	0.369	0.123	0.12	0.154	0.123	0.0206	0.0146	0.000987		198%	0.0264	2.8471	5.6677	Not calculated		Insufficient Data								Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																
	donor TEC: Row E																																
	N05-CE01-TNBN: Row A	.774 J	1.71 U	1.52 U	1.5 U	1.72 U	3.05 J	38.6 J	1.11 U	1.2 U	1.12 U	4.89 J	1.08 U	1.4 U	1.17 U	18.8 J	1.79 U	28.8 J															
	value to use: Row B	0.774	1.71	1.52	1.5	1.72	3.05	38.6	1.11	1.2	1.12	4.89	1.08	1.4	1.17	18.8	1.79	28.8															
56	congener TEC: Row C	0.774	1.71	0.152	0.15	0.172	0.0305	0.01158	0.111	0.036	0.336	0.489	0.108	0.14	0.117	0.188	0.0179	0.00864		101%	1.5017	3.0267	4.5516	3.3720	J	Section 2, Treatment 1			3.3720	J	3.3720	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N05-CE01-TNBS: Row A	1.95 U	1.99 U	1.84 U	1.62 U	1.84 U	1.71 U	16.7 J	1.84 U	1.58 U	1.42 U	1.42 U	1.38 U	1.6 U	1.36 U	1.53 J	1.46 U	2.1 J															
	value to use: Row B	1.95	1.99	1.84	1.62	1.84	1.71	16.7	1.84	1.58	1.42	1.42	1.38	1.6	1.36	1.53	1.46	2.1															
57	congener TEC: Row C	1.95	1.99	0.184	0.162	0.184	0.0171	0.00501	0.184	0.0474	0.426	0.142	0.138	0.16	0.136	0.0153	0.0146	0.00063		199%	0.0209	2.8885	5.7560	2.0850	J	Section 2, Treatment 1			2.0850	J	2.0850	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N05-CE01-TNNE: Row A	1.17 J	1.31 U	1.52 U	1.72 U	1.6 U	3.11 J	34.7 J	1.01 U	1.32 U	1.16 U	1.19 J	1.04 U	1.2 U	1.1 U	3.32 J	1.38 U	6.83 J															
	value to use: Row B	1.17	1.31	1.52	1.72	1.6	3.11	34.7	1.01	1.32	1.16	1.19	1.04	1.2	1.1	3.32	1.38	6.83															
58	congener TEC: Row C	1.17	1.31	0.152	0.172	0.16	0.0311	0.01041	0.101	0.0396	0.348	0.119	0.104	0.12	0.11	0.0332	0.0138	0.002049		98%	1.3658	2.6810	3.9962	2.8826	J	Section 2, Treatment 1			2.8826	J	2.8826	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N05-CE01-TNNW: Row A	2.28 J	2.32 U	1.39 U	1.45 U	1.55 U	1.77 J	34.4 J	1.34 U	1.38 U	1.35 U	1.19 J	1.26 U	1.41 U	1.21 U	7.09 J	1.74 U	17.3 J															
	value to use: Row B	2.28	2.32	1.39	1.45	1.55	1.77	34.4	1.34	1.38	1.35	1.19	1.26	1.41	1.21	7.09	1.74	17.3															
59	congener TEC: Row C	2.28	2.32	0.139	0.145	0.155	0.0177	0.01032	0.134	0.0414	0.405	0.119	0.126	0.141	0.121	0.0709	0.0174	0.00519		86%	2.5031	4.3755	6.2479	5.1167	J	Section 2, Treatment 1			5.1167	J	5.1167	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N05-CE02-TNBE: Row A	2.81 U	3.29 U	2.28 U	2.45 U	2.48 U	2.07 J	31.8 J	1.95 U	1.9 U	1.92 U	2.13 U	2.15 U	2.56 U	2.09 U	2.68 J	3.19 U	3.99 J															
	value to use: Row B	2.81	3.29	2.28	2.45	2.48	2.07	31.8	1.95	1.9	1.92	2.13	2.15	2.56	2.09	2.68	3.19	3.99															
60	congener TEC: Row C	2.81	3.29	0.228	0.245	0.248	0.0207	0.00954	0.195	0.057	0.576	0.213	0.215	0.256	0.209	0.0268	0.0319	0.001197		197%	0.0582	4.3452	8.6321	3.5229	J	Section 2, Treatment 1			3.5229	J	3.5229	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	
	N05-CE02-TNBN: Row A	1.76 U	2.28 U	1.99 U	2.03 U	2.15 U	1.58 J	22.7 J	1.53 U	1.45 U	1.28 U	1.45 U	1.32 U	1.76 U	1.37 U	2.35 J	1.56 U	3.07 J															
	value to use: Row B	1.76	2.28	1.99	2.03	2.15	1.58	22.7	1.53	1.45	1.28	1.45	1.32	1.76	1.37	2.35	1.56	3.07															
61	congener TEC: Row C	1.76	2.28	0.199	0.203	0.215	0.0158	0.00681	0.153	0.0435	0.384	0.145	0.132	0.176	0.137	0.0235	0.0156	0.000921		197%	0.0470	2.9686	5.8901	2.4429	J	Section 2, Treatment 1			2.4429	J	2.4429	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%	
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%	

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2			(Quasi) Sensitivity Analysis SECTIO	
																											Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			"ND") may or may not be present.	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**	**0.0001**								**Treatment 1**		**Treatment 1: Make highest U value a D**		**Treatment 2: Substitute comparable "donor" value for highest U**		
	Sample ID:	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDs**	**OCDD**	**TCDF**	**1-PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDs**	**1,4,9-HpCDs**	**OCDF**	**PCB 77**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**Comment**
	N05-CE02-TNBS: Row A	1.83 U	1.91 U	2.04 U	2.28 U	2.39 U	1.48 J	17.8 J	1.14 U	1.52 U	1.35 U	1.46 U	1.27 U	1.62 U	1.5 U	1.23 U	1.89 U	2.22 U															
	value to use: Row B	1.83	1.91	2.04	2.28	2.39	1.48	17.8	1.14	1.52	1.35	1.46	1.27	1.62	1.5	1.23	1.89	2.22															
62	congener TEC: Row C	**1.83**	**1.91**	**0.204**	**0.228**	**0.239**	**0.0148**	**0.00534**	**0.114**	**0.0456**	**0.405**	**0.146**	**0.127**	**0.162**	**0.15**	**0.0123**	**0.0189**	**0.000666**		199%	0.0201	2.8164	5.6126	Not calculated		**Insufficient Data**								Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																
	donor TEC: Row E																																
	N05-CE02-TNNE: Row A	.986 U	1.27 U	1.07 U	1.01 U	1.18 J	2.35 J	26.5 J	.672 U	.803 U	.744 U	1.13 J	.787 U	.995 U	.897 U	4.88 J	.847 U	7.82 J															
	value to use: Row B	0.986	1.27	1.07	1.01	1.18	2.35	26.5	0.672	0.803	0.744	1.13	0.787	0.995	0.897	4.88	0.847	7.82															
63	congener TEC: Row C	**0.986**	**1.27**	**0.107**	**0.101**	**0.118**	**0.0235**	**0.00795**	**0.0672**	**0.02409**	**0.2232**	**0.113**	**0.0787**	**0.0995**	**0.0897**	**0.0488**	**0.00847**	**0.002346**		166%	0.3136	1.8410	3.3685	1.7568	J	**Section 2, Treatment 1**			**1.7568**	**J**	1.7568	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE02-TNNW: Row A	1.01 U	1.05 U	.992 U	.969 U	1.02 U	2.87 J	26.3 J	.786 U	.839 U	.735 U	.738 U	.702 U	.913 U	.718 U	2.21 J	.866 U	3.14 J															
	value to use: Row B	1.01	1.05	0.992	0.969	1.02	2.87	26.3	0.786	0.839	0.735	0.738	0.702	0.913	0.718	2.21	0.866	3.14															
64	congener TEC: Row C	**1.01**	**1.05**	**0.0992**	**0.0969**	**0.102**	**0.0287**	**0.00789**	**0.0786**	**0.02517**	**0.2205**	**0.0738**	**0.0702**	**0.0913**	**0.0718**	**0.0221**	**0.00866**	**0.000942**		192%	0.0596	1.5587	3.0578	1.2444	J	**Section 2, Treatment 1**			**1.2444**	**J**	1.2444	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE03-TNBE: Row A	.492 J	1.54 U	1.63 U	1.48 U	1.65 U	1.13 J	20.7 J	1.1 U	1.4 U	1.28 U	.931 U	.882 U	1.06 U	.968 U	1.46 J	1.56 U	2.71 J															
	value to use: Row B	0.492	1.54	1.63	1.48	1.65	1.13	20.7	1.1	1.4	1.28	0.931	0.882	1.06	0.968	1.46	1.56	2.71															
65	congener TEC: Row C	**0.492**	**1.54**	**0.163**	**0.148**	**0.165**	**0.0113**	**0.00621**	**0.11**	**0.042**	**0.384**	**0.0931**	**0.0882**	**0.106**	**0.0968**	**0.0146**	**0.0156**	**0.000813**		148%	0.5249	2.0008	3.4766	2.1555	J	**Section 2, Treatment 1**			**2.1555**	**J**	2.1555	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE03-TNBN: Row A	1.35 U	1.37 U	1.52 U	1.41 U	1.43 U	2.3 J	22.1 J	1.02 U	1.11 U	1.01 U	.92 U	.832 U	.999 U	.928 U	1.24 J	1.44 U	2.58 J															
	value to use: Row B	1.35	1.37	1.52	1.41	1.43	2.3	22.1	1.02	1.11	1.01	0.92	0.832	0.999	0.928	1.24	1.44	2.58															
66	congener TEC: Row C	**1.35**	**1.37**	**0.152**	**0.141**	**0.143**	**0.023**	**0.00663**	**0.102**	**0.0333**	**0.303**	**0.092**	**0.0832**	**0.0999**	**0.0928**	**0.0124**	**0.0144**	**0.000774**		196%	0.0428	2.0311	4.0194	1.5281	J	**Section 2, Treatment 1**			**1.5281**	**J**	1.5281	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE03-TNBS: Row A	1.61 U	2 U	1.69 U	1.76 U	1.62 U	2.13 U	15.9 J	1.02 U	.994 U	.927 U	.866 U	.784 U	1.02 U	.883 U	1.16 J	1.85 U	1.55 J															
	value to use: Row B	1.61	2	1.69	1.76	1.62	2.13	15.9	1.02	0.994	0.927	0.866	0.784	1.02	0.883	1.16	1.85	1.55															
67	congener TEC: Row C	**1.61**	**2**	**0.169**	**0.176**	**0.162**	**0.0213**	**0.00477**	**0.102**	**0.02982**	**0.2781**	**0.0866**	**0.0784**	**0.102**	**0.0883**	**0.0116**	**0.0185**	**0.000465**		199%	0.0168	2.4778	4.9389	2.0898	J	**Section 2, Treatment 1**			**2.0898**	**J**	2.0898	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE03-TNNE: Row A	1.37 U	1.56 U	1.26 U	1.38 U	1.35 U	1.83 U	16.5 J	1.1 U	1.37 U	1.23 U	.935 U	.898 U	1.11 U	.976 U	1.69 J	1.34 U	3.23 J															
	value to use: Row B	1.37	1.56	1.26	1.38	1.35	1.83	16.5	1.1	1.37	1.23	0.935	0.898	1.11	0.976	1.69	1.34	3.23															
68	congener TEC: Row C	**1.37**	**1.56**	**0.126**	**0.138**	**0.135**	**0.0183**	**0.00495**	**0.11**	**0.0411**	**0.369**	**0.0935**	**0.0898**	**0.111**	**0.0976**	**0.0169**	**0.0134**	**0.000969**		198%	0.0228	2.1592	4.2955	1.6631	J	**Section 2, Treatment 1**			**1.6631**	**J**	1.6631	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE03-TNNW: Row A	1.6 U	1.72 U	1.85 U	1.83 U	2.02 U	1.05 J	21.8 J	1.08 U	1.07 U	1.02 U	.996 U	.918 U	1.17 U	1.05 U	1.41 J	1.51 U	2.39 J															
	value to use: Row B	1.6	1.72	1.85	1.83	2.02	1.05	21.8	1.08	1.07	1.02	0.996	0.918	1.17	1.05	1.41	1.51	2.39															
69	congener TEC: Row C	**1.6**	**1.72**	**0.185**	**0.183**	**0.202**	**0.0105**	**0.00654**	**0.108**	**0.0321**	**0.306**	**0.0996**	**0.0918**	**0.117**	**0.105**	**0.0141**	**0.0151**	**0.000717**		197%	0.0319	2.4142	4.7965	1.8474	J	**Section 2, Treatment 1**			**1.8474**	**J**	1.8474	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE04-TNBN: Row A	2.29 J	1.16 U	1.17 U	1.16 U	1.26 U	4 J	41.7 J	.86 U	.766 U	.729 U	1.13 J	.726 U	.911 U	.819 U	6.9 J	1.11 U	12.1 J															
	value to use: Row B	2.29	1.16	1.17	1.16	1.26	4	41.7	0.86	0.766	0.729	1.13	0.726	0.911	0.819	6.9	1.11	12.1															
70	congener TEC: Row C	**2.29**	**1.16**	**0.117**	**0.116**	**0.126**	**0.04**	**0.01251**	**0.086**	**0.02298**	**0.2187**	**0.113**	**0.0726**	**0.0911**	**0.0819**	**0.069**	**0.0111**	**0.00363**		59%	2.5281	3.5798	4.6315	2.7825	J	**Section 1**	**2.7825**	**J**							
	donor value to use: Row D																										Qualified	100%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N05-CE04-TNBS: Row A	1.6 U	1.67 U	1.91 U	1.84 U	2 U	1.95 J	15.1 J	1.4 U	1.4 U	1.42 U	.973 U	.924 U	1.24 U	.921 U	1.64 J	1.69 U	3.81 U															
	value to use: Row B	1.6	1.67	1.91	1.84	2	1.95	15.1	1.4	1.4	1.42	0.973	0.924	1.24	0.921	1.64	1.69	3.81															
71	congener TEC: Row C	**1.6**	**1.67**	**0.191**	**0.184**	**0.2**	**0.0195**	**0.00453**	**0.14**	**0.042**	**0.426**	**0.0973**	**0.0924**	**0.124**	**0.0921**	**0.0164**	**0.0169**	**0.001143**		197%	0.0404	2.4789	4.9173	1.7032	J	**Section 2, Treatment 1**			**1.7032**	**J**	1.7032	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE04-TNNE: Row A	.219 J	1.77 U	1.7 U	1.67 U	1.74 U	3.12 J	41.1 J	1.23 U	1.32 U	1.24 U	1.22 U	1.06 U	1.24 U	1.1 U	3.46 J	1.43 U	6.45 J															
	value to use: Row B	0.219	1.77	1.7	1.67	1.74	3.12	41.1	1.23	1.32	1.24	1.22	1.06	1.24	1.1	3.46	1.43	6.45															
72	congener TEC: Row C	**0.219**	**1.77**	**0.17**	**0.167**	**0.174**	**0.0312**	**0.01233**	**0.123**	**0.0396**	**0.372**	**0.122**	**0.106**	**0.124**	**0.11**	**0.0346**	**0.0143**	**0.001935**		169%	0.2991	1.9450	3.5910	2.2640	J	**Section 2, Treatment 1**			**2.2640**	**J**	2.2640	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N05-CE04-TNNW: Row A	1.96 J	1.4 U	1.43 U	1.07 J	.673 J	14.6 J	194	.852 U	1.22 U	1.17 J	8.01 J	1.17 J	1.13 U	1.03 U	27.1	1.51 U	56.7															
	value to use: Row B	1.96	1.4	1.43	1.07	0.673	14.6	194	0.852	1.22	1.17	8.01	1.17	1.13	1.03	27.1	1.51	56.7															
73	congener TEC: Row C	**1.96**	**1.4**	**0.143**	**0.107**	**0.0673**	**0.146**	**0.0582**	**0.0852**	**0.0366**	**0.351**	**0.801**	**0.117**	**0.113**	**0.103**	**0.271**	**0.0151**	**0.01701**		39%	3.8955	4.8435	5.7914	4.2331	J	**Section 1**	**4.2331**	**J**							
	donor value to use: Row D																										Qualified	94%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N07-CE01-TNBE: Row A	1.16 U	1.3 U	.987 U	1.12 J	2.1 U	14.1 J	149	2.73 J	1.66 J	6.46 J	7.61 J	1.57 J	1.18 U	1.76 J	6.14 J	2.25 U	13.3 U															
	value to use: Row B	1.16	1.3	0.987	1.12	2.1	14.1	149	2.73	1.66	6.46	7.61	1.57	1.18	1.76	6.14	2.25	13.3															
74	congener TEC: Row C	**1.16**	**1.3**	**0.0987**	**0.112**	**0.21**	**0.141**	**0.0447**	**0.273**	**0.0498**	**1.938**	**0.761**	**0.157**	**0.118**	**0.176**	**0.0614**	**0.0225**	**0.00399**		56%	3.7139	5.1705	6.6271	4.1505	J	**Section 1**	**4.1505**	**J**							
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N07-CE01-TNBN: Row A	1.11 U	1.33 U	1.2 U	1.29 U	1.32 U	4.7 J	60.4	.803 U	.876 U	.847 U	1.37 U	1.4 U	2.04 U	1.45 U	5.97 J	2.49 U	9.6 J															
	value to use: Row B	1.11	1.33	1.2	1.29	1.32	4.7	60.4	0.803	0.876	0.847	1.37	1.4	2.04	1.45	5.97	2.49	9.6															
75	congener TEC: Row C	**1.11**	**1.33**	**0.12**	**0.129**	**0.132**	**0.047**	**0.01812**	**0.0803**	**0.02628**	**0.2541**	**0.137**	**0.14**	**0.204**	**0.145**	**0.0597**	**0.0249**	**0.00288**		188%	0.1277	2.0440	3.9603	1.7265	J	**Section 2, Treatment 1**			**1.7265**	**J**	1.7265	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE01-TNBS: Row A	.941 U	1.61 U	1.59 U	1.58 U	1.88 U	6.48 U	97.1	1.04 U	1.19 U	1.14 U	1.55 J	.682 U	1.03 U	.716 U	3.48 U	1.67 U	8.44 U															
	value to use: Row B	0.941	1.61	1.59	1.58	1.88	6.48	97.1	1.04	1.19	1.14	1.55	0.682	1.03	0.716	3.48	1.67	8.44															
76	congener TEC: Row C	**0.941**	**1.61**	**0.159**	**0.158**	**0.188**	**0.0648**	**0.02913**	**0.104**	**0.0357**	**0.342**	**0.155**	**0.0682**	**0.103**	**0.0716**	**0.0348**	**0.0167**	**0.002532**		183%	0.1841	2.1338	4.0835	Not calculated		**Insufficient Data**								Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																
	donor TEC: Row E																																
	N07-CE01-TNNE: Row A	1.69 J	.802 U	.818 U	.849 U	.947 U	7.12 J	104	.565 U	.544 U	.477 U	1.63 J	.559 U	.66 U	.53 U	7.88 J	.782 U	11.5 U															
	value to use: Row B	1.69	0.802	0.818	0.849	0.947	7.12	104	0.565	0.544	0.477	1.63	0.559	0.66	0.53	7.88	0.782	11.5															
77	congener TEC: Row C	**1.69**	**0.802**	**0.0818**	**0.0849**	**0.0947**	**0.0712**	**0.0312**	**0.0565**	**0.01632**	**0.1431**	**0.163**	**0.0559**	**0.066**	**0.053**	**0.0788**	**0.00782**	**0.00345**		53%	2.0342	2.7669	3.4997	2.2120	J	**Section 1**	**2.2120**	**J**							
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N07-CE01-TNNW: Row A	.97 U	1.06 U	.906 U	.92 U	1.25 J	1.44 J	12.2 U	.55 U	.619 U	.591 U	.669 U	.646 U	.781 U	.662 U	1.42 U	.921 U	3.01 U															
	value to use: Row B	0.97	1.06	0.906	0.92	1.25	1.44	12.2	0.55	0.619	0.591	0.669	0.646	0.781	0.662	1.42	0.921	3.01															
78	congener TEC: Row C	**0.97**	**1.06**	**0.0906**	**0.092**	**0.125**	**0.0144**	**0.00366**	**0.055**	**0.01857**	**0.1773**	**0.0669**	**0.0646**	**0.0781**	**0.0662**	**0.0142**	**0.00921**	**0.000903**		182%	0.1394	1.5230	2.9066	Not calculated		**Insufficient Data**								Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																
	donor TEC: Row E																																
	N07-CE02-TNBE: Row A	.989 U	1.17 U	1.2 U	1.3 U	1.46 U	4.53 U	39.6 J	.859 U	1.01 U	.968 U	1.05 J	.896 U	1.25 U	.916 U	3.06 J	1.42 U	5.23 U															
	value to use: Row B	0.989	1.17	1.2	1.3	1.46	4.53	39.6	0.859	1.01	0.968	1.05	0.896	1.25	0.916	3.06	1.42	5.23															
79	congener TEC: Row C	**0.989**	**1.17**	**0.12**	**0.13**	**0.146**	**0.0453**	**0.01188**	**0.0859**	**0.0303**	**0.2904**	**0.105**	**0.0896**	**0.125**	**0.0916**	**0.0306**	**0.0142**	**0.001569**		184%	0.1475	1.8119	3.4763	1.3872	J	**Section 2, Treatment 1**			**1.3872**	**J**	1.3872	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE02-TNBN: Row A	.797 U	.857 U	.844 U	.816 U	.961 U	5.91 J	66.3	.55 U	.522 U	.457 U	.961 J	.617 U	.745 U	.624 U	5.2 J	.69 U	7.21 U															
	value to use: Row B	0.797	0.857	0.844	0.816	0.961	5.91	66.3	0.55	0.522	0.457	0.961	0.617	0.745	0.624	5.2	0.69	7.21															
80	congener TEC: Row C	**0.797**	**0.857**	**0.0844**	**0.0816**	**0.0961**	**0.0591**	**0.01989**	**0.055**	**0.01566**	**0.1371**	**0.0961**	**0.0617**	**0.0745**	**0.0624**	**0.052**	**0.0069**	**0.002163**		167%	0.2271	1.3929	2.5586	1.1895	J	**Section 2, Treatment 1**			**1.1895**	**J**	1.1895	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE02-TNBS: Row A	.807 U	.8 U	.819 U	1.13 J	1.32 J	11.8 J	113	.56 U	.524 U	.415 U	.985 J	.907 J	.757 U	1.06 J	6.16 U	.801 U	7.25 U															
	value to use: Row B	0.807	0.8	0.819	1.13	1.32	11.8	113	0.56	0.524	0.415	0.985	0.907	0.757	1.06	6.16	0.801	7.25															
81	congener TEC: Row C	**0.807**	**0.8**	**0.0819**	**0.113**	**0.132**	**0.118**	**0.0339**	**0.056**	**0.01572**	**0.1245**	**0.0985**	**0.0907**	**0.0757**	**0.106**	**0.0616**	**0.00801**	**0.002175**		119%	0.6921	1.7084	2.7247	1.5344	J	**Section 2, Treatment 1**			**1.5344**	**J**	1.5344	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2				(ssi) Sensitivity Analysis SECTIO	
																											Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**	**0.0001**								**Treatment 1**		**Treatment 1: Make highest U value a D**		**Treatment 2: Substitute comparable "donor" value for highest U**		
	Sample ID:	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDF**	**OCDD**	**TCDF**	**1-PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDF**	**1,4,9-HpCDF**	**OCDF**	**PCB 77**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**Comment**
	N07-CE02-TNNE: Row A	1.14 J	1.23 U	1.11 U	1.23 U	1.33 U	3 J	36 J	.717 U	.904 U	.835 U	1.17 U	1.08 U	1.67 U	1.19 U	3.54 J	2.24 U	5.34 U																
	value to use: Row B	1.14	1.23	1.11	1.23	1.33	3	36	0.717	0.904	0.835	1.17	1.08	1.67	1.19	3.54	2.24	5.34																
82	**congener TEC: Row C**	**1.14**	**1.23**	**0.111**	**0.123**	**0.133**	**0.03**	**0.0108**	**0.0717**	**0.02712**	**0.2505**	**0.117**	**0.108**	**0.167**	**0.119**	**0.0354**	**0.0224**	**0.001602**		101%	1.2162	2.4569	3.6975	2.4241	J	**Section 2, Treatment 1**			**2.4241**	**J**	2.4241	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE02-TNNW: Row A	.923 U	.961 U	.942 U	.909 U	.959 U	6.03 J	53.4	.724 U	.697 U	.674 U	1.32 J	.724 U	.774 U	.641 U	5.94 U	1 U	33.6 U																
	value to use: Row B	0.923	0.961	0.942	0.909	0.959	6.03	53.4	0.724	0.697	0.674	1.32	0.724	0.774	0.641	5.94	1	33.6																
83	**congener TEC: Row C**	**0.923**	**0.961**	**0.0942**	**0.0909**	**0.0959**	**0.0603**	**0.01602**	**0.0724**	**0.02091**	**0.2022**	**0.132**	**0.0724**	**0.0774**	**0.0641**	**0.0594**	**0.01**	**0.01008**		174%	0.2083	1.5853	2.9622	1.2776	J	**Section 2, Treatment 1**			**1.2776**	**J**	1.2776	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE03-TNBE: Row A	1.37 U	1.29 U	1.39 U	1.53 U	1.51 U	3.25 U	28.6 J	.793 U	.868 U	.82 U	.982 U	.919 U	1.09 U	.921 U	2.28 J	1.22 U	3.47 J																
	value to use: Row B	1.37	1.29	1.39	1.53	1.51	3.25	28.6	0.793	0.868	0.82	0.982	0.919	1.09	0.921	2.28	1.22	3.47																
84	**congener TEC: Row C**	**1.37**	**1.29**	**0.139**	**0.153**	**0.151**	**0.0325**	**0.00858**	**0.0793**	**0.02604**	**0.246**	**0.0982**	**0.0919**	**0.109**	**0.0921**	**0.0228**	**0.0122**	**0.001041**		197%	0.0324	1.9775	3.9227	1.5189	J	**Section 2, Treatment 1**			**1.5189**	**J**	1.5189	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE03-TNBN: Row A	.958 U	1.25 U	1.29 U	1.33 U	1.35 U	3.28 J	37.7 J	.675 U	.821 U	.768 U	5.01 J	.975 U	1.41 U	1.04 U	44	1.81 U	115																
	value to use: Row B	0.958	1.25	1.29	1.33	1.35	3.28	37.7	0.675	0.821	0.768	5.01	0.975	1.41	1.04	44	1.81	115																
85	**congener TEC: Row C**	**0.958**	**1.25**	**0.129**	**0.133**	**0.135**	**0.0328**	**0.01131**	**0.0675**	**0.02463**	**0.2304**	**0.501**	**0.0975**	**0.141**	**0.104**	**0.44**	**0.0181**	**0.0345**		123%	1.0196	2.6637	4.3077	2.5345	J	**Section 2, Treatment 1**			**2.5345**	**J**	2.5345	J		
	donor value to use: Row D																												Qualified	89%	Qualified	89%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE03-TNBS: Row A	.738 U	.931 U	.871 U	.92 U	.878 U	4.42 U	47.6 J	.683 U	.654 U	.606 U	.722 U	.66 U	.766 U	.644 U	1.53 U	.823 U	2.66 U																
	value to use: Row B	0.738	0.931	0.871	0.92	0.878	4.42	47.6	0.683	0.654	0.606	0.722	0.66	0.766	0.644	1.53	0.823	2.66																
86	**congener TEC: Row C**	**0.738**	**0.931**	**0.0871**	**0.092**	**0.0878**	**0.0442**	**0.01428**	**0.0683**	**0.01962**	**0.1818**	**0.0722**	**0.066**	**0.0766**	**0.0644**	**0.0153**	**0.00823**	**0.000798**		198%	0.0143	1.2910	2.5676	Not calculated		**Insufficient Data**									Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																	
	donor TEC: Row E																																	
	N07-CE03-TNNE: Row A	.946 U	1.13 U	1.09 U	1.08 U	1.1 U	1.92 J	14.6 U	.606 U	.627 U	.575 U	.744 U	.713 U	.998 U	.735 U	1.64 U	1.28 U	1.56 U																
	value to use: Row B	0.946	1.13	1.09	1.08	1.1	1.92	14.6	0.606	0.627	0.575	0.744	0.713	0.998	0.735	1.64	1.28	1.56																
87	**congener TEC: Row C**	**0.946**	**1.13**	**0.109**	**0.108**	**0.11**	**0.0192**	**0.00438**	**0.0606**	**0.01881**	**0.1725**	**0.0744**	**0.0713**	**0.0998**	**0.0735**	**0.0164**	**0.0128**	**0.000468**		197%	0.0192	1.5232	3.0272	Not calculated		**Insufficient Data**									Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																	
	donor TEC: Row E																																	
	N07-CE03-TNNW: Row A	.758 U	.865 U	1.13 U	1.16 U	1.26 U	3.61 J	40.2 J	.57 U	.635 U	.549 U	.662 U	.63 U	.882 U	.698 U	2.73 U	.958 U	3.86 U																
	value to use: Row B	0.758	0.865	1.13	1.16	1.26	3.61	40.2	0.57	0.635	0.549	0.662	0.63	0.882	0.698	2.73	0.958	3.86																
88	**congener TEC: Row C**	**0.758**	**0.865**	**0.113**	**0.116**	**0.126**	**0.0361**	**0.01206**	**0.057**	**0.01905**	**0.1647**	**0.0662**	**0.063**	**0.0882**	**0.0698**	**0.0273**	**0.00958**	**0.001158**		193%	0.0482	1.3202	2.5921	Not calculated		**Insufficient Data**									Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																	
	donor TEC: Row E																																	
	N07-CE04-TNBE: Row A	.736 U	1.25 U	1.12 U	1.1 U	1.21 U	3.19 J	40.7 J	.675 U	.587 U	.539 U	.659 U	.623 U	.792 U	.608 U	3.08 J	1.01 U	7.6 U																
	value to use: Row B	0.736	1.25	1.12	1.1	1.21	3.19	40.7	0.675	0.587	0.539	0.659	0.623	0.792	0.608	3.08	1.01	7.6																
89	**congener TEC: Row C**	**0.736**	**1.25**	**0.112**	**0.11**	**0.121**	**0.0319**	**0.01221**	**0.0675**	**0.01761**	**0.1617**	**0.0659**	**0.0623**	**0.0792**	**0.0608**	**0.0308**	**0.0101**	**0.00228**		190%	0.0749	1.5031	2.9313	1.3692	J	**Section 2, Treatment 1**			**1.3692**	**J**	1.3692	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE04-TNBN: Row A	1.34 J	1.04 U	.869 U	.932 U	.974 U	8.32 J	115	.619 U	.682 U	.582 U	1.68 J	.777 J	.856 U	.702 U	8.66 U	1 U	17.4 J																
	value to use: Row B	1.34	1.04	0.869	0.932	0.974	8.32	115	0.619	0.682	0.582	1.68	0.777	0.856	0.702	8.66	1	17.4																
90	**congener TEC: Row C**	**1.34**	**1.04**	**0.0869**	**0.0932**	**0.0974**	**0.0832**	**0.0345**	**0.0619**	**0.02046**	**0.1746**	**0.168**	**0.0777**	**0.0856**	**0.0702**	**0.0866**	**0.01**	**0.00522**		70%	1.7086	2.6221	3.5355	1.9705	J	**Section 1**	**1.9705**	**J**								
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N07-CE04-TNBS: Row A	1.39 U	1.46 U	1.38 U	1.42 U	1.54 U	2.23 J	19.1 J	.91 U	.866 U	.77 U	.847 U	.879 U	1.16 U	.926 U	2.63 U	1.21 U	22.2 U																
	value to use: Row B	1.39	1.46	1.38	1.42	1.54	2.23	19.1	0.91	0.866	0.77	0.847	0.879	1.16	0.926	2.63	1.21	22.2																
91	**congener TEC: Row C**	**1.39**	**1.46**	**0.138**	**0.142**	**0.154**	**0.0223**	**0.00573**	**0.091**	**0.02598**	**0.231**	**0.0847**	**0.0879**	**0.116**	**0.0926**	**0.0263**	**0.0121**	**0.00666**		197%	0.0280	2.0572	4.0863	Not calculated		**Insufficient Data**									Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																																	
	donor TEC: Row E																																	
	N07-CE04-TNNE: Row A	2.2 U	2.88 U	2.53 U	2.41 U	2.87 U	12.5 J	127	1.73 U	1.69 U	1.58 U	1.85 J	1.77 U	2.39 U	1.65 U	9.66 U	1.95 U	14.3 U																
	value to use: Row B	2.2	2.88	2.53	2.41	2.87	12.5	127	1.73	1.69	1.58	1.85	1.77	2.39	1.65	9.66	1.95	14.3																
92	**congener TEC: Row C**	**2.2**	**2.88**	**0.253**	**0.241**	**0.287**	**0.125**	**0.0381**	**0.173**	**0.0507**	**0.474**	**0.185**	**0.177**	**0.239**	**0.165**	**0.0966**	**0.0195**	**0.00429**		182%	0.3481	3.9781	7.6082	3.3900	J	**Section 2, Treatment 1**			**3.3900**	**J**	3.3900	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N07-CE04-TNNW: Row A	1.69 J	1.08 U	1.32 U	1.31 U	1.37 U	8.71 J	97.8	.754 U	.88 U	.809 U	1.68 J	1.08 U	1.56 U	1.05 U	8.96 J	2.04 U	8.55 U																
	value to use: Row B	1.69	1.08	1.32	1.31	1.37	8.71	97.8	0.754	0.88	0.809	1.68	1.08	1.56	1.05	8.96	2.04	8.55																
93	**congener TEC: Row C**	**1.69**	**1.08**	**0.132**	**0.131**	**0.137**	**0.0871**	**0.02934**	**0.0754**	**0.0264**	**0.2427**	**0.168**	**0.108**	**0.156**	**0.105**	**0.0896**	**0.0204**	**0.002565**		70%	2.0640	3.1723	4.2805	2.3553	J	**Section 1**	**2.3553**	**J**								
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N09-CE11-TNBE: Row A	3.19 J	1.94 U	2.02 U	2.19 U	2.6 U	13.8 J	156	1.45 U	1.86 U	1.67 U	2.97 J	1.25 U	1.8 U	1.36 U	12.1 J	1.95 U	19.7 J																
	value to use: Row B	3.19	1.94	2.02	2.19	2.6	13.8	156	1.45	1.86	1.67	2.97	1.25	1.8	1.36	12.1	1.95	19.7																
94	**congener TEC: Row C**	**3.19**	**1.94**	**0.202**	**0.219**	**0.26**	**0.138**	**0.0468**	**0.145**	**0.0558**	**0.501**	**0.297**	**0.125**	**0.18**	**0.136**	**0.121**	**0.0195**	**0.00591**		66%	3.7987	5.6904	7.5820	4.3035	J	**Section 1**	**4.3035**	**J**								
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N09-CE11-TNBN: Row A	1.79 U	1.54 U	1.96 U	1.98 U	2.21 U	9.64 J	94.5	1.46 U	1.32 U	1.14 U	1.68 J	1.37 U	1.71 U	1.43 U	8.29 J	1.73 U	13.2 J																
	value to use: Row B	1.79	1.54	1.96	1.98	2.21	9.64	94.5	1.46	1.32	1.14	1.68	1.37	1.71	1.43	8.29	1.73	13.2																
95	**congener TEC: Row C**	**1.79**	**1.54**	**0.196**	**0.198**	**0.221**	**0.0964**	**0.02835**	**0.146**	**0.0396**	**0.342**	**0.168**	**0.137**	**0.171**	**0.143**	**0.0829**	**0.0173**	**0.00396**		173%	0.3796	2.8501	5.3205	2.6052	J	**Section 2, Treatment 1**			**2.6052**	**J**	2.6052	J		
	donor value to use: Row D																												Qualified	99%	Qualified	99%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N09-CE11-TNBS: Row A	1.26 U	1.7 U	1.79 U	1.67 U	1.77 U	6.21 J	55.3	1.25 U	1.19 U	1.15 U	1.21 U	1.11 U	1.69 U	1.21 U	4.76 J	1.91 U	6.25 J																
	value to use: Row B	1.26	1.7	1.79	1.67	1.77	6.21	55.3	1.25	1.19	1.15	1.21	1.11	1.69	1.21	4.76	1.91	6.25																
96	**congener TEC: Row C**	**1.26**	**1.7**	**0.179**	**0.167**	**0.177**	**0.0621**	**0.01659**	**0.125**	**0.0357**	**0.345**	**0.121**	**0.111**	**0.169**	**0.121**	**0.0476**	**0.0191**	**0.001875**		189%	0.1282	2.3931	4.6580	2.0910	J	**Section 2, Treatment 1**			**2.0910**	**J**	2.0910	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N09-CE11-TNNE: Row A	3.34 J	1.41 U	1.27 U	1.28 U	1.44 U	13.4 J	140	.855 U	.923 U	.841 U	3.73 J	.96 J	.969 U	.837 U	15.6 J	.996 U	20.9 J																
	value to use: Row B	3.34	1.41	1.27	1.28	1.44	13.4	140	0.855	0.923	0.841	3.73	0.96	0.969	0.837	15.6	0.996	20.9																
97	**congener TEC: Row C**	**3.34**	**1.41**	**0.127**	**0.128**	**0.144**	**0.134**	**0.042**	**0.0855**	**0.02769**	**0.2523**	**0.373**	**0.096**	**0.0969**	**0.0837**	**0.156**	**0.00996**	**0.00627**		44%	4.1473	5.3298	6.5123	4.4201	J	**Section 1**	**4.4201**	**J**								
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N09-CE11-TNNW: Row A	1.83 J	1.13 U	1.31 U	1.26 U	1.42 U	9.48 J	92.4	1.06 U	.886 U	.755 U	2.17 J	.816 U	1.08 U	.842 U	9.68 J	1.23 U	14.2 J																
	value to use: Row B	1.83	1.13	1.31	1.26	1.42	9.48	92.4	1.06	0.886	0.755	2.17	0.816	1.08	0.842	9.68	1.23	14.2																
98	**congener TEC: Row C**	**1.83**	**1.13**	**0.131**	**0.126**	**0.142**	**0.0948**	**0.02772**	**0.106**	**0.02658**	**0.2265**	**0.217**	**0.0816**	**0.108**	**0.0842**	**0.0968**	**0.0123**	**0.00426**		65%	2.2706	3.3577	4.4448	2.5467	J	**Section 1**	**2.5467**	**J**								
	donor value to use: Row D																										Qualified	99%						
	donor TEC: Row E																										Dioxin/Furan	100%						
	N09-CE12-TNBE: Row A	1.47 U	1.57 U	1.52 U	1.42 U	1.8 U	3.19 J	36.3 J	1.05 U	1.18 U	1.03 U	1.04 U	1.01 U	1.41 U	1.07 U	4.15 J	1.57 U	4.66 J																
	value to use: Row B	1.47	1.57	1.52	1.42	1.8	3.19	36.3	1.05	1.18	1.03	1.04	1.01	1.41	1.07	4.15	1.57	4.66																
99	**congener TEC: Row C**	**1.47**	**1.57**	**0.152**	**0.142**	**0.18**	**0.0319**	**0.01089**	**0.105**	**0.0354**	**0.309**	**0.104**	**0.101**	**0.141**	**0.107**	**0.0415**	**0.0157**	**0.001398**		193%	0.0857	2.3017	4.5178	1.8484	J	**Section 2, Treatment 1**			**1.8484**	**J**	1.8484	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N09-CE12-TNBN: Row A	1.4 U	1.54 U	1.69 U	1.77 U	1.94 U	4.24 J	45.8 J	1.17 U	1.1 U	1.07 U	.853 U	.784 U	1.07 U	.889 U	3.9 J	1.44 U	6.41 J																
	value to use: Row B	1.4	1.54	1.69	1.77	1.94	4.24	45.8	1.17	1.1	1.07	0.853	0.784	1.07	0.889	3.9	1.44	6.41																
100	**congener TEC: Row C**	**1.4**	**1.54**	**0.169**	**0.177**	**0.194**	**0.0424**	**0.01374**	**0.117**	**0.033**	**0.321**	**0.0853**	**0.0784**	**0.107**	**0.0889**	**0.039**	**0.0144**	**0.001923**		191%	0.0971	2.2596	4.4221	1.8406	J	**Section 2, Treatment 1**			**1.8406**	**J**	1.8406	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		
	N09-CE12-TNBS: Row A	1.36 U	1.4 U	1.41 U	1.32 U	1.46 U	3.75 J	35.8 J	1.08 U	1.13 U	1.12 U	1.04 U	.973 U	1.3 U	1.06 U	3.58 J	1.21 U	5.62 J																
	value to use: Row B	1.36	1.4	1.41	1.32	1.46	3.75	35.8	1.08	1.13	1.12	1.04	0.973	1.3	1.06	3.58	1.21	5.62																
101	**congener TEC: Row C**	**1.36**	**1.4**	**0.141**	**0.132**	**0.146**	**0.0375**	**0.01074**	**0.108**	**0.0339**	**0.336**	**0.104**	**0.0973**	**0.13**	**0.106**	**0.0358**	**0.0121**	**0.001686**		192%	0.0857	2.1389	4.1920	1.6617	J	**Section 2, Treatment 1**			**1.6617**	**J**	1.6617	J		
	donor value to use: Row D																												Qualified	100%	Qualified	100%		
	donor TEC: Row E																												Dioxin/Furan	100%	Dioxin/Furan	100%		

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2		(Quasi) Sensitivity Analysis SECTIO	
																											Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values		"ND") may or may not be present.	
		WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	0.0001							Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U		
		Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDs	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDs	1,4,9-HpCDs	OCDF	PCB 77		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	Comment
	N09-CE12-TNNW: Row A		1.37 U	1.6 U	1.62 U	1.46 U	1.77 U	5.35 U	58.6	1.11 U	1.19 U	1.12 U	1.04 J	.874 U	1.3 U	.973 U	5.97 J	1.5 U	7.44 J														
	value to use: Row B		1.37	1.6	1.62	1.46	1.77	5.35	58.6	1.11	1.19	1.12	1.04	0.874	1.3	0.973	5.97	1.5	7.44														
102	congener TEC: Row C		1.37	1.6	0.162	0.146	0.177	0.0535	0.01758	0.111	0.0357	0.336	0.104	0.0874	0.13	0.0973	0.0597	0.015	0.002232		184%	0.1835	2.3440	4.5044	2.0135	J	Section 2, Treatment 1			**2.0135**	**J**	2.0135	J	
	donor value to use: Row D																													Qualified	100%	Qualified	100%	
	donor TEC: Row E																													Dioxin/Furan	100%	Dioxin/Furan	100%	
	N09-CE20-TNBE: Row A		.589 U	.516 U	.397 U	.406 U	.852 J	3.14 U	26.3 J	.434 U	.34 U	.31 U	.396 U	.345 U	.515 U	.366 U	2.37 J	.513 U	4.88 J														
	value to use: Row B		0.589	0.516	0.397	0.406	0.852	3.14	26.3	0.434	0.34	0.31	0.396	0.345	0.515	0.366	2.37	0.513	4.88														
103	congener TEC: Row C		0.589	0.516	0.0397	0.0406	0.0852	0.0314	0.00789	0.0434	0.0102	0.093	0.0396	0.0345	0.0515	0.0366	0.0237	0.00513	0.001464		173%	0.1183	0.8836	1.6489	0.7997	J	Section 2, Treatment 1			**0.7997**	**J**	0.7997	J	
	donor value to use: Row D																													Qualified	100%	Qualified	100%	
	donor TEC: Row E																													Dioxin/Furan	100%	Dioxin/Furan	100%	
	N09-CE20-TNBN: Row A		2.63 J	.479 U	.468 U	.481 U	1.24 J	9.4 J	90.8	.534 J	.43 U	.405 U	1.66 J	.407 J	.429 U	.486 J	10.4 J	.554 J	18.7 J														
	value to use: Row B		2.63	0.479	0.468	0.481	1.24	9.4	90.8	0.534	0.43	0.405	1.66	0.407	0.429	0.486	10.4	0.554	18.7														
104	congener TEC: Row C		2.63	0.479	0.0468	0.0481	0.124	0.094	0.02724	0.0534	0.0129	0.1215	0.166	0.0407	0.0429	0.0486	0.104	0.00554	0.00561		20%	3.2991	3.6747	4.0503	3.4425	J	Section 1	**3.4425**	**J**						
	donor value to use: Row D																													Qualified	99%					
	donor TEC: Row E																													Dioxin/Furan	100%					
	N09-CE20-TNBS: Row A		.742 U	.535 U	.483 U	.517 U	1.02 J	3.65 U	27.7 J	.496 U	.379 U	.425 J	.921 J	.456 J	.529 U	.38 U	2.81 J	.604 U	4.17 J														
	value to use: Row B		0.742	0.535	0.483	0.517	1.02	3.65	27.7	0.496	0.379	0.425	0.921	0.456	0.529	0.38	2.81	0.604	4.17														
105	congener TEC: Row C		0.742	0.535	0.0483	0.0517	0.102	0.0365	0.00831	0.0496	0.01137	0.1275	0.0921	0.0456	0.0529	0.038	0.0281	0.00604	0.001251		132%	0.4049	1.1906	1.9763	1.2532	J	Section 2, Treatment 1			**1.2532**	**J**	1.2532	J	
	donor value to use: Row D																													Qualified	100%	Qualified	100%	
	donor TEC: Row E																													Dioxin/Furan	100%	Dioxin/Furan	100%	
	N09-CE20-TNNE: Row A		.865 J	.353 U	.404 U	.425 U	.766 J	4.49 U	63.1	.31 U	.254 U	.321 J	1.13 J	.296 J	.401 U	.304 U	4.85 J	.423 U	7.95 J														
	value to use: Row B		0.865	0.353	0.404	0.425	0.766	4.49	63.1	0.31	0.254	0.321	1.13	0.296	0.401	0.304	4.85	0.423	7.95														
106	congener TEC: Row C		0.865	0.353	0.0404	0.0425	0.0766	0.0449	0.01893	0.031	0.00762	0.0963	0.113	0.0296	0.0401	0.0304	0.0485	0.00423	0.002385		38%	1.2503	1.5474	1.8445	1.3524	J	Section 1	**1.3524**	**J**						
	donor value to use: Row D																													Qualified	99%					
	donor TEC: Row E																													Dioxin/Furan	100%					
	N09-CE20-TNNW: Row A		1.44 J	.503 U	.364 U	.373 U	.95 J	5.17 U	51.6	.285 U	.346 U	.325 U	.819 J	.229 U	.325 U	.255 U	4.45 J	.464 U	6.42 J														
	value to use: Row B		1.44	0.503	0.364	0.373	0.95	5.17	51.6	0.285	0.346	0.325	0.819	0.229	0.325	0.255	4.45	0.464	6.42														
107	congener TEC: Row C		1.44	0.503	0.0364	0.0373	0.095	0.0517	0.01548	0.0285	0.01038	0.0975	0.0819	0.0229	0.0325	0.0255	0.0445	0.00464	0.001926		40%	1.6788	2.1040	2.5291	1.7639	J	Section 1	**1.7639**	**J**						
	donor value to use: Row D																													Qualified	99%					
	donor TEC: Row E																													Dioxin/Furan	100%					
	N09-CE21-TNBE: Row A		2.4 J	2.16 U	2.65 U	3.06 U	3.06 U	8.69 J	91	1.51 U	1.98 U	1.87 U	2.34 U	2.17 U	2.6 U	2.4 U	9.37 J	3.36 U	16.1 J														
	value to use: Row B		2.4	2.16	2.65	3.06	3.06	8.69	91	1.51	1.98	1.87	2.34	2.17	2.6	2.4	9.37	3.36	16.1														
108	congener TEC: Row C		2.4	2.16	0.265	0.306	0.306	0.0869	0.0273	0.151	0.0594	0.561	0.234	0.217	0.26	0.24	0.0937	0.0336	0.00483		96%	2.6127	5.0092	7.4057	3.0530	J	Section 1	**3.0530**	**J**						
	donor value to use: Row D																													Qualified	100%					
	donor TEC: Row E																													Dioxin/Furan	100%					
	N09-CE21-TNBN: Row A		2.75 J	3.62 U	3.07 U	3.17 U	3.17 U	8.39 J	116	1.95 U	2.5 U	2.3 U	3.3 J	2.15 U	2.64 U	2.3 U	10.3 J	3.46 U	19.6 J														
	value to use: Row B		2.75	3.62	3.07	3.17	3.17	8.39	116	1.95	2.5	2.3	3.3	2.15	2.64	2.3	10.3	3.46	19.6														
109	congener TEC: Row C		2.75	3.62	0.307	0.317	0.317	0.0839	0.0348	0.195	0.075	0.69	0.33	0.215	0.264	0.23	0.103	0.0346	0.00588		97%	3.3076	6.4399	9.5722	7.3016	J	Section 2, Treatment 1			**7.3016**	**J**	7.3016	J	
	donor value to use: Row D																													Qualified	100%	Qualified	100%	
	donor TEC: Row E																													Dioxin/Furan	100%	Dioxin/Furan	100%	
	N09-CE21-TNBS: Row A		2.72 U	2.69 U	3.03 U	3.18 U	3.61 U	4.49 U	65.8	1.85 U	2.12 U	2.07 U	1.91 U	1.95 U	2.5 U	2.23 U	8.05 J	3.13 U	8.66 J														
	value to use: Row B		2.72	2.69	3.03	3.18	3.61	4.49	65.8	1.85	2.12	2.07	1.91	1.95	2.5	2.23	8.05	3.13	8.66														
110	congener TEC: Row C		2.72	2.69	0.303	0.318	0.361	0.0449	0.01974	0.185	0.0636	0.621	0.191	0.195	0.25	0.223	0.0805	0.0313	0.002598		195%	0.1028	4.2012	8.2996	3.0836	J	Section 2, Treatment 1			**3.0836**	**J**	3.0836	J	
	donor value to use: Row D																													Qualified	100%	Qualified	100%	
	donor TEC: Row E																													Dioxin/Furan	100%	Dioxin/Furan	100%	
	N09-CE21-TNNE: Row A		2.17 J	1.8 U	1.97 U	2.04 U	2.06 U	11.4 J	140	1.01 U	1.59 U	1.41 U	2.18 J	1.28 U	1.68 U	1.35 U	13.3 J	2.2 U	17.4 J														
	value to use: Row B		2.17	1.8	1.97	2.04	2.06	11.4	140	1.01	1.59	1.41	2.18	1.28	1.68	1.35	13.3	2.2	17.4														
111	congener TEC: Row C		2.17	1.8	0.197	0.204	0.206	0.114	0.042	0.101	0.0477	0.423	0.218	0.128	0.168	0.135	0.133	0.022	0.00522		78%	2.6822	4.3981	6.1139	3.1025	J	Section 1	**3.1025**	**J**						
	donor value to use: Row D																													Qualified	99%					
	donor TEC: Row E																													Dioxin/Furan	100%					
	N09-CE21-TNNW: Row A		4.35 J	2.65 U	2.55 U	2.6 U	2.63 U	16.6 J	152	1.8 U	1.9 U	1.91 U	3.05 J	1.74 U	2.11 U	1.85 U	14.4 J	3.13 U	20.8 J														
	value to use: Row B		4.35	2.65	2.55	2.6	2.63	16.6	152	1.8	1.9	1.91	3.05	1.74	2.11	1.85	14.4	3.13	20.8														
112	congener TEC: Row C		4.35	2.65	0.255	0.26	0.263	0.166	0.0456	0.18	0.057	0.573	0.305	0.174	0.211	0.185	0.144	0.0313	0.00624		65%	5.0168	7.4365	9.8561	5.6579	J	Section 1	**5.6579**	**J**						
	donor value to use: Row D																													Qualified	100%					
	donor TEC: Row E																													Dioxin/Furan	100%					

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	02-CE01-TNB	2.1432	J
Line #2	02-CE01-TNB	6.8455	J
Line #3	02-CE01-TNB	1.1462	J
Line #4	02-CE01-TNN	3.4677	J
Line #5	02-CE02-TNB	1.2229	J
Line #6	02-CE02-TNB	1.1297	J
Line #7	02-CE02-TNB	0.8622	J
Line #8	02-CE02-TNN	1.1825	J
Line #9	02-CE03-TNB	1.0602	J
Line #10	02-CE03-TNB	Not calculated	
Line #11	02-CE03-TNB	0.8107	J
Line #12	02-CE03-TNN	2.2210	J
Line #13	02-CE04-TNB	1.0744	J
Line #14	02-CE04-TNB	2.5363	J
Line #15	02-CE04-TNB	0.7984	J
Line #16	02-CE04-TNN	2.2479	J
Line #17	03-CE01-TNB	1.2481	J
Line #18	03-CE01-TNB	3.1386	J
Line #19	03-CE01-TNB	1.0763	J
Line #20	03-CE01-TNN	2.7852	J
Line #21	03-CE01-TNN	2.1365783	J
Line #22	03-CE02-TNB	Not calculated	
Line #23	03-CE02-TNB	2.127712	J
Line #24	03-CE02-TNB	1.248345	J
Line #25	03-CE02-TNN	3.7273138	J
Line #26	03-CE02-TNN	2.247903	J
Line #27	03-CE03-TNB	Not calculated	
Line #28	03-CE03-TNB	1.293664	J
Line #29	03-CE03-TNB	Not calculated	
Line #30	03-CE03-TNN	2.4464325	J
Line #31	03-CE03-TNN	2.1518512	J
Line #32	03-CE04-TNB	2.7174034	J
Line #33	03-CE04-TNB	1.6521173	J
Line #34	03-CE04-TNN	1.8104811	J
Line #35	03-CE04-TNN	6.113006	J
Line #36	04-CE11-TNB	1.3427133	J
Line #37	04-CE11-TNB	1.8562909	J
Line #38	04-CE11-TNB	1.3410548	J

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC TCDD TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

| Chemical Sort Order: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | | |

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2				(Quasi) Sensitivity Analysis SECTIO	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.	
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U			
	Sample ID: **(must enter on Row A)**	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**Comment**
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**															
1	**N02-CE01-TNBE: Row A**	12.5 U	13.1 U	63.5 J	11.2 U	136 J	12.4 U	11.3 U	21.7 U		13.4 U	12.4 U	15.6 U															
	value to use: Row B	12.5	13.1	63.5	11.2	136	12.4	11.3	21.7		13.4	12.4	15.6															
	congener TEC: Row C	**0.00125**	**0.00393**	**0.001905**	**0.000336**	**0.00408**	**0.000372**	**1.13**	**0.000651**		**0.000402**	**0.372**	**0.000468**	198%	0.0060	0.7607	1.5154	Not calculated		**Insufficient Data**								Fewer than 3 detected results. Refer to KM Discussion worksheet for discussion.
	donor value to use: Row D																											
	donor TEC: Row E																											
2	**N02-CE01-TNBN: Row A**	25.7 J	.623 J	80.2	4.66 J	201 J	2.93 J	.967 J	20.7		7.41 J	.504 U	1.86 J															
	value to use: Row B	25.7	0.623	80.2	4.66	201	2.93	0.967	20.7		7.41	0.504	1.86															
	congener TEC: Row C	**0.00257**	**0.0001869**	**0.002406**	**0.0001398**	**0.00603**	**0.0000879**	**0.0967**	**0.000621**		**0.0002223**	**0.01512**	**0.0000558**	13%	0.1090	0.1166	0.1241	0.1104	J	**Section 1**	**0.1104** Qualified Dioxin/Furan	**J** 98%						
	donor value to use: Row D																											
	donor TEC: Row E																											
3	**N02-CE01-TNBS: Row A**	15.5 J	.806 U	50.5	3.3 J	123 J	2.47 J	.865 U	11.1		3.47 J	.701 U	.565 U															
	value to use: Row B	15.5	0.806	50.5	3.3	123	2.47	0.865	11.1		3.47	0.701	0.565															
	congener TEC: Row C	**0.00155**	**0.0002418**	**0.001515**	**0.000099**	**0.00369**	**0.0000741**	**0.0865**	**0.000333**		**0.0001041**	**0.02103**	**1.695E-05**	176%	0.0074	0.0613	0.1152	0.0868	J	**Section 2, Treatment 1**			**0.0868** Qualified Dioxin/Furan	**J** 98%	0.0868 Qualified Dioxin/Furan	J 98%	
	donor value to use: Row D																											
	donor TEC: Row E																											
4	**N02-CE01-TNNE: Row A**	24.9 J	1.04 U	94.6	4.73 J	225 J	3.91 J	1.14 U	22.8		7.46 J	.95 U	2.24 J															
	value to use: Row B	24.9	1.04	94.6	4.73	225	3.91	1.14	22.8		7.46	0.95	2.24															
	congener TEC: Row C	**0.00249**	**0.000312**	**0.002838**	**0.0001419**	**0.00675**	**0.0001173**	**0.114**	**0.000684**		**0.0002238**	**0.0285**	**0.0000672**	169%	0.0133	0.0847	0.1561	0.1289	J	**Section 2, Treatment 1**			**0.1289** Qualified Dioxin/Furan	**J** 98%	0.1289 Qualified Dioxin/Furan	J 98%	
	donor value to use: Row D																											
	donor TEC: Row E																											
5	**N02-CE02-TNBE: Row A**	13.9 J	.889 U	48.9	1.53 J	116 J	1.3 J	.85 U	8.63 J		3.78 J	.868 U	.666 U															
	value to use: Row B	13.9	0.889	48.9	1.53	116	1.3	0.85	8.63		3.78	0.868	0.666															
	congener TEC: Row C	**0.00139**	**0.0002667**	**0.001467**	**0.0000459**	**0.00348**	**0.000039**	**0.085**	**0.0002589**		**0.0001134**	**0.02604**	**1.998E-05**	178%	0.0067942	0.0624575	0.1181209	0.0849	J	**Section 2, Treatment 1**			**0.0849** Qualified Dioxin/Furan	**J** 99%	0.0849 Qualified Dioxin/Furan	J 99%	
	donor value to use: Row D																											
	donor TEC: Row E																											
6	**N02-CE02-TNBN: Row A**	17 J	.958 J	55.2	2.76 J	133 J	2.7 J	.719 J	11.2		3.47 J	.705 U	1.04 J															
	value to use: Row B	17	0.958	55.2	2.76	133	2.7	0.719	11.2		3.47	0.705	1.04															
	congener TEC: Row C	**0.0017**	**0.0002874**	**0.001656**	**0.0000828**	**0.00399**	**0.000081**	**0.0719**	**0.000336**		**0.0001041**	**0.02115**	**0.0000312**	23%	0.0801685	0.0907435	0.1013185	0.0811	J	**Section 1**	**0.0811** Qualified Dioxin/Furan	**J** 98%						
	donor value to use: Row D																											
	donor TEC: Row E																											
7	**N02-CE02-TNBS: Row A**	14 J	1.93 U	48.9 J	1.38 U	123	1.59 U	1.84 U	10.7		4.56 J	1.59 U	1.29 U															
	value to use: Row B	14	1.93	48.9	1.38	123	1.59	1.84	10.7		4.56	1.59	1.29															
	congener TEC: Row C	**0.0014**	**0.000579**	**0.001467**	**0.0000414**	**0.00369**	**0.0000477**	**0.184**	**0.000321**		**0.0001368**	**0.0477**	**0.0000387**	189%	0.0070	0.1232	0.2394	0.1759	J	**Section 2, Treatment 1**			**0.1759** Qualified Dioxin/Furan	**J** 98%	0.1759 Qualified Dioxin/Furan	J 98%	
	donor value to use: Row D																											
	donor TEC: Row E																											
8	**N02-CE02-TNNE: Row A**	22.5 J	2.06 U	84.5	5.33 J	205	4.67 J	1.9 U	21.8		7.69 J	2.16 U	1.75 U															
	value to use: Row B	22.5	2.06	84.5	5.33	205	4.67	1.9	21.8		7.69	2.16	1.75															
	congener TEC: Row C	**0.00225**	**0.000618**	**0.002535**	**0.0001599**	**0.00615**	**0.0001401**	**0.19**	**0.000654**		**0.0002307**	**0.0648**	**0.0000525**	183%	0.0121	0.1399	0.2676	0.1866	J	**Section 2, Treatment 1**			**0.1866** Qualified Dioxin/Furan	**J** 97%	0.1866 Qualified Dioxin/Furan	J 97%	
	donor value to use: Row D																											
	donor TEC: Row E																											
9	**N02-CE03-TNBE: Row A**	14.7 J	.991 U	51.8	1.94 J	122 J	2.3 J	.963 U	11.6		2.9 J	.768 U	.722 U															
	value to use: Row B	14.7	0.991	51.8	1.94	122	2.3	0.963	11.6		2.9	0.768	0.722															
	congener TEC: Row C	**0.00147**	**0.0002973**	**0.001554**	**0.0000582**	**0.00366**	**0.000069**	**0.0963**	**0.000348**		**0.000087**	**0.02304**	**2.166E-05**	178%	0.0072	0.0671	0.1269	0.0957	J	**Section 2, Treatment 1**			**0.0957** Qualified Dioxin/Furan	**J** 99%	0.0957 Qualified Dioxin/Furan	J 99%	
	donor value to use: Row D																											
	donor TEC: Row E																											
10	**N02-CE03-TNBN: Row A**	12.1 J	.915 U	48.3	3.32 J	118 J	3.53 J	.937 U	9.76 J		2.94 J	.815 U	.689 U															
	value to use: Row B	12.1	0.915	48.3	3.32	118	3.53	0.937	9.76		2.94	0.815	0.689															
	congener TEC: Row C	**0.00121**	**0.0002745**	**0.001449**	**0.0000996**	**0.00354**	**0.0001059**	**0.0937**	**0.0002928**		**0.0000882**	**0.02445**	**2.067E-05**	179%	0.0068	0.0660	0.1252	0.0928	J	**Section 2, Treatment 1**			**0.0928** Qualified Dioxin/Furan	**J** 99%	0.0928 Qualified Dioxin/Furan	J 99%	
	donor value to use: Row D																											
	donor TEC: Row E																											
11	**N02-CE03-TNBS: Row A**	11.8 J	1.83 U	44.6	1.37 U	107	1.52 U	1.72 U	7.64 J		4.19 J	1.64 U	1.34 U															
	value to use: Row B	11.8	1.83	44.6	1.37	107	1.52	1.72	7.64		4.19	1.64	1.34															
	congener TEC: Row C	**0.00118**	**0.000549**	**0.001338**	**0.0000411**	**0.00321**	**0.0000456**	**0.172**	**0.0002292**		**0.0001257**	**0.0492**	**0.0000402**	190%	0.0061	0.1170	0.2280	0.1640	J	**Section 2, Treatment 1**			**0.1640** Qualified Dioxin/Furan	**J** 98%	0.1640 Qualified Dioxin/Furan	J 98%	
	donor value to use: Row D																											
	donor TEC: Row E																											
12	**N02-CE03-TNNE: Row A**	21.7 J	2.61 U	71.4 J	4.79 J	197	3.77 J	2.32 U	16.6 J		5.67 J	2.51 U	2.11 U															
	value to use: Row B	21.7	2.61	71.4	4.79	197	3.77	2.32	16.6		5.67	2.51	2.11															
	congener TEC: Row C	**0.00217**	**0.000783**	**0.002142**	**0.0001437**	**0.00591**	**0.0001131**	**0.232**	**0.000498**		**0.0001701**	**0.0753**	**0.0000633**	187%	0.0111	0.1652	0.3193	0.2241	J	**Section 2, Treatment 1**			**0.2241** Qualified Dioxin/Furan	**J** 98%	0.2241 Qualified Dioxin/Furan	J 98%	
	donor value to use: Row D																											
	donor TEC: Row E																											
13	**N02-CE04-TNBE: Row A**	17.3 J	.488 U	55.2	2.71 J	136 J	2.45 J	.823 J	12.4		4.64 J	.52 U	.925 J															
	value to use: Row B	17.3	0.488	55.2	2.71	136	2.45	0.823	12.4		4.64	0.52	0.925															
	congener TEC: Row C	**0.00173**	**0.0001464**	**0.001656**	**0.0000813**	**0.00408**	**0.0000735**	**0.0823**	**0.000372**		**0.0001392**	**0.0156**	**2.775E-05**	16%	0.0904598	0.098333	0.1062062	0.0915	J	**Section 1**	**0.0915** Qualified Dioxin/Furan	**J** 98%						
	donor value to use: Row D																											
	donor TEC: Row E																											
14	**N02-CE04-TNBN: Row A**	24.7 J	.999 J	85.2	4.42 J	203 J	4.67 J	.829 J	22.3		7.34 J	.334 U	1.66 J															
	value to use: Row B	24.7	0.999	85.2	4.42	203	4.67	0.829	22.3		7.34	0.334	1.66															
	congener TEC: Row C	**0.00247**	**0.0002997**	**0.002556**	**0.0001326**	**0.00609**	**0.0001401**	**0.0829**	**0.000669**		**0.0002202**	**0.01002**	**0.0000498**	10%	0.0955274	0.1005374	0.1055474	0.0969	J	**Section 1**	**0.0969** Qualified Dioxin/Furan	**J** 97%						
	donor value to use: Row D																											
	donor TEC: Row E																											
15	**N02-CE04-TNBS: Row A**	15.5 J	.489 U	41.5	1.88 J	101 J	1.59 J	.552 J	9.46		3.39 J	.502 U	1.45 J															
	value to use: Row B	15.5	0.489	41.5	1.88	101	1.59	0.552	9.46		3.39	0.502	1.45															
	congener TEC: Row C	**0.00155**	**0.0001467**	**0.001245**	**0.0000564**	**0.00303**	**0.0000477**	**0.0552**	**0.0002838**		**0.0001017**	**0.01506**	**0.0000435**	22%	0.0616	0.0692	0.0768	0.0623	J	**Section 1**	**0.0623** Qualified Dioxin/Furan	**J** 98%						
	donor value to use: Row D																											
	donor TEC: Row E																											
16	**N02-CE04-TNNE: Row A**	24.9 J	1.16 J	77.6	3.67 J	194 J	3.55 J	.794 J	20.1		6.52 J	.455 U	1.62 J															
	value to use: Row B	24.9	1.16	77.6	3.67	194	3.55	0.794	20.1		6.52	0.455	1.62															
	congener TEC: Row C	**0.00249**	**0.000348**	**0.002328**	**0.0001101**	**0.00582**	**0.0001065**	**0.0794**	**0.000603**		**0.0001956**	**0.01365**	**0.0000486**	14%	0.0914	0.0983	0.1051	0.0928	J	**Section 1**	**0.0928** Qualified Dioxin/Furan	**J** 97%						
	donor value to use: Row D																											
	donor TEC: Row E																											
17	**N03-CE01-TNBE: Row A**	14.2 J	.995 U	42.6	1.6 J	112 J	2.28 J	.948 U	9.74 J		3.57 J	1.39 U	1.21 U															
	value to use: Row B	14.2	0.995	42.6	1.6	112	2.28	0.948	9.74		3.57	1.39	1.21															
	congener TEC: Row C	**0.00142**	**0.0002985**	**0.001278**	**0.000048**	**0.00336**	**0.0000684**	**0.0948**	**0.0002922**		**0.0001071**	**0.0417**	**0.0000363**	182%	0.0066	0.0750	0.1434	0.0937	J	**Section 2, Treatment 1**			**0.0937** Qualified Dioxin/Furan	**J** 99%	0.0937 Qualified Dioxin/Furan	J 99%	
	donor value to use: Row D																											
	donor TEC: Row E																											
18	**N03-CE01-TNBN: Row A**	23.1 J	.773 U	70.1 J	4.41 J	197 J	3.01 J	.736 U	21.2 J		7.99 J	1.2 U	1.19 J															
	value to use: Row B	23.1	0.773	70.1	4.41	197	3.01	0.736	21.2		7.99	1.2	1.19															
	congener TEC: Row C	**0.00231**	**0.0002319**	**0.002103**	**0.0001323**	**0.00591**	**0.0000903**	**0.0736**	**0.000636**		**0.0002397**	**0.036**	**0.0000357**	165%	0.0115	0.0664	0.1213	0.0864	J	**Section 2, Treatment 1**			**0.0864** Qualified Dioxin/Furan	**J** 100%	0.0864 Qualified Dioxin/Furan	J 100%	
	donor value to use: Row D																											
	donor TEC: Row E																											

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2				asi) Sensitivity Analysis SECTIO	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.	
		WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003							Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U			
	Sample ID: (must enter on Row A)		PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	Comment
19	**N03-CE01-TNBS: Row A**		15.7 J	.912 U	40.9	2.21 J	110 J	1.27 J	.673 U	9.21 J		3.99 J	.919 U	.628 U														
	value to use: Row B		15.7	0.912	40.9	2.21	110	1.27	0.673	9.21		3.99	0.919	0.628														
	congener TEC: Row C		**0.00157**	**0.0002736**	**0.001227**	**0.0000663**	**0.0033**	**0.0000381**	**0.0673**	**0.0002763**		**0.0001197**	**0.02757**	**1.884E-05**	176%	0.0066	0.0542	0.1018	0.0684	J	**Section 2, Treatment 1**			**0.0684**	**J**	0.0684	J	
	donor value to use: Row D																							Qualified	99%	Qualified	99%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
20	**N03-CE01-TNNE: Row A**		30.9 J	.868 U	102	4.65 J	268 J	4.79 J	1.02 U	31.7 J		9.98 J	1.58 U	1.03 U														
	value to use: Row B		30.9	0.868	102	4.65	268	4.79	1.02	31.7		9.98	1.58	1.03														
	congener TEC: Row C		**0.00309**	**0.0002604**	**0.00306**	**0.0001395**	**0.00804**	**0.0001437**	**0.102**	**0.000951**		**0.0002994**	**0.0474**	**0.0000309**	165%	0.0157	0.0906	0.1654	0.1095	J	**Section 2, Treatment 1**			**0.1095**	**J**	0.1095	J	
	donor value to use: Row D																							Qualified	98%	Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
21	**N03-CE01-TNNW: Row A**		26.8 J	1.08 U	85.1	4.26 J	217 J	4.27 J	.942 U	26.1 J		7.01 J	1.27 U	1.43 J														
	value to use: Row B		26.8	1.08	85.1	4.26	217	4.27	0.942	26.1		7.01	1.27	1.43														
	congener TEC: Row C		**0.00268**	**0.000324**	**0.002553**	**0.0001278**	**0.00651**	**0.0001281**	**0.0942**	**0.000783**		**0.0002103**	**0.0381**	**0.0000429**	167%	0.0130351	0.0793471	0.1456591	0.1088	J	**Section 2, Treatment 1**			**0.1088**	**J**	0.1088	J	
	donor value to use: Row D																							Qualified	98%	Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
22	**N03-CE02-TNBE: Row A**		12.2 J	.87 U	33.6 J	1.37 J	90.5 J	.845 J	.783 U	7.25 J		1.88 J	.921 U	.562 U														
	value to use: Row B		12.2	0.87	33.6	1.37	90.5	0.845	0.783	7.25		1.88	0.921	0.562														
	congener TEC: Row C		**0.00122**	**0.000261**	**0.001008**	**0.0000411**	**0.002715**	**2.535E-05**	**0.0783**	**0.0002175**		**0.0000564**	**0.02763**	**1.686E-05**	182%	0.0052834	0.0583873	0.1114912	0.0772	J	**Section 2, Treatment 1**			**0.0772**	**J**	0.0772	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
23	**N03-CE02-TNBN: Row A**		18.2 J	.931 U	49.8 J	3.11 J	143 J	2.5 J	.825 U	12.5 J		4.64 J	.997 U	.692 U														
	value to use: Row B		18.2	0.931	49.8	3.11	143	2.5	0.825	12.5		4.64	0.997	0.692														
	congener TEC: Row C		**0.00182**	**0.0002793**	**0.001494**	**0.0000933**	**0.00429**	**0.000075**	**0.0825**	**0.000375**		**0.0001392**	**0.02991**	**2.076E-05**	174%	0.0083	0.0646	0.1210	0.0841	J	**Section 2, Treatment 1**			**0.0841**	**J**	0.0841	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
24	**N03-CE02-TNBS: Row A**		11.4 J	1.19 U	28.1 J	2.02 J	76.1 J	.778 J	.883 U	7.2 J		2.97 J	1.02 U	.719 U														
	value to use: Row B		11.4	1.19	28.1	2.02	76.1	0.778	0.883	7.2		2.97	1.02	0.719														
	congener TEC: Row C		**0.00114**	**0.000357**	**0.000843**	**0.0000606**	**0.002283**	**2.334E-05**	**0.0883**	**0.000216**		**0.0000891**	**0.0306**	**2.157E-05**	186%	0.0047	0.0643	0.1239	0.0857	J	**Section 2, Treatment 1**			**0.0857**	**J**	0.0857	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
25	**N03-CE02-TNNE: Row A**		28.7 J	.948 U	72.6	3.8 J	176 J	2.89 J	.978 U	18.4 J		5.46 J	1.5 U	1.05 U														
	value to use: Row B		28.7	0.948	72.6	3.8	176	2.89	0.978	18.4		5.46	1.5	1.05														
	congener TEC: Row C		**0.00287**	**0.0002844**	**0.002178**	**0.000114**	**0.00528**	**0.0000867**	**0.0978**	**0.000552**		**0.0001638**	**0.045**	**0.0000315**	173%	0.0112	0.0828	0.1544	0.1011	J	**Section 2, Treatment 1**			**0.1011**	**J**	0.1011	J	
	donor value to use: Row D																							Qualified	99%	Qualified	99%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
26	**N03-CE02-TNNW: Row A**		28.8 J	.939 U	103	4.95 J	245 J	5.56 J	1.28 U	32.3 J		8.62 J	1.67 U	2.1 J														
	value to use: Row B		28.8	0.939	103	4.95	245	5.56	1.28	32.3		8.62	1.67	2.1														
	congener TEC: Row C		**0.00288**	**0.0002817**	**0.00309**	**0.0001485**	**0.00735**	**0.0001668**	**0.128**	**0.000969**		**0.0002586**	**0.0501**	**0.000063**	171%	0.0149	0.1041	0.1933	0.1448	J	**Section 2, Treatment 1**			**0.1448**	**J**	0.1448	J	
	donor value to use: Row D																							Qualified	98%	Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
27	**N03-CE03-TNBE: Row A**		11.1 J	1.21 U	31.5 J	1.62 J	84.7 J	.91 U	1.12 U	8.01 J		2.59 J	1.49 U	1.19 U														
	value to use: Row B		11.1	1.21	31.5	1.62	84.7	0.91	1.12	8.01		2.59	1.49	1.19														
	congener TEC: Row C		**0.00111**	**0.000363**	**0.000945**	**0.0000486**	**0.002541**	**0.0000273**	**0.112**	**0.0002403**		**0.0000777**	**0.0447**	**0.0000357**	188%	0.0050	0.0835	0.1621	0.1078	J	**Section 2, Treatment 1**			**0.1078**	**J**	0.1078	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
28	**N03-CE03-TNBN: Row A**		11.7 J	.777 U	32.5 J	1.1 J	90.2 J	.947 J	.796 U	9.04 J		3.34 J	.804 U	.505 U														
	value to use: Row B		11.7	0.777	32.5	1.1	90.2	0.947	0.796	9.04		3.34	0.804	0.505														
	congener TEC: Row C		**0.00117**	**0.0002331**	**0.000975**	**0.000033**	**0.002706**	**2.841E-05**	**0.0796**	**0.0002712**		**0.0001002**	**0.02412**	**1.515E-05**	182%	0.0053	0.0573	0.1093	0.0783	J	**Section 2, Treatment 1**			**0.0783**	**J**	0.0783	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
29	**N03-CE03-TNBS: Row A**		11.2 J	1.04 U	33.3 J	1.51 J	89 J	1.9 J	.951 U	7.59 J		3.14 J	1.31 U	.929 U														
	value to use: Row B		11.2	1.04	33.3	1.51	89	1.9	0.951	7.59		3.14	1.31	0.929														
	congener TEC: Row C		**0.00112**	**0.000312**	**0.000999**	**0.0000453**	**0.00267**	**0.000057**	**0.0951**	**0.0002277**		**0.0000942**	**0.0393**	**2.787E-05**	186%	0.0052132	0.0725831	0.1399531	0.0925	J	**Section 2, Treatment 1**			**0.0925**	**J**	0.0925	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
30	**N03-CE03-TNNE: Row A**		12.1 J	.901 U	40.2	1.85 J	102 J	1.63 J	.816 U	10.2 J		3.4 J	.868 U	.559 U														
	value to use: Row B		12.1	0.901	40.2	1.85	102	1.63	0.816	10.2		3.4	0.868	0.559														
	congener TEC: Row C		**0.00121**	**0.0002703**	**0.001206**	**0.0000555**	**0.00306**	**0.0000489**	**0.0816**	**0.000306**		**0.000102**	**0.02604**	**1.677E-05**	180%	0.0059884	0.0599519	0.1139155	0.0809	J	**Section 2, Treatment 1**			**0.0809**	**J**	0.0809	J	
	donor value to use: Row D																							Qualified	99%	Qualified	99%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
31	**N03-CE03-TNNW: Row A**		11.7 J	.813 U	34.8 J	1.5 J	96.1 J	1.39 J	.647 U	8.18 J		2.35 J	.933 U	1.29 J														
	value to use: Row B		11.7	0.813	34.8	1.5	96.1	1.39	0.647	8.18		2.35	0.933	1.29														
	congener TEC: Row C		**0.00117**	**0.0002439**	**0.001044**	**0.000045**	**0.002883**	**0.0000417**	**0.0647**	**0.0002454**		**0.0000705**	**0.02799**	**0.0000387**	179%	0.0055	0.0520	0.0985	0.0709	J	**Section 2, Treatment 1**			**0.0709**	**J**	0.0709	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
32	**N03-CE04-TNBN: Row A**		25.3 J	1.02 U	85.9	4.03 J	218 J	4.88 J	.926 U	21.8 J		7.54 J	1.48 U	.967 U														
	value to use: Row B		25.3	1.02	85.9	4.03	218	4.88	0.926	21.8		7.54	1.48	0.967														
	congener TEC: Row C		**0.00253**	**0.000306**	**0.002577**	**0.0001209**	**0.00654**	**0.0001464**	**0.0926**	**0.000654**		**0.0002262**	**0.0444**	**2.901E-05**	169%	0.0128	0.0815	0.1501	0.0979	J	**Section 2, Treatment 1**			**0.0979**	**J**	0.0979	J	
	donor value to use: Row D																							Qualified	98%	Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
33	**N03-CE04-TNBS: Row A**		6.8 J	1.16 U	28.7 J	.747 U	79.1 J	1.14 J	.928 U	5.83 J		1.51 J	1.31 U	.889 U														
	value to use: Row B		6.8	1.16	28.7	0.747	79.1	1.14	0.928	5.83		1.51	1.31	0.889														
	congener TEC: Row C		**0.00068**	**0.000348**	**0.000861**	**2.241E-05**	**0.002373**	**0.0000342**	**0.0928**	**0.0001749**		**0.0000453**	**0.0393**	**2.667E-05**	188%	0.0042	0.0704	0.1367	0.0894	J	**Section 2, Treatment 1**			**0.0894**	**J**	0.0894	J	
	donor value to use: Row D																							Qualified	100%	Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
34	**N03-CE04-TNNE: Row A**		20.6 J	1.3 U	70	3.04 J	175 J	2.99 J	1.27 U	18.4 J		4.89 J	2 U	1.3 U														
	value to use: Row B		20.6	1.3	70	3.04	175	2.99	1.27	18.4		4.89	2	1.3														
	congener TEC: Row C		**0.00206**	**0.00039**	**0.0021**	**0.0000912**	**0.00525**	**0.0000897**	**0.127**	**0.000552**		**0.0001467**	**0.06**	**0.000039**	180%	0.0103	0.1040	0.1977	0.1269	J	**Section 2, Treatment 1**			**0.1269**	**J**	0.1269	J	
	donor value to use: Row D																							Qualified	99%	Qualified	99%	
	donor TEC: Row E																							Dioxin/Furan		Dioxin/Furan		
35	**N03-CE04-TNNW: Row A**		35.2 J	1.02 U	123	7.08 J	317 J	5.46 J	1.12 J	37.3 J		11.1 J	1.52 U	2.77 J														
	value to use: Row B		35.2	1.02	123	7.08	317	5.46	1.12	37.3		11.1	1.52	2.77														
	congener TEC: Row C		**0.00352**	**0.000306**	**0.00369**	**0.0002124**	**0.00951**	**0.0001638**	**0.112**	**0.001119**		**0.000333**	**0.0456**	**0.0000831**	30%	0.1306	0.1536	0.1765	0.1329	J	**Section 1**	**0.1329**	**J**					
	donor value to use: Row D																					Qualified	98%					
	donor TEC: Row E																					Dioxin/Furan						

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

																				(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2				asi) Sensitivity Analysis SECTIO	
																				Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.	
	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29														
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003							Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U			
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	Comment
															U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ							
	N04-CE11-TNBE: Row A	6.59 J	1.07 U	21.3 J	.87 U	68.8	.985 U	.972 U	6.67 J		2.15 J	.912 U	.964 U															
	value to use: Row B	6.59	1.07	21.3	0.87	68.8	0.985	0.972	6.67		2.15	0.912	0.964															
36	congener TEC: Row C	0.000659	0.000321	0.000639	0.0000261	0.002064	2.955E-05	0.0972	0.0002001		0.0000645	0.02736	2.892E-05	189%	0.0036	0.0661	0.1286	0.0929	J	Section 2, Treatment 1			**0.0929**	**J**	0.0929	J		
	donor value to use: Row D																						Qualified	98%	Qualified	98%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE11-TNBN: Row A	22.9 J	.783 U	83.7	3.68 J	212	4.18 J	.854 U	21.7 J		7.02 J	.71 U	1.5 J															
	value to use: Row B	22.9	0.783	83.7	3.68	212	4.18	0.854	21.7		7.02	0.71	1.5															
37	congener TEC: Row C	0.00229	0.0002349	0.002511	0.0001104	0.00636	0.0001254	0.0854	0.000651		0.0002106	0.0213	0.000045	163%	0.0123034	0.0657709	0.1192383	0.0992	J	Section 2, Treatment 1			**0.0992**	**J**	0.0992	J		
	donor value to use: Row D																						Qualified	93%	Qualified	93%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE11-TNBS: Row A	7.88 J	.984 U	33.4 J	1.56 J	89.9	.94 U	.937 U	7.38 J		2.69 J	.782 U	.856 U															
	value to use: Row B	7.88	0.984	33.4	1.56	89.9	0.94	0.937	7.38		2.69	0.782	0.856															
38	congener TEC: Row C	0.000788	0.0002952	0.001002	0.0000468	0.002697	0.0000282	0.0937	0.0002214		0.0000807	0.02346	2.568E-05	185%	0.0048359	0.0635904	0.122345	0.0909	J	Section 2, Treatment 1			**0.0909**	**J**	0.0909	J		
	donor value to use: Row D																						Qualified	98%	Qualified	98%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE11-TNNW: Row A	16.3 J	.464 U	44.1	2.24 J	112 J	2.32 U	.711 U	11 J		4.58 J	.448 U	1.35 U															
	value to use: Row B	16.3	0.464	44.1	2.24	112	2.32	0.711	11		4.58	0.448	1.35															
39	congener TEC: Row C	0.00163	0.0001392	0.001323	0.0000672	0.00336	0.0000696	0.0711	0.00033		0.0001374	0.01344	0.0000405	172%	0.0068	0.0492	0.0916	0.0722	J	Section 2, Treatment 1			**0.0722**	**J**	0.0722	J		
	donor value to use: Row D																						Qualified	99%	Qualified	99%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE12-TNBE: Row A	10.8 J	.755 J	42.8	2.5 J	106 J	2.58 U	.437 U	12.7 J		3.96 J	.332 U	.821 U															
	value to use: Row B	10.8	0.755	42.8	2.5	106	2.58	0.437	12.7		3.96	0.332	0.821															
40	congener TEC: Row C	0.00108	0.0002265	0.001284	0.000075	0.00318	0.0000774	0.0437	0.000381		0.0001188	0.00996	2.463E-05	162%	0.0063	0.0332	0.0601	0.0465	J	Section 2, Treatment 1			**0.0465**	**J**	0.0465	J		
	donor value to use: Row D																						Qualified	98%	Qualified	98%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE12-TNBN: Row A	7.72 J	.973 U	27.2 J	.905 U	85.5	1.03 U	1.01 U	8.27 J		2.97 J	.896 U	.915 U															
	value to use: Row B	7.72	0.973	27.2	0.905	85.5	1.03	1.01	8.27		2.97	0.896	0.915															
41	congener TEC: Row C	0.000772	0.0002919	0.000816	2.715E-05	0.002565	0.0000309	0.101	0.0002481		0.0000891	0.02688	2.745E-05	187%	0.0045	0.0686	0.1327	0.0972	J	Section 2, Treatment 1			**0.0972**	**J**	0.0972	J		
	donor value to use: Row D																						Qualified	98%	Qualified	98%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE12-TNBS: Row A	6.58 J	.414 U	24.8 J	1.57 J	62.7 J	1.1 U	.425 U	6.07 U		1.82 J	.383 U	.388 U															
	value to use: Row B	6.58	0.414	24.8	1.57	62.7	1.1	0.425	6.07		1.82	0.383	0.388															
42	congener TEC: Row C	0.000658	0.0001242	0.000744	0.0000471	0.001881	0.000033	0.0425	0.0001821		0.0000546	0.01149	1.164E-05	178%	0.0034	0.0306	0.0577	0.0424	J	Section 2, Treatment 1			**0.0424**	**J**	0.0424	J		
	donor value to use: Row D																						Qualified	100%	Qualified	100%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE12-TNNE: Row A	10.9 J	.48 U	43.6	1.47 J	107 J	2.04 U	.49 U	12 J		3.89 J	.446 U	1 U															
	value to use: Row B	10.9	0.48	43.6	1.47	107	2.04	0.49	12		3.89	0.446	1															
43	congener TEC: Row C	0.00109	0.000144	0.001308	0.0000441	0.00321	0.0000612	0.049	0.00036		0.0001167	0.01338	0.00003	167%	0.0061	0.0374	0.0687	0.0512	J	Section 2, Treatment 1			**0.0512**	**J**	0.0512	J		
	donor value to use: Row D																						Qualified	98%	Qualified	98%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE12-TNNW: Row A	8.39 J	.35 U	26 J	1.25 J	69.6 J	1.66 U	.382 U	6.97 U		2.44 J	.339 U	.351 U															
	value to use: Row B	8.39	0.35	26	1.25	69.6	1.66	0.382	6.97		2.44	0.339	0.351															
44	congener TEC: Row C	0.000839	0.000105	0.00078	0.0000375	0.002088	0.0000498	0.0382	0.0002091		0.0000732	0.01017	1.053E-05	173%	0.0038	0.0282	0.0526	0.0389	J	Section 2, Treatment 1			**0.0389**	**J**	0.0389	J		
	donor value to use: Row D																						Qualified	100%	Qualified	100%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE20-TNBE: Row A	10.5 J	.627 U	39.1	1.68 J	98.2	.882 J	.683 U	9.59 J		2.36 J	.627 U	.585 U															
	value to use: Row B	10.5	0.627	39.1	1.68	98.2	0.882	0.683	9.59		2.36	0.627	0.585															
45	congener TEC: Row C	0.00105	0.0001881	0.001173	0.0000504	0.002946	2.646E-05	0.0683	0.0002877		0.0000708	0.01881	1.755E-05	177%	0.0056044	0.0492622	0.09292	0.0683	J	Section 2, Treatment 1			**0.0683**	**J**	0.0683	J		
	donor value to use: Row D																						Qualified	96%	Qualified	96%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE20-TNBN: Row A	20 J	.789 U	82.2	3.6 J	207	2.29 J	.806 U	22.4 J		6.76 J	.728 U	1.91 J															
	value to use: Row B	20	0.789	82.2	3.6	207	2.29	0.806	22.4		6.76	0.728	1.91															
46	congener TEC: Row C	0.002	0.0002367	0.002466	0.000108	0.00621	0.0000687	0.0806	0.000672		0.0002028	0.02184	0.0000573	163%	0.0117848	0.0631232	0.1144615	0.0938	J	Section 2, Treatment 1			**0.0938**	**J**	0.0938	J		
	donor value to use: Row D																						Qualified	92%	Qualified	92%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE20-TNBS: Row A	9.05 J	.702 U	36.1 J	1.7 J	90.6	1.58 J	.683 U	7.39 J		3.18 J	.611 U	.545 U															
	value to use: Row B	9.05	0.702	36.1	1.7	90.6	1.58	0.683	7.39		3.18	0.611	0.545															
47	congener TEC: Row C	0.000905	0.0002106	0.001083	0.000051	0.002718	0.0000474	0.0683	0.0002217		0.0000954	0.01833	1.635E-05	179%	0.0051	0.0485	0.0920	0.0678	J	Section 2, Treatment 1			**0.0678**	**J**	0.0678	J		
	donor value to use: Row D																						Qualified	97%	Qualified	97%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE20-TNNE: Row A	21 J	.672 U	66.2	2.65 J	165	2.65 J	.67 J	17.4 J		5.55 J	.642 U	.576 U															
	value to use: Row B	21	0.672	66.2	2.65	165	2.65	0.67	17.4		5.55	0.642	0.576															
48	congener TEC: Row C	0.0021	0.0002016	0.001986	0.0000795	0.00495	0.0000795	0.067	0.000522		0.0001665	0.01926	1.728E-05	22%	0.0769	0.0866	0.0964	0.0781	J	Section 1	**0.0781**	**J**						
	donor value to use: Row D																				Qualified	93%						
	donor TEC: Row E																				Dioxin/Furan							
	N04-CE20-TNNW: Row A	53.4	1.44 U	180	9.41 J	428	7.43 J	1.92 J	45.7 J		13.9 J	2 U	3.75 J															
	value to use: Row B	53.4	1.44	180	9.41	428	7.43	1.92	45.7		13.9	2	3.75															
49	congener TEC: Row C	0.00534	0.000432	0.0054	0.0002823	0.01284	0.0002229	0.192	0.001371		0.000417	0.06	0.0001125	24%	0.2180	0.2482	0.2784	0.2212	J	Section 1	**0.2212**	**J**						
	donor value to use: Row D																				Qualified	92%						
	donor TEC: Row E																				Dioxin/Furan							
	N04-CE21-TNBE: Row A	30.1 J	.643 U	31.8 J	1.7 J	80	.637 J	.603 U	7.73 J		2.39 J	.538 U	.474 U															
	value to use: Row B	30.1	0.643	31.8	1.7	80	0.637	0.603	7.73		2.39	0.538	0.474															
50	congener TEC: Row C	0.00301	0.0001929	0.000954	0.000051	0.0024	1.911E-05	0.0603	0.0002319		0.0000717	0.01614	1.422E-05	170%	0.0067	0.0451	0.0834	0.0621	J	Section 2, Treatment 1			**0.0621**	**J**	0.0621	J		
	donor value to use: Row D																						Qualified	97%	Qualified	97%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE21-TNBN: Row A	9.05 J	.614 U	30.4 J	1.33 J	82.4	1.36 J	.577 U	6.62 J		2.95 J	.481 U	.446 U															
	value to use: Row B	9.05	0.614	30.4	1.33	82.4	1.36	0.577	6.62		2.95	0.481	0.446															
51	congener TEC: Row C	0.000905	0.0001842	0.000912	0.0000399	0.002472	0.0000408	0.0577	0.0001986		0.0000885	0.01443	1.338E-05	177%	0.0047	0.0408	0.0770	0.0576	J	Section 2, Treatment 1			**0.0576**	**J**	0.0576	J		
	donor value to use: Row D																						Qualified	97%	Qualified	97%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N04-CE21-TNBS: Row A	16.7 J	.76 U	38.9	1.88 J	103	1.28 J	.711 U	9.91 J		3.31 J	.645 U	.575 U															
	value to use: Row B	16.7	0.76	38.9	1.88	103	1.28	0.711	9.91		3.31	0.645	0.575															
52	congener TEC: Row C	0.00167	0.000228	0.001167	0.0000564	0.00309	0.0000384	0.0711	0.0002973		0.0000993	0.01935	1.725E-05	175%	0.0064	0.0518	0.0971	0.0717	J	Section 2, Treatment 1			**0.0717**	**J**	0.0717	J		
	donor value to use: Row D																						Qualified	96%	Qualified	96%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

																			(Quasi) Sensitivity Analysis SECTION 1			(Quasi) Sensitivity Analysis SECTION 2				asi) Sensitivity Analysis SECTIO
																			Highest TEC value is a DETECT, and there are no rejected ("R") values			Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present
	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29														
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003						Treatment 1			Treatment 1: Make highest U value a D			Treatment 2: Substitute comparable "donor" value for highest U		
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution U = 0 & sum	TEQs from Substitution U = 1/2 DL & sum	TEQs from Substitution U = DL & sum	KM Method Sample KM TEQ	KM Method Qualifier	KM Method Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions		KM TEQ	Qualifier and Qualifier Fractions		KM TEQ	Qualifier and Qualifier Fractions		Comment
	N04-CE21-TNNE: Row A	8.86 J	.452 U	28.6 J	1.09 J	74.5	1.1 J	.456 U	7.54 J		2.54 J	.374 U	.349 U															
	value to use: Row B	8.86	0.452	28.6	1.09	74.5	1.1	0.456	7.54		2.54	0.374	0.349															
53	congener TEC: Row C	0.000886	0.0001356	0.000858	0.0000327	0.002235	0.000033	0.0456	0.0002262		0.0000762	0.01122	1.047E-05	174%	0.0043	0.0328	0.0613	0.0462	J	Section 2, Treatment 1				0.0462	J		0.0462	J	
	donor value to use: Row D																							Qualified	96%		Qualified	96%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N04-CE21-TNNW: Row A	10 J	.715 U	41.4	1.82 J	109	1.04 J	.715 U	11.4 J		3.63 J	.637 U	.508 U															
	value to use: Row B	10	0.715	41.4	1.82	109	1.04	0.715	11.4		3.63	0.637	0.508															
54	congener TEC: Row C	0.001	0.0002145	0.001242	0.0000546	0.00327	0.0000312	0.0715	0.000342		0.0001089	0.01911	1.524E-05	176%	0.0060	0.0515	0.0969	0.0717	J	Section 2, Treatment 1				0.0717	J		0.0717	J	
	donor value to use: Row D																							Qualified	95%		Qualified	95%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE01-TNBE: Row A	14.3 J	.958 U	39.4 J	.776 U	107 J	2.13 J	.811 U	10.1 J		4.97 J	1.09 U	.85 U															
	value to use: Row B	14.3	0.958	39.4	0.776	107	2.13	0.811	10.1		4.97	1.09	0.85															
55	congener TEC: Row C	0.00143	0.0002874	0.001182	2.328E-05	0.00321	0.0000639	0.0811	0.000303		0.0001491	0.0327	0.0000255	180%	0.0063	0.0634	0.1205	0.0808	J	Section 2, Treatment 1				0.0808	J		0.0808	J	
	donor value to use: Row D																							Qualified	100%		Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE01-TNBN: Row A	14.6 J	1.26 U	47.5	1.01 U	121	1.08 U	1.19 U	13.9 J		4.04 J	1.82 U	1.56 U															
	value to use: Row B	14.6	1.26	47.5	1.01	121	1.08	1.19	13.9		4.04	1.82	1.56															
56	congener TEC: Row C	0.00146	0.000378	0.001425	0.0000303	0.00363	0.0000324	0.119	0.000417		0.0001212	0.0546	0.0000468	185%	0.0071	0.0941	0.1811	0.1163	J	Section 2, Treatment 1				0.1163	J		0.1163	J	
	donor value to use: Row D																							Qualified	97%		Qualified	97%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE01-TNBS: Row A	9.18 J	.905 U	21.6 J	.701 U	62.3 J	.804 U	.711 U	5.93 J		2.19 J	.743 U	.764 U															
	value to use: Row B	9.18	0.905	21.6	0.701	62.3	0.804	0.711	5.93		2.19	0.743	0.764															
57	congener TEC: Row C	0.000918	0.0002715	0.000648	2.103E-05	0.001869	2.412E-05	0.0711	0.0001779		0.0000657	0.02229	2.292E-05	185%	0.0037	0.0505	0.0974	0.0690	J	Section 2, Treatment 1				0.0690	J		0.0690	J	
	donor value to use: Row D																							Qualified	100%		Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE01-TNNE: Row A	18.6 J	1.07 U	58.7	4.48 J	138	3.44 J	1.1 U	15.5 U		4.3 J	1.54 U	1.53 U															
	value to use: Row B	18.6	1.07	58.7	4.48	138	3.44	1.1	15.5		4.3	1.54	1.53															
58	congener TEC: Row C	0.00186	0.000321	0.001761	0.0001344	0.00414	0.0001032	0.11	0.000465		0.000129	0.0462	0.0000459	181%	0.0081	0.0866	0.1652	0.1092	J	Section 2, Treatment 1				0.1092	J		0.1092	J	
	donor value to use: Row D																							Qualified	96%		Qualified	96%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE01-TNNW: Row A	18.4 J	1.07 U	53.5	3.52 J	137	3.54 J	1.08 U	10.7 J		6.27 J	1.58 U	1.47 U															
	value to use: Row B	18.4	1.07	53.5	3.52	137	3.54	1.08	10.7		6.27	1.58	1.47															
59	congener TEC: Row C	0.00184	0.000321	0.001605	0.0001056	0.00411	0.0001062	0.108	0.000321		0.0001881	0.0474	0.0000441	181%	0.0083	0.0862	0.1640	0.1075	J	Section 2, Treatment 1				0.1075	J		0.1075	J	
	donor value to use: Row D																							Qualified	97%		Qualified	97%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE02-TNBE: Row A	11.7 J	.841 U	41.5	.642 U	103 J	2.19 J	.716 U	11.3 J		3.9 J	.998 U	.772 U															
	value to use: Row B	11.7	0.841	41.5	0.642	103	2.19	0.716	11.3		3.9	0.998	0.772															
60	congener TEC: Row C	0.00117	0.0002523	0.001245	1.926E-05	0.00309	0.0000657	0.0716	0.000339		0.000117	0.02994	2.316E-05	179%	0.0060	0.0569	0.1079	0.0718	J	Section 2, Treatment 1				0.0718	J		0.0718	J	
	donor value to use: Row D																							Qualified	99%		Qualified	99%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE02-TNBN: Row A	13.3 J	.971 U	35.2 J	2.14 J	86.8	1.87 J	.754 U	8.77 J		2.23 J	1.38 U	.663 U															
	value to use: Row B	13.3	0.971	35.2	2.14	86.8	1.87	0.754	8.77		2.23	1.38	0.663															
61	congener TEC: Row C	0.00133	0.0002913	0.001056	0.0000642	0.002604	0.0000561	0.0754	0.0002631		0.0000669	0.0414	1.989E-05	183%	0.0054	0.0640	0.1226	0.0747	J	Section 2, Treatment 1				0.0747	J		0.0747	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE02-TNBS: Row A	10.7 J	.796 U	25.9 J	1.28 J	69.2 J	2.05 J	.642 U	8.98 J		3.33 J	.603 U	.618 U															
	value to use: Row B	10.7	0.796	25.9	1.28	69.2	2.05	0.642	8.98		3.33	0.603	0.618															
62	congener TEC: Row C	0.00107	0.0002388	0.000777	0.0000384	0.002076	0.0000615	0.0642	0.0002694		0.0000999	0.01809	1.854E-05	181%	0.0044	0.0457	0.0869	0.0633	J	Section 2, Treatment 1				0.0633	J		0.0633	J	
	donor value to use: Row D																							Qualified	100%		Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE02-TNNE: Row A	9.37 J	.988 U	33.5 U	.794 J	101	1.31 J	.908 U	10.3 U		.969 U	1.4 U	1.06 U															
	value to use: Row B	9.37	0.988	33.5	0.794	101	1.31	0.908	10.3		0.969	1.4	1.06															
63	congener TEC: Row C	0.000937	0.0002964	0.001005	2.382E-05	0.00303	0.0000393	0.0908	0.000309		2.907E-05	0.042	0.0000318	189%	0.0040	0.0713	0.1385	0.0956	J	Section 2, Treatment 1				0.0956	J		0.0956	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE02-TNNW: Row A	16.9 J	1.1 U	40.2	2.74 J	108	2.28 J	1.23 U	9.39 J		4.43 J	1.65 U	1.75 U															
	value to use: Row B	16.9	1.1	40.2	2.74	108	2.28	1.23	9.39		4.43	1.65	1.75															
64	congener TEC: Row C	0.00169	0.00033	0.001206	0.0000822	0.00324	0.0000684	0.123	0.0002817		0.0001329	0.0495	0.0000525	186%	0.0067	0.0931	0.1796	0.1197	J	Section 2, Treatment 1				0.1197	J		0.1197	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE03-TNBE: Row A	10.4 J	1.15 U	24.7 J	.873 U	81 J	1.58 J	.915 U	7.48 J		2.24 J	1.01 U	1.02 U															
	value to use: Row B	10.4	1.15	24.7	0.873	81	1.58	0.915	7.48		2.24	1.01	1.02															
65	congener TEC: Row C	0.00104	0.000345	0.000741	2.619E-05	0.00243	0.0000474	0.0915	0.0002244		0.0000672	0.0303	0.0000306	186%	0.0046	0.0657	0.1268	0.0886	J	Section 2, Treatment 1				0.0886	J		0.0886	J	
	donor value to use: Row D																							Qualified	100%		Qualified	100%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE03-TNBN: Row A	12.9 J	.76 U	32.2 J	1.61 J	87.5	1.44 J	.733 U	8.1 J		2.63 J	1.13 U	.694 U															
	value to use: Row B	12.9	0.76	32.2	1.61	87.5	1.44	0.733	8.1		2.63	1.13	0.694															
66	congener TEC: Row C	0.00129	0.000228	0.000966	0.0000483	0.002625	0.0000432	0.0733	0.000243		0.0000789	0.0339	2.082E-05	182%	0.0053	0.0590	0.1127	0.0726	J	Section 2, Treatment 1				0.0726	J		0.0726	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE03-TNBS: Row A	12.2 J	.781 U	28.3 J	1.96 J	75.1	1.54 J	.688 U	8.03 J		2.58 J	.722 U	.696 U															
	value to use: Row B	12.2	0.781	28.3	1.96	75.1	1.54	0.688	8.03		2.58	0.722	0.696															
67	congener TEC: Row C	0.00122	0.0002343	0.000849	0.0000588	0.002253	0.0000462	0.0688	0.0002409		0.0000774	0.02166	2.088E-05	181%	0.0047	0.0501	0.0955	0.0679	J	Section 2, Treatment 1				0.0679	J		0.0679	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE03-TNNE: Row A	11.4 J	1.19 U	29.7 U	1.26 J	76.1	.87 U	.836 U	6.28 U		.883 U	1.12 U	.863 U															
	value to use: Row B	11.4	1.19	29.7	1.26	76.1	0.87	0.836	6.28		0.883	1.12	0.863															
68	congener TEC: Row C	0.00114	0.000357	0.000891	0.0000378	0.002283	0.0000261	0.0836	0.0001884		2.649E-05	0.0336	2.589E-05	189%	0.0035	0.0628	0.1222	0.0802	J	Section 2, Treatment 1				0.0802	J		0.0802	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		
	N05-CE03-TNNW: Row A	13.5 J	.878 U	36 J	2.43 J	78.9	.987 J	.826 U	10.1 J		3.27 J	1.57 U	.897 U															
	value to use: Row B	13.5	0.878	36	2.43	78.9	0.987	0.826	10.1		3.27	1.57	0.897															
69	congener TEC: Row C	0.00135	0.0002634	0.00108	0.0000729	0.002367	2.961E-05	0.0826	0.000303		0.0000981	0.0471	2.691E-05	185%	0.0053	0.0703	0.1353	0.0811	J	Section 2, Treatment 1				0.0811	J		0.0811	J	
	donor value to use: Row D																							Qualified	98%		Qualified	98%	
	donor TEC: Row E																							Dioxin/Furan			Dioxin/Furan		

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

																			(Quasi) Sensitivity Analysis SECTION 1			(Quasi) Sensitivity Analysis SECTION 2			asi) Sensitivity Analysis SECTIO	
																			Highest TEC value is a DETECT, and there are no rejected ("R") values			Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			"ND") may or may not be present.	
	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29						Treatment 1			Treatment 1: Make highest U value a D			Treatment 2: Substitute comparable "donor" value for highest U		
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003			TEQs from Substitution			KM Method								
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions		KM TEQ	Qualifier and Qualifier Fractions		KM TEQ	Qualifier and Qualifier Fractions		Comment
	N05-CE04-TNBN: Row A	20.2 J	.965 U	57.9	4.01 J	143	2.65 J	.723 U	16.2 J		6.89 J	1.41 U	.876 U																
	value to use: Row B	20.2	0.965	57.9	4.01	143	2.65	0.723	16.2		6.89	1.41	0.876																
70	**congener TEC: Row C**	0.00202	0.0002895	0.001737	0.0001203	0.00429	0.0000795	0.0723	0.000486		0.0002067	0.0423	2.628E-05	173%		0.0089	0.0664	0.1239	0.0754	J	Section 2, Treatment 1				**0.0754**	**J**		0.0754	J	
	donor value to use: Row D																								Qualified	95%		Qualified	95%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N05-CE04-TNBS: Row A	10.6 J	.888 U	25.1 J	2 J	67.8	1.67 J	.62 U	7.21 J		1.88 J	.795 U	.634 U																
	value to use: Row B	10.6	0.888	25.1	2	67.8	1.67	0.62	7.21		1.88	0.795	0.634																
71	**congener TEC: Row C**	0.00106	0.0002664	0.000753	0.00006	0.002034	0.0000501	0.062	0.0002163		0.0000564	0.02385	1.902E-05	182%		0.0042	0.0473	0.0904	0.0612	J	Section 2, Treatment 1				**0.0612**	**J**		0.0612	J	
	donor value to use: Row D																								Qualified	98%		Qualified	98%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N05-CE04-TNNE: Row A	14.2 J	1.58 U	53.6	1.6 J	130	5.34 J	1.24 U	15.4 U		5.31 J	1.81 U	1.67 U																
	value to use: Row B	14.2	1.58	53.6	1.6	130	5.34	1.24	15.4		5.31	1.81	1.67																
72	**congener TEC: Row C**	0.00142	0.000474	0.001608	0.000048	0.0039	0.0001602	0.124	0.000462		0.0001593	0.0543	0.0000501	185%		0.0073	0.0969	0.1866	0.1324	J	Section 2, Treatment 1				**0.1324**	**J**		0.1324	J	
	donor value to use: Row D																								Qualified	97%		Qualified	97%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N05-CE04-TNNW: Row A	22.5 J	.95 U	69.1	4.15 J	161	2.76 J	1.06 U	18.4 J		6.8 J	1.28 U	1.14 U																
	value to use: Row B	22.5	0.95	69.1	4.15	161	2.76	1.06	18.4		6.8	1.28	1.14																
73	**congener TEC: Row C**	0.00225	0.000285	0.002073	0.0001245	0.00483	0.0000828	0.106	0.000552		0.000204	0.0384	0.0000342	175%		0.0101	0.0825	0.1548	0.1075	J	Section 2, Treatment 1				**0.1075**	**J**		0.1075	J	
	donor value to use: Row D																								Qualified	96%		Qualified	96%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE01-TNBE: Row A	11.7 J	.64 U	34.7 J	2.15 J	93.2 J	1.58 J	.443 U	7.93 J		2.74 J	.392 U	.773 J																
	value to use: Row B	11.7	0.64	34.7	2.15	93.2	1.58	0.443	7.93		2.74	0.392	0.773																
74	**congener TEC: Row C**	0.00117	0.000192	0.001041	0.0000645	0.002796	0.0000474	0.0443	0.0002379		0.0000822	0.01176	2.319E-05	167%		0.0055	0.0336	0.0617	0.0504	J	Section 2, Treatment 1				**0.0504**	**J**		0.0504	J	
	donor value to use: Row D																								Qualified	100%		Qualified	100%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE01-TNBN: Row A	24.2 J	.624 J	79.3	4.12 J	197 J	4.41 J	1.33 J	20.1 J		6.27 J	.719 U	1.62 J																
	value to use: Row B	24.2	0.624	79.3	4.12	197	4.41	1.33	20.1		6.27	0.719	1.62																
75	**congener TEC: Row C**	0.00242	0.0001872	0.002379	0.0001236	0.00591	0.0001323	0.133	0.000603		0.0001881	0.02157	0.0000486	14%		0.1450	0.1558	0.1666	0.1463	J	Section 1	**0.1463**	**J**							
	donor value to use: Row D																					Qualified	99%							
	donor TEC: Row E																					Dioxin/Furan								
	N07-CE01-TNBS: Row A	14.8 J	.846 U	41.1	1.91 J	109 J	1.84 J	.572 U	9.39 J		2.77 J	.609 U	.476 U																
	value to use: Row B	14.8	0.846	41.1	1.91	109	1.84	0.572	9.39		2.77	0.609	0.476																
76	**congener TEC: Row C**	0.00148	0.0002538	0.001233	0.0000573	0.00327	0.0000552	0.0572	0.0002817		0.0000831	0.01827	1.428E-05	171%		0.0065	0.0443	0.0822	0.0590	J	Section 2, Treatment 1				**0.0590**	**J**		0.0590	J	
	donor value to use: Row D																								Qualified	98%		Qualified	98%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE01-TNNE: Row A	29.4 J	.598 U	84.2 J	5.11 J	200 J	4.38 J	.9 J	21.7 J		7.6 J	.347 J	1.68 J																
	value to use: Row B	29.4	0.598	84.2	5.11	200	4.38	0.9	21.7		7.6	0.347	1.68																
77	**congener TEC: Row C**	0.00294	0.0001794	0.002526	0.0001533	0.006	0.0001314	0.09	0.000651		0.000228	0.01041	0.0000504	0%		0.1131	0.1132	0.1133	0.1132	J	Section 1	**0.1132**	**J**							
	donor value to use: Row D																					Qualified	100%							
	donor TEC: Row E																					Dioxin/Furan								
	N07-CE01-TNNW: Row A	33.6 J	.777 U	95.4	3.92 J	251 J	5.08 J	.48 U	25.2 J		8.12 J	.677 U	1.95 J																
	value to use: Row B	33.6	0.777	95.4	3.92	251	5.08	0.48	25.2		8.12	0.677	1.95																
78	**congener TEC: Row C**	0.00336	0.0002331	0.002862	0.0001176	0.00753	0.0001524	0.048	0.000756		0.0002436	0.02031	0.0000585	139%		0.0151	0.0494	0.0836	0.0649	J	Section 2, Treatment 1				**0.0649**	**J**		0.0649	J	
	donor value to use: Row D																								Qualified	97%		Qualified	97%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE02-TNBE: Row A	4.7 J	.692 U	15.6 J	.489 U	45.5 J	.835 J	.49 U	4.35 J		.934 J	.396 U	.599 J																
	value to use: Row B	4.7	0.692	15.6	0.489	45.5	0.835	0.49	4.35		0.934	0.396	0.599																
79	**congener TEC: Row C**	0.00047	0.0002076	0.000468	1.467E-05	0.001365	2.505E-05	0.049	0.0001305		2.802E-05	0.01188	1.797E-05	185%		0.0025	0.0331	0.0636	0.0475	J	Section 2, Treatment 1				**0.0475**	**J**		0.0475	J	
	donor value to use: Row D																								Qualified	100%		Qualified	100%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE02-TNBN: Row A	26.6 J	.65 J	66.8 J	2.58 J	169 J	3.64 J	.533 J	16.9 J		5.67 J	.386 U	1.29 J																
	value to use: Row B	26.6	0.65	66.8	2.58	169	3.64	0.533	16.9		5.67	0.386	1.29																
80	**congener TEC: Row C**	0.00266	0.000195	0.002004	0.0000774	0.00507	0.0001092	0.0533	0.000507		0.0001701	0.01158	0.0000387	17%		0.0641	0.0699	0.0757	0.0653	J	Section 1	**0.0653**	**J**							
	donor value to use: Row D																					Qualified	100%							
	donor TEC: Row E																					Dioxin/Furan								
	N07-CE02-TNBS: Row A	19.7 J	1.37 J	41.5 J	.578 U	133 J	2.51 J	.474 J	12.2 J		4.54 J	.642 U	.447 U																
	value to use: Row B	19.7	1.37	41.5	0.578	133	2.51	0.474	12.2		4.54	0.642	0.447																
81	**congener TEC: Row C**	0.00197	0.000411	0.001245	1.734E-05	0.00399	0.0000753	0.0474	0.000366		0.0001362	0.01926	1.341E-05	30%		0.0556	0.0652	0.0749	0.0565	J	Section 1	**0.0565**	**J**							
	donor value to use: Row D																					Qualified	100%							
	donor TEC: Row E																					Dioxin/Furan								
	N07-CE02-TNNE: Row A	23.5 J	.808 U	74.9	4.49 J	180 J	3.04 J	.597 U	20 J		6.93 J	.585 U	1.83 J																
	value to use: Row B	23.5	0.808	74.9	4.49	180	3.04	0.597	20		6.93	0.585	1.83																
82	**congener TEC: Row C**	0.00235	0.0002424	0.002247	0.0001347	0.0054	0.0000912	0.0597	0.0006		0.0002079	0.01755	0.0000549	156%		0.0111	0.0498	0.0886	0.0722	J	Section 2, Treatment 1				**0.0722**	**J**		0.0722	J	
	donor value to use: Row D																								Qualified	97%		Qualified	97%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE02-TNNW: Row A	23.4 J	.846 U	73.5	3.76 J	191 J	2.78 J	.731 U	19.1 J		7.19 J	.825 U	.538 U																
	value to use: Row B	23.4	0.846	73.5	3.76	191	2.78	0.731	19.1		7.19	0.825	0.538																
83	**congener TEC: Row C**	0.00234	0.0002538	0.002205	0.0001128	0.00573	0.0000834	0.0731	0.000573		0.0002157	0.02475	1.614E-05	163%		0.0113	0.0603	0.1094	0.0785	J	Section 2, Treatment 1				**0.0785**	**J**		0.0785	J	
	donor value to use: Row D																								Qualified	98%		Qualified	98%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE03-TNBE: Row A	9.81 J	.559 U	28.2 J	.431 U	75.3 J	1.77 J	.431 U	6.89 J		2.27 J	.389 U	.347 U																
	value to use: Row B	9.81	0.559	28.2	0.431	75.3	1.77	0.431	6.89		2.27	0.389	0.347																
84	**congener TEC: Row C**	0.000981	0.0001677	0.000846	1.293E-05	0.002259	0.0000531	0.0431	0.0002067		0.0000681	0.01167	1.041E-05	172%		0.0044	0.0319	0.0594	0.0440	J	Section 2, Treatment 1				**0.0440**	**J**		0.0440	J	
	donor value to use: Row D																								Qualified	100%		Qualified	100%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		
	N07-CE03-TNBN: Row A	23.5 J	.522 J	42.1	2.54 J	109 J	1.86 J	.639 J	10.9 J		3.01 J	.437 U	.978 J																
	value to use: Row B	23.5	0.522	42.1	2.54	109	1.86	0.639	10.9		3.01	0.437	0.978																
85	**congener TEC: Row C**	0.00235	0.0001566	0.001263	0.0000762	0.00327	0.0000558	0.0639	0.000327		0.0000903	0.01311	2.934E-05	17%		0.0715	0.0781	0.0846	0.0724	J	Section 1	**0.0724**	**J**							
	donor value to use: Row D																					Qualified	99%							
	donor TEC: Row E																					Dioxin/Furan								
	N07-CE03-TNBS: Row A	17.3 J	.588 J	37.2 J	1.85 J	100 J	1.99 J	.345 U	9.58 J		2.63 J	.339 U	.306 U																
	value to use: Row B	17.3	0.588	37.2	1.85	100	1.99	0.345	9.58		2.63	0.339	0.306																
86	**congener TEC: Row C**	0.00173	0.0001764	0.001116	0.0000555	0.003	0.0000597	0.0345	0.0002874		0.0000789	0.01017	9.18E-06	155%		0.0065	0.0288	0.0512	0.0382	J	Section 2, Treatment 1				**0.0382**	**J**		0.0382	J	
	donor value to use: Row D																								Qualified	100%		Qualified	100%	
	donor TEC: Row E																								Dioxin/Furan			Dioxin/Furan		

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2				(Quasi) Sensitivity Analysis SECTIO	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.	
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U			
	Sample ID: **(must enter on Row A)**	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**Comment**
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**															
	N07-CE03-TNNE: Row A	11.7 J	.557 U	28.6 J	1.79 J	85.5 J	1.5 J	.408 U	6.96 J		1.94 J	.411 U	.561 J															
	value to use: Row B	11.7	0.557	28.6	1.79	85.5	1.5	0.408	6.96		1.94	0.411	0.561															
87	**congener TEC: Row C**	**0.00117**	**0.0001671**	**0.000858**	**0.0000537**	**0.002565**	**0.000045**	**0.0408**	**0.0002088**		**0.0000582**	**0.01233**	**1.683E-05**	169%	0.0050	0.0316	0.0583	0.0464	J	**Section 2, Treatment 1**			**0.0464**	**J**	0.0464	J		
	donor value to use: Row D																						Qualified	100%	Qualified	100%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N07-CE03-TNNW: Row A	15.5 J	.366 J	43.2	1.35 J	109 J	1.59 J	.651 J	10.8 J		3.41 J	.477 U	.675 J															
	value to use: Row B	15.5	0.366	43.2	1.35	109	1.59	0.651	10.8		3.41	0.477	0.675															
88	**congener TEC: Row C**	**0.00155**	**0.0001098**	**0.001296**	**0.0000405**	**0.00327**	**0.0000477**	**0.0651**	**0.000324**		**0.0001023**	**0.01431**	**2.025E-05**	18%	0.0719	0.0790	0.0862	0.0726	J	**Section 1**	**0.0726**	**J**						
	donor value to use: Row D																				Qualified	98%						
	donor TEC: Row E																				Dioxin/Furan							
	N07-CE04-TNBE: Row A	12.7 J	.626 J	31.7 J	.415 U	92.9 J	1.5 J	.372 J	7.49 J		3.1 J	.348 U	.262 U															
	value to use: Row B	12.7	0.626	31.7	0.415	92.9	1.5	0.372	7.49		3.1	0.348	0.262															
89	**congener TEC: Row C**	**0.00127**	**0.0001878**	**0.000951**	**1.245E-05**	**0.002787**	**0.000045**	**0.0372**	**0.0002247**		**0.000093**	**0.01044**	**7.86E-06**	22%	0.0428	0.0480	0.0532	0.0434	J	**Section 1**	**0.0434**	**J**						
	donor value to use: Row D																				Qualified	100%						
	donor TEC: Row E																				Dioxin/Furan							
	N07-CE04-TNBN: Row A	27.3 J	.931 J	71.5 J	3.83 J	207 J	4.61 J	1.2 J	19.9 J		5.37 J	.7 U	.443 U															
	value to use: Row B	27.3	0.931	71.5	3.83	207	4.61	1.2	19.9		5.37	0.7	0.443															
90	**congener TEC: Row C**	**0.00273**	**0.0002793**	**0.002145**	**0.0001149**	**0.00621**	**0.0001383**	**0.12**	**0.000597**		**0.0001611**	**0.021**	**1.329E-05**	15%	0.1324	0.1429	0.1534	0.1338	J	**Section 1**	**0.1338**	**J**						
	donor value to use: Row D																				Qualified	100%						
	donor TEC: Row E																				Dioxin/Furan							
	N07-CE04-TNBS: Row A	8.85 J	.769 J	24.8 J	1.6 J	64.8 J	.943 J	.543 J	5.62 J		2.26 J	.363 U	.369 U															
	value to use: Row B	8.85	0.769	24.8	1.6	64.8	0.943	0.543	5.62		2.26	0.363	0.369															
91	**congener TEC: Row C**	**0.000885**	**0.0002307**	**0.000744**	**0.000048**	**0.001944**	**2.829E-05**	**0.0543**	**0.0001686**		**0.0000678**	**0.01089**	**1.107E-05**	17%	0.0584	0.0639	0.0693	0.0589	J	**Section 1**	**0.0589**	**J**						
	donor value to use: Row D																				Qualified	100%						
	donor TEC: Row E																				Dioxin/Furan							
	N07-CE04-TNNE: Row A	39.1 J	.827 J	98.3	5.58 J	253 J	5.29 J	1.19 J	25.1 J		10.2 J	.41 U	1.89 J															
	value to use: Row B	39.1	0.827	98.3	5.58	253	5.29	1.19	25.1		10.2	0.41	1.89															
92	**congener TEC: Row C**	**0.00391**	**0.0002481**	**0.002949**	**0.0001674**	**0.00759**	**0.0001587**	**0.119**	**0.000753**		**0.000306**	**0.0123**	**0.0000567**	9%	0.1351	0.1413	0.1474	0.1369	J	**Section 1**	**0.1369**	**J**						
	donor value to use: Row D																				Qualified	98%						
	donor TEC: Row E																				Dioxin/Furan							
	N07-CE04-TNNW: Row A	44 J	1.5 J	145	8.44 J	367 J	8.65 J	1.44 J	38.7 J		11.1 J	.639 U	2.87 J															
	value to use: Row B	44	1.5	145	8.44	367	8.65	1.44	38.7		11.1	0.639	2.87															
93	**congener TEC: Row C**	**0.0044**	**0.00045**	**0.00435**	**0.0002532**	**0.01101**	**0.0002595**	**0.144**	**0.001161**		**0.000333**	**0.01917**	**0.0000861**	11%	0.1663	0.1759	0.1855	0.1688	J	**Section 1**	**0.1688**	**J**						
	donor value to use: Row D																				Qualified	98%						
	donor TEC: Row E																				Dioxin/Furan							
	N09-CE11-TNBE: Row A	30.7 J	1.38 J	126	6.69 J	333	5.25 J	1.02 U	34.7 J		10.6 J	.851 U	2.55 U															
	value to use: Row B	30.7	1.38	126	6.69	333	5.25	1.02	34.7		10.6	0.851	2.55															
94	**congener TEC: Row C**	**0.00307**	**0.000414**	**0.00378**	**0.0002007**	**0.00999**	**0.0001575**	**0.102**	**0.001041**		**0.000318**	**0.02553**	**0.0000765**	154%	0.0190	0.0828	0.1466	0.1127	J	**Section 2, Treatment 1**			**0.1127**	**J**	0.1127	J		
	donor value to use: Row D																						Qualified	91%	Qualified	91%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE11-TNBN: Row A	28.5 J	1.09 U	108	5.89 J	260	5.05 J	1.29 U	27.9 J		7.68 J	1.08 U	1.05 U															
	value to use: Row B	28.5	1.09	108	5.89	260	5.05	1.29	27.9		7.68	1.08	1.05															
95	**congener TEC: Row C**	**0.00285**	**0.000327**	**0.00324**	**0.0001767**	**0.0078**	**0.0001515**	**0.129**	**0.000837**		**0.0002304**	**0.0324**	**0.0000315**	168%	0.0153	0.0962	0.1770	0.1338	J	**Section 2, Treatment 1**			**0.1338**	**J**	0.1338	J		
	donor value to use: Row D																						Qualified	94%	Qualified	94%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE11-TNBS: Row A	23.4 J	.694 U	73.4	5.48 J	177	3.69 J	.751 U	21.4 J		7.11 J	.611 U	1.52 J															
	value to use: Row B	23.4	0.694	73.4	5.48	177	3.69	0.751	21.4		7.11	0.611	1.52															
96	**congener TEC: Row C**	**0.00234**	**0.0002082**	**0.002202**	**0.0001644**	**0.00531**	**0.0001107**	**0.0751**	**0.000642**		**0.0002133**	**0.01833**	**0.0000456**	162%	0.0110	0.0578	0.1047	0.0875	J	**Section 2, Treatment 1**			**0.0875**	**J**	0.0875	J		
	donor value to use: Row D																						Qualified	93%	Qualified	93%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE11-TNNE: Row A	47.6	2.5 J	176	12.4 J	418	12.9 J	1.7 J	49.5		17.1 J	.952 U	4.54 U															
	value to use: Row B	47.6	2.5	176	12.4	418	12.9	1.7	49.5		17.1	0.952	4.54															
97	**congener TEC: Row C**	**0.00476**	**0.00075**	**0.00528**	**0.000372**	**0.01254**	**0.000387**	**0.17**	**0.001485**		**0.000513**	**0.02856**	**0.0001362**	14%	0.1961	0.2104	0.2248	0.1991	J	**Section 1**	**0.1991**	**J**						
	donor value to use: Row D																				Qualified	89%						
	donor TEC: Row E																				Dioxin/Furan							
	N09-CE11-TNNW: Row A	60.6	1.81 J	151	8.79 J	375	10.3 J	5.24 J	44.7		15.8 J	.862 U	4.8 U															
	value to use: Row B	60.6	1.81	151	8.79	375	10.3	5.24	44.7		15.8	0.862	4.8															
98	**congener TEC: Row C**	**0.00606**	**0.000543**	**0.00453**	**0.0002637**	**0.01125**	**0.000309**	**0.524**	**0.001341**		**0.000474**	**0.02586**	**0.000144**	5%	0.5488	0.5618	0.5748	0.5517	J	**Section 1**	**0.5517**	**J**						
	donor value to use: Row D																				Qualified	96%						
	donor TEC: Row E																				Dioxin/Furan							
	N09-CE12-TNBE: Row A	18.5 J	1.01 J	60.3	3.7 J	147	4.17 J	.652 U	15.5 J		5.75 J	1.04 J	1.26 J															
	value to use: Row B	18.5	1.01	60.3	3.7	147	4.17	0.652	15.5		5.75	1.04	1.26															
99	**congener TEC: Row C**	**0.00185**	**0.000303**	**0.001809**	**0.000111**	**0.00441**	**0.0001251**	**0.0652**	**0.000465**		**0.0001725**	**0.0312**	**0.0000378**	89%	0.0405	0.0731	0.1057	0.1057	J	**Section 2, Treatment 1**			**0.1057**	**J**	0.1057	J		
	donor value to use: Row D																						Qualified	94%	Qualified	94%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE12-TNBN: Row A	22.3 J	1.86 U	81.6	3.57 J	192	2.87 J	1.72 U	20.4 J		8.62 J	1.8 U	1.41 U															
	value to use: Row B	22.3	1.86	81.6	3.57	192	2.87	1.72	20.4		8.62	1.8	1.41															
100	**congener TEC: Row C**	**0.00223**	**0.000558**	**0.002448**	**0.0001071**	**0.00576**	**0.0000861**	**0.172**	**0.000612**		**0.0002586**	**0.054**	**0.0000423**	182%	0.0115	0.1248	0.2381	0.1694	J	**Section 2, Treatment 1**			**0.1694**	**J**	0.1694	J		
	donor value to use: Row D																						Qualified	97%	Qualified	97%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE12-TNBS: Row A	17.7 J	1.56 U	57.6	2.9 J	143	2.29 J	1.42 U	14.4 J		6.35 J	1.26 U	1.11 U															
	value to use: Row B	17.7	1.56	57.6	2.9	143	2.29	1.42	14.4		6.35	1.26	1.11															
101	**congener TEC: Row C**	**0.00177**	**0.000468**	**0.001728**	**0.000087**	**0.00429**	**0.0000687**	**0.142**	**0.000432**		**0.0001905**	**0.0378**	**0.0000333**	183%	0.0086	0.0987	0.1889	0.1390	J	**Section 2, Treatment 1**			**0.1390**	**J**	0.1390	J		
	donor value to use: Row D																						Qualified	97%	Qualified	97%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE12-TNNW: Row A	21.7 J	1.82 U	80.7	3.77 J	196	4 J	1.68 U	19.7 J		6.3 J	1.69 U	1.46 U															
	value to use: Row B	21.7	1.82	80.7	3.77	196	4	1.68	19.7		6.3	1.69	1.46															
102	**congener TEC: Row C**	**0.00217**	**0.000546**	**0.002421**	**0.0001131**	**0.00588**	**0.00012**	**0.168**	**0.000591**		**0.000189**	**0.0507**	**0.0000438**	181%	0.0115	0.1211	0.2308	0.1657	J	**Section 2, Treatment 1**			**0.1657**	**J**	0.1657	J		
	donor value to use: Row D																						Qualified	96%	Qualified	96%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			
	N09-CE20-TNBE: Row A	10.2 J	.634 U	36.7 J	1.49 J	99.6	1.1 J	.704 U	8.48 J		2.82 J	.605 U	.663 U															
	value to use: Row B	10.2	0.634	36.7	1.49	99.6	1.1	0.704	8.48		2.82	0.605	0.663															
103	**congener TEC: Row C**	**0.00102**	**0.0001902**	**0.001101**	**0.0000447**	**0.002988**	**0.000033**	**0.0704**	**0.0002544**		**0.0000846**	**0.01815**	**1.989E-05**	178%	0.0055	0.0499	0.0943	0.0702	J	**Section 2, Treatment 1**			**0.0702**	**J**	0.0702	J		
	donor value to use: Row D																						Qualified	97%	Qualified	97%		
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan			

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow **Data entered by:** Todor Antonijevic
Units: pg/l **Date entered:** 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29														
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003														
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values: Treatment 1: KM TEQ	Treatment 1: Qualifier and Qualifier Fractions	(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values: Treatment 1: Make highest U value a D: KM TEQ	Treatment 1: Make highest U value a D: Qualifier and Qualifier Fractions	Treatment 2: Substitute comparable "donor" value for highest U: KM TEQ	Treatment 2: Substitute comparable "donor" value for highest U: Qualifier and Qualifier Fractions	(Quasi) Sensitivity Analysis SECTIO — "ND") may or may not be present: Comment
104	N09-CE20-TNBN: Row A	29.9 J	1.8 J	101	5.36 J	249	5.24 J	1.22 U	29 J		10.2 J	.957 U	3.58 J														
	value to use: Row B	29.9	1.8	101	5.36	249	5.24	1.22	29		10.2	0.957	3.58														
	congener TEC: Row C	0.00299	0.00054	0.00303	0.0001608	0.00747	0.0001572	0.122	0.00087		0.000306	0.02871	0.0001074	166%	0.0156	0.0910	0.1663	0.1394	J	Section 2, Treatment 1			0.1394	J	0.1394	J	
	donor value to use: Row D																						Qualified	94%	Qualified	94%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
105	N09-CE20-TNBS: Row A	11.3 J	.775 U	39.9	2.53 J	106	2.3 J	.923 U	9.09 J		3.46 J	.753 U	.884 U														
	value to use: Row B	11.3	0.775	39.9	2.53	106	2.3	0.923	9.09		3.46	0.753	0.884														
	congener TEC: Row C	0.00113	0.0002325	0.001197	0.0000759	0.00318	0.000069	0.0923	0.0002727		0.0001038	0.02259	2.652E-05	181%	0.0060	0.0636	0.1212	0.0908	J	Section 2, Treatment 1			0.0908	J	0.0908	J	
	donor value to use: Row D																						Qualified	96%	Qualified	96%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
106	N09-CE20-TNNE: Row A	15.2 J	1.01 U	57.9	3.14 J	144	2.66 J	1.15 U	15.9 J		5.37 J	.948 U	.984 U														
	value to use: Row B	15.2	1.01	57.9	3.14	144	2.66	1.15	15.9		5.37	0.948	0.984														
	congener TEC: Row C	0.00152	0.000303	0.001737	0.0000942	0.00432	0.0000798	0.115	0.000477		0.0001611	0.02844	2.952E-05	179%	0.0084	0.0803	0.1522	0.1140	J	Section 2, Treatment 1			0.1140	J	0.1140	J	
	donor value to use: Row D																						Qualified	96%	Qualified	96%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
107	N09-CE20-TNNW: Row A	20.1 J	.817 U	69.9	4.07 J	168	3.67 J	1.01 U	17.2 J		5.79 J	.816 U	1.74 J														
	value to use: Row B	20.1	0.817	69.9	4.07	168	3.67	1.01	17.2		5.79	0.816	1.74														
	congener TEC: Row C	0.00201	0.0002451	0.002097	0.0001221	0.00504	0.0001101	0.101	0.000516		0.0001737	0.02448	0.0000522	172%	0.0101	0.0730	0.1358	0.1124	J	Section 2, Treatment 1			0.1124	J	0.1124	J	
	donor value to use: Row D																						Qualified	95%	Qualified	95%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
108	N09-CE21-TNBE: Row A	27.6 J	.966 J	97.8	6.19 U	241	4.17 U	.833 U	28.9 J		10 J	.798 U	2.65 U														
	value to use: Row B	27.6	0.966	97.8	6.19	241	4.17	0.833	28.9		10	0.798	2.65														
	congener TEC: Row C	0.00276	0.0002898	0.002934	0.0001857	0.00723	0.0001251	0.0833	0.000867		0.0003	0.02394	0.0000795	158%	0.0144	0.0682	0.1220	0.0910	J	Section 2, Treatment 1			0.0910	J	0.0910	J	
	donor value to use: Row D																						Qualified	92%	Qualified	92%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
109	N09-CE21-TNBN: Row A	29.1 J	1.13 J	93.7	6.11 U	235	5.9 J	.891 U	28.6 J		9.88 J	.828 U	2.59 U														
	value to use: Row B	29.1	1.13	93.7	6.11	235	5.9	0.891	28.6		9.88	0.828	2.59														
	congener TEC: Row C	0.00291	0.000339	0.002811	0.0001833	0.00705	0.000177	0.0891	0.000858		0.0002964	0.02484	0.0000777	160%	0.0144	0.0715	0.1286	0.0964	J	Section 2, Treatment 1			0.0964	J	0.0964	J	
	donor value to use: Row D																						Qualified	92%	Qualified	92%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
110	N09-CE21-TNBS: Row A	19.6 J	.985 J	65.6	2.85 U	171	3.51 U	.524 U	17.4 U		5.25 U	.396 U	1.03 U														
	value to use: Row B	19.6	0.985	65.6	2.85	171	3.51	0.524	17.4		5.25	0.396	1.03														
	congener TEC: Row C	0.00196	0.0002955	0.001968	0.0000855	0.00513	0.0001053	0.0524	0.000522		0.0001575	0.01188	0.0000309	155%	0.0094	0.0419	0.0745	0.0576	J	Section 2, Treatment 1			0.0576	J	0.0576	J	
	donor value to use: Row D																						Qualified	90%	Qualified	90%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
111	N09-CE21-TNNE: Row A	36.4 J	1.97 J	125	6.24 U	307	7.1 J	1.59 U	35.4 J		13.3 J	.886 U	3.47 U														
	value to use: Row B	36.4	1.97	125	6.24	307	7.1	1.59	35.4		13.3	0.886	3.47														
	congener TEC: Row C	0.00364	0.000591	0.00375	0.0001872	0.00921	0.000213	0.159	0.001062		0.000399	0.02658	0.0001041	166%	0.0189	0.1118	0.2047	0.1649	J	Section 2, Treatment 1			0.1649	J	0.1649	J	
	donor value to use: Row D																						Qualified	94%	Qualified	94%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		
112	N09-CE21-TNNW: Row A	41.5	1.03 J	134	8.9 J	325	6.98 J	1.47 U	38.5 J		13.4 J	.851 U	3.4 U														
	value to use: Row B	41.5	1.03	134	8.9	325	6.98	1.47	38.5		13.4	0.851	3.4														
	congener TEC: Row C	0.00415	0.000309	0.00402	0.000267	0.00975	0.0002094	0.147	0.001155		0.000402	0.02553	0.000102	162%	0.0203	0.1066	0.1929	0.1553	J	Section 2, Treatment 1			0.1553	J	0.1553	J	
	donor value to use: Row D																						Qualified	91%	Qualified	91%	
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan		

DATA LIST

List of TEQ results to copy and paste into other soreadsheets. such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	02-CE01-TNB	Not calculated	
Line #2	02-CE01-TNB	0.1104	J
Line #3	02-CE01-TNB	0.0868	J
Line #4	02-CE01-TNN	0.1289	J
Line #5	02-CE02-TNB	0.0849	J
Line #6	02-CE02-TNB	0.0811	J
Line #7	02-CE02-TNB	0.1759	J
Line #8	02-CE02-TNN	0.1866	J
Line #9	02-CE03-TNB	0.0957	J
Line #10	02-CE03-TNB	0.0928	J
Line #11	02-CE03-TNB	0.1640	J
Line #12	02-CE03-TNN	0.2241	J
Line #13	02-CE04-TNB	0.0915	J
Line #14	02-CE04-TNB	0.0969	J
Line #15	02-CE04-TNB	0.0623	J
Line #16	02-CE04-TNN	0.0928	J
Line #17	03-CE01-TNB	0.0937	J
Line #18	03-CE01-TNB	0.0864	J
Line #19	03-CE01-TNB	0.0684	J
Line #20	03-CE01-TNN	0.1095	J
Line #21	03-CE01-TNN	0.1088249	J
Line #22	03-CE02-TNB	0.0771794	J
Line #23	03-CE02-TNB	0.0840677	J
Line #24	03-CE02-TNB	0.0857263	J
Line #25	03-CE02-TNN	0.1010998	J
Line #26	03-CE02-TNN	0.1447613	J
Line #27	03-CE03-TNB	0.1077804	J
Line #28	03-CE03-TNB	0.0783454	J
Line #29	03-CE03-TNB	0.0925357	J
Line #30	03-CE03-TNN	0.0809002	J
Line #31	03-CE03-TNN	0.0709081	J
Line #32	03-CE04-TNB	0.0979191	J
Line #33	03-CE04-TNB	0.0893521	J

EPA Advanced KM TEQ Calculator

Surface Water Screening/EPC PCB TEQ

Project Name: Glenn Springs Holding - Newark Bay Study Area
Matrix: Surface Water SV shallow
Units: pg/l
Data entered by: Todor Antonijevic
Date entered: 10/16/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29
WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003
Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189
Sample notes												

Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2				asi) Sensitivity Analysis SECTIO
							Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values				"ND") may or may not be present.
							Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U		
	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	Comment
		Line #34	03-CE04-TNN	0.1269053	J								
		Line #35	03-CE04-TNN	0.1328716	J								
		Line #36	04-CE11-TNB	0.0928627	J								
		Line #37	04-CE11-TNB	0.0992069	J								
		Line #38	04-CE11-TNB	0.0908718	J								
		Line #39	04-CE11-TNN	0.0722134	J								
		Line #40	04-CE12-TNB	0.0465148	J								
		Line #41	04-CE12-TNB	0.0972315	J								
		Line #42	04-CE12-TNB	0.0424369	J								
		Line #43	04-CE12-TNN	0.0511952	J								
		Line #44	04-CE12-TNN	0.0389483	J								
		Line #45	04-CE20-TNB	0.0683104	J								
		Line #46	04-CE20-TNB	0.0938156	J								
		Line #47	04-CE20-TNB	0.0678314	J								
		Line #48	04-CE20-TNN	0.0780961	J								
		Line #49	04-CE20-TNN	0.2211604	J								
		Line #50	04-CE21-TNB	0.0621147	J								
		Line #51	04-CE21-TNB	0.0576376	J								
		Line #52	04-CE21-TNB	0.0717069	J								
		Line #53	04-CE21-TNN	0.0462246	J								
		Line #54	04-CE21-TNN	0.0716985	J								
		Line #55	05-CE01-TNB	0.0808177	J								
		Line #56	05-CE01-TNB	0.1162931	J								
		Line #57	05-CE01-TNB	0.0689747	J								
		Line #58	05-CE01-TNN	0.1092413	J								
		Line #59	05-CE01-TNN	0.1074789	J								
		Line #60	05-CE02-TNB	0.0717821	J								
		Line #61	05-CE02-TNB	0.0747014	J								
		Line #62	05-CE02-TNB	0.0633415	J								
		Line #63	05-CE02-TNN	0.0955675	J								
		Line #64	05-CE02-TNN	0.1196638	J								
		Line #65	05-CE03-TNB	0.0885661	J								
		Line #66	05-CE03-TNB	0.0725897	J								
		Line #67	05-CE03-TNB	0.0679136	J								
		Line #68	05-CE03-TNN	0.0802294	J								
		Line #69	05-CE03-TNN	0.0811345	J								
		Line #70	05-CE04-TNB	0.0754028	J								
		Line #71	05-CE04-TNB	0.0611851	J								
		Line #72	05-CE04-TNN	0.1323903	J								
		Line #73	05-CE04-TNN	0.1074916	J								
		Line #74	07-CE01-TNB	0.0504295	J								
		Line #75	07-CE01-TNB	0.1463242	J								
		Line #76	07-CE01-TNB	0.0590042	J								
		Line #77	07-CE01-TNN	0.1132018	J								
		Line #78	07-CE01-TNN	0.0648773	J								
		Line #79	07-CE02-TNB	0.0474932	J								
		Line #80	07-CE02-TNB	0.0653349	J								
		Line #81	07-CE02-TNB	0.0565337	J								
		Line #82	07-CE02-TNN	0.0721532	J								
		Line #83	07-CE02-TNN	0.0784647	J								
		Line #84	07-CE03-TNB	0.0440024	J								
		Line #85	07-CE03-TNB	0.0723647	J								
		Line #86	07-CE03-TNB	0.0381924	J								
		Line #87	07-CE03-TNN	0.0463766	J								
		Line #88	07-CE03-TNN	0.0726117	J								
		Line #89	07-CE04-TNB	0.0433936	J								
		Line #90	07-CE04-TNB	0.1337654	J								
		Line #91	07-CE04-TNB	0.0588861	J								
		Line #92	07-CE04-TNN	0.1369321	J								
		Line #93	07-CE04-TNN	0.1687809	J								
		Line #94	09-CE11-TNB	0.1127064	J								
		Line #95	09-CE11-TNB	0.1338137	J								
		Line #96	09-CE11-TNB	0.0874721	J								
		Line #97	09-CE11-TNN	0.1991369	J								
		Line #98	09-CE11-TNN	0.551683	J								
		Line #99	09-CE12-TNB	0.1056834	J								
		Line #100	09-CE12-TNB	0.1694066	J								
		Line #101	09-CE12-TNB	0.1389742	J								
		Line #102	09-CE12-TNN	0.1657179	J								
		Line #103	09-CE20-TNB	0.0701619	J								
		Line #104	09-CE20-TNB	0.1393682	J								
		Line #105	09-CE20-TNB	0.0907692	J								
		Line #106	09-CE20-TNN	0.113979	J								
		Line #107	09-CE20-TNN	0.1123729	J								
		Line #108	09-CE21-TNB	0.0910193	J								
		Line #109	09-CE21-TNB	0.0964007	J								
		Line #110	09-CE21-TNB	0.0576053	J								
		Line #111	09-CE21-TNN	0.1649297	J								
		Line #112	09-CE21-TNN	0.1552841	J								

EPA Advanced KM TEQ Calculator

Fish fillet TCDD-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003									
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDI	1,4,9-HpCDI	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03FAEC-COMP01: Row A	5.8	0.532 J	0.225 J	1.29 J	0.254 J	1.42 J	12.3 J	0.181 U	1.1 J	1.57 J	1.35 J	1.65 J	0.0801 U	0.192 J	4.38 J	0.262 J	0.677 J									
	value to use: Row B	5.8	0.532	0.225	1.29	0.254	1.42	12.3	0.181	1.1	1.57	1.35	1.65	0.0801	0.192	4.38	0.262	0.677									
1	congener TEC: Row C	5.8	0.532	0.0225	0.129	0.0254	0.0142	0.00369	0.0181	0.033	0.471	0.135	0.165	0.00801	0.0192	0.0438	0.00262	0.0002031	0%	7.3966	7.4097	7.4227	7.4034	none	**Section 1**	**7.4034**	**none**
	donor value to use: Row D																									Qualified	22%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEC-COMP02: Row A	4.34	0.4 J	0.106 J	0.819 J	0.0814 J	0.146 J	0.707 J	0.145 U	0.391 J	1.06 J	0.785 J	1.09 J	0.154 J	0.0969 J	3.21 J	0.11 U	0.188 J									
	value to use: Row B	4.34	0.4	0.106	0.819	0.0814	0.146	0.707	0.145	0.391	1.06	0.785	1.09	0.154	0.0969	3.21	0.11	0.188									
2	congener TEC: Row C	4.34	0.4	0.0106	0.0819	0.00814	0.00146	0.0002121	0.0145	0.01173	0.318	0.0785	0.109	0.0154	0.00969	0.0321	0.0011	0.0000564	0%	5.4168	5.4246	5.4324	5.4222	none	**Section 1**	**5.4222**	**none**
	donor value to use: Row D																									Qualified	20%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEC-COMP03: Row A	7.38	0.402 J	0.218 J	1.33 J	0.15 J	0.48 J	0.755 J	0.162 U	1.14 J	1.27 J	0.903 J	1.76 J	0.119 J	0.179 J	2.77 J	0.119 U	0.141 J									
	value to use: Row B	7.38	0.402	0.218	1.33	0.15	0.48	0.755	0.162	1.14	1.27	0.903	1.76	0.119	0.179	2.77	0.119	0.141									
3	congener TEC: Row C	7.38	0.402	0.0218	0.133	0.015	0.0048	0.0002265	0.0162	0.0342	0.381	0.0903	0.176	0.0119	0.0179	0.0277	0.00119	0.0000423	0%	8.6959	8.7046	8.7133	8.7014	none	**Section 1**	**8.7014**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEC076: Row A	14	1.18 J	0.388 J	2.4 J	0.451 J	1.91 J	2.37 J	0.189 U	1.51 J	5.27 J	4.17 J	2.35 J	0.0726 U	0.585 J	4.85 J	0.128 U	0.28 J									
	value to use: Row B	14	1.18	0.388	2.4	0.451	1.91	2.37	0.189	1.51	5.27	4.17	2.35	0.0726	0.585	4.85	0.128	0.28									
4	congener TEC: Row C	14	1.18	0.0388	0.24	0.0451	0.0191	0.000711	0.0189	0.0453	1.581	0.417	0.235	0.00726	0.0585	0.0485	0.00128	0.000084	0%	17.9091	17.9228	17.9365	17.9103	none	**Section 1**	**17.9103**	**none**
	donor value to use: Row D																									Qualified	22%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEC502: Row A	14.5	1.25 J	0.932 J	3.25 J	0.537 J	2.6 J	3.57 J	0.158 J	2.25 J	1.88 J	3.38 J	2.33 J	0.114 J	0.54 J	6.56 J	0.227 J	0.633 J									
	value to use: Row B	14.5	1.25	0.932	3.25	0.537	2.6	3.57	0.158	2.25	1.88	3.38	2.33	0.114	0.54	6.56	0.227	0.633									
5	congener TEC: Row C	14.5	1.25	0.0932	0.325	0.0537	0.026	0.001071	0.0158	0.0675	0.564	0.338	0.233	0.0114	0.054	0.0656	0.00227	0.0001899	No difference	17.600731	17.6007	17.6007309	17.6007	none	**Section 1**	**17.6007**	**none**
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEC508: Row A	4.82 J	0.347 J	0.163 J	0.717 J	0.139 J	0.439 J	0.791 J	0.141 J	0.395 J	0.913 J	1.11 J	0.542 J	0.0459 J	0.19 J	1.52 J	0.0545 J	0.247 J									
	value to use: Row B	4.82	0.347	0.163	0.717	0.139	0.439	0.791	0.141	0.395	0.913	1.11	0.542	0.0459	0.19	1.52	0.0545	0.247									
6	congener TEC: Row C	4.82	0.347	0.0163	0.0717	0.0139	0.00439	0.0002373	0.0141	0.01185	0.2739	0.111	0.0542	0.00459	0.019	0.0152	0.000545	0.0000741	No difference	5.7779864	5.77799	5.7779864	5.7780	J	**Section 1**	**5.7780**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEN-COMP01: Row A	3.81 J	0.185 J	0.117 J	0.566 J	0.092 J	0.492 J	0.606 J	0.082 U	0.682 J	3.51 J	1.23 J	1.46 J	0.0602 J	0.133 J	3.15 J	0.112 J	0.19 J									
	value to use: Row B	3.81	0.185	0.117	0.566	0.092	0.492	0.606	0.082	0.682	3.51	1.23	1.46	0.0602	0.133	3.15	0.112	0.19									
7	congener TEC: Row C	3.81	0.185	0.0117	0.0566	0.0092	0.00492	0.0001818	0.0082	0.02046	1.053	0.123	0.146	0.00602	0.0133	0.0315	0.00112	0.000057	0%	5.4721	5.4762	5.4803	5.4745	J	**Section 1**	**5.4745**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEN-COMP02: Row A	3.05 J	0.27 J	0.111 J	0.393 J	0.0528 J	0.233 J	0.311 J	0.0611 U	0.479 J	1.48 J	0.918 J	0.988 J	0.0703 J	0.0897 J	2.27 J	0.0518 J	0.0821 J									
	value to use: Row B	3.05	0.27	0.111	0.393	0.0528	0.233	0.311	0.0611	0.479	1.48	0.918	0.988	0.0703	0.0897	2.27	0.0518	0.0821									
8	congener TEC: Row C	3.05	0.27	0.0111	0.0393	0.00528	0.00233	0.0000933	0.00611	0.01437	0.444	0.0918	0.0988	0.00703	0.00897	0.0227	0.000518	2.463E-05	0%	4.0663	4.0694	4.0724	4.0680	J	**Section 1**	**4.0680**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEN-COMP03: Row A	10.3	0.23 U	0.326 J	2.08 J	0.202 J	1.09 J	2.06 J	0.217 U	1.49 J	3.39 J	3.52 J	2.67 J	0.0947 U	0.379 J	8.22 J	0.208 J	0.323 J									
	value to use: Row B	10.3	0.23	0.326	2.08	0.202	1.09	2.06	0.217	1.49	3.39	3.52	2.67	0.0947	0.379	8.22	0.208	0.323									
9	congener TEC: Row C	10.3	0.23	0.0326	0.208	0.0202	0.0109	0.000618	0.0217	0.0447	1.017	0.352	0.267	0.00947	0.0379	0.0822	0.00208	0.0000969	2%	12.3753	12.5059	12.6365	12.4192	none	**Section 1**	**12.4192**	**none**
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEN-COMP04: Row A	14.7	0.817 J	0.327 J	1.35 J	0.249 J	0.964 J	1.77 J	0.261 U	2.26 J	9.23 J	4.71 J	3.85 J	0.0911 U	0.463 J	8.58 J	0.257 J	0.452 J									
	value to use: Row B	14.7	0.817	0.327	1.35	0.249	0.964	1.77	0.261	2.26	9.23	4.71	3.85	0.0911	0.463	8.58	0.257	0.452									
10	congener TEC: Row C	14.7	0.817	0.0327	0.135	0.0249	0.00964	0.000531	0.0261	0.0678	2.769	0.471	0.385	0.00911	0.0463	0.0858	0.00257	0.0001356	0%	19.5474	19.5650	19.5826	19.5549	none	**Section 1**	**19.5549**	**none**
	donor value to use: Row D																									Qualified	25%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEN-COMP05: Row A	7.99 J	0.448 J	0.207 J	0.714 J	0.18 J	0.734 J	1.13 J	0.0564 J	1.09 J	1.93 J	2.18 J	1.24 J	0.0736 J	0.282 J	3.35 J	0.0939 J	0.344 J									
	value to use: Row B	7.99	0.448	0.207	0.714	0.18	0.734	1.13	0.0564	1.09	1.93	2.18	1.24	0.0736	0.282	3.35	0.0939	0.344									
11	congener TEC: Row C	7.99	0.448	0.0207	0.0714	0.018	0.00734	0.000339	0.00564	0.0327	0.579	0.218	0.124	0.00736	0.0282	0.0335	0.000939	0.0001032	No difference	9.5852	9.5852	9.5852	9.5852	J	**Section 1**	**9.5852**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAEN-COMP06: Row A	9.11	0.662 J	0.0757 U	1.23 J	0.24 J	0.892 J	1.84 J	0.211 U	0.108 U	4.22 J	2.92 J	1.86 J	0.106 J	0.303 J	5.69 J	0.157 J	0.289 J									
	value to use: Row B	9.11	0.662	0.0757	1.23	0.24	0.892	1.84	0.211	0.108	4.22	2.92	1.86	0.106	0.303	5.69	0.157	0.289									
12	congener TEC: Row C	9.11	0.662	0.00757	0.123	0.024	0.00892	0.000552	0.0211	0.00324	1.266	0.292	0.186	0.0106	0.0303	0.0569	0.00157	0.0000867	0%	11.7719	11.7879	11.8038	11.7767	none	**Section 1**	**11.7767**	**none**
	donor value to use: Row D																									Qualified	23%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAES-COMP01: Row A	0.0566 U	0.122 U	0.0819 J	0.369 J	0.0506 J	0.248 J	0.393 J	0.0967 U	0.126 J	0.788 J	0.184 J	0.397 J	0.0646 J	0.0956 J	0.541 J	0.0967 J	0.159 J									
	value to use: Row B	0.0566	0.122	0.0819	0.369	0.0506	0.248	0.393	0.0967	0.126	0.788	0.184	0.397	0.0646	0.0956	0.541	0.0967	0.159									
13	congener TEC: Row C	0.0566	0.122	0.00819	0.0369	0.00506	0.00248	0.0001179	0.00967	0.00378	0.2364	0.0184	0.0397	0.00646	0.00956	0.00541	0.000967	0.0000477	40%	0.3734726	0.46761	0.5617426	0.3979	J	**Section 1**	**0.3979**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAES018: Row A	2.48 J	0.187 J	0.0977 J	0.416 J	0.0922 J	0.287 J	0.509 J	0.0688 U	0.193 J	0.684 J	0.281 J	0.398 J	0.0703 J	0.102 J	0.583 J	0.0372 J	0.116 J									
	value to use: Row B	2.48	0.187	0.0977	0.416	0.0922	0.287	0.509	0.0688	0.193	0.684	0.281	0.398	0.0703	0.102	0.583	0.0372	0.116									
14	congener TEC: Row C	2.48	0.187	0.00977	0.0416	0.00922	0.00287	0.0001527	0.00688	0.00579	0.2052	0.0281	0.0398	0.00703	0.0102	0.00583	0.000372	0.0000348	0%	3.0329695	3.03641	3.0398495	3.0355	J	**Section 1**	**3.0355**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAES019: Row A	3.87 J	0.634 J	0.261 J	1.28 J	0.224 J	0.617 J	0.848 J	0.0786 U	0.697 J	1.48 J	0.901 J	1.21 J	0.0561 J	0.223 J	2.1 J	0.065 J	0.105 J									
	value to use: Row B	3.87	0.634	0.261	1.28	0.224	0.617	0.848	0.0786	0.697	1.48	0.901	1.21	0.0561	0.223	2.1	0.065	0.105									
15	congener TEC: Row C	3.87	0.634	0.0261	0.128	0.0224	0.00617	0.0002544	0.00786	0.02091	0.444	0.0901	0.121	0.00561	0.0223	0.021	0.00065	0.0000315	0%	5.4125	5.4165	5.4204	5.4151	J	**Section 1**	**5.4151**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAES347: Row A	5.05	0.135 U	0.364 J	1.48 J	0.356 J	1.31 J	2.05 J	0.112 U	0.934 J	2.41 J	1.53 J	1.23 J	0.129 J	0.4 J	2.69 J	0.121 J	0.256 J									
	value to use: Row B	5.05	0.135	0.364	1.48	0.356	1.31	2.05	0.112	0.934	2.41	1.53	1.23	0.129	0.4	2.69	0.121	0.256									
16	congener TEC: Row C	5.05	0.135	0.0364	0.148	0.0356	0.0131	0.000615	0.0112	0.02802	0.723	0.153	0.123	0.0129	0.04	0.0269	0.00121	0.0000768	2%	6.3918	6.4649	6.5380	6.4190	none	**Section 1**	**6.4190**	**none**
	donor value to use: Row D																									Qualified	23%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FAES364: Row A	6.66	0.792 J	0.246 J	1.32 J	0.277 J	0.718 J	1.04 J	0.118 U	0.791 J	2.11 J	0.933 J	1.65 J	0.254 J	0.349 J	1.57 J	0.186 J	0.279 J									
	value to use: Row B	6.66	0.792	0.246	1.32	0.277	0.718	1.04	0.118	0.791	2.11	0.933	1.65	0.254	0.349	1.57	0.186	0.279									
17	congener TEC: Row C	6.66	0.792	0.0246	0.132	0.0277	0.00718	0.000312	0.0118	0.02373	0.633	0.0933	0.165	0.0254	0.0349	0.0157	0.00186	0.0000837	0%	8.6368	8.6427	8.6486	8.6391	none	**Section 1**	**8.6391**	**none**
	donor value to use: Row D																									Qualified	23%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish fillet TCDD-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003									
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDD	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDF	1,4,9-HpCDF	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03FAES365: Row A	8.66	1.26 J	0.753 J	3.76 J	0.76 J	2.85 J	2.8 J	0.151 J	3.25 J	5.66 J	2.22 J	2.92 J	0.107 J	0.63 J	5.77 J	0.191 J	0.462 J									
	value to use: Row B	8.66	1.26	0.753	3.76	0.76	2.85	2.8	0.151	3.25	5.66	2.22	2.92	0.107	0.63	5.77	0.191	0.462									
18	congener TEC: Row C	**8.66**	**1.26**	**0.0753**	**0.376**	**0.076**	**0.0285**	**0.00084**	**0.0151**	**0.0975**	**1.698**	**0.222**	**0.292**	**0.0107**	**0.063**	**0.0577**	**0.00191**	**0.0001386**	No difference	12.9347	12.9347	12.9347	12.9347	none	**Section 1**	**12.9347**	**none**
	donor value to use: Row D																									Qualified	33%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP01: Row A	1.99	0.327 J	0.0391 J	0.152 J	0.0273 U	0.0727 J	0.176 J	0.359 J	0.591 J	0.623 J	0.106 J	0.185 J	0.0849 J	0.0241 J	0.322 J	0.0457 U	0.0468 J									
	value to use: Row B	1.99	0.327	0.0391	0.152	0.0273	0.0727	0.176	0.359	0.591	0.623	0.106	0.185	0.0849	0.0241	0.322	0.0457	0.0468									
19	congener TEC: Row C	**1.99**	**0.327**	**0.00391**	**0.0152**	**0.00273**	**0.000727**	**0.0000528**	**0.0359**	**0.01773**	**0.1869**	**0.0106**	**0.0185**	**0.00849**	**0.00241**	**0.00322**	**0.000457**	**1.404E-05**	0%	2.6207	2.6222	2.6238	2.6213	none	**Section 1**	**2.6213**	**none**
	donor value to use: Row D																									Qualified	24%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP02: Row A	0.804 J	0.0891 U	0.0208 U	0.085 J	0.0475 J	0.122 J	0.17 J	0.198 J	0.401 J	0.322 J	0.0316 J	0.0716 J	0.0775 J	0.0294 J	0.104 J	0.045 U	0.0716 J									
	value to use: Row B	0.804	0.0891	0.0208	0.085	0.0475	0.122	0.17	0.198	0.401	0.322	0.0316	0.0716	0.0775	0.0294	0.104	0.045	0.0716									
20	congener TEC: Row C	**0.804**	**0.0891**	**0.00208**	**0.0085**	**0.00475**	**0.00122**	**0.000051**	**0.0198**	**0.01203**	**0.0966**	**0.00316**	**0.00716**	**0.00775**	**0.00294**	**0.00104**	**0.00045**	**2.148E-05**	9%	0.9690	1.0148	1.0607	0.9745	J	**Section 1**	**0.9745**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP03: Row A	1.31	0.113 U	0.0559 J	0.228 J	0.025 U	0.137 J	0.254 J	0.291 J	0.612 J	0.626 J	0.0887 J	0.133 J	0.0618 J	0.0368 J	0.335 J	0.0569 U	0.0737 J									
	value to use: Row B	1.31	0.113	0.0559	0.228	0.025	0.137	0.254	0.291	0.612	0.626	0.0887	0.133	0.0618	0.0368	0.335	0.0569	0.0737									
21	congener TEC: Row C	**1.31**	**0.113**	**0.00559**	**0.0228**	**0.0025**	**0.00137**	**0.0000762**	**0.0291**	**0.01836**	**0.1878**	**0.00887**	**0.0133**	**0.00618**	**0.00368**	**0.00335**	**0.000569**	**2.211E-05**	7%	1.6104983	1.66853	1.72656731	1.6190	none	**Section 1**	**1.6190**	**none**
	donor value to use: Row D																									Qualified	24%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP04: Row A	0.192 J	0.108 J	0.0427 U	0.113 J	0.0431 U	0.0789 J	0.21 J	0.0988 U	0.162 J	0.125 J	0.047 U	0.0915 J	0.0984 J	0.0457 U	0.266 J	0.049 U	0.214 J									
	value to use: Row B	0.192	0.108	0.0427	0.113	0.0431	0.0789	0.21	0.0988	0.162	0.125	0.047	0.0915	0.0984	0.0457	0.266	0.049	0.214									
22	congener TEC: Row C	**0.192**	**0.108**	**0.00427**	**0.0113**	**0.00431**	**0.000789**	**0.000063**	**0.00988**	**0.00486**	**0.0375**	**0.0047**	**0.00915**	**0.00984**	**0.00457**	**0.00266**	**0.00049**	**0.0000642**	7%	0.3762262	0.39034	0.4044462	0.3817	J	**Section 1**	**0.3817**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP05: Row A	2.53	0.131 U	0.168 J	0.28 J	0.0923 J	0.135 J	0.318 J	0.59 J	1.72 J	1.03 J	0.208 J	0.5 J	0.0986 J	0.125 J	1.07 J	0.102 J	0.153 J									
	value to use: Row B	2.53	0.131	0.168	0.28	0.0923	0.135	0.318	0.59	1.72	1.03	0.208	0.5	0.0986	0.125	1.07	0.102	0.153									
23	congener TEC: Row C	**2.53**	**0.131**	**0.0168**	**0.028**	**0.00923**	**0.00135**	**0.0000954**	**0.059**	**0.0516**	**0.309**	**0.0208**	**0.05**	**0.00986**	**0.0125**	**0.0107**	**0.00102**	**0.0000459**	4%	3.1100	3.1755	3.2410	3.1294	none	**Section 1**	**3.1294**	**none**
	donor value to use: Row D																									Qualified	22%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC468: Row A	0.616 J	0.274 J	0.0612 J	0.117 J	0.0909 J	0.108 J	0.145 J	0.289 J	0.617 J	0.495 J	0.0621 J	0.0647 J	0.0726 J	0.0475 J	0.438 J	0.07 U	0.0714 J									
	value to use: Row B	0.616	0.274	0.0612	0.117	0.0909	0.108	0.145	0.289	0.617	0.495	0.0621	0.0647	0.0726	0.0475	0.438	0.07	0.0714									
24	congener TEC: Row C	**0.616**	**0.274**	**0.00612**	**0.0117**	**0.00909**	**0.00108**	**0.0000435**	**0.0289**	**0.01851**	**0.1485**	**0.00621**	**0.00647**	**0.00726**	**0.00475**	**0.00438**	**0.0007**	**2.142E-05**	0%	1.1430	1.1434	1.1437	1.1431	J	**Section 1**	**1.1431**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC469: Row A	0.542 J	0.222 J	0.0696 J	0.114 J	0.0517 J	0.179 J	0.239 J	0.431 J	0.769 J	0.682 J	0.0463 U	0.158 J	0.0746 J	0.0409 U	0.552 J	0.11 J	0.0716 J									
	value to use: Row B	0.542	0.222	0.0696	0.114	0.0517	0.179	0.239	0.431	0.769	0.682	0.0463	0.158	0.0746	0.0409	0.552	0.11	0.0716									
25	congener TEC: Row C	**0.542**	**0.222**	**0.00696**	**0.0114**	**0.00517**	**0.00179**	**0.0000717**	**0.0431**	**0.02307**	**0.2046**	**0.00463**	**0.0158**	**0.00746**	**0.00409**	**0.00552**	**0.0011**	**2.148E-05**	1%	1.0901	1.0944	1.0988	1.0916	J	**Section 1**	**1.0916**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC471: Row A	0.629 J	0.178 J	0.048 J	0.23 J	0.0402 U	0.0721 J	0.15 J	0.239 J	0.279 J	0.458 J	0.0799 J	0.218 J	0.0736 J	0.0343 U	0.296 J	0.0763 J	0.0666 J									
	value to use: Row B	0.629	0.178	0.048	0.23	0.0402	0.0721	0.15	0.239	0.279	0.458	0.0799	0.218	0.0736	0.0343	0.296	0.0763	0.0666									
26	congener TEC: Row C	**0.629**	**0.178**	**0.0048**	**0.023**	**0.00402**	**0.000721**	**0.000045**	**0.0239**	**0.00837**	**0.1374**	**0.00799**	**0.0218**	**0.00736**	**0.00343**	**0.00296**	**0.000763**	**1.998E-05**	1%	1.0461	1.0499	1.0536	1.0479	J	**Section 1**	**1.0479**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC475: Row A	0.0765 J	0.0945 U	0.0323 U	0.0931 J	0.0417 J	0.151 J	0.278 J	0.104 U	0.347 J	0.616 J	0.0377 U	0.041 J	0.0438 U	0.0372 U	0.331 J	0.065 U	0.0641 J									
	value to use: Row B	0.0765	0.0945	0.0323	0.0931	0.0417	0.151	0.278	0.104	0.347	0.616	0.0377	0.041	0.0438	0.0372	0.331	0.065	0.0641									
27	congener TEC: Row C	**0.0765**	**0.0945**	**0.00323**	**0.00931**	**0.00417**	**0.00151**	**0.0000834**	**0.0104**	**0.01041**	**0.1848**	**0.00377**	**0.0041**	**0.00438**	**0.00372**	**0.00331**	**0.00065**	**1.923E-05**	34%	0.2942	0.3545	0.4149	0.3079	J	**Section 1**	**0.3079**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC476: Row A	1.58	0.47 J	0.0812 J	0.392 J	0.0852 J	0.19 J	0.313 J	0.318 J	0.769 J	1.18 J	0.0841 J	0.292 J	0.0899 J	0.0551 J	0.777 J	0.0653 U	0.0865 J									
	value to use: Row B	1.58	0.47	0.0812	0.392	0.0852	0.19	0.313	0.318	0.769	1.18	0.0841	0.292	0.0899	0.0551	0.777	0.0653	0.0865									
28	congener TEC: Row C	**1.58**	**0.47**	**0.00812**	**0.0392**	**0.00852**	**0.0019**	**0.0000939**	**0.0318**	**0.02307**	**0.354**	**0.00841**	**0.0292**	**0.00899**	**0.00551**	**0.00777**	**0.000653**	**2.595E-05**	0%	2.5766	2.5769	2.5773	2.5767	none	**Section 1**	**2.5767**	**none**
	donor value to use: Row D																									Qualified	39%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC478: Row A	0.396 J	0.152 J	0.0378 U	0.0483 J	0.0405 U	0.0577 J	0.227 J	0.193 J	0.221 J	0.456 J	0.0446 J	0.0904 J	0.0721 J	0.0356 U	0.694 J	0.121 J	0.107 J									
	value to use: Row B	0.396	0.152	0.0378	0.0483	0.0405	0.0577	0.227	0.193	0.221	0.456	0.0446	0.0904	0.0721	0.0356	0.694	0.121	0.107									
29	congener TEC: Row C	**0.396**	**0.152**	**0.00378**	**0.00483**	**0.00405**	**0.000577**	**0.0000681**	**0.0193**	**0.00663**	**0.1368**	**0.00446**	**0.00904**	**0.00721**	**0.00356**	**0.00694**	**0.00121**	**0.0000321**	2%	0.7450972	0.75079	0.7564872	0.7465	J	**Section 1**	**0.7465**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC479: Row A	0.196 J	0.536 J	0.106 J	0.223 J	0.153 J	0.284 J	0.342 J	0.903 J	0.759 J	1.17 J	0.0797 J	0.266 J	0.0786 J	0.058 J	0.733 J	0.101 U	0.138 J									
	value to use: Row B	0.196	0.536	0.106	0.223	0.153	0.284	0.342	0.903	0.759	1.17	0.0797	0.266	0.0786	0.058	0.733	0.101	0.138									
30	congener TEC: Row C	**0.196**	**0.536**	**0.0106**	**0.0223**	**0.0153**	**0.00284**	**0.0001026**	**0.0903**	**0.02277**	**0.351**	**0.00797**	**0.0266**	**0.00786**	**0.0058**	**0.00733**	**0.00101**	**0.0000414**	0%	1.302814	1.30332	1.303824	1.3029	J	**Section 1**	**1.3029**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC481: Row A	0.455 J	0.263 J	0.0256 U	0.118 J	0.0419 J	0.0818 J	0.104 J	0.074 U	0.227 J	0.287 J	0.0306 J	0.0653 J	0.0895 J	0.0311 J	0.266 J	0.0444 U	0.0896 J									
	value to use: Row B	0.455	0.263	0.0256	0.118	0.0419	0.0818	0.104	0.074	0.227	0.287	0.0306	0.0653	0.0895	0.0311	0.266	0.0444	0.0896									
31	congener TEC: Row C	**0.455**	**0.263**	**0.00256**	**0.0118**	**0.00419**	**0.000818**	**0.0000312**	**0.0074**	**0.00681**	**0.0861**	**0.00306**	**0.00653**	**0.00895**	**0.00311**	**0.00266**	**0.000444**	**2.688E-05**	1%	0.8521	0.8573	0.8625	0.8548	J	**Section 1**	**0.8548**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLN404: Row A	0.448 J	0.0927 U	0.0545 J	0.0352 J	0.034 J	0.0886 J	0.428 J	0.142 J	0.146 J	0.72 J	0.0774 J	0.264 J	0.0903 J	0.0782 J	1.13 J	0.061 J	0.222 J									
	value to use: Row B	0.448	0.0927	0.0545	0.0352	0.034	0.0886	0.428	0.142	0.146	0.72	0.0774	0.264	0.0903	0.0782	1.13	0.061	0.222									
32	congener TEC: Row C	**0.448**	**0.0927**	**0.00545**	**0.00352**	**0.0034**	**0.000886**	**0.0001284**	**0.0142**	**0.00438**	**0.216**	**0.00774**	**0.0264**	**0.00903**	**0.00782**	**0.0113**	**0.00061**	**0.0000666**	12%	0.7589	0.8053	0.8516	0.7657	J	**Section 1**	**0.7657**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLN405: Row A	3.19	0.0612 U	0.0942 J	0.103 J	0.0435 J	0.0766 J	0.172 J	0.0653 J	0.47 J	0.54 J	0.127 J	0.321 J	0.1 J	0.0745 J	0.954 J	0.0502 U	0.249 J									
	value to use: Row B	3.19	0.0612	0.0942	0.103	0.0435	0.0766	0.172	0.0653	0.47	0.54	0.127	0.321	0.1	0.0745	0.954	0.0502	0.249									
33	congener TEC: Row C	**3.19**	**0.0612**	**0.00942**	**0.0103**	**0.00435**	**0.000766**	**0.0000516**	**0.00653**	**0.0141**	**0.162**	**0.0127**	**0.0321**	**0.01**	**0.00745**	**0.00954**	**0.000502**	**0.0000747**	2%	3.4694	3.5002	3.5311	3.4778	none	**Section 1**	**3.4778**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLN406: Row A	1.4	0.575 J	0.0488 J	0.187 J	0.0756 J	0.0591 J	0.116 J	0.577 J	0.502 J	0.996 J	0.101 J	0.249 J	0.0993 J	0.0435 U	0.428 J	0.0845 U	0.034 U									
	value to use: Row B	1.4	0.575	0.0488	0.187	0.0756	0.0591	0.116	0.577	0.502	0.996	0.101	0.249	0.0993	0.0435	0.428	0.0845	0.034									
34	congener TEC: Row C	**1.4**	**0.575**	**0.00488**	**0.0187**	**0.00756**	**0.000591**	**0.0000348**	**0.0577**	**0.01506**	**0.2988**	**0.0101**	**0.0249**	**0.00993**	**0.00435**	**0.00428**	**0.000845**	**0.0000102**	0%	2.4275	2.4301	2.4327	2.4288	none	**Section 1**	**2.4288**	**none**
	donor value to use: Row D																									Qualified	42%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLS339: Row A	0.328 J	0.117 J	0.0464 J	0.0738 J	0.0305 U	0.0804 J	0.178 J	0.12 U	0.219 J	0.506 J	0.0453 U	0.0675 J	0.0423 U	0.0403 U	0.584 J	0.0747 J	0.0617 J									
	value to use: Row B	0.328	0.117	0.0464	0.0738	0.0305	0.0804	0.178	0.12	0.219	0.506	0.0453	0.0675	0.0423	0.0403	0.584	0.0747	0.0617									
35	congener TEC: Row C	**0.328**	**0.117**	**0.00464**	**0.00738**	**0.00305**	**0.000804**	**0.0000534**	**0.012**	**0.00657**	**0.1518**	**0.00453**	**0.00675**	**0.00423**	**0.00403**	**0.00584**	**0.000747**	**1.851E-05**	4%	0.6296	0.6435	0.6574	0.6339	J	**Section 1**	**0.6339**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLS349: Row A	0.652 J	0.426 J	0.0474 J	0.125 J	0.0721 J	0.0756 J	0.174 J	0.355 J	0.432 J	0.513 J	0.0987 J	0.15 J	0.0492 J	0.0441 J	0.394 J	0.095 J	0.0357 U									
	value to use: Row B	0.652	0.426	0.0474	0.125	0.0721	0.0756	0.174	0.355	0.432	0.513	0.0987	0.15	0.0492	0.0441	0.394	0.095	0.0357									
36	congener TEC: Row C	**0.652**	**0.426**	**0.00474**	**0.0125**	**0.00721**	**0.000756**	**0.0000522**	**0.0355**	**0.01296**	**0.1539**	**0.00987**	**0.015**	**0.00492**	**0.00441**	**0.00394**	**0.00095**	**1.071E-05**	0%	1.3447	1.3447	1.3447	1.3447	J	**Section 1**	**1.3447**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSBDUP-10: Row A	21.2 J	0.653 J	0.0723 J	0.377 J	0.0938 J	0.234 J	0.403 J	6.43 J	3.03 J	6.41 J	0.783 J	2.33 J	0.127 J	0.125 J	6.6 J	0.0982 J	0.151 J									
	value to use: Row B	21.2	0.653	0.0723	0.377	0.0938	0.234	0.403	6.43	3.03	6.41	0.783	2.33	0.127	0.125	6.6	0.0982	0.151									
37	congener TEC: Row C	**21.2**	**0.653**	**0.00723**	**0.0377**	**0.00938**	**0.00234**	**0.0001209**	**0.643**	**0.0909**	**1.923**	**0.0783**	**0.233**	**0.0127**	**0.0125**	**0.066**	**0.000982**	**0.0000453**	No difference	24.970198	24.9702	24.9701982	24.9702	J	**Section 1**	**24.9702**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish fillet TCDD-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening — Data entered by: Francis Loko
Units: ng/kg — Date entered: 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	Treatment 1	
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDI	1,4,9-HpCDI	OCDF								KM TEQ	Qualifier and Qualifier Fractions
38	NB03FSBDUP-11: Row A	1.97	0.427 J	0.169 J	0.112 J	0.0636 J	0.165 J	0.176 J	1.49 J	2.24 J	1.73 J	0.0823 J	0.259 J	0.0869 J	0.0554 U	1.33 J	0.158 J	0.0571 U									
	value to use: Row B	1.97	0.427	0.169	0.112	0.0636	0.165	0.176	1.49	2.24	1.73	0.0823	0.259	0.0869	0.0554	1.33	0.158	0.0571									
	congener TEC: Row C	1.97	0.427	0.0169	0.0112	0.00636	0.00165	0.0000528	0.149	0.0672	0.519	0.00823	0.0259	0.00869	0.00554	0.0133	0.00158	1.713E-05	0%	3.2260628	3.22884	3.23161993	3.2269	none	Section 1	3.2269	none
	donor value to use: Row D																									Qualified	39%
	donor TEC: Row E																									Dioxin/Furan	100%
39	NB03FSBDUP-12: Row A	3.85 J	0.77 J	0.145 J	0.0894 J	0.203 J	0.112 J	0.297 J	0.934 J	1.26 J	1.1 J	0.153 J	0.166 J	0.132 J	0.117 J	0.814 J	0.162 J	0.0785 J									
	value to use: Row B	3.85	0.77	0.145	0.0894	0.203	0.112	0.297	0.934	1.26	1.1	0.153	0.166	0.132	0.117	0.814	0.162	0.0785									
	congener TEC: Row C	3.85	0.77	0.0145	0.00894	0.0203	0.00112	0.0000891	0.0934	0.0378	0.33	0.0153	0.0166	0.0132	0.0117	0.00814	0.00162	2.355E-05	No difference	5.1927	5.1927	5.1927	5.1927	J	Section 1	5.1927	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
40	NB03FSBS320: Row A	2.21	0.114 U	0.448 J	0.326 J	0.16 J	0.155 J	0.35 J	2.7 J	3.78 J	1.41 J	0.278 J	1 J	0.238 J	0.102 J	2.67 J	0.128 J	0.225 J									
	value to use: Row B	2.21	0.114	0.448	0.326	0.16	0.155	0.35	2.7	3.78	1.41	0.278	1	0.238	0.102	2.67	0.128	0.225									
	congener TEC: Row C	2.21	0.114	0.0448	0.0326	0.016	0.00155	0.000105	0.27	0.1134	0.423	0.0278	0.1	0.0238	0.0102	0.0267	0.00128	0.0000675	3%	3.3013	3.3583	3.4153	3.3319	none	Section 1	3.3319	none
	donor value to use: Row D																									Qualified	35%
	donor TEC: Row E																									Dioxin/Furan	100%
41	NB03FSBS321: Row A	0.269 J	0.0764 U	0.217 J	0.105 J	0.047 J	0.0601 J	0.17 J	0.589 J	1.6 J	0.508 J	0.113 J	0.382 J	0.0647 J	0.0562 J	0.632 J	0.101 J	0.0737 J									
	value to use: Row B	0.269	0.0764	0.217	0.105	0.047	0.0601	0.17	0.589	1.6	0.508	0.113	0.382	0.0647	0.0562	0.632	0.101	0.0737									
	congener TEC: Row C	0.269	0.0764	0.0217	0.0105	0.0047	0.000601	0.000051	0.0589	0.048	0.1524	0.0113	0.0382	0.00647	0.00562	0.00632	0.00101	2.211E-05	11%	0.6348	0.6730	0.7112	0.6500	J	Section 1	0.6500	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
42	NB03FSBS322: Row A	0.608 J	0.978 J	0.285 J	0.065 J	0.0405 U	0.0745 J	0.179 J	0.891 J	1.99 J	0.565 J	0.148 J	0.392 J	0.0733 J	0.0365 U	1.18 J	0.0844 J	0.0499 J									
	value to use: Row B	0.608	0.978	0.285	0.065	0.0405	0.0745	0.179	0.891	1.99	0.565	0.148	0.392	0.0733	0.0365	1.18	0.0844	0.0499									
	congener TEC: Row C	0.608	0.978	0.0285	0.0065	0.00405	0.000745	0.0000537	0.0891	0.0597	0.1695	0.0148	0.0392	0.00733	0.00365	0.0118	0.000844	1.497E-05	0%	2.0141	2.0179	2.0218	2.0149	J	Section 1	2.0149	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
43	NB03FSBS323: Row A	0.252 J	0.174 J	0.146 J	0.0633 J	0.0486 J	0.0472 J	0.148 J	0.862 J	1.16 J	0.355 J	0.0294 U	0.0711 J	0.0375 J	0.027 U	0.571 J	0.0686 U	0.114 J									
	value to use: Row B	0.252	0.174	0.146	0.0633	0.0486	0.0472	0.148	0.862	1.16	0.355	0.0294	0.0711	0.0375	0.027	0.571	0.0686	0.114									
	congener TEC: Row C	0.252	0.174	0.0146	0.00633	0.00486	0.000472	0.0000444	0.0862	0.0348	0.1065	0.00294	0.00711	0.00375	0.0027	0.00571	0.000686	0.0000342	1%	0.6964	0.6996	0.7027	0.6970	J	Section 1	0.6970	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
44	NB03FSBS324: Row A	1.97	0.157 U	0.0677 J	0.263 J	0.0845 J	0.159 J	0.205 J	1.62 J	2.57 J	2.06 J	0.0464 J	0.759 J	0.0589 J	0.0418 J	1.6 J	0.146 U	0.145 J									
	value to use: Row B	1.97	0.157	0.0677	0.263	0.0845	0.159	0.205	1.62	2.57	2.06	0.0464	0.759	0.0589	0.0418	1.6	0.146	0.145									
	congener TEC: Row C	1.97	0.157	0.00677	0.0263	0.00845	0.00159	0.0000615	0.162	0.0771	0.618	0.00464	0.0759	0.00589	0.00418	0.016	0.00146	0.0000435	5%	2.9769	3.0562	3.1354	2.9944	none	Section 1	2.9944	none
	donor value to use: Row D																									Qualified	37%
	donor TEC: Row E																									Dioxin/Furan	100%
45	NB03FSBS325: Row A	0.379 J	0.281 J	0.179 J	0.15 J	0.0626 U	4.54 J	53.4 J	1.68 J	1.59 J	1.54 J	0.104 J	0.387 J	0.0945 J	0.155 J	0.9 J	0.124 U	0.487 J									
	value to use: Row B	0.379	0.281	0.179	0.15	0.0626	4.54	53.4	1.68	1.59	1.54	0.104	0.387	0.0945	0.155	0.9	0.124	0.487									
	congener TEC: Row C	0.379	0.281	0.0179	0.015	0.00626	0.0454	0.01602	0.168	0.0477	0.462	0.0104	0.0387	0.00945	0.0155	0.009	0.00124	0.0001461	0%	1.5152161	1.51897	1.5227161	1.5155	J	Section 1	1.5155	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
46	NB03FSBS327: Row A	0.595 J	0.12 U	0.252 J	0.101 J	0.0443 U	0.0769 J	0.217 J	1.54 J	1.83 J	0.634 J	0.0899 J	0.383 J	0.096 J	0.0326 U	1.09 J	0.107 U	0.122 J									
	value to use: Row B	0.595	0.12	0.252	0.101	0.0443	0.0769	0.217	1.54	1.83	0.634	0.0899	0.383	0.096	0.0326	1.09	0.107	0.122									
	congener TEC: Row C	0.595	0.12	0.0252	0.0101	0.00443	0.000769	0.0000651	0.154	0.0549	0.1902	0.00899	0.0383	0.0096	0.00326	0.0109	0.00107	0.0000366	11%	1.0980607	1.16244	1.2268207	1.1112	J	Section 1	1.1112	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
47	NB03FSBS328: Row A	0.464 J	0.0912 U	0.203 J	0.165 J	0.0408 J	0.0553 J	0.153 J	1.39 J	1.11 J	0.62 J	0.0815 J	0.11 J	0.0937 J	0.0263 U	0.463 J	0.0971 J	0.061 J									
	value to use: Row B	0.464	0.0912	0.203	0.165	0.0408	0.0553	0.153	1.39	1.11	0.62	0.0815	0.11	0.0937	0.0263	0.463	0.0971	0.061									
	congener TEC: Row C	0.464	0.0912	0.0203	0.0165	0.00408	0.000553	0.0000459	0.139	0.0333	0.186	0.00815	0.011	0.00937	0.00263	0.00463	0.000971	0.0000183	10%	0.8979	0.9448	0.9917	0.9067	J	Section 1	0.9067	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
48	NB03FSBS329: Row A	0.264 J	0.757 J	0.0259 U	0.0336 J	0.0267 J	0.0906 J	0.11 J	0.863 J	1.17 J	0.76 J	0.0319 U	0.131 J	0.0919 J	0.0299 U	0.276 J	0.0706 J	0.0778 J									
	value to use: Row B	0.264	0.757	0.0259	0.0336	0.0267	0.0906	0.11	0.863	1.17	0.76	0.0319	0.131	0.0919	0.0299	0.276	0.0706	0.0778									
	congener TEC: Row C	0.264	0.757	0.00259	0.00336	0.00267	0.000906	0.000033	0.0863	0.0351	0.228	0.00319	0.0131	0.00919	0.00299	0.00276	0.000706	2.334E-05	1%	1.4031	1.4075	1.4119	1.4057	J	Section 1	1.4057	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
49	NB03FSBS330: Row A	1.51	0.419 J	0.0291 J	0.0525 J	0.0245 J	0.0394 J	0.104 J	0.266 J	0.318 J	0.309 J	0.0255 J	0.0421 J	0.0358 J	0.0255 J	0.192 J	0.04 U	0.0869 J									
	value to use: Row B	1.51	0.419	0.0291	0.0525	0.0245	0.0394	0.104	0.266	0.318	0.309	0.0255	0.0421	0.0358	0.0255	0.192	0.04	0.0869									
	congener TEC: Row C	1.51	0.419	0.00291	0.00525	0.00245	0.000394	0.0000312	0.0266	0.00954	0.0927	0.00255	0.00421	0.00358	0.00255	0.00192	0.0004	2.607E-05	0%	2.0837	2.0839	2.0841	2.0839	none	Section 1	2.0839	none
	donor value to use: Row D																									Qualified	28%
	donor TEC: Row E																									Dioxin/Furan	100%
50	NB03FSBS331: Row A	27.7 J	1.15 J	0.316 J	0.478 J	0.192 J	0.26 J	0.436 J	8.51 J	4.65 J	8.12 J	1.16 J	3.5 J	0.202 J	0.248 J	10.6 J	0.171 J	0.228 J									
	value to use: Row B	27.7	1.15	0.316	0.478	0.192	0.26	0.436	8.51	4.65	8.12	1.16	3.5	0.202	0.248	10.6	0.171	0.228									
	congener TEC: Row C	27.7	1.15	0.0316	0.0478	0.0192	0.0026	0.0001308	0.851	0.1395	2.436	0.116	0.35	0.0202	0.0248	0.106	0.00171	0.0000684	No difference	32.9966	32.9966	32.9966	32.9966	J	Section 1	32.9966	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
51	NB03FSBS332: Row A	1.02	0.124 U	0.0284 J	0.0645 J	0.0271 U	0.0762 J	0.186 J	2.03 J	2.15 J	0.871 J	0.047 J	0.264 J	0.053 J	0.029 U	0.543 J	0.0455 U	0.0692 J									
	value to use: Row B	1.02	0.124	0.0284	0.0645	0.0271	0.0762	0.186	2.03	2.15	0.871	0.047	0.264	0.053	0.029	0.543	0.0455	0.0692									
	congener TEC: Row C	1.02	0.124	0.00284	0.00645	0.00271	0.000762	0.0000558	0.203	0.0645	0.2613	0.0047	0.0264	0.0053	0.0029	0.00543	0.000455	2.076E-05	8%	1.6008	1.6658	1.7308	1.6107	none	Section 1	1.6107	none
	donor value to use: Row D																									Qualified	41%
	donor TEC: Row E																									Dioxin/Furan	100%
52	NB03FSBS333: Row A	0.678 J	0.329 J	0.0357 J	0.0998 J	0.0353 U	0.0744 J	0.283 J	1.83 J	1.12 J	1.22 J	0.0302 U	0.211 J	0.0509 J	0.0347 J	0.858 J	0.0968 J	0.0561 J									
	value to use: Row B	0.678	0.329	0.0357	0.0998	0.0353	0.0744	0.283	1.83	1.12	1.22	0.0302	0.211	0.0509	0.0347	0.858	0.0968	0.0561									
	congener TEC: Row C	0.678	0.329	0.00357	0.00998	0.00353	0.000744	0.0000849	0.183	0.0336	0.366	0.00302	0.0211	0.00509	0.00347	0.00858	0.000968	1.683E-05	0%	1.6432	1.6465	1.6498	1.6446	J	Section 1	1.6446	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
53	NB03FSBS334: Row A	0.226 J	0.382 J	0.0471 U	0.102 J	0.0538 J	0.0707 J	0.196 J	1.66 J	1.51 J	1.47 J	0.0395 U	0.371 J	0.0683 J	0.0397 U	0.91 J	0.11 U	0.105 J									
	value to use: Row B	0.226	0.382	0.0471	0.102	0.0538	0.0707	0.196	1.66	1.51	1.47	0.0395	0.371	0.0683	0.0397	0.91	0.11	0.105									
	congener TEC: Row C	0.226	0.382	0.00471	0.0102	0.00538	0.000707	0.0000588	0.166	0.0453	0.441	0.00395	0.0371	0.00683	0.00397	0.0091	0.0011	0.0000315	1%	1.3297	1.3366	1.3434	1.3308	J	Section 1	1.3308	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
54	NB03FSBS335: Row A	0.256 J	0.11 U	0.0767 J	0.0956 J	0.0345 U	0.126 J	0.173 J	1.43 J	1.27 J	0.862 J	0.0446 J	0.101 J	0.0407 J	0.037 J	0.616 J	0.102 J	0.102 J									
	value to use: Row B	0.256	0.11	0.0767	0.0956	0.0345	0.126	0.173	1.43	1.27	0.862	0.0446	0.101	0.0407	0.037	0.616	0.102	0.102									
	congener TEC: Row C	0.256	0.11	0.00767	0.00956	0.00345	0.00126	0.0000519	0.143	0.0381	0.2586	0.00446	0.0101	0.00407	0.0037	0.00616	0.00102	0.0000306	14%	0.7438	0.8005	0.8572	0.7510	J	Section 1	0.7510	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
55	NB03FSBS336: Row A	13.7 J	1.15 J	0.217 J	0.394 J	0.108 U	0.333 J	0.143 J	5.59 J	3.15 J	4.55 J	0.586 J	1.44 J	0.164 J	0.27 J	1.84 J	0.215 U	0.271 J									
	value to use: Row B	13.7	1.15	0.217	0.394	0.108	0.333	0.143	5.59	3.15	4.55	0.586	1.44	0.164	0.27	1.84	0.215	0.271									
	congener TEC: Row C	13.7	1.15	0.0217	0.0394	0.0108	0.00333	0.0000429	0.559	0.0945	1.365	0.0586	0.144	0.0164	0.027	0.0184	0.00215	0.0000813	0%	17.1975	17.2039	17.2104	17.1984	J	Section 1	17.1984	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
56	NB03FSBS337: Row A	3.78 J	0.16 U	0.147 J	0.11 J	0.114 J	0.111 J	0.172 J	1.03 J	1.36 J	1.08 J	0.165 J	0.276 J	0.163 J	0.0829 J	0.82 J	0.117 U	0.254 J									
	value to use: Row B	3.78	0.16	0.147	0.11	0.114	0.111	0.172	1.03	1.36	1.08	0.165	0.276	0.163	0.0829	0.82	0.117	0.254									
	congener TEC: Row C	3.78	0.16	0.0147	0.011	0.0114	0.00111	0.0000516	0.103	0.0408	0.324	0.0165	0.0276	0.0163	0.00829	0.0082	0.00117	0.0000762	4%	4.3630	4.4436	4.5242	4.3820	J	Section 1	4.3820	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
57	NB03FSBS338: Row A	1.26 J	0.113 U	0.207 J	0.148 J	0.0495 J	0.128 J	0.241 J	1.95 J	1.38 J	0.804 J	0.0926 J	0.213 J	0.099 J	0.0548 J	0.779 J	0.061 J	0.126 J									
	value to use: Row B	1.26	0.113	0.207	0.148	0.0495	0.128	0.241	1.95	1.38	0.804	0.0926	0.213	0.099	0.0548	0.779	0.061	0.126									
	congener TEC: Row C	1.26	0.113	0.0207	0.0148	0.00495	0.00128	0.0000723	0.195	0.0414	0.2412	0.00926	0.0213	0.0099	0.00548	0.00779	0.00061	0.0000378	6%	1.8338	1.8903	1.9468	1.8444	J	Section 1	1.8444	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish fillet TCDD-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening — Data entered by: Francis Loko
Units: ng/kg — Date entered: 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003									
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDI	1,4,9-HpCDI	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03FSFC486: Row A	4.53	0.289 J	0.0285 J	0.102 J	0.0358 J	0.199 J	0.294 J	0.177 J	0.0254 U	0.513 J	0.206 J	0.118 J	0.0348 J	0.0415 J	0.179 J	0.0241 J	0.0415 J									
	value to use: Row B	4.53	0.289	0.0285	0.102	0.0358	0.199	0.294	0.177	0.0254	0.513	0.206	0.118	0.0348	0.0415	0.179	0.0241	0.0415									
58	congener TEC: Row C	4.53	0.289	0.00285	0.0102	0.00358	0.00199	0.0000882	0.0177	0.000762	0.1539	0.0206	0.0118	0.00348	0.00415	0.00179	0.000241	1.245E-05	0%	5.0514	5.0518	5.0521	5.0515	none	Section 1	5.0515	none
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFC487: Row A	1.78 J	0.0571 U	0.016 J	0.0709 J	0.0308 J	0.149 J	0.372 J	0.0899 J	0.0627 J	0.273 J	0.202 J	0.11 J	0.0503 J	0.0229 J	0.174 J	0.0341 J	0.0503 J									
	value to use: Row B	1.78	0.0571	0.016	0.0709	0.0308	0.149	0.372	0.0899	0.0627	0.273	0.202	0.11	0.0503	0.0229	0.174	0.0341	0.0503									
59	congener TEC: Row C	1.78	0.0571	0.0016	0.00709	0.00308	0.00149	0.0001116	0.00899	0.001881	0.0819	0.0202	0.011	0.00503	0.00229	0.00174	0.000341	1.509E-05	3%	1.9268	1.9553	1.9839	1.9314	J	Section 1	1.9314	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFC488: Row A	3.75	0.0818 U	0.0351 J	0.258 J	0.0253 U	0.244 J	0.332 J	0.0787 U	0.465 J	0.911 J	0.307 J	0.301 J	0.0672 J	0.0674 J	0.513 J	0.0778 J	0.0639 J									
	value to use: Row B	3.75	0.0818	0.0351	0.258	0.0253	0.244	0.332	0.0787	0.465	0.911	0.307	0.301	0.0672	0.0674	0.513	0.0778	0.0639									
60	congener TEC: Row C	3.75	0.0818	0.00351	0.0258	0.00253	0.00244	0.0000996	0.00787	0.01395	0.2733	0.0307	0.0301	0.00672	0.00674	0.00513	0.000778	1.917E-05	2%	4.1493	4.1954	4.2415	4.1623	none	Section 1	4.1623	none
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFC489: Row A	1.26 J	0.326 J	0.164 J	0.186 J	0.148 J	0.209 J	0.442 J	0.0812 J	0.281 J	0.387 J	0.251 J	0.189 J	0.271 J	0.093 J	0.16 J	0.216 J	0.324 J									
	value to use: Row B	1.26	0.326	0.164	0.186	0.148	0.209	0.442	0.0812	0.281	0.387	0.251	0.189	0.271	0.093	0.16	0.216	0.324									
61	congener TEC: Row C	1.26	0.326	0.0164	0.0186	0.0148	0.00209	0.0001326	0.00812	0.00843	0.1161	0.0251	0.0189	0.0271	0.0093	0.0016	0.00216	0.0000972	No difference	1.8549	1.8549	1.8549	1.8549	J	Section 1	1.8549	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFC490: Row A	3.41 J	0.379 J	0.102 J	0.207 J	0.116 J	0.437 J	0.307 J	0.178 J	0.405 J	0.881 J	0.278 J	0.234 J	0.247 J	0.111 J	0.318 J	0.127 J	0.192 J									
	value to use: Row B	3.41	0.379	0.102	0.207	0.116	0.437	0.307	0.178	0.405	0.881	0.278	0.234	0.247	0.111	0.318	0.127	0.192									
62	congener TEC: Row C	3.41	0.379	0.0102	0.0207	0.0116	0.00437	0.0000921	0.0178	0.01215	0.2643	0.0278	0.0234	0.0247	0.0111	0.00318	0.00127	0.0000576	No difference	4.2217	4.2217	4.2217	4.2217	J	Section 1	4.2217	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFC491: Row A	5.35	0.0615 U	0.0471 J	0.195 J	0.0596 J	0.16 J	0.312 J	0.224 J	0.237 J	0.877 J	0.438 J	0.337 J	0.104 J	0.149 J	0.666 J	0.0574 J	0.125 J									
	value to use: Row B	5.35	0.0615	0.0471	0.195	0.0596	0.16	0.312	0.224	0.237	0.877	0.438	0.337	0.104	0.149	0.666	0.0574	0.125									
63	congener TEC: Row C	5.35	0.0615	0.00471	0.0195	0.00596	0.0016	0.0000936	0.0224	0.00711	0.2631	0.0438	0.0337	0.0104	0.0149	0.00666	0.000574	0.0000375	1%	5.7845	5.8153	5.8460	5.7968	none	Section 1	5.7968	none
	donor value to use: Row D																									Qualified	8%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFN407: Row A	4.63	0.0878 U	0.0553 J	0.188 J	0.0806 J	0.217 J	0.407 J	0.104 J	0.201 J	0.659 J	0.892 J	0.314 J	0.103 J	0.105 J	0.82 J	0.0568 J	0.201 J									
	value to use: Row B	4.63	0.0878	0.0553	0.188	0.0806	0.217	0.407	0.104	0.201	0.659	0.892	0.314	0.103	0.105	0.82	0.0568	0.201									
64	congener TEC: Row C	4.63	0.0878	0.00553	0.0188	0.00806	0.00217	0.0001221	0.0104	0.00603	0.1977	0.0892	0.0314	0.0103	0.0105	0.0082	0.000568	0.0000603	2%	5.0290	5.0729	5.1168	5.0377	none	Section 1	5.0377	none
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFN408: Row A	3.01	0.241 J	0.0398 J	0.0866 J	0.0577 J	0.136 J	0.119 J	0.0707 J	0.105 J	0.41 J	0.309 J	0.118 J	0.0856 J	0.0857 J	0.101 J	0.0497 J	0.156 J									
	value to use: Row B	3.01	0.241	0.0398	0.0866	0.0577	0.136	0.119	0.0707	0.105	0.41	0.309	0.118	0.0856	0.0857	0.101	0.0497	0.156									
65	congener TEC: Row C	3.01	0.241	0.00398	0.00866	0.00577	0.00136	0.0000357	0.00707	0.00315	0.123	0.0309	0.0118	0.00856	0.00857	0.00101	0.000497	0.0000468	No difference	3.4654	3.4654	3.4654	3.4654	none	Section 1	3.4654	none
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFN409: Row A	10.4	0.126 U	0.0341 U	0.243 J	0.0914 J	0.33 J	0.366 J	0.249 J	0.145 J	1.29 J	1 J	0.382 J	0.0589 J	0.13 J	0.776 J	0.0538 U	0.107 J									
	value to use: Row B	10.4	0.126	0.0341	0.243	0.0914	0.33	0.366	0.249	0.145	1.29	1	0.382	0.0589	0.13	0.776	0.0538	0.107									
66	congener TEC: Row C	10.4	0.126	0.00341	0.0243	0.00914	0.0033	0.0001098	0.0249	0.00435	0.387	0.1	0.0382	0.00589	0.013	0.00776	0.000538	0.0000321	1%	11.0180	11.0830	11.1479	11.0355	none	Section 1	11.0355	none
	donor value to use: Row D																									Qualified	7%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFN410: Row A	3.77	0.0851 U	0.051 J	0.104 J	0.0758 J	0.188 J	0.633 J	0.222 J	0.251 J	0.71 J	0.367 J	0.173 J	0.076 J	0.0818 J	0.357 J	0.0408 J	0.161 J									
	value to use: Row B	3.77	0.0851	0.051	0.104	0.0758	0.188	0.633	0.222	0.251	0.71	0.367	0.173	0.076	0.0818	0.357	0.0408	0.161									
67	congener TEC: Row C	3.77	0.0851	0.0051	0.0104	0.00758	0.00188	0.0001899	0.0222	0.00753	0.213	0.0367	0.0173	0.0076	0.00818	0.00357	0.000408	0.0000483	2%	4.1117	4.1542	4.1968	4.1209	none	Section 1	4.1209	none
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFN411: Row A	1.56 J	0.0776 U	0.046 J	0.155 J	0.0223 U	0.319 J	0.555 J	0.062 J	0.301 J	0.302 J	0.166 J	0.114 J	0.109 J	0.0241 J	0.15 J	0.0282 J	0.073 J									
	value to use: Row B	1.56	0.0776	0.046	0.155	0.0223	0.319	0.555	0.062	0.301	0.302	0.166	0.114	0.109	0.0241	0.15	0.0282	0.073									
68	congener TEC: Row C	1.56	0.0776	0.0046	0.0155	0.00223	0.00319	0.0001665	0.0062	0.00903	0.0906	0.0166	0.0114	0.0109	0.00241	0.0015	0.000282	0.0000219	5%	1.7324	1.7723	1.8122	1.7388	J	Section 1	1.7388	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFN412: Row A	5.02	0.265 J	0.0217 U	0.108 J	0.0761 J	0.156 J	0.354 J	0.118 J	0.166 J	0.43 J	0.255 J	0.093 J	0.0486 J	0.0401 J	0.231 J	0.0377 J	0.0488 J									
	value to use: Row B	5.02	0.265	0.0217	0.108	0.0761	0.156	0.354	0.118	0.166	0.43	0.255	0.093	0.0486	0.0401	0.231	0.0377	0.0488									
69	congener TEC: Row C	5.02	0.265	0.00217	0.0108	0.00761	0.00156	0.0001062	0.0118	0.00498	0.129	0.0255	0.0093	0.00486	0.00401	0.00231	0.000377	1.464E-05	0%	5.4972	5.4983	5.4994	5.4977	none	Section 1	5.4977	none
	donor value to use: Row D																									Qualified	9%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFS351: Row A	4.67 J	0.472 J	0.0866 J	0.402 J	0.109 J	0.337 J	0.55 J	0.383 J	0.801 J	0.89 J	0.281 J	0.331 J	0.182 J	0.0545 J	0.418 J	0.177 J	0.214 J									
	value to use: Row B	4.67	0.472	0.0866	0.402	0.109	0.337	0.55	0.383	0.801	0.89	0.281	0.331	0.182	0.0545	0.418	0.177	0.214									
70	congener TEC: Row C	4.67	0.472	0.00866	0.0402	0.0109	0.00337	0.000165	0.0383	0.02403	0.267	0.0281	0.0331	0.0182	0.00545	0.00418	0.00177	0.0000642	No difference	5.6255	5.6255	5.6255	5.6255	J	Section 1	5.6255	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFS354: Row A	2.01 J	0.0995 U	0.0572 J	0.101 J	0.0688 J	0.0814 J	0.166 J	0.0735 J	0.159 J	0.494 J	0.0974 J	0.0813 J	0.0794 J	0.0387 J	0.132 J	0.0886 J	0.136 J									
	value to use: Row B	2.01	0.0995	0.0572	0.101	0.0688	0.0814	0.166	0.0735	0.159	0.494	0.0974	0.0813	0.0794	0.0387	0.132	0.0886	0.136									
71	congener TEC: Row C	2.01	0.0995	0.00572	0.0101	0.00688	0.000814	0.0000498	0.00735	0.00477	0.1482	0.00974	0.00813	0.00794	0.00387	0.00132	0.000886	0.0000408	4%	2.2258	2.2756	2.3253	2.2306	J	Section 1	2.2306	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFS355: Row A	7.95 J	0.4 J	0.0522 J	0.435 J	0.125 J	0.597 J	0.482 J	0.382 J	0.399 J	1.55 J	0.847 J	0.204 J	0.123 J	0.186 J	0.797 J	0.115 J	0.275 J									
	value to use: Row B	7.95	0.4	0.0522	0.435	0.125	0.597	0.482	0.382	0.399	1.55	0.847	0.204	0.123	0.186	0.797	0.115	0.275									
72	congener TEC: Row C	7.95	0.4	0.00522	0.0435	0.0125	0.00597	0.0001446	0.0382	0.01197	0.465	0.0847	0.0204	0.0123	0.0186	0.00797	0.00115	0.0000825	No difference	9.0777	9.0777	9.0777	9.0777	J	Section 1	9.0777	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFS356: Row A	7.47 J	0.164 U	0.112 J	0.372 J	0.143 J	0.325 J	0.433 J	0.482 J	0.239 J	1.17 J	0.274 J	0.309 J	0.0775 J	0.135 J	0.284 J	0.104 J	0.314 J									
	value to use: Row B	7.47	0.164	0.112	0.372	0.143	0.325	0.433	0.482	0.239	1.17	0.274	0.309	0.0775	0.135	0.284	0.104	0.314									
73	congener TEC: Row C	7.47	0.164	0.0112	0.0372	0.0143	0.00325	0.0001299	0.0482	0.00717	0.351	0.0274	0.0309	0.00775	0.0135	0.00284	0.00104	0.0000942	2%	8.0260	8.1080	8.1900	8.0406	J	Section 1	8.0406	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFS357: Row A	0.123 U	0.285 J	0.081 J	0.193 J	0.178 J	0.233 J	0.402 J	0.122 U	0.232 J	0.392 J	0.149 J	0.108 J	0.153 J	0.0431 U	0.223 J	0.0605 J	0.231 J									
	value to use: Row B	0.123	0.285	0.081	0.193	0.178	0.233	0.402	0.122	0.232	0.392	0.149	0.108	0.153	0.0431	0.223	0.0605	0.231									
74	congener TEC: Row C	0.123	0.285	0.0081	0.0193	0.0178	0.00233	0.0001206	0.0122	0.00696	0.1176	0.0149	0.0108	0.0153	0.00431	0.00223	0.000605	0.0000693	24%	0.5011	0.5709	0.6406	0.5205	J	Section 1	0.5205	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FSFS359: Row A	7.73	0.0767 U	0.0576 J	0.337 J	0.147 J	0.342 J	0.579 J	0.591 J	0.459 J	1.18 J	0.489 J	0.425 J	0.104 J	0.178 J	0.712 J	0.0415 J	0.202 J									
	value to use: Row B	7.73	0.0767	0.0576	0.337	0.147	0.342	0.579	0.591	0.459	1.18	0.489	0.425	0.104	0.178	0.712	0.0415	0.202									
75	congener TEC: Row C	7.73	0.0767	0.00576	0.0337	0.0147	0.00342	0.0001737	0.0591	0.01377	0.354	0.0489	0.0425	0.0104	0.0178	0.00712	0.000415	0.0000606	1%	8.3418	8.3802	8.4185	8.3602	none	Section 1	8.3602	none
	donor value to use: Row D																									Qualified	8%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FWPC-COMP07: Row A	31.8 J	0.197 U	0.195 J	0.595 J	0.0814 J	0.481 J	0.606 J	3.72 J	2.38 J	3.45 J	1.55 J	1.14 J	0.0634 U	0.201 J	1.85 J	0.102 J	0.0977 J									
	value to use: Row B	31.8	0.197	0.195	0.595	0.0814	0.481	0.606	3.72	2.38	3.45	1.55	1.14	0.0634	0.201	1.85	0.102	0.0977									
76	congener TEC: Row C	31.8	0.197	0.0195	0.0595	0.00814	0.00481	0.0001818	0.372	0.0714	1.035	0.155	0.114	0.00634	0.0201	0.0185	0.00102	2.931E-05	1%	33.6792	33.7809	33.8825	33.7171	J	Section 1	33.7171	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FWPC-COMP08: Row A	8.36 J	0.635 J	0.224 J	0.353 J	0.059 U	0.218 J	0.482 J	2.28 J	1.73 J	2.56 J	1.5 J	0.739 J	0.0537 J	0.176 J	1.54 J	0.0616 U	0.162 J									
	value to use: Row B	8.36	0.635	0.224	0.353	0.059	0.218	0.482	2.28	1.73	2.56	1.5	0.739	0.0537	0.176	1.54	0.0616	0.162									
77	congener TEC: Row C	8.36	0.635	0.0224	0.0353	0.0059	0.00218	0.0001446	0.228	0.0519	0.768	0.15	0.0739	0.00537	0.0176	0.0154	0.000616	0.0000486	0%	10.3652	10.3685	10.3718	10.3669	J	Section 1	10.3669	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish fillet TCDD-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003									
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDI	1,4,9-HpCDI	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
78	NB03FWPC-COMP09: Row A	14.1 J	0.544 J	0.324 J	0.394 J	0.103 J	0.308 J	0.568 J	3.39 J	3.96 J	3.62 J	1.75 J	1.66 J	0.0897 J	0.205 J	4.12 J	0.0786 U	0.29 J									
	value to use: Row B	14.1	0.544	0.324	0.394	0.103	0.308	0.568	3.39	3.96	3.62	1.75	1.66	0.0897	0.205	4.12	0.0786	0.29									
	congener TEC: Row C	14.1	0.544	0.0324	0.0394	0.0103	0.00308	0.0001704	0.339	0.1188	1.086	0.175	0.166	0.00897	0.0205	0.0412	0.000786	0.000087	0%	16.6849	16.6853	16.6857	16.6850	J	Section 1	16.6850	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
79	NB03FWPC-COMP10: Row A	10.2 J	0.107 U	0.25 J	0.502 J	0.224 J	0.312 J	0.65 J	4.33 J	3.31 J	3.42 J	1.32 J	1.64 J	0.208 J	0.33 J	3.91 J	0.181 J	0.408 J									
	value to use: Row B	10.2	0.107	0.25	0.502	0.224	0.312	0.65	4.33	3.31	3.42	1.32	1.64	0.208	0.33	3.91	0.181	0.408									
	congener TEC: Row C	10.2	0.107	0.025	0.0502	0.0224	0.00312	0.000195	0.433	0.0993	1.026	0.132	0.164	0.0208	0.033	0.0391	0.00181	0.0001224	1%	12.2500	12.3035	12.3570	12.2769	J	Section 1	12.2769	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
80	NB03FWPC-COMP11: Row A	15.8 J	0.0882 U	0.206 J	0.542 J	0.123 J	0.323 J	0.596 J	3.09 J	3.3 J	3.97 J	1.69 J	1.29 J	0.0626 J	0.223 J	2.93 J	0.0808 U	0.298 J									
	value to use: Row B	15.8	0.0882	0.206	0.542	0.123	0.323	0.596	3.09	3.3	3.97	1.69	1.29	0.0626	0.223	2.93	0.0808	0.298									
	congener TEC: Row C	15.8	0.0882	0.0206	0.0542	0.0123	0.00323	0.0001788	0.309	0.099	1.191	0.169	0.129	0.00626	0.0223	0.0293	0.000808	0.0000894	0%	17.8455	17.8900	17.9345	17.8605	J	Section 1	17.8605	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
81	NB03FWPC-COMP12: Row A	13.1 J	0.727 J	0.143 J	0.351 J	0.114 J	0.263 J	0.455 J	3.04 J	2.1 J	3.31 J	1.74 J	1.03 J	0.107 J	0.193 J	1.53 J	0.0714 U	0.139 J									
	value to use: Row B	13.1	0.727	0.143	0.351	0.114	0.263	0.455	3.04	2.1	3.31	1.74	1.03	0.107	0.193	1.53	0.0714	0.139									
	congener TEC: Row C	13.1	0.727	0.0143	0.0351	0.0114	0.00263	0.0001365	0.304	0.063	0.993	0.174	0.103	0.0107	0.0193	0.0153	0.000714	0.0000417	0%	15.5729	15.5733	15.5736	15.5730	J	Section 1	15.5730	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
82	NB03FWDUP-13: Row A	19.7 J	0.0706 U	0.114 J	0.465 J	0.137 J	0.325 J	0.458 J	4.02 J	1.81 J	2.93 J	1.79 J	0.73 J	0.0799 J	0.169 J	1.15 J	0.072 U	0.125 J									
	value to use: Row B	19.7	0.0706	0.114	0.465	0.137	0.325	0.458	4.02	1.81	2.93	1.79	0.73	0.0799	0.169	1.15	0.072	0.125									
	congener TEC: Row C	19.7	0.0706	0.0114	0.0465	0.0137	0.00325	0.0001374	0.402	0.0543	0.879	0.179	0.073	0.00799	0.0169	0.0115	0.00072	0.0000375	0%	21.3987	21.4344	21.4700	21.4139	J	Section 1	21.4139	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
83	NB03FWPDUP-15: Row A	10.2 J	0.121 U	0.143 J	0.429 J	0.0523 U	0.281 J	0.48 J	2.62 J	1.83 J	2.7 J	1.55 J	0.837 J	0.0846 J	0.182 J	1.65 J	0.08 U	0.223 J									
	value to use: Row B	10.2	0.121	0.143	0.429	0.0523	0.281	0.48	2.62	1.83	2.7	1.55	0.837	0.0846	0.182	1.65	0.08	0.223									
	congener TEC: Row C	10.2	0.121	0.0143	0.0429	0.00523	0.00281	0.000144	0.262	0.0549	0.81	0.155	0.0837	0.00846	0.0182	0.0165	0.0008	0.0000669	1%	11.6690	11.7325	11.7960	11.6901	J	Section 1	11.6901	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
84	NB03FWPN-COMP07: Row A	21.8 J	0.518 J	0.114 J	0.221 J	0.0719 J	0.225 J	0.588 J	1.28 J	1.55 J	2.11 J	0.913 J	0.795 J	0.0726 J	0.0752 J	1.55 J	0.0733 U	0.223 J									
	value to use: Row B	21.8	0.518	0.114	0.221	0.0719	0.225	0.588	1.28	1.55	2.11	0.913	0.795	0.0726	0.0752	1.55	0.0733	0.223									
	congener TEC: Row C	21.8	0.518	0.0114	0.0221	0.00719	0.00225	0.0001764	0.128	0.0465	0.633	0.0913	0.0795	0.00726	0.00752	0.0155	0.000733	0.0000669	0%	23.3698	23.3701	23.3705	23.3699	J	Section 1	23.3699	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
85	NB03FWPN-COMP08: Row A	13.7 J	0.0842 U	0.234 J	0.689 J	0.142 J	0.416 J	0.73 J	4.4 J	3.03 J	3.27 J	1.28 J	1.2 J	0.0919 J	0.233 J	1.74 J	0.0607 J	0.112 J									
	value to use: Row B	13.7	0.0842	0.234	0.689	0.142	0.416	0.73	4.4	3.03	3.27	1.28	1.2	0.0919	0.233	1.74	0.0607	0.112									
	congener TEC: Row C	13.7	0.0842	0.0234	0.0689	0.0142	0.00416	0.000219	0.44	0.0909	0.981	0.128	0.12	0.00919	0.0233	0.0174	0.000607	0.0000336	1%	15.6213	15.6634	15.7055	15.6375	J	Section 1	15.6375	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
86	NB03FWPN-COMP09: Row A	21.8 J	0.719 J	0.247 J	0.578 J	0.129 J	0.309 J	0.55 J	1.9 J	1.69 J	4.59 J	2.87 J	1.29 J	0.096 J	0.244 J	1.13 J	0.0748 U	0.263 J									
	value to use: Row B	21.8	0.719	0.247	0.578	0.129	0.309	0.55	1.9	1.69	4.59	2.87	1.29	0.096	0.244	1.13	0.0748	0.263									
	congener TEC: Row C	21.8	0.719	0.0247	0.0578	0.0129	0.00309	0.000165	0.19	0.0507	1.377	0.287	0.129	0.0096	0.0244	0.0113	0.000748	0.0000789	0%	24.6967	24.6971	24.6975	24.6969	J	Section 1	24.6969	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
87	NB03FWPN-COMP10: Row A	7.69 J	0.0761 U	0.163 J	0.411 J	0.0466 J	0.253 J	0.457 J	2.18 J	2.1 J	2.78 J	1.1 J	0.819 J	0.0896 J	0.161 J	1.54 J	0.0665 U	0.162 J									
	value to use: Row B	7.69	0.0761	0.163	0.411	0.0466	0.253	0.457	2.18	2.1	2.78	1.1	0.819	0.0896	0.161	1.54	0.0665	0.162									
	congener TEC: Row C	7.69	0.0761	0.0163	0.0411	0.00466	0.00253	0.0001371	0.218	0.063	0.834	0.11	0.0819	0.00896	0.0161	0.0154	0.000665	0.0000486	1%	9.1021	9.1405	9.1789	9.1175	J	Section 1	9.1175	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
88	NB03FWPN-COMP11: Row A	8 J	0.0952 U	0.182 J	0.599 J	0.15 J	0.264 J	0.772 J	2.93 J	2.8 J	3.65 J	1.27 J	1.19 J	0.0769 J	0.149 J	3 J	0.0626 U	0.116 J									
	value to use: Row B	8	0.0952	0.182	0.599	0.15	0.264	0.772	2.93	2.8	3.65	1.27	1.19	0.0769	0.149	3	0.0626	0.116									
	congener TEC: Row C	8	0.0952	0.0182	0.0599	0.015	0.00264	0.0002316	0.293	0.084	1.095	0.127	0.119	0.00769	0.0149	0.03	0.000626	0.0000348	1%	9.8666	9.9145	9.9624	9.8879	J	Section 1	9.8879	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
89	NB03FWPN-COMP12: Row A	17.6 J	0.0836 U	0.198 J	0.55 J	0.114 J	0.357 J	0.707 J	4.27 J	2.28 J	4.8 J	3.76 J	1.27 J	0.07 J	0.269 J	1.95 J	0.0743 J	0.134 J									
	value to use: Row B	17.6	0.0836	0.198	0.55	0.114	0.357	0.707	4.27	2.28	4.8	3.76	1.27	0.07	0.269	1.95	0.0743	0.134									
	congener TEC: Row C	17.6	0.0836	0.0198	0.055	0.0114	0.00357	0.0002121	0.427	0.0684	1.44	0.376	0.127	0.007	0.0269	0.0195	0.000743	0.0000402	0%	20.1826	20.2244	20.2662	20.2019	J	Section 1	20.2019	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
90	NB03FWPS-COMP07: Row A	13.6 J	0.696 J	0.157 J	0.446 J	0.0574 U	0.204 J	0.707 J	2.88 J	2.19 J	3.3 J	1.31 J	0.797 J	0.0554 J	0.163 J	1.18 J	0.0893 J	0.193 J									
	value to use: Row B	13.6	0.696	0.157	0.446	0.0574	0.204	0.707	2.88	2.19	3.3	1.31	0.797	0.0554	0.163	1.18	0.0893	0.193									
	congener TEC: Row C	13.6	0.696	0.0157	0.0446	0.00574	0.00204	0.0002121	0.288	0.0657	0.99	0.131	0.0797	0.00554	0.0163	0.0118	0.000893	0.0000579	0%	15.9475	15.9504	15.9533	15.9493	J	Section 1	15.9493	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
91	NB03FWPS-COMP08: Row A	5.77 J	0.127 U	0.112 J	0.516 J	0.102 J	0.21 J	0.783 J	2.74 J	1.91 J	2.52 J	0.521 J	0.561 J	0.0745 J	0.117 J	0.928 J	0.0729 U	0.143 J									
	value to use: Row B	5.77	0.127	0.112	0.516	0.102	0.21	0.783	2.74	1.91	2.52	0.521	0.561	0.0745	0.117	0.928	0.0729	0.143									
	congener TEC: Row C	5.77	0.127	0.0112	0.0516	0.0102	0.0021	0.0002349	0.274	0.0573	0.756	0.0521	0.0561	0.00745	0.0117	0.00928	0.000729	0.0000429	2%	7.0693	7.1332	7.1970	7.0902	J	Section 1	7.0902	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
92	NB03FWPS-COMP09: Row A	10.9 J	0.736 J	0.174 J	0.463 J	0.106 J	0.285 J	0.577 J	2.1 J	1.7 J	1.61 J	0.426 J	1.11 J	0.0983 J	0.103 J	0.895 J	0.0608 U	0.0606 J									
	value to use: Row B	10.9	0.736	0.174	0.463	0.106	0.285	0.577	2.1	1.7	1.61	0.426	1.11	0.0983	0.103	0.895	0.0608	0.0606									
	congener TEC: Row C	10.9	0.736	0.0174	0.0463	0.0106	0.00285	0.0001731	0.21	0.051	0.483	0.0426	0.111	0.00983	0.0103	0.00895	0.000608	1.818E-05	0%	12.6400	12.6403	12.6406	12.6401	J	Section 1	12.6401	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
93	NB03FWPS-COMP10: Row A	14.7 J	0.0955 U	0.389 J	0.915 J	0.198 J	0.555 J	1.51 J	6.39 J	4.93 J	3.08 J	0.686 J	1.34 J	0.143 J	0.228 J	2.14 J	0.0779 U	0.178 J									
	value to use: Row B	14.7	0.0955	0.389	0.915	0.198	0.555	1.51	6.39	4.93	3.08	0.686	1.34	0.143	0.228	2.14	0.0779	0.178									
	congener TEC: Row C	14.7	0.0955	0.0389	0.0915	0.0198	0.00555	0.000453	0.639	0.1479	0.924	0.0686	0.134	0.0143	0.0228	0.0214	0.000779	0.0000534	1%	16.8283	16.8764	16.9245	16.8543	J	Section 1	16.8543	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
94	NB03FWPS-COMP11: Row A	1.44 J	0.137 U	0.0694 J	0.482 J	0.13 J	0.367 J	0.971 J	3.93 J	2.13 J	1.67 J	0.322 J	0.455 J	0.084 J	0.189 J	0.568 J	0.0675 U	0.0671 J									
	value to use: Row B	1.44	0.137	0.0694	0.482	0.13	0.367	0.971	3.93	2.13	1.67	0.322	0.455	0.084	0.189	0.568	0.0675	0.0671									
	congener TEC: Row C	1.44	0.137	0.00694	0.0482	0.013	0.00367	0.0002913	0.393	0.0639	0.501	0.0322	0.0455	0.0084	0.0189	0.00568	0.000675	2.013E-05	5%	2.5807	2.6495	2.7184	2.5998	J	Section 1	2.5998	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
95	NB03FWPS-COMP12: Row A	7.18 J	0.0645 U	0.377 J	0.926 J	0.197 J	0.531 J	1.32 J	5.46 J	3.69 J	2.98 J	1.18 J	0.98 J	0.0928 J	0.21 J	1.71 J	0.0986 J	0.186 J									
	value to use: Row B	7.18	0.0645	0.377	0.926	0.197	0.531	1.32	5.46	3.69	2.98	1.18	0.98	0.0928	0.21	1.71	0.0986	0.186									
	congener TEC: Row C	7.18	0.0645	0.0377	0.0926	0.0197	0.00531	0.000396	0.546	0.1107	0.894	0.118	0.098	0.00928	0.021	0.0171	0.000986	0.0000558	1%	9.1508	9.1831	9.2153	9.1632	J	Section 1	9.1632	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

DATA LIST

List of TEQ results to copy and paste into other spreadsheets. such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03FAEC-COMP01	7.4034	
Line #2	NB03FAEC-COMP02	5.4222	

EPA Advanced KM TEQ Calculator

Fish fillet TCDD-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17								(Quasi) Sensitivity Analysis SECTION 1	
																									Highest TEC value is a DETECT, and there are no rejected ("R") values	
WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003		TEQs from Substitution			KM Method			Treatment 1	
Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDI	1,4,9-HpCDI	OCDF	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
Sample notes																										
Line #3																					NB03FAEC-COMP03	8.7014				
Line #4																					NB03FAEC076	17.9103				
Line #5																					NB03FAEC502	17.6007				
Line #6																					NB03FAEC508	5.7780	J			
Line #7																					NB03FAEN-COMP01	5.4745	J			
Line #8																					NB03FAEN-COMP02	4.0680	J			
Line #9																					NB03FAEN-COMP03	12.4192				
Line #10																					NB03FAEN-COMP04	19.5549				
Line #11																					NB03FAEN-COMP05	9.5852	J			
Line #12																					NB03FAEN-COMP06	11.7767				
Line #13																					NB03FAES-COMP01	0.3979	J			
Line #14																					NB03FAES018	3.0355	J			
Line #15																					NB03FAES019	5.4151	J			
Line #16																					NB03FAES347	6.4190				
Line #17																					NB03FAES364	8.6391				
Line #18																					NB03FAES365	12.9347				
Line #19																					NB03FBL-COMP01	2.6213				
Line #20																					NB03FBL-COMP02	0.9745	J			
Line #21																					NB03FBL-COMP03	1.6190073				
Line #22																					NB03FBL-COMP04	0.3817351	J			
Line #23																					NB03FBL-COMP05	3.1293585				
Line #24																					NB03FBLC468	1.1430674	J			
Line #25																					NB03FBLC469	1.0915548	J			
Line #26																					NB03FBLC471	1.0479326	J			
Line #27																					NB03FBLC475	0.3079092	J			
Line #28																					NB03FBLC476	2.5766698				
Line #29																					NB03FBLC478	0.7465126	J			
Line #30																					NB03FBLC479	1.302886	J			
Line #31																					NB03FBLC481	0.8548406	J			
Line #32																					NB03FBLN404	0.7657118	J			
Line #33																					NB03FBLN405	3.4778344				
Line #34																					NB03FBLN406	2.4287836				
Line #35																					NB03FBLS339	0.633874	J			
Line #36																					NB03FBLS349	1.3447189	J			
Line #37																					NB03FSBDUP-10	24.970198	J			
Line #38																					NB03FSBDUP-11	3.2269049				
Line #39																					NB03FSBDUP-12	5.1927327	J			
Line #40																					NB03FSBS320	3.3319412				
Line #41																					NB03FSBS321	0.6500365	J			
Line #42																					NB03FSBS322	2.0149165	J			
Line #43																					NB03FSBS323	0.6969612	J			
Line #44																					NB03FSBS324	2.9944373				
Line #45																					NB03FSBS325	1.5155083	J			
Line #46																					NB03FSBS327	1.1112184	J			
Line #47																					NB03FSBS328	0.9067241	J			
Line #48																					NB03FSBS329	1.4057127	J			
Line #49																					NB03FSBS330	2.0838617				
Line #50																					NB03FSBS331	32.996609	J			
Line #51																					NB03FSBS332	1.6107007				
Line #52																					NB03FSBS333	1.6446134	J			
Line #53																					NB03FSBS334	1.3307704	J			
Line #54																					NB03FSBS335	0.751048	J			
Line #55																					NB03FSBS336	17.198395	J			
Line #56																					NB03FSBS337	4.3819719	J			
Line #57																					NB03FSBS338	1.8443632	J			
Line #58																					NB03FSFC486	5.0514955				
Line #59																					NB03FSFC487	1.9313915	J			
Line #60																					NB03FSFC488	4.1623071				
Line #61																					NB03FSFC489	1.8549298	J			
Line #62																					NB03FSFC490	4.2217197	J			
Line #63																					NB03FSFC491	5.7967912				
Line #64																					NB03FSFN407	5.0376666				
Line #65																					NB03FSFN408	3.4654095				
Line #66																					NB03FSFN409	11.035498				
Line #67																					NB03FSFN410	4.1208781				
Line #68																					NB03FSFN411	1.7387711	J			
Line #69																					NB03FSFN412	5.4977423				
Line #70																					NB03FSFS351	5.6254892	J			
Line #71																					NB03FSFS354	2.2306399	J			
Line #72																					NB03FSFS355	9.0777071	J			
Line #73																					NB03FSFS356	8.0406151	J			
Line #74																					NB03FSFS357	0.5204914	J			
Line #75																					NB03FSFS359	8.360235				
Line #76																					NB03FWPC-COMP07	33.717129	J			
Line #77																					NB03FWPC-COMP08	10.366908	J			
Line #78																					NB03FWPC-COMP09	16.685036	J			
Line #79																					NB03FWPC-COMP10	12.27687	J			
Line #80																					NB03FWPC-COMP11	17.860452	J			
Line #81																					NB03FWPC-COMP12	15.572997	J			
Line #82																					NB03FWPDUP-13	21.413875	J			
Line #83																					NB03FWPDUP-15	11.690107	J			
Line #84																					NB03FWPN-COMP07	23.369885	J			
Line #85																					NB03FWPN-COMP08	15.637451	J			
Line #86																					NB03FWPN-COMP09	24.696856	J			
Line #87																					NB03FWPN-COMP10	9.1175311	J			
Line #88																					NB03FWPN-COMP11	9.8878868	J			
Line #89																					NB03FWPN-COMP12	20.201889	J			
Line #90																					NB03FWPS-COMP07	15.949292	J			
Line #91																					NB03FWPS-COMP08	7.0901734	J			
Line #92																					NB03FWPS-COMP09	12.640117	J			
Line #93																					NB03FWPS-COMP10	16.854292	J			
Line #94																					NB03FWPS-COMP11	2.5998462	J			
Line #95																					NB03FWPS-COMP12	9.1632198	J			

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003								Treatment 1	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
1	NB03FAEC-COMP01: Row A	47.2		9550 J	785	37500 J	662	8 U	4320		1820	7.5 U	352									
	value to use: Row B	47.2		9550	785	37500	662	8	4320		1820	7.5	352									
	congener TEC: Row C	0.00472		0.2865	0.02355	1.125	0.01986	0.8	0.1296		0.0546	0.225	0.01056	47%	1.6544	2.1669	2.6794	1.7661	J	Section 1	1.7661	J
	donor value to use: Row D																				Qualified Dioxin/Furan	91%
	donor TEC: Row E																					
2	NB03FAEC-COMP02: Row A	44.9	8.63 U	7720 J	543	29000 J		7.67 U	3780		1590	7.19 U	339									
	value to use: Row B	44.9	8.63	7720	543	29000		7.67	3780		1590	7.19	339									
	congener TEC: Row C	0.00449	0.002589	0.2316	0.01629	0.87		0.767	0.1134		0.0477	0.2157	0.01017	55%	1.2937	1.7863	2.2789	1.3860	J	Section 1	1.3860	J
	donor value to use: Row D																				Qualified Dioxin/Furan	92%
	donor TEC: Row E																					
3	NB03FAEC-COMP03: Row A	45.4	9.05 J	11800 J	756	42800 J		7.95 U	5110		2190	7.46 U	456									
	value to use: Row B	45.4	9.05	11800	756	42800		7.95	5110		2190	7.46	456									
	congener TEC: Row C	0.00454	0.002715	0.354	0.02268	1.284		0.795	0.1533		0.0657	0.2238	0.01368	42%	1.9006	2.4100	2.9194	2.0269	J	Section 1	2.0269	J
	donor value to use: Row D																				Qualified Dioxin/Furan	91%
	donor TEC: Row E																					
4	NB03FAEC076: Row A	78.1	14.6 J	19300 J	1320	72500 J	1150	7.91 U			2840	7.94 J	449									
	value to use: Row B	78.1	14.6	19300	1320	72500	1150	7.91			2840	7.94	449									
	congener TEC: Row C	0.00781	0.00438	0.579	0.0396	2.175	0.0345	0.791			0.0852	0.2382	0.01347	22%	3.1772	3.5727	3.9682	3.3024	J	Section 1	3.3024	J
	donor value to use: Row D																				Qualified Dioxin/Furan	95%
	donor TEC: Row E																					
5	NB03FAEC502: Row A	119	17 J	16100 J	1310	65500 J	1240	7.98 U				7.48 U	577									
	value to use: Row B	119	17	16100	1310	65500	1240	7.98				7.48	577									
	congener TEC: Row C	0.0119	0.0051	0.483	0.0393	1.965	0.0372	0.798				0.2244	0.01731	33%	2.55881	3.07001	3.58121	2.6690	J	Section 1	2.6690	J
	donor value to use: Row D																				Qualified Dioxin/Furan	97%
	donor TEC: Row E																					
6	NB03FAEC508: Row A	102 J	8.58 U	30800 J	2110 J	127000 J	2280 J	100 J	10900 J		4730 J	7.15 U	805 J									
	value to use: Row B	102	8.58	30800	2110	127000	2280	100	10900		4730	7.15	805									
	congener TEC: Row C	0.0102	0.002574	0.924	0.0633	3.81	0.0684	10	0.327		0.1419	0.2145	0.02415	1%	15.36895	15.477487	15.586024	15.4233	J	Section 1	15.4233	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
7	NB03FAEN-COMP01: Row A	15.9 J	1.75 U	7260 J	363 J	25800 J	490 J	1.56 U	2410 J			1.46 U	225 J									
	value to use: Row B	15.9	1.75	7260	363	25800	490	1.56	2410			1.46	225									
	congener TEC: Row C	0.00159	0.000525	0.2178	0.01089	0.774	0.0147	0.156	0.0723			0.0438	0.00675	17%	1.0980	1.1982	1.2984	1.1217	J	Section 1	1.1217	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
8	NB03FAEN-COMP02: Row A	18.6 J	1.75 U	5540 J	292 J	20000 J	294 J		1950 J		947 J	2.49 J	186 J									
	value to use: Row B	18.6	1.75	5540	292	20000	294		1950		947	2.49	186									
	congener TEC: Row C	0.00186	0.000525	0.1662	0.00876	0.6	0.00882		0.0585		0.02841	0.0747	0.00558	0%	0.9528	0.9531	0.9534	0.9534	J	Section 1	0.9534	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
9	NB03FAEN-COMP03: Row A	61.7		24600 J	1380	84200 J	1530	7.94 U	7640 J		3030 J	7.45 U	580									
	value to use: Row B	61.7		24600	1380	84200	1530	7.94	7640		3030	7.45	580									
	congener TEC: Row C	0.00617		0.738	0.0414	2.526	0.0459	0.794	0.2292		0.0909	0.2235	0.0174	24%	3.6950	4.2037	4.7125	3.8865	J	Section 1	3.8865	J
	donor value to use: Row D																				Qualified Dioxin/Furan	98%
	donor TEC: Row E																					
10	NB03FAEN-COMP04: Row A	54.9		20300 J	1480	76200 J	1500	7.74 U	6080 J		2510	7.26 U	379									
	value to use: Row B	54.9		20300	1480	76200	1500	7.74	6080		2510	7.26	379									
	congener TEC: Row C	0.00549		0.609	0.0444	2.286	0.045	0.774	0.1824		0.0753	0.2178	0.01137	26%	3.2590	3.7549	4.2508	3.4488	J	Section 1	3.4488	J
	donor value to use: Row D																				Qualified Dioxin/Furan	96%
	donor TEC: Row E																					
11	NB03FAEN-COMP05: Row A	10.1 J	1.79 U	5670 J	313 J	18900 J	352 J	13.4 J	1540 J		711 J	1.49 U	105 J									
	value to use: Row B	10.1	1.79	5670	313	18900	352	13.4	1540		711	1.49	105									
	congener TEC: Row C	0.00101	0.000537	0.1701	0.00939	0.567	0.01056	1.34	0.0462		0.02133	0.0447	0.00315	2%	2.1687	2.1914	2.2140	2.1769	J	Section 1	2.1769	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
12	NB03FAEN-COMP06: Row A	92.8		17300 J	960	59200 J	1020	7.91 U	5270		2380	7.42 U	487									
	value to use: Row B	92.8		17300	960	59200	1020	7.91	5270		2380	7.42	487									
	congener TEC: Row C	0.00928		0.519	0.0288	1.776	0.0306	0.791	0.1581		0.0714	0.2226	0.01461	33%	2.6078	3.1146	3.6214	2.7704	J	Section 1	2.7704	J
	donor value to use: Row D																				Qualified Dioxin/Furan	91%
	donor TEC: Row E																					
13	NB03FAES-COMP01: Row A	24.4	8.73 U	6140 J	334	17200 J	305	7.76 U	2190		955	7.27 U	153									
	value to use: Row B	24.4	8.73	6140	334	17200	305	7.76	2190		955	7.27	153									
	congener TEC: Row C	0.00244	0.002619	0.1842	0.01002	0.516	0.00915	0.776	0.0657		0.02865	0.2181	0.00459	76%	0.82075	1.3191095	1.817469	1.6376	J	Section 2, Treatment 1		
	donor value to use: Row D																					
	donor TEC: Row E																					
14	NB03FAES018: Row A	40.7 J	1.8 U	27800 J	1450 J	90100 J	1550 J	1.6 U	8390 J			1.5 U	445 J									
	value to use: Row B	40.7	1.8	27800	1450	90100	1550	1.6	8390			1.5	445									
	congener TEC: Row C	0.00407	0.00054	0.834	0.0435	2.703	0.0465	0.16	0.2517			0.045	0.01335	5%	3.89612	3.99889	4.10166	3.9326	J	Section 1	3.9326	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
15	NB03FAES019: Row A	30.8 J	1.79 U	16300 J	863 J	47000 J	1230 J	1.6 U	5450 J			1.5 U	328 J									
	value to use: Row B	30.8	1.79	16300	863	47000	1230	1.6	5450			1.5	328									
	congener TEC: Row C	0.00308	0.000537	0.489	0.02589	1.41	0.0369	0.16	0.1635			0.045	0.00984	9%	2.1382	2.2410	2.3437	2.1692	J	Section 1	2.1692	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values	
		WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003								Treatment 1	
	Sample ID: (must enter on Row A)		PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
16	NB03FAES347: Row A		52.7	8.75 U	11900 J	791	37300 J	794	268	3960		1720	7.3 U	294									
	value to use:	Row B	52.7	8.75	11900	791	37300	794	268	3960		1720	7.3	294									
	congener TEC:	Row C	0.00527	0.002625	0.357	0.02373	1.119	0.02382	26.8	0.1188		0.0516	0.219	0.00882	1%	28.5080	28.6189	28.7297	28.5442	none	Section 1	28.5442	none
	donor value to use:	Row D																				Qualified	6%
	donor TEC:	Row E																				Dioxin/Furan	
17	NB03FAES364: Row A		140	34.7	40200 J	2520	110000 J	2170	7.8 U				7.31 U	545									
	value to use:	Row B	140	34.7	40200	2520	110000	2170	7.8				7.31	545									
	congener TEC:	Row C	0.014	0.01041	1.206	0.0756	3.3	0.0651	0.78				0.2193	0.01635	19%	4.6875	5.1871	5.6868	4.7600	J	Section 1	4.7600	J
	donor value to use:	Row D																				Qualified	97%
	donor TEC:	Row E																				Dioxin/Furan	
18	NB03FAES365: Row A		93.9	8.7 U	21900 J	1520	79100 J	1660	519				7.25 U	638									
	value to use:	Row B	93.9	8.7	21900	1520	79100	1660	519				7.25	638									
	congener TEC:	Row C	0.00939	0.00261	0.657	0.0456	2.373	0.0498	51.9				0.2175	0.01914	0%	55.0539	55.1640	55.2740	55.0818	none	Section 1	55.0818	none
	donor value to use:	Row D																				Qualified	6%
	donor TEC:	Row E																				Dioxin/Furan	
19	NB03FBL-COMP01: Row A		166	7.3	1290 J	80.3	4910 J	87.3	9.41	455		217	1.49 U	42.7									
	value to use:	Row B	166	7.3	1290	80.3	4910	87.3	9.41	455		217	1.49	42.7									
	congener TEC:	Row C	0.0166	0.00219	0.0387	0.002409	0.1473	0.002619	0.941	0.01365		0.00651	0.0447	0.001281	4%	1.1723	1.1946	1.2170	1.1828	none	Section 1	1.1828	none
	donor value to use:	Row D																				Qualified	19%
	donor TEC:	Row E																				Dioxin/Furan	
20	NB03FBL-COMP02: Row A		53.5	2.19 J	1040 J	59.7	4650 J	68.1	14.2	501		250	1.46 U	44.9									
	value to use:	Row B	53.5	2.19	1040	59.7	4650	68.1	14.2	501		250	1.46	44.9									
	congener TEC:	Row C	0.00535	0.000657	0.0312	0.001791	0.1395	0.002043	1.42	0.01503		0.0075	0.0438	0.001347	3%	1.6244	1.6463	1.6682	1.6325	none	Section 1	1.6325	none
	donor value to use:	Row D																				Qualified	13%
	donor TEC:	Row E																				Dioxin/Furan	
21	NB03FBL-COMP03: Row A		62.8	1.76 U	774 J	44.1	3320 J	50.2	8.59	388		195	1.47 U	45.6									
	value to use:	Row B	62.8	1.76	774	44.1	3320	50.2	8.59	388		195	1.47	45.6									
	congener TEC:	Row C	0.00628	0.000528	0.02322	0.001323	0.0996	0.001506	0.859	0.01164		0.00585	0.0441	0.001368	4%	1.009787	1.032101	1.054415	1.0168	none	Section 1	1.0168	none
	donor value to use:	Row D																				Qualified	16%
	donor TEC:	Row E																				Dioxin/Furan	
22	NB03FBL-COMP04: Row A		20.2	1.74 U	435	24.4	1890 J	27.8	4.53 J	219			1.45 U	24									
	value to use:	Row B	20.2	1.74	435	24.4	1890	27.8	4.53	219			1.45	24									
	congener TEC:	Row C	0.00202	0.000522	0.01305	0.000732	0.0567	0.000834	0.453	0.00657			0.0435	0.00072	8%	0.533626	0.555637	0.577648	0.5376	J	Section 1	0.5376	J
	donor value to use:	Row D																				Qualified	96%
	donor TEC:	Row E																				Dioxin/Furan	
23	NB03FBL-COMP05: Row A		51	3.31 J	1220 J	72.3	5030 J	87.4	12.7	535		257	1.49 U	48									
	value to use:	Row B	51	3.31	1220	72.3	5030	87.4	12.7	535		257	1.49	48									
	congener TEC:	Row C	0.0051	0.000993	0.0366	0.002169	0.1509	0.002622	1.27	0.01605		0.00771	0.0447	0.00144	3%	1.4936	1.5159	1.5383	1.5027	none	Section 1	1.5027	none
	donor value to use:	Row D																				Qualified	15%
	donor TEC:	Row E																				Dioxin/Furan	
24	NB03FBLC468: Row A		83.2	3.4 J	937 J	50.6	3900 J	48.8	1.58 U	443		230	1.48 U	47.2									
	value to use:	Row B	83.2	3.4	937	50.6	3900	48.8	1.58	443		230	1.48	47.2									
	congener TEC:	Row C	0.00832	0.00102	0.02811	0.001518	0.117	0.001464	0.158	0.01329		0.0069	0.0444	0.001416	72%	0.1790	0.2802	0.3814	0.3448	J	Section 2, Treatment 1		
	donor value to use:	Row D																					
	donor TEC:	Row E																					
25	NB03FBLC469: Row A		88.2	1.72 U	1370 J	71.7	5960 J	71.2	80.3	608		303	1.44 U	55.1									
	value to use:	Row B	88.2	1.72	1370	71.7	5960	71.2	80.3	608		303	1.44	55.1									
	congener TEC:	Row C	0.00882	0.000516	0.0411	0.002151	0.1788	0.002136	8.03	0.01824		0.00909	0.0432	0.001653	1%	8.2920	8.3138	8.3357	8.3030	none	Section 1	8.3030	none
	donor value to use:	Row D																				Qualified	3%
	donor TEC:	Row E																				Dioxin/Furan	
26	NB03FBLC471: Row A		34.4	1.79 U	534	29.6	2280 J	26.8	1.59 U	291		152	1.49 U	32.3									
	value to use:	Row B	34.4	1.79	534	29.6	2280	26.8	1.59	291		152	1.49	32.3									
	congener TEC:	Row C	0.00344	0.000537	0.01602	0.000888	0.0684	0.000804	0.159	0.00873		0.00456	0.0447	0.000969	99%	0.1038	0.2059	0.3080	0.2451	J	Section 2, Treatment 1		
	donor value to use:	Row D																					
	donor TEC:	Row E																					
27	NB03FBLC475: Row A		14.1		498	30.2	2040 J	25.6	1.6 U	297		149	1.5 U	35.8									
	value to use:	Row B	14.1		498	30.2	2040	25.6	1.6	297		149	1.5	35.8									
	congener TEC:	Row C	0.00141		0.01494	0.000906	0.0612	0.000768	0.16	0.00891		0.00447	0.045	0.001074	104%	0.0937	0.1962	0.2987	0.2583	J	Section 2, Treatment 1		
	donor value to use:	Row D																					
	donor TEC:	Row E																					
28	NB03FBLC476: Row A		81.5	4.13 J	1350 J	82.4	5910 J	55	1.57 U	726		390	2.33 J	80.2									
	value to use:	Row B	81.5	4.13	1350	82.4	5910	55	1.57	726		390	2.33	80.2									
	congener TEC:	Row C	0.00815	0.001239	0.0405	0.002472	0.1773	0.00165	0.157	0.02178		0.0117	0.0699	0.002406	38%	0.3371	0.4156	0.4941	0.3549	J	Section 1	0.3549	J
	donor value to use:	Row D																				Qualified	90%
	donor TEC:	Row E																				Dioxin/Furan	
29	NB03FBLC478: Row A		50.6		641 J	35.4	2530 J	31	1.57 U	283		150	1.47 U	32.4									
	value to use:	Row B	50.6		641	35.4	2530	31	1.57	283		150	1.47	32.4									
	congener TEC:	Row C	0.00506		0.01923	0.001062	0.0759	0.00093	0.157	0.00849		0.0045	0.0441	0.000972	93%	0.116144	0.216694	0.317244	0.2789	J	Section 2, Treatment 1		
	donor value to use:	Row D																					
	donor TEC:	Row E																					
30	NB03FBLC479: Row A		48.1	1.73 U	604 J	28.5	2620 J	28.7	1.54 U	355		194	2.5 J	49.4									
	value to use:	Row B	48.1	1.73	604	28.5	2620	28.7	1.54	355		194	2.5	49.4									
	congener TEC:	Row C	0.00481	0.000519	0.01812	0.000855	0.0786	0.000861	0.154	0.01065		0.00582	0.075	0.001482	57%	0.196198	0.2734575	0.350717	0.3215	J	Section 2, Treatment 1		
	donor value to use:	Row D																					
	donor TEC:	Row E																					
31	NB03FBLC481: Row A		22		366	23.1	1430 J	19.7	15.3	166		85.8	1.46 U	18.9									
	value to use:	Row B	22		366	23.1	1430	19.7	15.3	166		85.8	1.46	18.9									
	congener TEC:	Row C	0.0022		0.01098	0.000693	0.0429	0.000591	1.53	0.00498		0.002574	0.0438	0.000567	3%	1.5955	1.6174	1.6393	1.6037	none	Section 1	1.6037	none
	donor value to use:	Row D																				Qualified	5%
	donor TEC:	Row E																				Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**									
	Sample ID: (must enter on Row A)	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03FBLN404: Row A	65.9	1.78 U	1050 J	67	4130 J	82.4	10.5	504			1.48 U	61.2									
	value to use: Row B	65.9	1.78	1050	67	4130	82.4	10.5	504			1.48	61.2									
32	**congener TEC: Row C**	**0.00659**	**0.000534**	**0.0315**	**0.00201**	**0.1239**	**0.002472**	**1.05**	**0.01512**			**0.0444**	**0.001836**	4%	1.2334	1.2559	1.2784	1.2425	none	**Section 1**	**1.2425** Qualified Dioxin/Furan	**none** 16%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FBLN405: Row A	34	3.25 J	778 J	52	2920 J	54.7	7.88	350		161	1.48 U	36.6									
	value to use: Row B	34	3.25	778	52	2920	54.7	7.88	350		161	1.48	36.6									
33	**congener TEC: Row C**	**0.0034**	**0.000975**	**0.02334**	**0.00156**	**0.0876**	**0.001641**	**0.788**	**0.0105**		**0.00483**	**0.0444**	**0.001098**	5%	0.9229	0.9451	0.9673	0.9289	none	**Section 1**	**0.9289** Qualified Dioxin/Furan	**none** 16%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FBLN406: Row A	264		2240 J	144	9380 J	148	72.7	764		365	1.72 J	64.3									
	value to use: Row B	264		2240	144	9380	148	72.7	764		365	1.72	64.3									
34	**congener TEC: Row C**	**0.0264**		**0.0672**	**0.00432**	**0.2814**	**0.00444**	**7.27**	**0.02292**		**0.01095**	**0.0516**	**0.001929**	No difference	7.7412	7.7412	7.7412	7.7412	none	**Section 1**	**7.7412** Qualified Dioxin/Furan	**none** 5%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FBLS339: Row A	26		2150 J	140	9090 J	107	1.6 U	1010		461	1.5 U	83.8									
	value to use: Row B	26		2150	140	9090	107	1.6	1010		461	1.5	83.8									
35	**congener TEC: Row C**	**0.0026**		**0.0645**	**0.0042**	**0.2727**	**0.00321**	**0.16**	**0.0303**		**0.01383**	**0.045**	**0.002514**	41%	0.3939	0.4964	0.5989	0.4196	J	**Section 1**	**0.4196** Qualified Dioxin/Furan	**J** 91%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FBLS349: Row A	68.7	1.79 U	1240 J	71.4	5470 J	68.5	1.59 U	695		351	2.37 J	77									
	value to use: Row B	68.7	1.79	1240	71.4	5470	68.5	1.59	695		351	2.37	77									
36	**congener TEC: Row C**	**0.00687**	**0.000537**	**0.0372**	**0.002142**	**0.1641**	**0.002055**	**0.159**	**0.02085**		**0.01053**	**0.0711**	**0.00231**	40%	0.3172	0.3969	0.4767	0.3348	J	**Section 1**	**0.3348** Qualified Dioxin/Furan	**J** 91%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBDUP-10: Row A	2010 J	115 J	14600 J	1130 J	52000 J	912 J	367	4190 J		1690 J	7.41 U	333 J									
	value to use: Row B	2010	115	14600	1130	52000	912	367	4190		1690	7.41	333									
37	**congener TEC: Row C**	**0.201**	**0.0345**	**0.438**	**0.0339**	**1.56**	**0.02736**	**36.7**	**0.1257**		**0.0507**	**0.2223**	**0.00999**	1%	39.18115	39.2923	39.40345	39.2502	none	**Section 1**	**39.2502** Qualified Dioxin/Furan	**none** 7%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBDUP-11: Row A	260			256	21300 J	231	3.09 U	2020		1110	5.45 J	203									
	value to use: Row B	260			256	21300	231	3.09	2020		1110	5.45	203									
38	**congener TEC: Row C**	**0.026**			**0.00768**	**0.639**	**0.00693**	**0.309**	**0.0606**		**0.0333**	**0.1635**	**0.00609**	28%	0.9431	1.0976	1.2521	0.9865	J	**Section 1**	**0.9865** Qualified Dioxin/Furan	**J** 89%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBDUP-12: Row A	271	16.3	3550 J	294	17000 J	210		1450 J		690 J	1.46 U	117									
	value to use: Row B	271	16.3	3550	294	17000	210		1450		690	1.46	117									
39	**congener TEC: Row C**	**0.0271**	**0.00489**	**0.1065**	**0.00882**	**0.51**	**0.0063**		**0.0435**		**0.0207**	**0.0438**	**0.00351**	6%	0.7313	0.7532	0.7751	0.7477	J	**Section 1**	**0.7477** Qualified Dioxin/Furan	**J** 93%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS320: Row A	313	15	4470 J	298	25200 J	384 J	48.6	2700 J		1610 J	7.88	340									
	value to use: Row B	313	15	4470	298	25200	384	48.6	2700		1610	7.88	340									
40	**congener TEC: Row C**	**0.0313**	**0.0045**	**0.1341**	**0.00894**	**0.756**	**0.01152**	**4.86**	**0.081**		**0.0483**	**0.2364**	**0.0102**	No difference	6.1823	6.1823	6.1823	6.1823	none	**Section 1**	**6.1823** Qualified Dioxin/Furan	**none** 17%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS321: Row A	167	1.73 U	2390 J	123	11600 J	97.7	28.2	1240 J		670 J	1.45 U	124									
	value to use: Row B	167	1.73	2390	123	11600	97.7	28.2	1240		670	1.45	124									
41	**congener TEC: Row C**	**0.0167**	**0.000519**	**0.0717**	**0.00369**	**0.348**	**0.002931**	**2.82**	**0.0372**		**0.0201**	**0.0435**	**0.00372**	1%	3.3240	3.3461	3.3681	3.3367	none	**Section 1**	**3.3367** Qualified Dioxin/Furan	**none** 15%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS322: Row A	132	1.75 U	2420 J	147	11500 J	160	28.3	1260 J		674 J	1.46 U	129									
	value to use: Row B	132	1.75	2420	147	11500	160	28.3	1260		674	1.46	129									
42	**congener TEC: Row C**	**0.0132**	**0.000525**	**0.0726**	**0.00441**	**0.345**	**0.0048**	**2.83**	**0.0378**		**0.02022**	**0.0438**	**0.00387**	1%	3.3319	3.3541	3.3762	3.3445	none	**Section 1**	**3.3445** Qualified Dioxin/Furan	**none** 15%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS323: Row A	95.3	1.79 U	1940 J	118	9860 J	111	18.6	1000		531	1.49 U	87.2									
	value to use: Row B	95.3	1.79	1940	118	9860	111	18.6	1000		531	1.49	87.2									
43	**congener TEC: Row C**	**0.00953**	**0.000537**	**0.0582**	**0.00354**	**0.2958**	**0.00333**	**1.86**	**0.03**		**0.01593**	**0.0447**	**0.002616**	2%	2.2789	2.3016	2.3242	2.2888	none	**Section 1**	**2.2888** Qualified Dioxin/Furan	**none** 17%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS324: Row A	215	11.1 J	3100 J	188	14800 J	174	7.79 U	1510		852	7.3 U	158									
	value to use: Row B	215	11.1	3100	188	14800	174	7.79	1510		852	7.3	158									
44	**congener TEC: Row C**	**0.0215**	**0.00333**	**0.093**	**0.00564**	**0.444**	**0.00522**	**0.779**	**0.0453**		**0.02556**	**0.219**	**0.00474**	87%	0.6483	1.1473	1.6463	1.4528	J	**Section 2, Treatment 1**		
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS325: Row A	254 J	8.71 U	3250 J	168 J	14800 J	8.23 U	170	1600 J		910 J	7.26 U	157 J									
	value to use: Row B	254	8.71	3250	168	14800	8.23	170	1600		910	7.26	157									
45	**congener TEC: Row C**	**0.0254**	**0.002613**	**0.0975**	**0.00504**	**0.444**	**0.0002469**	**17**	**0.048**		**0.0273**	**0.2178**	**0.00471**	1%	17.65195	17.76228	17.8726099	17.6785	none	**Section 1**	**17.6785** Qualified Dioxin/Furan	**none** 5%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS327: Row A	180	1.77 U	2420 J	137	12200 J	171	33.4	1250 J		689 J	1.47 U	131									
	value to use: Row B	180	1.77	2420	137	12200	171	33.4	1250		689	1.47	131									
46	**congener TEC: Row C**	**0.018**	**0.000531**	**0.0726**	**0.00411**	**0.366**	**0.00513**	**3.34**	**0.0375**		**0.02067**	**0.0441**	**0.00393**	1%	3.86794	3.8902555	3.912571	3.8813	none	**Section 1**	**3.8813** Qualified Dioxin/Furan	**none** 14%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS328: Row A	159	5.1	1800 J	87.7	8410 J	91.5	24.8	856		483	1.5 U	83.2									
	value to use: Row B	159	5.1	1800	87.7	8410	91.5	24.8	856		483	1.5	83.2									
47	**congener TEC: Row C**	**0.0159**	**0.00153**	**0.054**	**0.002631**	**0.2523**	**0.002745**	**2.48**	**0.02568**		**0.01449**	**0.045**	**0.002496**	2%	2.8518	2.8743	2.8968	2.8611	none	**Section 1**	**2.8611** Qualified Dioxin/Furan	**none** 12%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03FSBS329: Row A	79.8	1.73 U	1300 J	62.6	6980 J	77.9	17.2	642		383	1.45 U	63									
	value to use: Row B	79.8	1.73	1300	62.6	6980	77.9	17.2	642		383	1.45	63									
48	**congener TEC: Row C**	**0.00798**	**0.000519**	**0.039**	**0.001878**	**0.2094**	**0.002337**	**1.72**	**0.01926**		**0.01149**	**0.0435**	**0.00189**	2%	2.0132	2.0352	2.0573	2.0243	none	**Section 1**	**2.0243** Qualified Dioxin/Furan	**none** 14%
	donor value to use: Row D																					
	donor TEC: Row E																					

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003								Treatment 1	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
49	**NB03FSBS330: Row A**	153	1.74 U	1870 J	141	7490 J	80	11.9	779		321	1.45 U	55.7									
	value to use: Row B	153	1.74	1870	141	7490	80	11.9	779		321	1.45	55.7									
	congener TEC: Row C	0.0153	0.000522	0.0561	0.00423	0.2247	0.0024	1.19	0.02337		0.00963	0.0435	0.001671	3%	1.5274	1.5494	1.5714	1.5361	none	Section 1	**1.5361**	**none**
	donor value to use: Row D																				Qualified Dioxin/Furan	21%
	donor TEC: Row E																					
50	**NB03FSBS331: Row A**	3900 J			2370 J	99900 J	1720 J	15 U	8890 J		3490 J	14 U	695 J									
	value to use: Row B	3900			2370	99900	1720	15	8890		3490	14	695									
	congener TEC: Row C	0.39			0.0711	2.997	0.0516	1.5	0.2667		0.1047	0.42	0.02085	39%	3.9020	4.8620	5.8220	4.2036	J	Section 1	**4.2036**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
51	**NB03FSBS332: Row A**	225	8.21	3040 J	167	14900 J	233	38	1370 J		669 J	1.49 U	94.7									
	value to use: Row B	225	8.21	3040	167	14900	233	38	1370		669	1.49	94.7									
	congener TEC: Row C	0.0225	0.002463	0.0912	0.00501	0.447	0.00699	3.8	0.0411		0.02007	0.0447	0.002841	1%	4.4392	4.4615	4.4839	4.4536	none	Section 1	**4.4536**	**none**
	donor value to use: Row D																				Qualified Dioxin/Furan	14%
	donor TEC: Row E																					
52	**NB03FSBS333: Row A**	242 J	8.87 U	2610 J	182 J	13600 J	214 J	7.88 U	1150 J		662 J	7.39 U	83.6									
	value to use: Row B	242	8.87	2610	182	13600	214	7.88	1150		662	7.39	83.6									
	congener TEC: Row C	0.0242	0.002661	0.0783	0.00546	0.408	0.00642	0.788	0.0345		0.01986	0.2217	0.002508	93%	0.5792	1.0854	1.5916	1.3915	J	Section 2, Treatment 1		
	donor value to use: Row D																					
	donor TEC: Row E																					
53	**NB03FSBS334: Row A**	177	8.75 U	2060 J	101	10900 J	8.26 U	7.77 U	1080		628	7.29 U	112									
	value to use: Row B	177	8.75	2060	101	10900	8.26	7.77	1080		628	7.29	112									
	congener TEC: Row C	0.0177	0.002625	0.0618	0.00303	0.327	0.0002478	0.777	0.0324		0.01884	0.2187	0.00336	104%	0.4641	0.9634	1.4627	1.1520	J	Section 2, Treatment 1		
	donor value to use: Row D																					
	donor TEC: Row E																					
54	**NB03FSBS335: Row A**	146	1.73 U	1510 J	82.7	7680 J	1.63 U	1.54 U	704		401	2.26 J	67.8									
	value to use: Row B	146	1.73	1510	82.7	7680	1.63	1.54	704		401	2.26	67.8									
	congener TEC: Row C	0.0146	0.000519	0.0453	0.002481	0.2304	0.0000489	0.154	0.02112		0.01203	0.0678	0.002034	33%	0.3958	0.4730	0.5503	0.4142	J	Section 1	**0.4142**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	91%
	donor TEC: Row E																					
55	**NB03FSBS336: Row A**	1460 J	73.2	13000 J	1020 J	57600 J	749 J	334 J	4610 J		1910 J	4.51 J	380									
	value to use: Row B	1460	73.2	13000	1020	57600	749	334	4610		1910	4.51	380									
	congener TEC: Row C	0.146	0.02196	0.39	0.0306	1.728	0.02247	33.4	0.1383		0.0573	0.1353	0.0114	No difference	36.0813	36.0813	36.0813	36.0813	J	Section 1	**36.0813**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
56	**NB03FSBS337: Row A**	235	14.7	2850 J	231	13500 J	210		1170 J		555	1.45 U	92.9									
	value to use: Row B	235	14.7	2850	231	13500	210		1170		555	1.45	92.9									
	congener TEC: Row C	0.0235	0.00441	0.0855	0.00693	0.405	0.0063		0.0351		0.01665	0.0435	0.002787	7%	0.5862	0.6079	0.6297	0.5998	J	Section 1	**0.5998**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	90%
	donor TEC: Row E																					
57	**NB03FSBS338: Row A**	198	7.21	1840 J	101	8110 J	128	24.9	821		437	1.88 J	64.4									
	value to use: Row B	198	7.21	1840	101	8110	128	24.9	821		437	1.88	64.4									
	congener TEC: Row C	0.0198	0.002163	0.0552	0.00303	0.2433	0.00384	2.49	0.02463		0.01311	0.0564	0.001932	No difference	2.9134	2.9134	2.9134	2.9134	none	Section 1	**2.9134**	**none**
	donor value to use: Row D																				Qualified Dioxin/Furan	12%
	donor TEC: Row E																					
58	**NB03FSFC486: Row A**	72.4	3.53 J	543	60.6	2810 J	39.2		307		134	1.44 U	18.5									
	value to use: Row B	72.4	3.53	543	60.6	2810	39.2		307		134	1.44	18.5									
	congener TEC: Row C	0.00724	0.001059	0.01629	0.001818	0.0843	0.001176		0.00921		0.00402	0.0432	0.000555	29%	0.1257	0.1473	0.1689	0.1308	J	Section 1	**0.1308**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	76%
	donor TEC: Row E																					
59	**NB03FSFC487: Row A**	41.5	2.76 J	479	41.6	1880 J	26.4		203		84.7	1.49 U	14.2									
	value to use: Row B	41.5	2.76	479	41.6	1880	26.4		203		84.7	1.49	14.2									
	congener TEC: Row C	0.00415	0.000828	0.01437	0.001248	0.0564	0.000792		0.00609		0.002541	0.0447	0.000426	41%	0.0868	0.1092	0.1315	0.0907	J	Section 1	**0.0907**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	77%
	donor TEC: Row E																					
60	**NB03FSFC488: Row A**	37.6	37.2	2280 J	183	10500 J	128		1110		476	1.49 U	85.2									
	value to use: Row B	37.6	37.2	2280	183	10500	128		1110		476	1.49	85.2									
	congener TEC: Row C	0.00376	0.01116	0.0684	0.00549	0.315	0.00384		0.0333		0.01428	0.0447	0.002556	9%	0.4578	0.4801	0.5025	0.4684	J	Section 1	**0.4684**	**J**
	donor value to use: Row D																				Qualified Dioxin/Furan	85%
	donor TEC: Row E																					
61	**NB03FSFC489: Row A**	16.8	1.75 U	375	35.6	1650 J	22.3	11.9	180		77.4	1.46 U	11.8									
	value to use: Row B	16.8	1.75	375	35.6	1650	22.3	11.9	180		77.4	1.46	11.8									
	congener TEC: Row C	0.00168	0.000525	0.01125	0.001068	0.0495	0.000669	1.19	0.0054		0.002322	0.0438	0.000354	3%	1.2622	1.2844	1.3066	1.2655	none	Section 1	**1.2655**	**none**
	donor value to use: Row D																				Qualified Dioxin/Furan	7%
	donor TEC: Row E																					
62	**NB03FSFC490: Row A**	113	1.76 U	1650 J	170	8110 J	95.2	57.6	956		440	1.46 U	60.6									
	value to use: Row B	113	1.76	1650	170	8110	95.2	57.6	956		440	1.46	60.6									
	congener TEC: Row C	0.0113	0.000528	0.0495	0.0051	0.2433	0.002856	5.76	0.02868		0.0132	0.0438	0.001818	1%	6.1158	6.1379	6.1601	6.1254	none	Section 1	**6.1254**	**none**
	donor value to use: Row D																				Qualified Dioxin/Furan	5%
	donor TEC: Row E																					
63	**NB03FSFC491: Row A**	244	20.6	7340 J	615 J	29300 J	519	45.6	3140 J		1270 J	1.49 U	238									
	value to use: Row B	244	20.6	7340	615	29300	519	45.6	3140		1270	1.49	238									
	congener TEC: Row C	0.0244	0.00618	0.2202	0.01845	0.879	0.01557	4.56	0.0942		0.0381	0.0447	0.00714	1%	5.8632	5.8856	5.9079	5.8815	none	Section 1	**5.8815**	**none**
	donor value to use: Row D																				Qualified Dioxin/Furan	22%
	donor TEC: Row E																					
64	**NB03FSFN407: Row A**	60.3	4.43 J	1160 J	98.8	3950 J	82.1	1.57 U	388		161	1.48 U	23.8									
	value to use: Row B	60.3	4.43	1160	98.8	3950	82.1	1.57	388		161	1.48	23.8									
	congener TEC: Row C	0.00603	0.001329	0.0348	0.002964	0.1185	0.002463	0.157	0.01164		0.00483	0.0444	0.000714	71%	0.1833	0.2840	0.3847	0.3484	J	Section 2, Treatment 1		
	donor value to use: Row D																					
	donor TEC: Row E																					
65	**NB03FSFN408: Row A**	42.9	2.74 J	569 J	47.1	1860 J	42.3	1.58 U	175		72.4	1.48 U	10.1									
	value to use: Row B	42.9	2.74	569	47.1	1860	42.3	1.58	175		72.4	1.48	10.1									
	congener TEC: Row C	0.00429	0.000822	0.01707	0.001413	0.0558	0.001269	0.158	0.00525		0.002172	0.0444	0.000303	107%	0.0884	0.1896	0.2908	0.2505	J	Section 2, Treatment 1		
	donor value to use: Row D																					
	donor TEC: Row E																					

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values: Treatment 1 KM TEQ	Treatment 1 Qualifier and Qualifier Fractions
	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29									
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003									
66	NB03FSFN409: Row A	111	6.28	2980 J	244	11000 J	158	18.4	1140		431	1.44 U	77.2									
	value to use: Row B	111	6.28	2980	244	11000	158	18.4	1140		431	1.44	77.2									
	congener TEC: Row C	0.0111	0.001884	0.0894	0.00732	0.33	0.00474	1.84	0.0342		0.01293	0.0432	0.002316	2%	2.3339	2.3555	2.3771	2.3445	none	Section 1	2.3445	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
67	NB03FSFN410: Row A	123	8.23	1850 J	151	6800 J	148	14.6	721			1.46 U	48.8									
	value to use: Row B	123	8.23	1850	151	6800	148	14.6	721			1.46	48.8									
	congener TEC: Row C	0.0123	0.002469	0.0555	0.00453	0.204	0.00444	1.46	0.02163			0.0438	0.001464	2%	1.7663	1.7882	1.8101	1.7741	none	Section 1	1.7741	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
68	NB03FSFN411: Row A	25	1.72 U	963 J	68.5	3840 J	75.8	5.49	366		155	1.43 U	24.8									
	value to use: Row B	25	1.72	963	68.5	3840	75.8	5.49	366		155	1.43	24.8									
	congener TEC: Row C	0.0025	0.000516	0.02889	0.002055	0.1152	0.002274	0.549	0.01098		0.00465	0.0429	0.000744	6%	0.7163	0.7380	0.7597	0.7234	none	Section 1	0.7234	none
	donor value to use: Row D																				Qualified	25%
	donor TEC: Row E																				Dioxin/Furan	
69	NB03FSFN412: Row A	41	2.73 J	980 J	86	4190 J	62.9		411		184	1.45 U	28.9									
	value to use: Row B	41	2.73	980	86	4190	62.9		411		184	1.45	28.9									
	congener TEC: Row C	0.0041	0.000819	0.0294	0.00258	0.1257	0.001887		0.01233		0.00552	0.0435	0.000867	21%	0.1832	0.2050	0.2267	0.1904	J	Section 1	0.1904	J
	donor value to use: Row D																				Qualified	88%
	donor TEC: Row E																				Dioxin/Furan	
70	NB03FSFS351: Row A	192	10	2370 J	222	11300 J	172	1.56 U	1310 J		558	2.03 J	81.5									
	value to use: Row B	192	10	2370	222	11300	172	1.56	1310		558	2.03	81.5									
	congener TEC: Row C	0.0192	0.003	0.0711	0.00666	0.339	0.00516	0.156	0.0393		0.01674	0.0609	0.002445	24%	0.5635	0.6415	0.7195	0.5885	J	Section 1	0.5885	J
	donor value to use: Row D																				Qualified	93%
	donor TEC: Row E																				Dioxin/Furan	
71	NB03FSFS354: Row A	43.8			90.3	3970 J	43.5	26.4	486		201	1.46 U	32.4									
	value to use: Row B	43.8			90.3	3970	43.5	26.4	486		201	1.46	32.4									
	congener TEC: Row C	0.00438			0.002709	0.1191	0.001305	2.64	0.01458		0.00603	0.0438	0.000972	2%	2.7891	2.8110	2.8329	2.7941	none	Section 1	2.7941	none
	donor value to use: Row D																				Qualified	6%
	donor TEC: Row E																				Dioxin/Furan	
72	NB03FSFS355: Row A	182	1.73 U	4410 J	408	17500 J	299	112	1750 J		675 J	1.44 U	107									
	value to use: Row B	182	1.73	4410	408	17500	299	112	1750		675	1.44	107									
	congener TEC: Row C	0.0182	0.000519	0.1323	0.01224	0.525	0.00897	11.2	0.0525		0.02025	0.0432	0.00321	0%	11.9727	11.9945	12.0164	11.9838	none	Section 1	11.9838	none
	donor value to use: Row D																				Qualified	6%
	donor TEC: Row E																				Dioxin/Furan	
73	NB03FSFS356: Row A	233	16.1	1990 J	223	9050 J	107	55.5	963		388	1.48 U	51.7									
	value to use: Row B	233	16.1	1990	223	9050	107	55.5	963		388	1.48	51.7									
	congener TEC: Row C	0.0233	0.00483	0.0597	0.00669	0.2715	0.00321	5.55	0.02889		0.01164	0.0444	0.001551	1%	5.9613	5.9835	6.0057	5.9728	none	Section 1	5.9728	none
	donor value to use: Row D																				Qualified	6%
	donor TEC: Row E																				Dioxin/Furan	
74	NB03FSFS357: Row A	42.5	2.89 J	710 J	85.3	3250 J	1.68 U	21.2	395		160	1.48 U	24.4									
	value to use: Row B	42.5	2.89	710	85.3	3250	1.68	21.2	395		160	1.48	24.4									
	congener TEC: Row C	0.00425	0.000867	0.0213	0.002559	0.0975	0.0000504	2.12	0.01185		0.0048	0.0444	0.000732	2%	2.2639	2.2861	2.3083	2.2697	none	Section 1	2.2697	none
	donor value to use: Row D																				Qualified	7%
	donor TEC: Row E																				Dioxin/Furan	
75	NB03FSFS359: Row A	156	10.2	3310 J	300	12500 J	257	30.7	1250 J			1.48 U	80.7									
	value to use: Row B	156	10.2	3310	300	12500	257	30.7	1250			1.48	80.7									
	congener TEC: Row C	0.0156	0.00306	0.0993	0.009	0.375	0.00771	3.07	0.0375			0.0444	0.002421	1%	3.6196	3.6418	3.6640	3.6321	none	Section 1	3.6321	none
	donor value to use: Row D																				Qualified	15%
	donor TEC: Row E																				Dioxin/Furan	
76	NB03FWPC-COMP07: Row A	934	30.4	5370	389	19800 J	385	48.3	1900		736	7.24 U										
	value to use: Row B	934	30.4	5370	389	19800	385	48.3	1900		736	7.24										
	congener TEC: Row C	0.0934	0.00912	0.1611	0.01167	0.594	0.01155	4.83	0.057		0.02208	0.2172		4%	5.7899	5.8985	6.0071	5.8422	none	Section 1	5.8422	none
	donor value to use: Row D																				Qualified	14%
	donor TEC: Row E																				Dioxin/Furan	
77	NB03FWPC-COMP08: Row A	737	31.8	6000 J	466	23500 J	505	48.7	2180		896	7.23 U	165									
	value to use: Row B	737	31.8	6000	466	23500	505	48.7	2180		896	7.23	165									
	congener TEC: Row C	0.0737	0.00954	0.18	0.01398	0.705	0.01515	4.87	0.0654		0.02688	0.2169	0.00495	4%	5.9646	6.0731	6.1815	6.0133	none	Section 1	6.0133	none
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
78	NB03FWPC-COMP09: Row A	1120	8.77 U	8950 J	660	34400 J	750	72.1	3350		1420	7.31 U										
	value to use: Row B	1120	8.77	8950	660	34400	750	72.1	3350		1420	7.31										
	congener TEC: Row C	0.112	0.002631	0.2685	0.0198	1.032	0.0225	7.21	0.1005		0.0426	0.2193		2%	8.8079	8.9189	9.0298	8.8605	none	Section 1	8.8605	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
79	NB03FWPC-COMP10: Row A	1060	36.1	9150 J	694	33400 J	677	63.4	3250		1390	7.3 U	283									
	value to use: Row B	1060	36.1	9150	694	33400	677	63.4	3250		1390	7.3	283									
	congener TEC: Row C	0.106	0.01083	0.2745	0.02082	1.002	0.02031	6.34	0.0975		0.0417	0.219	0.00849	3%	7.9222	8.0317	8.1412	7.9658	none	Section 1	7.9658	none
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
80	NB03FWPC-COMP11: Row A	1050	43.9	8020 J	632	30800 J	669	77.7	2870		1160	7.31 U										
	value to use: Row B	1050	43.9	8020	632	30800	669	77.7	2870		1160	7.31										
	congener TEC: Row C	0.105	0.01317	0.2406	0.01896	0.924	0.02007	7.77	0.0861		0.0348	0.2193		2%	9.2127	9.3224	9.4320	9.2591	none	Section 1	9.2591	none
	donor value to use: Row D																				Qualified	15%
	donor TEC: Row E																				Dioxin/Furan	
81	NB03FWPC-COMP12: Row A	873	35.9	5670	469	21700 J	429	62.1	2250		949	7.37 U	167									
	value to use: Row B	873	35.9	5670	469	21700	429	62.1	2250		949	7.37	167									
	congener TEC: Row C	0.0873	0.01077	0.1701	0.01407	0.651	0.01287	6.21	0.0675		0.02847	0.2211	0.00501	3%	7.2571	7.3676	7.4782	7.3066	none	Section 1	7.3066	none
	donor value to use: Row D																				Qualified	12%
	donor TEC: Row E																				Dioxin/Furan	
82	NB03FWPDUP-13: Row A	954	42.7	5180	423	21100 J	415	52.5	2340		956	7.46 U										
	value to use: Row B	954	42.7	5180	423	21100	415	52.5	2340		956	7.46										
	congener TEC: Row C	0.0954	0.01281	0.1554	0.01269	0.633	0.01245	5.25	0.0702		0.02868	0.2238		4%	6.2706	6.3825	6.4944	6.3260	none	Section 1	6.3260	none
	donor value to use: Row D																				Qualified	13%
	donor TEC: Row E																				Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003								Treatment 1	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
83	NB03FWPDUP-15: Row A	944	42.6	6210 J	513	24300 J	500	57.6	2510		1070	7.46 U	196									
	value to use: Row B	944	42.6	6210	513	24300	500	57.6	2510		1070	7.46	196									
	congener TEC: Row C	0.0944	0.01278	0.1863	0.01539	0.729	0.015	5.76	0.0753		0.0321	0.2238	0.00588	3%	6.9262	7.0381	7.1500	6.9808	none	Section 1	6.9808	none
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
84	NB03FWPN-COMP07: Row A	469	22.8 J	4280	314	14900 J	291	28.4	1510		602	7.35 U										
	value to use: Row B	469	22.8	4280	314	14900	291	28.4	1510		602	7.35										
	congener TEC: Row C	0.0469	0.00684	0.1284	0.00942	0.447	0.00873	2.84	0.0453		0.01806	0.2205		6%	3.5507	3.6609	3.7712	3.5883	none	Section 1	3.5883	none
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
85	NB03FWPN-COMP08: Row A	1510	60.2	9930 J	772	37500 J	632	78.8	3710		1430	7.46 U	243									
	value to use: Row B	1510	60.2	9930	772	37500	632	78.8	3710		1430	7.46	243									
	congener TEC: Row C	0.151	0.01806	0.2979	0.02316	1.125	0.01896	7.88	0.1113		0.0429	0.2238	0.00729	2%	9.6756	9.7875	9.8994	9.7288	none	Section 1	9.7288	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
86	NB03FWPN-COMP09: Row A	789	8.88 U	7820 J	557	27400 J	543	50.9	2930		1070	7.4 U										
	value to use: Row B	789	8.88	7820	557	27400	543	50.9	2930		1070	7.4										
	congener TEC: Row C	0.0789	0.002664	0.2346	0.01671	0.822	0.01629	5.09	0.0879		0.0321	0.222		3%	6.3785	6.4908	6.6032	6.4203	none	Section 1	6.4203	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
87	NB03FWPN-COMP10: Row A	539	24.8	4650	329	17500 J	262	44.7	1830		770	7.3 U										
	value to use: Row B	539	24.8	4650	329	17500	262	44.7	1830		770	7.3										
	congener TEC: Row C	0.0539	0.00744	0.1395	0.00987	0.525	0.00786	4.47	0.0549		0.0231	0.219		4%	5.2916	5.4011	5.5106	5.3339	none	Section 1	5.3339	none
	donor value to use: Row D																				Qualified	14%
	donor TEC: Row E																				Dioxin/Furan	
88	NB03FWPN-COMP11: Row A	759	37.9	7760 J	582	29400 J	508	65.6	3110		1340	7.42 U										
	value to use: Row B	759	37.9	7760	582	29400	508	65.6	3110		1340	7.42										
	congener TEC: Row C	0.0759	0.01137	0.2328	0.01746	0.882	0.01524	6.56	0.0933		0.0402	0.2226		3%	7.9283	8.0396	8.1509	7.9705	none	Section 1	7.9705	none
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
89	NB03FWPN-COMP12: Row A	953	35.5	4820	416	19700 J	382	49.1	2160		879	7.14 U	179									
	value to use: Row B	953	35.5	4820	416	19700	382	49.1	2160		879	7.14	179									
	congener TEC: Row C	0.0953	0.01065	0.1446	0.01248	0.591	0.01146	4.91	0.0648		0.02637	0.2142	0.00537	4%	5.8720	5.9791	6.0862	5.9184	none	Section 1	5.9184	none
	donor value to use: Row D																				Qualified	13%
	donor TEC: Row E																				Dioxin/Furan	
90	NB03FWPS-COMP07: Row A	901	35.5	6110 J	465	23000 J	516	50.4	2290		884	7.35 U	159									
	value to use: Row B	901	35.5	6110	465	23000	516	50.4	2290		884	7.35	159									
	congener TEC: Row C	0.0901	0.01065	0.1833	0.01395	0.69	0.01548	5.04	0.0687		0.02652	0.2205	0.00477	4%	6.1435	6.2537	6.3640	6.1952	none	Section 1	6.1952	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
91	NB03FWPS-COMP08: Row A	594	21.1 J	4710	360	17000 J	364	33	1750		706	7.25 U	133									
	value to use: Row B	594	21.1	4710	360	17000	364	33	1750		706	7.25	133									
	congener TEC: Row C	0.0594	0.00633	0.1413	0.0108	0.51	0.01092	3.3	0.0525		0.02118	0.2175	0.00399	5%	4.1164	4.2252	4.3339	4.1547	none	Section 1	4.1547	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
92	NB03FWPS-COMP09: Row A	670	23.3 J	6340 J	476	22900 J	468	49.9	2630		1050	7.28 U	197									
	value to use: Row B	670	23.3	6340	476	22900	468	49.9	2630		1050	7.28	197									
	congener TEC: Row C	0.067	0.00699	0.1902	0.01428	0.687	0.01404	4.99	0.0789		0.0315	0.2184	0.00591	4%	6.0858	6.1950	6.3042	6.1369	none	Section 1	6.1369	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
93	NB03FWPS-COMP10: Row A	1120	45.6	9370 J	698	35700 J	741	65.8	3590		1530	7.27 U	264									
	value to use: Row B	1120	45.6	9370	698	35700	741	65.8	3590		1530	7.27	264									
	congener TEC: Row C	0.112	0.01368	0.2811	0.02094	1.071	0.02223	6.58	0.1077		0.0459	0.2181	0.00792	3%	8.2625	8.3715	8.4806	8.3097	none	Section 1	8.3097	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
94	NB03FWPS-COMP11: Row A	530 J	18.3 J	3310 J	272 J	13200 J	215 J	36.4	1800 J		727 J	7.25 U	126 J									
	value to use: Row B	530	18.3	3310	272	13200	215	36.4	1800		727	7.25	126									
	congener TEC: Row C	0.053	0.00549	0.0993	0.00816	0.396	0.00645	3.64	0.054		0.02181	0.2175	0.00378	5%	4.2880	4.3967	4.5055	4.3195	none	Section 1	4.3195	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
95	NB03FWPS-COMP12: Row A	1020 J	36.6	6730 J	501 J	26600 J	486	58.4 J	2900 J		1160 J	7.42 U										
	value to use: Row B	1020	36.6	6730	501	26600	486	58.4	2900		1160	7.42										
	congener TEC: Row C	0.102	0.01098	0.2019	0.01503	0.798	0.01458	5.84	0.087		0.0348	0.2226		3%	7.1043	7.2156	7.3269	7.1709	J	Section 1	7.1709	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29								
WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**								
Sample notes	**Sample ID: (must enter on Row A)**	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**	**Summary of Sensitivity Analysis (relative percent difference)**	**TEQs from Substitution**			**KM Method**			**(Quasi) Sensitivity Analysis SECTION 1**	
															U = 0 & sum	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
																					Highest TEC value is a DETECT, and there are no rejected ("R") values	
																					Treatment 1	

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03FAEC-COMP01	1.7661	J
Line #2	NB03FAEC-COMP02	1.3860	J
Line #3	NB03FAEC-COMP03	2.0269	J
Line #4	NB03FAEC076	3.3024	J
Line #5	NB03FAEC502	2.6690	J
Line #6	NB03FAEC508	15.4233	J
Line #7	NB03FAEN-COMP01	1.1217	J
Line #8	NB03FAEN-COMP02	0.9534	J
Line #9	NB03FAEN-COMP03	3.8865	J
Line #10	NB03FAEN-COMP04	3.4488	J
Line #11	NB03FAEN-COMP05	2.1769	J
Line #12	NB03FAEN-COMP06	2.7704	J
Line #13	NB03FAES-COMP01	1.6376	J
Line #14	NB03FAES018	3.9326	J
Line #15	NB03FAES019	2.1692	J
Line #16	NB03FAES347	28.5442	
Line #17	NB03FAES364	4.7600	J
Line #18	NB03FAES365	55.0818	
Line #19	NB03FBL-COMP01	1.1828	
Line #20	NB03FBL-COMP02	1.6325	
Line #21	NB03FBL-COMP03	1.0167794	
Line #22	NB03FBL-COMP04	0.5376406	J
Line #23	NB03FBL-COMP05	1.5026695	
Line #24	NB03FBLC468	0.3447927	J
Line #25	NB03FBLC469	8.3029692	
Line #26	NB03FBLC471	0.2450637	J
Line #27	NB03FBLC475	0.2583177	J
Line #28	NB03FBLC476	0.3548522	J
Line #29	NB03FBLC478	0.2788931	J
Line #30	NB03FBLC479	0.3214906	J
Line #31	NB03FBLC481	1.6036706	
Line #32	NB03FBLN404	1.2425423	
Line #33	NB03FBLN405	0.928862	
Line #34	NB03FBLN406	7.741159	
Line #35	NB03FBLS339	0.4196209	J
Line #36	NB03FBLS349	0.33476	J
Line #37	NB03FSBDUP-10	39.250171	
Line #38	NB03FSBDUP-11	0.9865429	J
Line #39	NB03FSBDUP-12	0.7477229	J
Line #40	NB03FSBS320	6.18226	
Line #41	NB03FSBS321	3.3366829	
Line #42	NB03FSBS322	3.3445429	
Line #43	NB03FSBS323	2.2888377	
Line #44	NB03FSBS324	1.4528263	J
Line #45	NB03FSBS325	17.678499	
Line #46	NB03FSBS327	3.8813097	
Line #47	NB03FSBS328	2.8611251	
Line #48	NB03FSBS329	2.0242983	
Line #49	NB03FSBS330	1.5360834	
Line #50	NB03FSBS331	4.2036	J
Line #51	NB03FSBS332	4.4535989	
Line #52	NB03FSBS333	1.3914755	J
Line #53	NB03FSBS334	1.152048	J
Line #54	NB03FSBS335	0.4142476	J
Line #55	NB03FSBS336	36.08133	J
Line #56	NB03FSBS337	0.5998451	J
Line #57	NB03FSBS338	2.913405	
Line #58	NB03FSFC486	0.130839	J
Line #59	NB03FSFC487	0.0906506	J
Line #60	NB03FSFC488	0.4684126	J
Line #61	NB03FSFC489	1.2654841	
Line #62	NB03FSFC490	6.1253509	
Line #63	NB03FSFC491	5.8815467	
Line #64	NB03FSFN407	0.3483662	J
Line #65	NB03FSFN408	0.2504626	J
Line #66	NB03FSFN409	2.3445314	
Line #67	NB03FSFN410	1.7741385	
Line #68	NB03FSFN411	0.7233851	
Line #69	NB03FSFN412	0.1903909	J
Line #70	NB03FSFS351	0.58845	J
Line #71	NB03FSFS354	2.794072	
Line #72	NB03FSFS355	11.983754	
Line #73	NB03FSFS356	5.9727554	
Line #74	NB03FSFS357	2.2697095	
Line #75	NB03FSFS359	3.6321395	
Line #76	NB03FWPC-COMP07	5.8421943	
Line #77	NB03FWPC-COMP08	6.0133	
Line #78	NB03FWPC-COMP09	8.8605362	

EPA Advanced KM TEQ Calculator

Fish fillet PCB-TEQ, for COPC screening

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ, screening **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/19/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29												
WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**												
Sample ID: (must enter on Row A)	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**	**Summary of Sensitivity Analysis (relative percent difference)**	**TEQs from Substitution**			**KM Method**			**(Quasi) Sensitivity Analysis SECTION 1**			
																				Highest TEC value is a DETECT, and there are no rejected ("R") values			
Sample notes														**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**Treatment 1**			
																				KM TEQ	**Qualifier and Qualifier Fractions**		
															Line #79	NB03FWPC-COMP10	7.9658143						
															Line #80	NB03FWPC-COMP11	9.25905						
															Line #81	NB03FWPC-COMP12	7.3066013						
															Line #82	NB03FWPDUP-13	6.3260057						
															Line #83	NB03FWPDUP-15	6.9807938						
															Line #84	NB03FWPN-COMP07	3.5883143						
															Line #85	NB03FWPN-COMP08	9.7288086						
															Line #86	NB03FWPN-COMP09	6.420258						
															Line #87	NB03FWPN-COMP10	5.3339371						
															Line #88	NB03FWPN-COMP11	7.970515						
															Line #89	NB03FWPN-COMP12	5.9184088						
															Line #90	NB03FWPS-COMP07	6.1951538						
															Line #91	NB03FWPS-COMP08	4.1547225						
															Line #92	NB03FWPS-COMP09	6.1369225						
															Line #93	NB03FWPS-COMP10	8.3096657						
															Line #94	NB03FWPS-COMP11	4.3194888						
															Line #95	NB03FWPS-COMP12	7.1709029	J					

EPA Advanced KM TEQ Calculator

Fish Fillet TCDD TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003								Treatment 1	
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1,PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDi	1,4,9-HpCDi	OCDF	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
1	NB03FAEC-COMP01: Row A	5.8	0.532 J	0.225 J	1.29 J	0.254 J	1.42 J	12.3 J	0.181 U	1.1 J	1.57 J	1.35 J	1.65 J	0.0801 U	0.192 J	4.38 J	0.262 J	0.677 J									
	value to use: Row B	5.8	0.532	0.225	1.29	0.254	1.42	12.3	0.181	1.1	1.57	1.35	1.65	0.0801	0.192	4.38	0.262	0.677									
	congener TEC: Row C	5.8	0.532	0.0225	0.129	0.0254	0.0142	0.00369	0.0181	0.033	0.471	0.135	0.165	0.00801	0.0192	0.0438	0.00262	0.0002031	0%	7.3966	7.4097	7.4227	7.4034	none	Section 1	7.4034	none
	donor value to use: Row D																									Qualified	22%
	donor TEC: Row E																									Dioxin/Furan	100%
2	NB03FAEC-COMP02: Row A	4.34	0.4 J	0.106 J	0.819 J	0.0814 J	0.146 J	0.707 J	0.145 U	0.391 J	1.06 J	0.785 J	1.09 J	0.154 J	0.0969 J	3.21 J	0.11 U	0.188 J									
	value to use: Row B	4.34	0.4	0.106	0.819	0.0814	0.146	0.707	0.145	0.391	1.06	0.785	1.09	0.154	0.0969	3.21	0.11	0.188									
	congener TEC: Row C	4.34	0.4	0.0106	0.0819	0.00814	0.00146	0.0002121	0.0145	0.01173	0.318	0.0785	0.109	0.0154	0.00969	0.0321	0.0011	0.0000564	0%	5.4168	5.4246	5.4324	5.4222	none	Section 1	5.4222	none
	donor value to use: Row D																									Qualified	20%
	donor TEC: Row E																									Dioxin/Furan	100%
3	NB03FAEC-COMP03: Row A	7.38	0.402 J	0.218 J	1.33 J	0.15 J	0.48 J	0.755 J	0.162 U	1.14 J	1.27 J	0.903 J	1.76 J	0.119 J	0.179 J	2.77 J	0.119 U	0.141 J									
	value to use: Row B	7.38	0.402	0.218	1.33	0.15	0.48	0.755	0.162	1.14	1.27	0.903	1.76	0.119	0.179	2.77	0.119	0.141									
	congener TEC: Row C	7.38	0.402	0.0218	0.133	0.015	0.0048	0.0002265	0.0162	0.0342	0.381	0.0903	0.176	0.0119	0.0179	0.0277	0.00119	0.0000423	0%	8.6959	8.7046	8.7133	8.7014	none	Section 1	8.7014	none
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
4	NB03FAEC076: Row A	14	1.18 J	0.388 J	2.4 J	0.451 J	1.91 J	2.37 J	0.189 U	1.51 J	5.27 J	4.17 J	2.35 J	0.0726 U	0.585 J	4.85 J	0.128 U	0.28 J									
	value to use: Row B	14	1.18	0.388	2.4	0.451	1.91	2.37	0.189	1.51	5.27	4.17	2.35	0.0726	0.585	4.85	0.128	0.28									
	congener TEC: Row C	14	1.18	0.0388	0.24	0.0451	0.0191	0.000711	0.0189	0.0453	1.581	0.417	0.235	0.00726	0.0585	0.0485	0.00128	0.000084	0%	17.9091	17.9228	17.9365	17.9103	none	Section 1	17.9103	none
	donor value to use: Row D																									Qualified	22%
	donor TEC: Row E																									Dioxin/Furan	100%
5	NB03FAEC502: Row A	14.5	1.25 J	0.932 J	3.25 J	0.537 J	2.6 J	3.57 J	0.158 J	2.25 J	1.88 J	3.38 J	2.33 J	0.114 J	0.54 J	6.56 J	0.227 J	0.633 J									
	value to use: Row B	14.5	1.25	0.932	3.25	0.537	2.6	3.57	0.158	2.25	1.88	3.38	2.33	0.114	0.54	6.56	0.227	0.633									
	congener TEC: Row C	14.5	1.25	0.0932	0.325	0.0537	0.026	0.001071	0.0158	0.0675	0.564	0.338	0.233	0.0114	0.054	0.0656	0.00227	0.0001899	No difference	17.600731	17.6007	17.6007309	17.6007	none	Section 1	17.6007	none
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
6	NB03FAEC508: Row A	4.82 J	0.347 J	0.163 J	0.717 J	0.139 J	0.439 J	0.791 J	0.141 J	0.395 J	0.913 J	1.11 J	0.542 J	0.0459 J	0.19 J	1.52 J	0.0545 J	0.247 J									
	value to use: Row B	4.82	0.347	0.163	0.717	0.139	0.439	0.791	0.141	0.395	0.913	1.11	0.542	0.0459	0.19	1.52	0.0545	0.247									
	congener TEC: Row C	4.82	0.347	0.0163	0.0717	0.0139	0.00439	0.0002373	0.0141	0.01185	0.2739	0.111	0.0542	0.00459	0.019	0.0152	0.000545	0.0000741	No difference	5.7779864	5.77799	5.7779864	5.7780	J	Section 1	5.7780	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
7	NB03FAEN-COMP01: Row A	3.81 J	0.185 J	0.117 J	0.566 J	0.092 J	0.492 J	0.606 J	0.082 U	0.682 J	3.51 J	1.23 J	1.46 J	0.0602 J	0.133 J	3.15 J	0.112 J	0.19 J									
	value to use: Row B	3.81	0.185	0.117	0.566	0.092	0.492	0.606	0.082	0.682	3.51	1.23	1.46	0.0602	0.133	3.15	0.112	0.19									
	congener TEC: Row C	3.81	0.185	0.0117	0.0566	0.0092	0.00492	0.0001818	0.0082	0.02046	1.053	0.123	0.146	0.00602	0.0133	0.0315	0.00112	0.000057	0%	5.4721	5.4762	5.4803	5.4745	J	Section 1	5.4745	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
8	NB03FAEN-COMP02: Row A	3.05 J	0.27 J	0.111 J	0.393 J	0.0528 J	0.233 J	0.311 J	0.0611 U	0.479 J	1.48 J	0.918 J	0.988 J	0.0703 J	0.0897 J	2.27 J	0.0518 J	0.0821 J									
	value to use: Row B	3.05	0.27	0.111	0.393	0.0528	0.233	0.311	0.0611	0.479	1.48	0.918	0.988	0.0703	0.0897	2.27	0.0518	0.0821									
	congener TEC: Row C	3.05	0.27	0.0111	0.0393	0.00528	0.00233	0.0000933	0.00611	0.01437	0.444	0.0918	0.0988	0.00703	0.00897	0.0227	0.000518	2.463E-05	0%	4.0663	4.0694	4.0724	4.0680	J	Section 1	4.0680	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
9	NB03FAEN-COMP03: Row A	10.3	0.23 U	0.326 J	2.08 J	0.202 J	1.09 J	2.06 J	0.217 U	1.49 J	3.39 J	3.52 J	2.67 J	0.0947 U	0.379 J	8.22 J	0.208 J	0.323 J									
	value to use: Row B	10.3	0.23	0.326	2.08	0.202	1.09	2.06	0.217	1.49	3.39	3.52	2.67	0.0947	0.379	8.22	0.208	0.323									
	congener TEC: Row C	10.3	0.23	0.0326	0.208	0.0202	0.0109	0.000618	0.0217	0.0447	1.017	0.352	0.267	0.00947	0.0379	0.0822	0.00208	0.0000969	2%	12.3753	12.5059	12.6365	12.4192	none	Section 1	12.4192	none
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
10	NB03FAEN-COMP04: Row A	14.7	0.817 J	0.327 J	1.35 J	0.249 J	0.964 J	1.77 J	0.261 U	2.26 J	9.23 J	4.71 J	3.85 J	0.0911 U	0.463 J	8.58 J	0.257 J	0.452 J									
	value to use: Row B	14.7	0.817	0.327	1.35	0.249	0.964	1.77	0.261	2.26	9.23	4.71	3.85	0.0911	0.463	8.58	0.257	0.452									
	congener TEC: Row C	14.7	0.817	0.0327	0.135	0.0249	0.00964	0.000531	0.0261	0.0678	2.769	0.471	0.385	0.00911	0.0463	0.0858	0.00257	0.0001356	0%	19.5474	19.5650	19.5826	19.5549	none	Section 1	19.5549	none
	donor value to use: Row D																									Qualified	25%
	donor TEC: Row E																									Dioxin/Furan	100%
11	NB03FAEN-COMP05: Row A	7.99 J	0.448 J	0.207 J	0.714 J	0.18 J	0.734 J	1.13 J	0.0564 J	1.09 J	1.93 J	2.18 J	1.24 J	0.0736 J	0.282 J	3.35 J	0.0939 J	0.344 J									
	value to use: Row B	7.99	0.448	0.207	0.714	0.18	0.734	1.13	0.0564	1.09	1.93	2.18	1.24	0.0736	0.282	3.35	0.0939	0.344									
	congener TEC: Row C	7.99	0.448	0.0207	0.0714	0.018	0.00734	0.000339	0.00564	0.0327	0.579	0.218	0.124	0.00736	0.0282	0.0335	0.000939	0.0001032	No difference	9.5852	9.5852	9.5852	9.5852	J	Section 1	9.5852	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
12	NB03FAEN-COMP06: Row A	9.11	0.662 J	0.0757 U	1.23 J	0.24 J	0.892 J	1.84 J	0.211 U	0.108 U	4.22 J	2.92 J	1.86 J	0.106 J	0.303 J	5.69 J	0.157 J	0.289 J									
	value to use: Row B	9.11	0.662	0.0757	1.23	0.24	0.892	1.84	0.211	0.108	4.22	2.92	1.86	0.106	0.303	5.69	0.157	0.289									
	congener TEC: Row C	9.11	0.662	0.00757	0.123	0.024	0.00892	0.000552	0.0211	0.00324	1.266	0.292	0.186	0.0106	0.0303	0.0569	0.00157	0.0000867	0%	11.7719	11.7879	11.8038	11.7767	none	Section 1	11.7767	none
	donor value to use: Row D																									Qualified	23%
	donor TEC: Row E																									Dioxin/Furan	100%
13	NB03FAES-COMP01: Row A	0.0566 U	0.122 U	0.0819 J	0.369 J	0.0506 J	0.248 J	0.393 J	0.0967 U	0.126 J	0.788 J	0.184 J	0.397 J	0.0646 J	0.0956 J	0.541 J	0.0967 J	0.159 J									
	value to use: Row B	0.0566	0.122	0.0819	0.369	0.0506	0.248	0.393	0.0967	0.126	0.788	0.184	0.397	0.0646	0.0956	0.541	0.0967	0.159									
	congener TEC: Row C	0.0566	0.122	0.00819	0.0369	0.00506	0.00248	0.0001179	0.00967	0.00378	0.2364	0.0184	0.0397	0.00646	0.00956	0.00541	0.000967	0.0000477	40%	0.3734726	0.46761	0.5617426	0.3979	J	Section 1	0.3979	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
14	NB03FAES018: Row A	2.48 J	0.187 J	0.0977 J	0.416 J	0.0922 J	0.287 J	0.509 J	0.0688 U	0.193 J	0.684 J	0.281 J	0.398 J	0.0703 J	0.102 J	0.583 J	0.0372 J	0.116 J									
	value to use: Row B	2.48	0.187	0.0977	0.416	0.0922	0.287	0.509	0.0688	0.193	0.684	0.281	0.398	0.0703	0.102	0.583	0.0372	0.116									
	congener TEC: Row C	2.48	0.187	0.00977	0.0416	0.00922	0.00287	0.0001527	0.00688	0.00579	0.2052	0.0281	0.0398	0.00703	0.0102	0.00583	0.000372	0.0000348	0%	3.0329695	3.03641	3.0398495	3.0355	J	Section 1	3.0355	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
15	NB03FAES019: Row A	3.87 J	0.634 J	0.261 J	1.28 J	0.224 J	0.617 J	0.848 J	0.0786 U	0.697 J	1.48 J	0.901 J	1.21 J	0.0561 J	0.223 J	2.1 J	0.065 J	0.105 J									
	value to use: Row B	3.87	0.634	0.261	1.28	0.224	0.617	0.848	0.0786	0.697	1.48	0.901	1.21	0.0561	0.223	2.1	0.065	0.105									
	congener TEC: Row C	3.87	0.634	0.0261	0.128	0.0224	0.00617	0.0002544	0.00786	0.02091	0.444	0.0901	0.121	0.00561	0.0223	0.021	0.00065	0.0000315	0%	5.4125	5.4165	5.4204	5.4151	J	Section 1	5.4151	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
16	NB03FAES347: Row A	5.05	0.135 U	0.364 J	1.48 J	0.356 J	1.31 J	2.05 J	0.112 U	0.934 J	2.41 J	1.53 J	1.23 J	0.129 J	0.4 J	2.69 J	0.121 J	0.256 J									
	value to use: Row B	5.05	0.135	0.364	1.48	0.356	1.31	2.05	0.112	0.934	2.41	1.53	1.23	0.129	0.4	2.69	0.121	0.256									
	congener TEC: Row C	5.05	0.135	0.0364	0.148	0.0356	0.0131	0.000615	0.0112	0.02802	0.723	0.153	0.123	0.0129	0.04	0.0269	0.00121	0.0000768	2%	6.3918	6.4649	6.5380	6.4190	none	Section 1	6.4190	none
	donor value to use: Row D																									Qualified	23%
	donor TEC: Row E																									Dioxin/Furan	100%
17	NB03FAES364: Row A	6.66	0.792 J	0.246 J	1.32 J	0.277 J	0.718 J	1.04 J	0.118 U	0.791 J	2.11 J	0.933 J	1.65 J	0.254 J	0.349 J	1.57 J	0.186 J	0.279 J									
	value to use: Row B	6.66	0.792	0.246	1.32	0.277	0.718	1.04	0.118	0.791	2.11	0.933	1.65	0.254	0.349	1.57	0.186	0.279									
	congener TEC: Row C	6.66	0.792	0.0246	0.132	0.0277	0.00718	0.000312	0.0118	0.02373	0.633	0.0933	0.165	0.0254	0.0349	0.0157	0.00186	0.0000837	0%	8.6368	8.6427	8.6486	8.6391	none	Section 1	8.6391	none
	donor value to use: Row D																									Qualified	23%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish Fillet TCDD TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**									
	Sample ID: **(must enter on Row A)**	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDL**	**OCDD**	**TCDF**	**1,PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDF**	**1,4,9-HpCDF**	**OCDF**	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03FAES365: Row A	8.66	1.26 J	0.753 J	3.76 J	0.76 J	2.85 J	2.8 J	0.151 J	3.25 J	5.66 J	2.22 J	2.92 J	0.107 J	0.63 J	5.77 J	0.191 J	0.462 J									
	value to use: Row B	8.66	1.26	0.753	3.76	0.76	2.85	2.8	0.151	3.25	5.66	2.22	2.92	0.107	0.63	5.77	0.191	0.462									
18	**congener TEC: Row C**	**8.66**	**1.26**	**0.0753**	**0.376**	**0.076**	**0.0285**	**0.00084**	**0.0151**	**0.0975**	**1.698**	**0.222**	**0.292**	**0.0107**	**0.063**	**0.0577**	**0.00191**	**0.0001386**	No difference	12.9347	12.9347	12.9347	12.9347	none	**Section 1**	**12.9347**	**none**
	donor value to use: Row D																									Qualified	33%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP01: Row A	1.99	0.327 J	0.0391 J	0.152 J	0.0273 U	0.0727 J	0.176 J	0.359 J	0.591 J	0.623 J	0.106 J	0.185 J	0.0849 J	0.0241 J	0.322 J	0.0457 U	0.0468 J									
	value to use: Row B	1.99	0.327	0.0391	0.152	0.0273	0.0727	0.176	0.359	0.591	0.623	0.106	0.185	0.0849	0.0241	0.322	0.0457	0.0468									
19	**congener TEC: Row C**	**1.99**	**0.327**	**0.00391**	**0.0152**	**0.00273**	**0.000727**	**0.0000528**	**0.0359**	**0.01773**	**0.1869**	**0.0106**	**0.0185**	**0.00849**	**0.00241**	**0.00322**	**0.000457**	**1.404E-05**	0%	2.6207	2.6222	2.6238	2.6213	none	**Section 1**	**2.6213**	**none**
	donor value to use: Row D																									Qualified	24%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP02: Row A	0.804 J	0.0891 U	0.0208 U	0.085 J	0.0475 J	0.122 J	0.17 J	0.198 J	0.401 J	0.322 J	0.0316 J	0.0716 J	0.0775 J	0.0294 J	0.104 J	0.045 U	0.0716 J									
	value to use: Row B	0.804	0.0891	0.0208	0.085	0.0475	0.122	0.17	0.198	0.401	0.322	0.0316	0.0716	0.0775	0.0294	0.104	0.045	0.0716									
20	**congener TEC: Row C**	**0.804**	**0.0891**	**0.00208**	**0.0085**	**0.00475**	**0.00122**	**0.000051**	**0.0198**	**0.01203**	**0.0966**	**0.00316**	**0.00716**	**0.00775**	**0.00294**	**0.00104**	**0.00045**	**2.148E-05**	9%	0.9690	1.0148	1.0607	0.9745	J	**Section 1**	**0.9745**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP03: Row A	1.31	0.113 U	0.0559 J	0.228 J	0.025 U	0.137 J	0.254 J	0.291 J	0.612 J	0.626 J	0.0887 J	0.133 J	0.0618 J	0.0368 J	0.335 J	0.0569 U	0.0737 J									
	value to use: Row B	1.31	0.113	0.0559	0.228	0.025	0.137	0.254	0.291	0.612	0.626	0.0887	0.133	0.0618	0.0368	0.335	0.0569	0.0737									
21	**congener TEC: Row C**	**1.31**	**0.113**	**0.00559**	**0.0228**	**0.0025**	**0.00137**	**0.0000762**	**0.0291**	**0.01836**	**0.1878**	**0.00887**	**0.0133**	**0.00618**	**0.00368**	**0.00335**	**0.000569**	**2.211E-05**	7%	1.6104983	1.66853	1.72656731	1.6190	none	**Section 1**	**1.6190**	**none**
	donor value to use: Row D																									Qualified	24%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP04: Row A	0.192 J	0.108 J	0.0427 U	0.113 J	0.0431 U	0.0789 J	0.21 J	0.0988 U	0.162 J	0.125 J	0.047 U	0.0915 J	0.0984 J	0.0457 U	0.266 J	0.049 U	0.214 J									
	value to use: Row B	0.192	0.108	0.0427	0.113	0.0431	0.0789	0.21	0.0988	0.162	0.125	0.047	0.0915	0.0984	0.0457	0.266	0.049	0.214									
22	**congener TEC: Row C**	**0.192**	**0.108**	**0.00427**	**0.0113**	**0.00431**	**0.000789**	**0.000063**	**0.00988**	**0.00486**	**0.0375**	**0.0047**	**0.00915**	**0.00984**	**0.00457**	**0.00266**	**0.00049**	**0.0000642**	7%	0.3762262	0.39034	0.4044462	0.3817	J	**Section 1**	**0.3817**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBL-COMP05: Row A	2.53	0.131 U	0.168 J	0.28 J	0.0923 J	0.135 J	0.318 J	0.59 J	1.72 J	1.03 J	0.208 J	0.5 J	0.0986 J	0.125 J	1.07 J	0.102 J	0.153 J									
	value to use: Row B	2.53	0.131	0.168	0.28	0.0923	0.135	0.318	0.59	1.72	1.03	0.208	0.5	0.0986	0.125	1.07	0.102	0.153									
23	**congener TEC: Row C**	**2.53**	**0.131**	**0.0168**	**0.028**	**0.00923**	**0.00135**	**0.0000954**	**0.059**	**0.0516**	**0.309**	**0.0208**	**0.05**	**0.00986**	**0.0125**	**0.0107**	**0.00102**	**0.0000459**	4%	3.1100	3.1755	3.2410	3.1294	none	**Section 1**	**3.1294**	**none**
	donor value to use: Row D																									Qualified	22%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC468: Row A	0.616 J	0.274 J	0.0612 J	0.117 J	0.0909 J	0.108 J	0.145 J	0.289 J	0.617 J	0.495 J	0.0621 J	0.0647 J	0.0726 J	0.0475 J	0.438 J	0.07 U	0.0714 J									
	value to use: Row B	0.616	0.274	0.0612	0.117	0.0909	0.108	0.145	0.289	0.617	0.495	0.0621	0.0647	0.0726	0.0475	0.438	0.07	0.0714									
24	**congener TEC: Row C**	**0.616**	**0.274**	**0.00612**	**0.0117**	**0.00909**	**0.00108**	**0.0000435**	**0.0289**	**0.01851**	**0.1485**	**0.00621**	**0.00647**	**0.00726**	**0.00475**	**0.00438**	**0.0007**	**2.142E-05**	0%	1.1430	1.1434	1.1437	1.1431	J	**Section 1**	**1.1431**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC469: Row A	0.542 J	0.222 J	0.0696 J	0.114 J	0.0517 J	0.179 J	0.239 J	0.431 J	0.769 J	0.682 J	0.0463 U	0.158 J	0.0746 J	0.0409 U	0.552 J	0.11 J	0.0716 J									
	value to use: Row B	0.542	0.222	0.0696	0.114	0.0517	0.179	0.239	0.431	0.769	0.682	0.0463	0.158	0.0746	0.0409	0.552	0.11	0.0716									
25	**congener TEC: Row C**	**0.542**	**0.222**	**0.00696**	**0.0114**	**0.00517**	**0.00179**	**0.0000717**	**0.0431**	**0.02307**	**0.2046**	**0.00463**	**0.0158**	**0.00746**	**0.00409**	**0.00552**	**0.0011**	**2.148E-05**	1%	1.0901	1.0944	1.0988	1.0916	J	**Section 1**	**1.0916**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC471: Row A	0.629 J	0.178 J	0.048 J	0.23 J	0.0402 U	0.0721 J	0.15 J	0.239 J	0.279 J	0.458 J	0.0799 J	0.218 J	0.0736 J	0.0343 U	0.296 J	0.0763 J	0.0666 J									
	value to use: Row B	0.629	0.178	0.048	0.23	0.0402	0.0721	0.15	0.239	0.279	0.458	0.0799	0.218	0.0736	0.0343	0.296	0.0763	0.0666									
26	**congener TEC: Row C**	**0.629**	**0.178**	**0.0048**	**0.023**	**0.00402**	**0.000721**	**0.000045**	**0.0239**	**0.00837**	**0.1374**	**0.00799**	**0.0218**	**0.00736**	**0.00343**	**0.00296**	**0.000763**	**1.998E-05**	1%	1.0461	1.0499	1.0536	1.0479	J	**Section 1**	**1.0479**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC475: Row A	0.0765 J	0.0945 U	0.0323 U	0.0931 J	0.0417 J	0.151 J	0.278 J	0.104 U	0.347 J	0.616 J	0.0377 U	0.041 J	0.0438 U	0.0372 U	0.331 J	0.065 U	0.0641 J									
	value to use: Row B	0.0765	0.0945	0.0323	0.0931	0.0417	0.151	0.278	0.104	0.347	0.616	0.0377	0.041	0.0438	0.0372	0.331	0.065	0.0641									
27	**congener TEC: Row C**	**0.0765**	**0.0945**	**0.00323**	**0.00931**	**0.00417**	**0.00151**	**0.0000834**	**0.0104**	**0.01041**	**0.1848**	**0.00377**	**0.0041**	**0.00438**	**0.00372**	**0.00331**	**0.00065**	**1.923E-05**	34%	0.2942	0.3545	0.4149	0.3079	J	**Section 1**	**0.3079**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC476: Row A	1.58	0.47 J	0.0812 J	0.392 J	0.0852 J	0.19 J	0.313 J	0.318 J	0.769 J	1.18 J	0.0841 J	0.292 J	0.0899 J	0.0551 J	0.777 J	0.0653 U	0.0865 J									
	value to use: Row B	1.58	0.47	0.0812	0.392	0.0852	0.19	0.313	0.318	0.769	1.18	0.0841	0.292	0.0899	0.0551	0.777	0.0653	0.0865									
28	**congener TEC: Row C**	**1.58**	**0.47**	**0.00812**	**0.0392**	**0.00852**	**0.0019**	**0.0000939**	**0.0318**	**0.02307**	**0.354**	**0.00841**	**0.0292**	**0.00899**	**0.00551**	**0.00777**	**0.000653**	**2.595E-05**	0%	2.5766	2.5769	2.5773	2.5767	none	**Section 1**	**2.5767**	**none**
	donor value to use: Row D																									Qualified	39%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC478: Row A	0.396 J	0.152 J	0.0378 U	0.0483 J	0.0405 U	0.0577 J	0.227 J	0.193 J	0.221 J	0.456 J	0.0446 J	0.0904 J	0.0721 J	0.0356 U	0.694 J	0.121 J	0.107 J									
	value to use: Row B	0.396	0.152	0.0378	0.0483	0.0405	0.0577	0.227	0.193	0.221	0.456	0.0446	0.0904	0.0721	0.0356	0.694	0.121	0.107									
29	**congener TEC: Row C**	**0.396**	**0.152**	**0.00378**	**0.00483**	**0.00405**	**0.000577**	**0.0000681**	**0.0193**	**0.00663**	**0.1368**	**0.00446**	**0.00904**	**0.00721**	**0.00356**	**0.00694**	**0.00121**	**0.0000321**	2%	0.7450972	0.75079	0.7564872	0.7465	J	**Section 1**	**0.7465**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC479: Row A	0.196 J	0.536 J	0.106 J	0.223 J	0.153 J	0.284 J	0.342 J	0.903 J	0.759 J	1.17 J	0.0797 J	0.266 J	0.0786 J	0.058 J	0.733 J	0.101 U	0.138 J									
	value to use: Row B	0.196	0.536	0.106	0.223	0.153	0.284	0.342	0.903	0.759	1.17	0.0797	0.266	0.0786	0.058	0.733	0.101	0.138									
30	**congener TEC: Row C**	**0.196**	**0.536**	**0.0106**	**0.0223**	**0.0153**	**0.00284**	**0.0001026**	**0.0903**	**0.02277**	**0.351**	**0.00797**	**0.0266**	**0.00786**	**0.0058**	**0.00733**	**0.00101**	**0.0000414**	0%	1.302814	1.30332	1.303824	1.3029	J	**Section 1**	**1.3029**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLC481: Row A	0.455 J	0.263 J	0.0256 U	0.118 J	0.0419 J	0.0818 J	0.104 J	0.074 U	0.227 J	0.287 J	0.0306 J	0.0653 J	0.0895 J	0.0311 J	0.266 J	0.0444 U	0.0896 J									
	value to use: Row B	0.455	0.263	0.0256	0.118	0.0419	0.0818	0.104	0.074	0.227	0.287	0.0306	0.0653	0.0895	0.0311	0.266	0.0444	0.0896									
31	**congener TEC: Row C**	**0.455**	**0.263**	**0.00256**	**0.0118**	**0.00419**	**0.000818**	**0.0000312**	**0.0074**	**0.00681**	**0.0861**	**0.00306**	**0.00653**	**0.00895**	**0.00311**	**0.00266**	**0.000444**	**2.688E-05**	1%	0.8521	0.8573	0.8625	0.8548	J	**Section 1**	**0.8548**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLN404: Row A	0.448 J	0.0927 U	0.0545 J	0.0352 J	0.034 J	0.0886 J	0.428 J	0.142 J	0.146 J	0.72 J	0.0774 J	0.264 J	0.0903 J	0.0782 J	1.13 J	0.061 J	0.222 J									
	value to use: Row B	0.448	0.0927	0.0545	0.0352	0.034	0.0886	0.428	0.142	0.146	0.72	0.0774	0.264	0.0903	0.0782	1.13	0.061	0.222									
32	**congener TEC: Row C**	**0.448**	**0.0927**	**0.00545**	**0.00352**	**0.0034**	**0.000886**	**0.0001284**	**0.0142**	**0.00438**	**0.216**	**0.00774**	**0.0264**	**0.00903**	**0.00782**	**0.0113**	**0.00061**	**0.0000666**	12%	0.7589	0.8053	0.8516	0.7657	J	**Section 1**	**0.7657**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLN405: Row A	3.19	0.0612 U	0.0942 J	0.103 J	0.0435 J	0.0766 J	0.172 J	0.0653 J	0.47 J	0.54 J	0.127 J	0.321 J	0.1 J	0.0745 J	0.954 J	0.0502 U	0.249 J									
	value to use: Row B	3.19	0.0612	0.0942	0.103	0.0435	0.0766	0.172	0.0653	0.47	0.54	0.127	0.321	0.1	0.0745	0.954	0.0502	0.249									
33	**congener TEC: Row C**	**3.19**	**0.0612**	**0.00942**	**0.0103**	**0.00435**	**0.000766**	**0.0000516**	**0.00653**	**0.0141**	**0.162**	**0.0127**	**0.0321**	**0.01**	**0.00745**	**0.00954**	**0.000502**	**0.0000747**	2%	3.4694	3.5002	3.5311	3.4778	none	**Section 1**	**3.4778**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLN406: Row A	1.4	0.575 J	0.0488 J	0.187 J	0.0756 J	0.0591 J	0.116 J	0.577 J	0.502 J	0.996 J	0.101 J	0.249 J	0.0993 J	0.0435 U	0.428 J	0.0845 U	0.034 U									
	value to use: Row B	1.4	0.575	0.0488	0.187	0.0756	0.0591	0.116	0.577	0.502	0.996	0.101	0.249	0.0993	0.0435	0.428	0.0845	0.034									
34	**congener TEC: Row C**	**1.4**	**0.575**	**0.00488**	**0.0187**	**0.00756**	**0.000591**	**0.0000348**	**0.0577**	**0.01506**	**0.2988**	**0.0101**	**0.0249**	**0.00993**	**0.00435**	**0.00428**	**0.000845**	**0.0000102**	0%	2.4275	2.4301	2.4327	2.4288	none	**Section 1**	**2.4288**	**none**
	donor value to use: Row D																									Qualified	42%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLS339: Row A	0.328 J	0.117 J	0.0464 J	0.0738 J	0.0305 U	0.0804 J	0.178 J	0.12 U	0.219 J	0.506 J	0.0453 U	0.0675 J	0.0423 U	0.0403 U	0.584 J	0.0747 J	0.0617 J									
	value to use: Row B	0.328	0.117	0.0464	0.0738	0.0305	0.0804	0.178	0.12	0.219	0.506	0.0453	0.0675	0.0423	0.0403	0.584	0.0747	0.0617									
35	**congener TEC: Row C**	**0.328**	**0.117**	**0.00464**	**0.00738**	**0.00305**	**0.000804**	**0.0000534**	**0.012**	**0.00657**	**0.1518**	**0.00453**	**0.00675**	**0.00423**	**0.00403**	**0.00584**	**0.000747**	**1.851E-05**	4%	0.6296	0.6435	0.6574	0.6339	J	**Section 1**	**0.6339**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
	NB03FBLS349: Row A	0.652 J	0.426 J	0.0474 J	0.125 J	0.0721 J	0.0756 J	0.174 J	0.355 J	0.432 J	0.513 J	0.0987 J	0.15 J	0.0492 J	0.0441 J	0.394 J	0.095 J	0.0357 U									
	value to use: Row B	0.652	0.426	0.0474	0.125	0.0721	0.0756	0.174	0.355	0.432	0.513	0.0987	0.15	0.0492	0.0441	0.394	0.095	0.0357									
36	**congener TEC: Row C**	**0.652**	**0.426**	**0.00474**	**0.0125**	**0.00721**	**0.000756**	**0.0000522**	**0.0355**	**0.01296**	**0.1539**	**0.00987**	**0.015**	**0.00492**	**0.00441**	**0.00394**	**0.00095**	**1.071E-05**	0%	1.3447	1.3447	1.3447	1.3447	J	**Section 1**	**1.3447**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish Fillet TCDD TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1,PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDı	1,4,9-HpCDı	OCDF									
37	**NB03FSBS320: Row A**	2.21	0.114 U	0.448 J	0.326 J	0.16 J	0.155 J	0.35 J	2.7 J	3.78 J	1.41 J	0.278 J	1 J	0.238 J	0.102 J	2.67 J	0.128 J	0.225 J								**3.3319**	**none**
	value to use: Row B	2.21	0.114	0.448	0.326	0.16	0.155	0.35	2.7	3.78	1.41	0.278	1	0.238	0.102	2.67	0.128	0.225								Qualified	35%
	congener TEC: Row C	2.21	0.114	0.0448	0.0326	0.016	0.00155	0.000105	0.27	0.1134	0.423	0.0278	0.1	0.0238	0.0102	0.0267	0.00128	0.0000675	3%	3.3013025	3.3583	3.4153025	3.3319	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
38	**NB03FSBS321: Row A**	0.269 J	0.0764 U	0.217 J	0.105 J	0.047 J	0.0601 J	0.17 J	0.589 J	1.6 J	0.508 J	0.113 J	0.382 J	0.0647 J	0.0562 J	0.632 J	0.101 J	0.0737 J									
	value to use: Row B	0.269	0.0764	0.217	0.105	0.047	0.0601	0.17	0.589	1.6	0.508	0.113	0.382	0.0647	0.0562	0.632	0.101	0.0737								**0.6500**	**J**
	congener TEC: Row C	0.269	0.0764	0.0217	0.0105	0.0047	0.000601	0.000051	0.0589	0.048	0.1524	0.0113	0.0382	0.00647	0.00562	0.00632	0.00101	2.211E-05	11%	0.6347941	0.67299	0.71119411	0.6500	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
39	**NB03FSBS322: Row A**	0.608 J	0.978 J	0.285 J	0.065 J	0.0405 U	0.0745 J	0.179 J	0.891 J	1.99 J	0.565 J	0.148 J	0.392 J	0.0733 J	0.0365 U	1.18 J	0.0844 J	0.0499 J									
	value to use: Row B	0.608	0.978	0.285	0.065	0.0405	0.0745	0.179	0.891	1.99	0.565	0.148	0.392	0.0733	0.0365	1.18	0.0844	0.0499								**2.0149**	**J**
	congener TEC: Row C	0.608	0.978	0.0285	0.0065	0.00405	0.000745	0.0000537	0.0891	0.0597	0.1695	0.0148	0.0392	0.00733	0.00365	0.0118	0.000844	1.497E-05	0%	2.0141	2.0179	2.0218	2.0149	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
40	**NB03FSBS323: Row A**	0.252 J	0.174 J	0.146 J	0.0633 J	0.0486 J	0.0472 J	0.148 J	0.862 J	1.16 J	0.355 J	0.0294 U	0.0711 J	0.0375 J	0.027 U	0.571 J	0.0686 U	0.114 J									
	value to use: Row B	0.252	0.174	0.146	0.0633	0.0486	0.0472	0.148	0.862	1.16	0.355	0.0294	0.0711	0.0375	0.027	0.571	0.0686	0.114								**0.6970**	**J**
	congener TEC: Row C	0.252	0.174	0.0146	0.00633	0.00486	0.000472	0.0000444	0.0862	0.0348	0.1065	0.00294	0.00711	0.00375	0.0027	0.00571	0.000686	0.0000342	1%	0.6964	0.6996	0.7027	0.6970	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
41	**NB03FSBS324: Row A**	1.97	0.427 J	0.11835 J	0.1875 J	0.07405 J	0.162 J	0.1905 J	1.555 J	2.405 J	1.895 J	0.06435 J	0.509 J	0.0729 J	0.0418 J	1.465 J	0.158 J	0.145 J									
	value to use: Row B	1.97	0.427	0.11835	0.1875	0.07405	0.162	0.1905	1.555	2.405	1.895	0.06435	0.509	0.0729	0.0418	1.465	0.158	0.145								**3.3179**	**none**
	congener TEC: Row C	1.97	0.427	0.011835	0.01875	0.007405	0.00162	5.715E-05	0.1555	0.07215	0.5685	0.006435	0.0509	0.00729	0.00418	0.01465	0.00158	0.0000435	No difference	3.3179	3.3179	3.3179	3.3179	none	**Section 1**	Qualified	41%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
42	**NB03FSBS325: Row A**	0.379 J	0.281 J	0.179 J	0.15 J	0.0626 U	4.54 J	53.4 J	1.68 J	1.59 J	1.54 J	0.104 J	0.387 J	0.0945 J	0.155 J	0.9 J	0.124 U	0.487 J									
	value to use: Row B	0.379	0.281	0.179	0.15	0.0626	4.54	53.4	1.68	1.59	1.54	0.104	0.387	0.0945	0.155	0.9	0.124	0.487								**1.5155**	**J**
	congener TEC: Row C	0.379	0.281	0.0179	0.015	0.00626	0.0454	0.01602	0.168	0.0477	0.462	0.0104	0.0387	0.00945	0.0155	0.009	0.00124	0.0001461	0%	1.5152	1.5190	1.5227	1.5155	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
43	**NB03FSBS327: Row A**	0.595 J	0.12 U	0.252 J	0.101 J	0.0443 U	0.0769 J	0.217 J	1.54 J	1.83 J	0.634 J	0.0899 J	0.383 J	0.096 J	0.0326 U	1.09 J	0.107 U	0.122 J									
	value to use: Row B	0.595	0.12	0.252	0.101	0.0443	0.0769	0.217	1.54	1.83	0.634	0.0899	0.383	0.096	0.0326	1.09	0.107	0.122								**1.1112**	**J**
	congener TEC: Row C	0.595	0.12	0.0252	0.0101	0.00443	0.000769	0.0000651	0.154	0.0549	0.1902	0.00899	0.0383	0.0096	0.00326	0.0109	0.00107	0.0000366	11%	1.0981	1.1624	1.2268	1.1112	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
44	**NB03FSBS328: Row A**	0.464 J	0.0912 U	0.203 J	0.165 J	0.0408 J	0.0553 J	0.153 J	1.39 J	1.11 J	0.62 J	0.0815 J	0.11 J	0.0937 J	0.0263 U	0.463 J	0.0971 J	0.061 J									
	value to use: Row B	0.464	0.0912	0.203	0.165	0.0408	0.0553	0.153	1.39	1.11	0.62	0.0815	0.11	0.0937	0.0263	0.463	0.0971	0.061								**0.9067**	**J**
	congener TEC: Row C	0.464	0.0912	0.0203	0.0165	0.00408	0.000553	0.0000459	0.139	0.0333	0.186	0.00815	0.011	0.00937	0.00263	0.00463	0.000971	0.0000183	10%	0.8979	0.9448	0.9917	0.9067	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
45	**NB03FSBS329: Row A**	0.264 J	0.757 J	0.0259 U	0.0336 J	0.0267 J	0.0906 J	0.11 J	0.863 J	1.17 J	0.76 J	0.0319 U	0.131 J	0.0919 J	0.0299 U	0.276 J	0.0706 J	0.0778 J									
	value to use: Row B	0.264	0.757	0.0259	0.0336	0.0267	0.0906	0.11	0.863	1.17	0.76	0.0319	0.131	0.0919	0.0299	0.276	0.0706	0.0778								**1.4057**	**J**
	congener TEC: Row C	0.264	0.757	0.00259	0.00336	0.00267	0.000906	0.000033	0.0863	0.0351	0.228	0.00319	0.0131	0.00919	0.00299	0.00276	0.000706	2.334E-05	1%	1.4031483	1.40753	1.41191834	1.4057	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
46	**NB03FSBS330: Row A**	1.51	0.419 J	0.0291 J	0.0525 J	0.0245 J	0.0394 J	0.104 J	0.266 J	0.318 J	0.309 J	0.0255 J	0.0421 J	0.0358 J	0.0255 J	0.192 J	0.04 U	0.0869 J									
	value to use: Row B	1.51	0.419	0.0291	0.0525	0.0245	0.0394	0.104	0.266	0.318	0.309	0.0255	0.0421	0.0358	0.0255	0.192	0.04	0.0869								**2.0839**	**none**
	congener TEC: Row C	1.51	0.419	0.00291	0.00525	0.00245	0.000394	0.0000312	0.0266	0.00954	0.0927	0.00255	0.00421	0.00358	0.00255	0.00192	0.0004	2.607E-05	0%	2.0837113	2.08391	2.08411127	2.0839	none	**Section 1**	Qualified	28%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
47	**NB03FSBS331: Row A**	24.45 J	0.9015 J	0.19415 J	0.4275 J	0.1429 J	0.247 J	0.4195 J	7.47 J	3.84 J	7.265 J	0.9715 J	2.915 J	0.1645 J	0.1865 J	8.6 J	0.1346 J	0.1895 J									
	value to use: Row B	24.45	0.9015	0.19415	0.4275	0.1429	0.247	0.4195	7.47	3.84	7.265	0.9715	2.915	0.1645	0.1865	8.6	0.1346	0.1895								**28.9834**	**J**
	congener TEC: Row C	24.45	0.9015	0.019415	0.04275	0.01429	0.00247	0.0001259	0.747	0.1152	2.1795	0.09715	0.2915	0.01645	0.01865	0.086	0.001346	5.685E-05	No difference	28.9834	28.9834	28.9834	28.9834	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
48	**NB03FSBS332: Row A**	1.02	0.124 U	0.0284 J	0.0645 J	0.0271 U	0.0762 J	0.186 J	2.03 J	2.15 J	0.871 J	0.047 J	0.264 J	0.053 J	0.029 U	0.543 J	0.0455 U	0.0692 J									
	value to use: Row B	1.02	0.124	0.0284	0.0645	0.0271	0.0762	0.186	2.03	2.15	0.871	0.047	0.264	0.053	0.029	0.543	0.0455	0.0692								**1.6107**	**none**
	congener TEC: Row C	1.02	0.124	0.00284	0.00645	0.00271	0.000762	0.0000558	0.203	0.0645	0.2613	0.0047	0.0264	0.0053	0.0029	0.00543	0.000455	2.076E-05	8%	1.6008	1.6658	1.7308	1.6107	none	**Section 1**	Qualified	41%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
49	**NB03FSBS333: Row A**	0.678 J	0.329 J	0.0357 J	0.0998 J	0.0353 U	0.0744 J	0.283 J	1.83 J	1.12 J	1.22 J	0.0302 U	0.211 J	0.0509 J	0.0347 J	0.858 J	0.0968 J	0.0561 J									
	value to use: Row B	0.678	0.329	0.0357	0.0998	0.0353	0.0744	0.283	1.83	1.12	1.22	0.0302	0.211	0.0509	0.0347	0.858	0.0968	0.0561								**1.6446**	**J**
	congener TEC: Row C	0.678	0.329	0.00357	0.00998	0.00353	0.000744	0.0000849	0.183	0.0336	0.366	0.00302	0.0211	0.00509	0.00347	0.00858	0.000968	1.683E-05	0%	1.6432	1.6465	1.6498	1.6446	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
50	**NB03FSBS334: Row A**	0.226 J	0.382 J	0.0471 U	0.102 J	0.0538 J	0.0707 J	0.196 J	1.66 J	1.51 J	1.47 J	0.0395 U	0.371 J	0.0683 J	0.0397 U	0.91 J	0.11 U	0.105 J									
	value to use: Row B	0.226	0.382	0.0471	0.102	0.0538	0.0707	0.196	1.66	1.51	1.47	0.0395	0.371	0.0683	0.0397	0.91	0.11	0.105								**1.3308**	**J**
	congener TEC: Row C	0.226	0.382	0.00471	0.0102	0.00538	0.000707	0.0000588	0.166	0.0453	0.441	0.00395	0.0371	0.00683	0.00397	0.0091	0.0011	0.0000315	1%	1.3297	1.3366	1.3434	1.3308	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
51	**NB03FSBS335: Row A**	0.256 J	0.11 U	0.0767 J	0.0956 J	0.0345 U	0.126 J	0.173 J	1.43 J	1.27 J	0.862 J	0.0446 J	0.101 J	0.0407 J	0.037 J	0.616 J	0.102 J	0.102 J									
	value to use: Row B	0.256	0.11	0.0767	0.0956	0.0345	0.126	0.173	1.43	1.27	0.862	0.0446	0.101	0.0407	0.037	0.616	0.102	0.102								**0.7510**	**J**
	congener TEC: Row C	0.256	0.11	0.00767	0.00956	0.00345	0.00126	0.0000519	0.143	0.0381	0.2586	0.00446	0.0101	0.00407	0.0037	0.00616	0.00102	0.0000306	14%	0.7438	0.8005	0.8572	0.7510	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
52	**NB03FSBS336: Row A**	13.7 J	1.15 J	0.217 J	0.394 J	0.108 U	0.333 J	0.143 J	5.59 J	3.15 J	4.55 J	0.586 J	1.44 J	0.164 J	0.27 J	1.84 J	0.215 U	0.271 J									
	value to use: Row B	13.7	1.15	0.217	0.394	0.108	0.333	0.143	5.59	3.15	4.55	0.586	1.44	0.164	0.27	1.84	0.215	0.271								**17.1984**	**J**
	congener TEC: Row C	13.7	1.15	0.0217	0.0394	0.0108	0.00333	0.0000429	0.559	0.0945	1.365	0.0586	0.144	0.0164	0.027	0.0184	0.00215	0.0000813	0%	17.1975	17.2039	17.2104	17.1984	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
53	**NB03FSBS337: Row A**	3.815 J	0.77 J	0.146 J	0.0997 J	0.1585 J	0.1115 J	0.2345 J	0.982 J	1.31 J	1.09 J	0.159 J	0.221 J	0.1475 J	0.09995 J	0.817 J	0.162 J	0.16625 J									
	value to use: Row B	3.815	0.77	0.146	0.0997	0.1585	0.1115	0.2345	0.982	1.31	1.09	0.159	0.221	0.1475	0.09995	0.817	0.162	0.16625								**5.1637**	**J**
	congener TEC: Row C	3.815	0.77	0.0146	0.00997	0.01585	0.001115	7.035E-05	0.0982	0.0393	0.327	0.0159	0.0221	0.01475	0.009995	0.00817	0.00162	4.988E-05	No difference	5.1637	5.1637	5.1637	5.1637	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
54	**NB03FSBS338: Row A**	1.26 J	0.113 U	0.207 J	0.148 J	0.0495 J	0.128 J	0.241 J	1.95 J	1.38 J	0.804 J	0.0926 J	0.213 J	0.099 J	0.0548 J	0.779 J	0.061 J	0.126 J									
	value to use: Row B	1.26	0.113	0.207	0.148	0.0495	0.128	0.241	1.95	1.38	0.804	0.0926	0.213	0.099	0.0548	0.779	0.061	0.126								**1.8444**	**J**
	congener TEC: Row C	1.26	0.113	0.0207	0.0148	0.00495	0.00128	0.0000723	0.195	0.0414	0.2412	0.00926	0.0213	0.0099	0.00548	0.00779	0.00061	0.0000378	6%	1.8338	1.8903	1.9468	1.8444	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
55	**NB03FSFC486: Row A**	4.53	0.289 J	0.0285 J	0.102 J	0.0358 J	0.199 J	0.294 J	0.177 J	0.0254 U	0.513 J	0.206 J	0.118 J	0.0348 J	0.0415 J	0.179 J	0.0241 J	0.0415 J									
	value to use: Row B	4.53	0.289	0.0285	0.102	0.0358	0.199	0.294	0.177	0.0254	0.513	0.206	0.118	0.0348	0.0415	0.179	0.0241	0.0415								**5.0515**	**none**
	congener TEC: Row C	4.53	0.289	0.00285	0.0102	0.00358	0.00199	0.0000882	0.0177	0.000762	0.1539	0.0206	0.0118	0.00348	0.00415	0.00179	0.000241	1.245E-05	0%	5.0514	5.0518	5.0521	5.0515	none	**Section 1**	Qualified	10%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										
56	**NB03FSFC487: Row A**	1.78 J	0.0571 U	0.016 J	0.0709 J	0.0308 J	0.149 J	0.372 J	0.0899 J	0.0627 J	0.273 J	0.202 J	0.11 J	0.0503 J	0.0229 J	0.174 J	0.0341 J	0.0503 J									
	value to use: Row B	1.78	0.0571	0.016	0.0709	0.0308	0.149	0.372	0.0899	0.0627	0.273	0.202	0.11	0.0503	0.0229	0.174	0.0341	0.0503								**1.9314**	**J**
	congener TEC: Row C	1.78	0.0571	0.0016	0.00709	0.00308	0.00149	0.0001116	0.00899	0.001881	0.0819	0.0202	0.011	0.00503	0.00229	0.00174	0.000341	1.509E-05	3%	1.9268	1.9553	1.9839	1.9314	J	**Section 1**	Qualified	100%
	donor value to use: Row D																									Dioxin/Furan	100%
	donor TEC: Row E																										

EPA Advanced KM TEQ Calculator

Fish Fillet TCDD TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1,PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDi	1,4,9-HpCDi	OCDF									
57	NB03FSFC488: Row A	3.75	0.0818 U	0.0351 J	0.258 J	0.0253 U	0.244 J	0.332 J	0.0787 U	0.465 J	0.911 J	0.307 J	0.301 J	0.0672 J	0.0674 J	0.513 J	0.0778 J	0.0639 J									
	value to use: Row B	3.75	0.0818	0.0351	0.258	0.0253	0.244	0.332	0.0787	0.465	0.911	0.307	0.301	0.0672	0.0674	0.513	0.0778	0.0639									
	congener TEC: Row C	3.75	0.0818	0.00351	0.0258	0.00253	0.00244	0.0000996	0.00787	0.01395	0.2733	0.0307	0.0301	0.00672	0.00674	0.00513	0.000778	1.917E-05	2%	4.1493	4.1954	4.2415	4.1623	none	Section 1	4.1623	none
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
58	NB03FSFC489: Row A	1.26 J	0.326 J	0.164 J	0.186 J	0.148 J	0.209 J	0.442 J	0.0812 J	0.281 J	0.387 J	0.251 J	0.189 J	0.271 J	0.093 J	0.16 J	0.216 J	0.324 J									
	value to use: Row B	1.26	0.326	0.164	0.186	0.148	0.209	0.442	0.0812	0.281	0.387	0.251	0.189	0.271	0.093	0.16	0.216	0.324									
	congener TEC: Row C	1.26	0.326	0.0164	0.0186	0.0148	0.00209	0.0001326	0.00812	0.00843	0.1161	0.0251	0.0189	0.0271	0.0093	0.0016	0.00216	0.0000972	No difference	1.8549	1.8549	1.8549	1.8549	J	Section 1	1.8549	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
59	NB03FSFC490: Row A	3.41 J	0.379 J	0.102 J	0.207 J	0.116 J	0.437 J	0.307 J	0.178 J	0.405 J	0.881 J	0.278 J	0.234 J	0.247 J	0.111 J	0.318 J	0.127 J	0.192 J									
	value to use: Row B	3.41	0.379	0.102	0.207	0.116	0.437	0.307	0.178	0.405	0.881	0.278	0.234	0.247	0.111	0.318	0.127	0.192									
	congener TEC: Row C	3.41	0.379	0.0102	0.0207	0.0116	0.00437	0.0000921	0.0178	0.01215	0.2643	0.0278	0.0234	0.0247	0.0111	0.00318	0.00127	0.0000576	No difference	4.2217	4.2217	4.2217	4.2217	J	Section 1	4.2217	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
60	NB03FSFC491: Row A	5.35	0.0615 U	0.0471 J	0.195 J	0.0596 J	0.16 J	0.312 J	0.224 J	0.237 J	0.877 J	0.438 J	0.337 J	0.104 J	0.149 J	0.666 J	0.0574 J	0.125 J									
	value to use: Row B	5.35	0.0615	0.0471	0.195	0.0596	0.16	0.312	0.224	0.237	0.877	0.438	0.337	0.104	0.149	0.666	0.0574	0.125									
	congener TEC: Row C	5.35	0.0615	0.00471	0.0195	0.00596	0.0016	0.0000936	0.0224	0.00711	0.2631	0.0438	0.0337	0.0104	0.0149	0.00666	0.000574	0.0000375	1%	5.7845	5.8153	5.8460	5.7968	none	Section 1	5.7968	none
	donor value to use: Row D																									Qualified	8%
	donor TEC: Row E																									Dioxin/Furan	100%
61	NB03FSFN407: Row A	4.63	0.0878 U	0.0553 J	0.188 J	0.0806 J	0.217 J	0.407 J	0.104 J	0.201 J	0.659 J	0.892 J	0.314 J	0.103 J	0.105 J	0.82 J	0.0568 J	0.201 J									
	value to use: Row B	4.63	0.0878	0.0553	0.188	0.0806	0.217	0.407	0.104	0.201	0.659	0.892	0.314	0.103	0.105	0.82	0.0568	0.201									
	congener TEC: Row C	4.63	0.0878	0.00553	0.0188	0.00806	0.00217	0.0001221	0.0104	0.00603	0.1977	0.0892	0.0314	0.0103	0.0105	0.0082	0.000568	0.0000603	2%	5.0290	5.0729	5.1168	5.0377	none	Section 1	5.0377	none
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
62	NB03FSFN408: Row A	3.01	0.241 J	0.0398 J	0.0866 J	0.0577 J	0.136 J	0.119 J	0.0707 J	0.105 J	0.41 J	0.309 J	0.118 J	0.0856 J	0.0857 J	0.101 J	0.0497 J	0.156 J									
	value to use: Row B	3.01	0.241	0.0398	0.0866	0.0577	0.136	0.119	0.0707	0.105	0.41	0.309	0.118	0.0856	0.0857	0.101	0.0497	0.156									
	congener TEC: Row C	3.01	0.241	0.00398	0.00866	0.00577	0.00136	0.0000357	0.00707	0.00315	0.123	0.0309	0.0118	0.00856	0.00857	0.00101	0.000497	0.0000468	No difference	3.4654	3.4654	3.4654	3.4654	none	Section 1	3.4654	none
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
63	NB03FSFN409: Row A	10.4	0.126 U	0.0341 U	0.243 J	0.0914 J	0.33 J	0.366 J	0.249 J	0.145 J	1.29 J	1 J	0.382 J	0.0589 J	0.13 J	0.776 J	0.0538 U	0.107 J									
	value to use: Row B	10.4	0.126	0.0341	0.243	0.0914	0.33	0.366	0.249	0.145	1.29	1	0.382	0.0589	0.13	0.776	0.0538	0.107									
	congener TEC: Row C	10.4	0.126	0.00341	0.0243	0.00914	0.0033	0.0001098	0.0249	0.00435	0.387	0.1	0.0382	0.00589	0.013	0.00776	0.000538	0.0000321	1%	11.0180	11.0830	11.1479	11.0355	none	Section 1	11.0355	none
	donor value to use: Row D																									Qualified	7%
	donor TEC: Row E																									Dioxin/Furan	100%
64	NB03FSFN410: Row A	3.77	0.0851 U	0.051 J	0.104 J	0.0758 J	0.188 J	0.633 J	0.222 J	0.251 J	0.71 J	0.367 J	0.173 J	0.076 J	0.0818 J	0.357 J	0.0408 J	0.161 J									
	value to use: Row B	3.77	0.0851	0.051	0.104	0.0758	0.188	0.633	0.222	0.251	0.71	0.367	0.173	0.076	0.0818	0.357	0.0408	0.161									
	congener TEC: Row C	3.77	0.0851	0.0051	0.0104	0.00758	0.00188	0.0001899	0.0222	0.00753	0.213	0.0367	0.0173	0.0076	0.00818	0.00357	0.000408	0.0000483	2%	4.1117	4.1542	4.1968	4.1209	none	Section 1	4.1209	none
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
65	NB03FSFN411: Row A	1.56 J	0.0776 U	0.046 J	0.155 J	0.0223 U	0.319 J	0.555 J	0.062 J	0.301 J	0.302 J	0.166 J	0.114 J	0.109 J	0.0241 J	0.15 J	0.0282 J	0.073 J									
	value to use: Row B	1.56	0.0776	0.046	0.155	0.0223	0.319	0.555	0.062	0.301	0.302	0.166	0.114	0.109	0.0241	0.15	0.0282	0.073									
	congener TEC: Row C	1.56	0.0776	0.0046	0.0155	0.00223	0.00319	0.0001665	0.0062	0.00903	0.0906	0.0166	0.0114	0.0109	0.00241	0.0015	0.000282	0.0000219	5%	1.7324	1.7723	1.8122	1.7388	J	Section 1	1.7388	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
66	NB03FSFN412: Row A	5.02	0.265 J	0.0217 U	0.108 J	0.0761 J	0.156 J	0.354 J	0.118 J	0.166 J	0.43 J	0.255 J	0.093 J	0.0486 J	0.0401 J	0.231 J	0.0377 J	0.0488 J									
	value to use: Row B	5.02	0.265	0.0217	0.108	0.0761	0.156	0.354	0.118	0.166	0.43	0.255	0.093	0.0486	0.0401	0.231	0.0377	0.0488									
	congener TEC: Row C	5.02	0.265	0.00217	0.0108	0.00761	0.00156	0.0001062	0.0118	0.00498	0.129	0.0255	0.0093	0.00486	0.00401	0.00231	0.000377	1.464E-05	0%	5.4972	5.4983	5.4994	5.4977	none	Section 1	5.4977	none
	donor value to use: Row D																									Qualified	9%
	donor TEC: Row E																									Dioxin/Furan	100%
67	NB03FSFS351: Row A	4.67 J	0.472 J	0.0866 J	0.402 J	0.109 J	0.337 J	0.55 J	0.383 J	0.801 J	0.89 J	0.281 J	0.331 J	0.182 J	0.0545 J	0.418 J	0.177 J	0.214 J									
	value to use: Row B	4.67	0.472	0.0866	0.402	0.109	0.337	0.55	0.383	0.801	0.89	0.281	0.331	0.182	0.0545	0.418	0.177	0.214									
	congener TEC: Row C	4.67	0.472	0.00866	0.0402	0.0109	0.00337	0.000165	0.0383	0.02403	0.267	0.0281	0.0331	0.0182	0.00545	0.00418	0.00177	0.0000642	No difference	5.6255	5.6255	5.6255	5.6255	J	Section 1	5.6255	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
68	NB03FSFS354: Row A	2.01 J	0.0995 U	0.0572 J	0.101 J	0.0688 J	0.0814 J	0.166 J	0.0735 J	0.159 J	0.494 J	0.0974 J	0.0813 J	0.0794 J	0.0387 J	0.132 J	0.0886 J	0.136 J									
	value to use: Row B	2.01	0.0995	0.0572	0.101	0.0688	0.0814	0.166	0.0735	0.159	0.494	0.0974	0.0813	0.0794	0.0387	0.132	0.0886	0.136									
	congener TEC: Row C	2.01	0.0995	0.00572	0.0101	0.00688	0.000814	0.0000498	0.00735	0.00477	0.1482	0.00974	0.00813	0.00794	0.00387	0.00132	0.000886	0.0000408	4%	2.2258	2.2756	2.3253	2.2306	J	Section 1	2.2306	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
69	NB03FSFS355: Row A	7.95 J	0.4 J	0.0522 J	0.435 J	0.125 J	0.597 J	0.482 J	0.382 J	0.399 J	1.55 J	0.847 J	0.204 J	0.123 J	0.186 J	0.797 J	0.115 J	0.275 J									
	value to use: Row B	7.95	0.4	0.0522	0.435	0.125	0.597	0.482	0.382	0.399	1.55	0.847	0.204	0.123	0.186	0.797	0.115	0.275									
	congener TEC: Row C	7.95	0.4	0.00522	0.0435	0.0125	0.00597	0.0001446	0.0382	0.01197	0.465	0.0847	0.0204	0.0123	0.0186	0.00797	0.00115	0.0000825	No difference	9.0777	9.0777	9.0777	9.0777	J	Section 1	9.0777	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
70	NB03FSFS356: Row A	7.47 J	0.164 U	0.112 J	0.372 J	0.143 J	0.325 J	0.433 J	0.482 J	0.239 J	1.17 J	0.274 J	0.309 J	0.0775 J	0.135 J	0.284 J	0.104 J	0.314 J									
	value to use: Row B	7.47	0.164	0.112	0.372	0.143	0.325	0.433	0.482	0.239	1.17	0.274	0.309	0.0775	0.135	0.284	0.104	0.314									
	congener TEC: Row C	7.47	0.164	0.0112	0.0372	0.0143	0.00325	0.0001299	0.0482	0.00717	0.351	0.0274	0.0309	0.00775	0.0135	0.00284	0.00104	0.0000942	2%	8.0260	8.1080	8.1900	8.0406	J	Section 1	8.0406	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
71	NB03FSFS357: Row A	0.123 U	0.285 J	0.081 J	0.193 J	0.178 J	0.233 J	0.402 J	0.122 U	0.232 J	0.392 J	0.149 J	0.108 J	0.153 J	0.0431 U	0.223 J	0.0605 J	0.231 J									
	value to use: Row B	0.123	0.285	0.081	0.193	0.178	0.233	0.402	0.122	0.232	0.392	0.149	0.108	0.153	0.0431	0.223	0.0605	0.231									
	congener TEC: Row C	0.123	0.285	0.0081	0.0193	0.0178	0.00233	0.0001206	0.0122	0.00696	0.1176	0.0149	0.0108	0.0153	0.00431	0.00223	0.000605	0.0000693	24%	0.5011	0.5709	0.6406	0.5205	J	Section 1	0.5205	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
72	NB03FSFS359: Row A	7.73	0.0767 U	0.0576 J	0.337 J	0.147 J	0.342 J	0.579 J	0.591 J	0.459 J	1.18 J	0.489 J	0.425 J	0.104 J	0.178 J	0.712 J	0.0415 J	0.202 J									
	value to use: Row B	7.73	0.0767	0.0576	0.337	0.147	0.342	0.579	0.591	0.459	1.18	0.489	0.425	0.104	0.178	0.712	0.0415	0.202									
	congener TEC: Row C	7.73	0.0767	0.00576	0.0337	0.0147	0.00342	0.0001737	0.0591	0.01377	0.354	0.0489	0.0425	0.0104	0.0178	0.00712	0.000415	0.0000606	1%	8.3418	8.3802	8.4185	8.3602	none	Section 1	8.3602	none
	donor value to use: Row D																									Qualified	8%
	donor TEC: Row E																									Dioxin/Furan	100%
73	NB03FWPC-COMP07: Row A	31.8 J	0.197 U	0.195 J	0.595 J	0.0814 J	0.481 J	0.606 J	3.72 J	2.38 J	3.45 J	1.55 J	1.14 J	0.0634 U	0.201 J	1.85 J	0.102 J	0.0977 J									
	value to use: Row B	31.8	0.197	0.195	0.595	0.0814	0.481	0.606	3.72	2.38	3.45	1.55	1.14	0.0634	0.201	1.85	0.102	0.0977									
	congener TEC: Row C	31.8	0.197	0.0195	0.0595	0.00814	0.00481	0.0001818	0.372	0.0714	1.035	0.155	0.114	0.00634	0.0201	0.0185	0.00102	2.931E-05	1%	33.6792	33.7809	33.8825	33.7171	J	Section 1	33.7171	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
74	NB03FWPC-COMP08: Row A	8.36 J	0.635 J	0.224 J	0.353 J	0.059 U	0.218 J	0.482 J	2.28 J	1.73 J	2.56 J	1.5 J	0.739 J	0.0537 J	0.176 J	1.54 J	0.0616 U	0.162 J									
	value to use: Row B	8.36	0.635	0.224	0.353	0.059	0.218	0.482	2.28	1.73	2.56	1.5	0.739	0.0537	0.176	1.54	0.0616	0.162									
	congener TEC: Row C	8.36	0.635	0.0224	0.0353	0.0059	0.00218	0.0001446	0.228	0.0519	0.768	0.15	0.0739	0.00537	0.0176	0.0154	0.000616	0.0000486	0%	10.3652	10.3685	10.3718	10.3669	J	Section 1	10.3669	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
75	NB03FWPC-COMP09: Row A	14.1 J	0.544 J	0.324 J	0.394 J	0.103 J	0.308 J	0.568 J	3.39 J	3.96 J	3.62 J	1.75 J	1.66 J	0.0897 J	0.205 J	4.12 J	0.0786 U	0.29 J									
	value to use: Row B	14.1	0.544	0.324	0.394	0.103	0.308	0.568	3.39	3.96	3.62	1.75	1.66	0.0897	0.205	4.12	0.0786	0.29									
	congener TEC: Row C	14.1	0.544	0.0324	0.0394	0.0103	0.00308	0.0001704	0.339	0.1188	1.086	0.175	0.166	0.00897	0.0205	0.0412	0.000786	0.000087	0%	16.6849	16.6853	16.6857	16.6850	J	Section 1	16.6850	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
76	NB03FWPC-COMP10: Row A	10.2 J	0.107 U	0.25 J	0.502 J	0.224 J	0.312 J	0.65 J	4.33 J	3.31 J	3.42 J	1.32 J	1.64 J	0.208 J	0.33 J	3.91 J	0.181 J	0.408 J									
	value to use: Row B	10.2	0.107	0.25	0.502	0.224	0.312	0.65	4.33	3.31	3.42	1.32	1.64	0.208	0.33	3.91	0.181	0.408									
	congener TEC: Row C	10.2	0.107	0.025	0.0502	0.0224	0.00312	0.000195	0.433	0.0993	1.026	0.132	0.164	0.0208	0.033	0.0391	0.00181	0.0001224	1%	12.2500	12.3035	12.3570	12.2769	J	Section 1	12.2769	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish Fillet TCDD TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ
Data entered by: Francis Loko
Units: ng/kg
Date entered: 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
		TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1,PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDF	1,4,9-HpCDF	OCDF	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003									
	Sample ID:																										
	(must enter on Row A)																										
77	**NB03FWPC-COMP11: Row A**	15.8 J	0.0882 U	0.206 J	0.542 J	0.123 J	0.323 J	0.596 J	3.09 J	3.3 J	3.97 J	1.69 J	1.29 J	0.0626 J	0.223 J	2.93 J	0.0808 U	0.298 J									
	value to use: Row B	15.8	0.0882	0.206	0.542	0.123	0.323	0.596	3.09	3.3	3.97	1.69	1.29	0.0626	0.223	2.93	0.0808	0.298									
	congener TEC: Row C	**15.8**	**0.0882**	**0.0206**	**0.0542**	**0.0123**	**0.00323**	**0.0001788**	**0.309**	**0.099**	**1.191**	**0.169**	**0.129**	**0.00626**	**0.0223**	**0.0293**	**0.000808**	**0.0000894**	0%	17.8455	17.8900	17.9345	17.8605	J	**Section 1**	**17.8605**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
78	**NB03FWPC-COMP12: Row A**	11.65 J	0.727 J	0.143 J	0.39 J	0.114 J	0.272 J	0.4675 J	2.83 J	1.965 J	3.005 J	1.645 J	0.9335 J	0.0958 J	0.1875 J	1.59 J	0.0757 U	0.181 J									
	value to use: Row B	11.65	0.727	0.143	0.39	0.114	0.272	0.4675	2.83	1.965	3.005	1.645	0.9335	0.0958	0.1875	1.59	0.0757	0.181									
	congener TEC: Row C	**11.65**	**0.727**	**0.0143**	**0.039**	**0.0114**	**0.00272**	**0.0001403**	**0.283**	**0.05895**	**0.9015**	**0.1645**	**0.09335**	**0.00958**	**0.01875**	**0.0159**	**0.000757**	**0.0000543**	0%	13.9901	13.9905	13.9909	13.9902	J	**Section 1**	**13.9902**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
79	**NB03FWPN-COMP07: Row A**	21.8 J	0.518 J	0.114 J	0.221 J	0.0719 J	0.225 J	0.588 J	1.28 J	1.55 J	2.11 J	0.913 J	0.795 J	0.0726 J	0.0752 J	1.55 J	0.0733 U	0.223 J									
	value to use: Row B	21.8	0.518	0.114	0.221	0.0719	0.225	0.588	1.28	1.55	2.11	0.913	0.795	0.0726	0.0752	1.55	0.0733	0.223									
	congener TEC: Row C	**21.8**	**0.518**	**0.0114**	**0.0221**	**0.00719**	**0.00225**	**0.0001764**	**0.128**	**0.0465**	**0.633**	**0.0913**	**0.0795**	**0.00726**	**0.00752**	**0.0155**	**0.000733**	**0.0000669**	0%	23.3698	23.3701	23.3705	23.3699	J	**Section 1**	**23.3699**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
80	**NB03FWPN-COMP08: Row A**	13.7 J	0.0842 U	0.234 J	0.689 J	0.142 J	0.416 J	0.73 J	4.4 J	3.03 J	3.27 J	1.28 J	1.2 J	0.0919 J	0.233 J	1.74 J	0.0607 J	0.112 J									
	value to use: Row B	13.7	0.0842	0.234	0.689	0.142	0.416	0.73	4.4	3.03	3.27	1.28	1.2	0.0919	0.233	1.74	0.0607	0.112									
	congener TEC: Row C	**13.7**	**0.0842**	**0.0234**	**0.0689**	**0.0142**	**0.00416**	**0.000219**	**0.44**	**0.0909**	**0.981**	**0.128**	**0.12**	**0.00919**	**0.0233**	**0.0174**	**0.000607**	**0.0000336**	1%	15.6213	15.6634	15.7055	15.6375	J	**Section 1**	**15.6375**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
81	**NB03FWPN-COMP09: Row A**	21.8 J	0.719 J	0.247 J	0.578 J	0.129 J	0.309 J	0.55 J	1.9 J	1.69 J	4.59 J	2.87 J	1.29 J	0.096 J	0.244 J	1.13 J	0.0748 U	0.263 J									
	value to use: Row B	21.8	0.719	0.247	0.578	0.129	0.309	0.55	1.9	1.69	4.59	2.87	1.29	0.096	0.244	1.13	0.0748	0.263									
	congener TEC: Row C	**21.8**	**0.719**	**0.0247**	**0.0578**	**0.0129**	**0.00309**	**0.000165**	**0.19**	**0.0507**	**1.377**	**0.287**	**0.129**	**0.0096**	**0.0244**	**0.0113**	**0.000748**	**0.0000789**	0%	24.6967	24.6971	24.6975	24.6969	J	**Section 1**	**24.6969**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
82	**NB03FWPN-COMP10: Row A**	7.69 J	0.0761 U	0.163 J	0.411 J	0.0466 J	0.253 J	0.457 J	2.18 J	2.1 J	2.78 J	1.1 J	0.819 J	0.0896 J	0.161 J	1.54 J	0.0665 U	0.162 J									
	value to use: Row B	7.69	0.0761	0.163	0.411	0.0466	0.253	0.457	2.18	2.1	2.78	1.1	0.819	0.0896	0.161	1.54	0.0665	0.162									
	congener TEC: Row C	**7.69**	**0.0761**	**0.0163**	**0.0411**	**0.00466**	**0.00253**	**0.0001371**	**0.218**	**0.063**	**0.834**	**0.11**	**0.0819**	**0.00896**	**0.0161**	**0.0154**	**0.000665**	**0.0000486**	1%	9.1021	9.1405	9.1789	9.1175	J	**Section 1**	**9.1175**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
83	**NB03FWPN-COMP11: Row A**	8 J	0.0952 U	0.182 J	0.599 J	0.15 J	0.264 J	0.772 J	2.93 J	2.8 J	3.65 J	1.27 J	1.19 J	0.0769 J	0.149 J	3 J	0.0626 U	0.116 J									
	value to use: Row B	8	0.0952	0.182	0.599	0.15	0.264	0.772	2.93	2.8	3.65	1.27	1.19	0.0769	0.149	3	0.0626	0.116									
	congener TEC: Row C	**8**	**0.0952**	**0.0182**	**0.0599**	**0.015**	**0.00264**	**0.0002316**	**0.293**	**0.084**	**1.095**	**0.127**	**0.119**	**0.00769**	**0.0149**	**0.03**	**0.000626**	**0.0000348**	1%	9.8666	9.9145	9.9624	9.8879	J	**Section 1**	**9.8879**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
84	**NB03FWPN-COMP12: Row A**	18.65 J	0.0771 U	0.156 J	0.5075 J	0.1255 J	0.341 J	0.5825 J	4.145 J	2.045 J	3.865 J	2.775 J	1 J	0.07495 J	0.219 J	1.55 J	0.0743 J	0.1295 J									
	value to use: Row B	18.65	0.0771	0.156	0.5075	0.1255	0.341	0.5825	4.145	2.045	3.865	2.775	1	0.07495	0.219	1.55	0.0743	0.1295									
	congener TEC: Row C	**18.65**	**0.0771**	**0.0156**	**0.05075**	**0.01255**	**0.00341**	**0.0001748**	**0.4145**	**0.06135**	**1.1595**	**0.2775**	**0.1**	**0.007495**	**0.0219**	**0.0155**	**0.000743**	**3.885E-05**	0%	20.7910	20.8296	20.8681	20.8082	J	**Section 1**	**20.8082**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
85	**NB03FWPS-COMP07: Row A**	13.6 J	0.696 J	0.157 J	0.446 J	0.0574 U	0.204 J	0.707 J	2.88 J	2.19 J	3.3 J	1.31 J	0.797 J	0.0554 J	0.163 J	1.18 J	0.0893 J	0.193 J									
	value to use: Row B	13.6	0.696	0.157	0.446	0.0574	0.204	0.707	2.88	2.19	3.3	1.31	0.797	0.0554	0.163	1.18	0.0893	0.193									
	congener TEC: Row C	**13.6**	**0.696**	**0.0157**	**0.0446**	**0.00574**	**0.00204**	**0.0002121**	**0.288**	**0.0657**	**0.99**	**0.131**	**0.0797**	**0.00554**	**0.0163**	**0.0118**	**0.000893**	**0.0000579**	0%	15.9475	15.9504	15.9533	15.9493	J	**Section 1**	**15.9493**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
86	**NB03FWPS-COMP08: Row A**	5.77 J	0.127 U	0.112 J	0.516 J	0.102 J	0.21 J	0.783 J	2.74 J	1.91 J	2.52 J	0.521 J	0.561 J	0.0745 J	0.117 J	0.928 J	0.0729 U	0.143 J									
	value to use: Row B	5.77	0.127	0.112	0.516	0.102	0.21	0.783	2.74	1.91	2.52	0.521	0.561	0.0745	0.117	0.928	0.0729	0.143									
	congener TEC: Row C	**5.77**	**0.127**	**0.0112**	**0.0516**	**0.0102**	**0.0021**	**0.0002349**	**0.274**	**0.0573**	**0.756**	**0.0521**	**0.0561**	**0.00745**	**0.0117**	**0.00928**	**0.000729**	**0.0000429**	2%	7.0693	7.1332	7.1970	7.0902	J	**Section 1**	**7.0902**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
87	**NB03FWPS-COMP09: Row A**	10.9 J	0.736 J	0.174 J	0.463 J	0.106 J	0.285 J	0.577 J	2.1 J	1.7 J	1.61 J	0.426 J	1.11 J	0.0983 J	0.103 J	0.895 J	0.0608 U	0.0606 J									
	value to use: Row B	10.9	0.736	0.174	0.463	0.106	0.285	0.577	2.1	1.7	1.61	0.426	1.11	0.0983	0.103	0.895	0.0608	0.0606									
	congener TEC: Row C	**10.9**	**0.736**	**0.0174**	**0.0463**	**0.0106**	**0.00285**	**0.0001731**	**0.21**	**0.051**	**0.483**	**0.0426**	**0.111**	**0.00983**	**0.0103**	**0.00895**	**0.000608**	**1.818E-05**	0%	12.6400	12.6403	12.6406	12.6401	J	**Section 1**	**12.6401**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
88	**NB03FWPS-COMP10: Row A**	14.7 J	0.0955 U	0.389 J	0.915 J	0.198 J	0.555 J	1.51 J	6.39 J	4.93 J	3.08 J	0.686 J	1.34 J	0.143 J	0.228 J	2.14 J	0.0779 U	0.178 J									
	value to use: Row B	14.7	0.0955	0.389	0.915	0.198	0.555	1.51	6.39	4.93	3.08	0.686	1.34	0.143	0.228	2.14	0.0779	0.178									
	congener TEC: Row C	**14.7**	**0.0955**	**0.0389**	**0.0915**	**0.0198**	**0.00555**	**0.000453**	**0.639**	**0.1479**	**0.924**	**0.0686**	**0.134**	**0.0143**	**0.0228**	**0.0214**	**0.000779**	**0.0000534**	1%	16.8283	16.8764	16.9245	16.8543	J	**Section 1**	**16.8543**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
89	**NB03FWPS-COMP11: Row A**	1.44 J	0.137 U	0.0694 J	0.482 J	0.13 J	0.367 J	0.971 J	3.93 J	2.13 J	1.67 J	0.322 J	0.455 J	0.084 J	0.189 J	0.568 J	0.0675 U	0.0671 J									
	value to use: Row B	1.44	0.137	0.0694	0.482	0.13	0.367	0.971	3.93	2.13	1.67	0.322	0.455	0.084	0.189	0.568	0.0675	0.0671									
	congener TEC: Row C	**1.44**	**0.137**	**0.00694**	**0.0482**	**0.013**	**0.00367**	**0.0002913**	**0.393**	**0.0639**	**0.501**	**0.0322**	**0.0455**	**0.0084**	**0.0189**	**0.00568**	**0.000675**	**2.013E-05**	5%	2.5807	2.6495	2.7184	2.5998	J	**Section 1**	**2.5998**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
90	**NB03FWPS-COMP12: Row A**	7.18 J	0.0645 U	0.377 J	0.926 J	0.197 J	0.531 J	1.32 J	5.46 J	3.69 J	2.98 J	1.18 J	0.98 J	0.0928 J	0.21 J	1.71 J	0.0986 J	0.186 J									
	value to use: Row B	7.18	0.0645	0.377	0.926	0.197	0.531	1.32	5.46	3.69	2.98	1.18	0.98	0.0928	0.21	1.71	0.0986	0.186									
	congener TEC: Row C	**7.18**	**0.0645**	**0.0377**	**0.0926**	**0.0197**	**0.00531**	**0.000396**	**0.546**	**0.1107**	**0.894**	**0.118**	**0.098**	**0.00928**	**0.021**	**0.0171**	**0.000986**	**0.0000558**	1%	9.1508	9.1831	9.2153	9.1632	J	**Section 1**	**9.1632**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Fish Fillet TCDD TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet TCDD-TEQ
Data entered by: Francis Loko
Units: ng/kg
Date entered: 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																									Highest TEC value is a DETECT, and there are no rejected ("R") values	
WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003	Summary of Sensitivity Analysis (relative percent difference)							Treatment 1	
Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDı	1,4,9-HpCDı	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
Sample notes																										

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03FAEC-COMP01	7.4034	
Line #2	NB03FAEC-COMP02	5.4222	
Line #3	NB03FAEC-COMP03	8.7014	
Line #4	NB03FAEC076	17.9103	
Line #5	NB03FAEC502	17.6007	
Line #6	NB03FAEC508	5.7780	J
Line #7	NB03FAEN-COMP01	5.4745	J
Line #8	NB03FAEN-COMP02	4.0680	J
Line #9	NB03FAEN-COMP03	12.4192	
Line #10	NB03FAEN-COMP04	19.5549	
Line #11	NB03FAEN-COMP05	9.5852	J
Line #12	NB03FAEN-COMP06	11.7767	
Line #13	NB03FAES-COMP01	0.3979	J
Line #14	NB03FAES018	3.0355	J
Line #15	NB03FAES019	5.4151	J
Line #16	NB03FAES347	6.4190	
Line #17	NB03FAES364	8.6391	
Line #18	NB03FAES365	12.9347	
Line #19	NB03FBL-COMP01	2.6213	
Line #20	NB03FBL-COMP02	0.9745	J
Line #21	NB03FBL-COMP03	1.6190073	
Line #22	NB03FBL-COMP04	0.3817351	J
Line #23	NB03FBL-COMP05	3.1293585	
Line #24	NB03FBLC468	1.1430674	J
Line #25	NB03FBLC469	1.0915548	J
Line #26	NB03FBLC471	1.0479326	J
Line #27	NB03FBLC475	0.3079092	J
Line #28	NB03FBLC476	2.5766698	
Line #29	NB03FBLC478	0.7465126	J
Line #30	NB03FBLC479	1.302886	J
Line #31	NB03FBLC481	0.8548406	J
Line #32	NB03FBLN404	0.7657118	J
Line #33	NB03FBLN405	3.4778344	
Line #34	NB03FBLN406	2.4287836	
Line #35	NB03FBLS339	0.633874	J
Line #36	NB03FBLS349	1.3447189	J
Line #37	NB03FSBS320	3.3319412	
Line #38	NB03FSBS321	0.6500365	J
Line #39	NB03FSBS322	2.0149165	J
Line #40	NB03FSBS323	0.6969612	J
Line #41	NB03FSBS324	3.3178956	
Line #42	NB03FSBS325	1.5155083	J
Line #43	NB03FSBS327	1.1112184	J
Line #44	NB03FSBS328	0.9067241	J
Line #45	NB03FSBS329	1.4057127	J
Line #46	NB03FSBS330	2.0838617	
Line #47	NB03FSBS331	28.983404	J
Line #48	NB03FSBS332	1.6107007	
Line #49	NB03FSBS333	1.6446134	J
Line #50	NB03FSBS334	1.3307704	J
Line #51	NB03FSBS335	0.751048	J
Line #52	NB03FSBS336	17.198395	J
Line #53	NB03FSBS337	5.1636902	J
Line #54	NB03FSBS338	1.8443632	J
Line #55	NB03FSFC486	5.0514955	
Line #56	NB03FSFC487	1.9313915	J
Line #57	NB03FSFC488	4.1623071	
Line #58	NB03FSFC489	1.8549298	J
Line #59	NB03FSFC490	4.2217197	J
Line #60	NB03FSFC491	5.7967912	
Line #61	NB03FSFN407	5.0376666	
Line #62	NB03FSFN408	3.4654095	
Line #63	NB03FSFN409	11.035498	
Line #64	NB03FSFN410	4.1208781	
Line #65	NB03FSFN411	1.7387711	J
Line #66	NB03FSFN412	5.4977423	
Line #67	NB03FSFS351	5.6254892	J
Line #68	NB03FSFS354	2.2306399	J
Line #69	NB03FSFS355	9.0777071	J
Line #70	NB03FSFS356	8.0406151	J
Line #71	NB03FSFS357	0.5204914	J
Line #72	NB03FSFS359	8.360235	
Line #73	NB03FWPC-COMP07	33.717129	J
Line #74	NB03FWPC-COMP08	10.366908	J
Line #75	NB03FWPC-COMP09	16.685036	J
Line #76	NB03FWPC-COMP10	12.27687	J
Line #77	NB03FWPC-COMP11	17.860452	J
Line #78	NB03FWPC-COMP12	13.990242	J
Line #79	NB03FWPN-COMP07	23.369885	J
Line #80	NB03FWPN-COMP08	15.637451	J
Line #81	NB03FWPN-COMP09	24.696856	J
Line #82	NB03FWPN-COMP10	9.1175311	J
Line #83	NB03FWPN-COMP11	9.8878868	J
Line #84	NB03FWPN-COMP12	20.80824	J
Line #85	NB03FWPS-COMP07	15.949292	J
Line #86	NB03FWPS-COMP08	7.0901734	J
Line #87	NB03FWPS-COMP09	12.640117	J
Line #88	NB03FWPS-COMP10	16.854292	J
Line #89	NB03FWPS-COMP11	2.5998462	J
Line #90	NB03FWPS-COMP12	9.1632198	J

EPA Advanced KM TEQ Calculator

Fish Fillet PCB TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1		(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values — Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003	**Summary of Sensitivity Analysis (relative percent difference)**													
	Sample ID: (must enter on Row A)	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03FAEC-COMP01: Row A	47.2		9550 J	785	37500 J	662	8 U	4320		1820	7.5 U	352														
	value to use: Row B	47.2		9550	785	37500	662	8	4320		1820	7.5	352														
1	**congener TEC: Row C**	0.00472		0.2865	0.02355	1.125	0.01986	0.8	0.1296		0.0546	0.225	0.01056	47%	1.6544	2.1669	2.6794	1.7661	J	**Section 1**	**1.7661** Qualified Dioxin/Furan	**J** 91%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEC-COMP02: Row A	44.9	8.63 U	7720 J	543	29000 J		7.67 U	3780		1590	7.19 U	339														
	value to use: Row B	44.9	8.63	7720	543	29000		7.67	3780		1590	7.19	339														
2	**congener TEC: Row C**	0.00449	0.002589	0.2316	0.01629	0.87		0.767	0.1134		0.0477	0.2157	0.01017	55%	1.2937	1.7863	2.2789	1.3860	J	**Section 1**	**1.3860** Qualified Dioxin/Furan	**J** 92%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEC-COMP03: Row A	45.4	9.05 J	11800 J	756	42800 J		7.95 U	5110		2190	7.46 U	456														
	value to use: Row B	45.4	9.05	11800	756	42800		7.95	5110		2190	7.46	456														
3	**congener TEC: Row C**	0.00454	0.002715	0.354	0.02268	1.284		0.795	0.1533		0.0657	0.2238	0.01368	42%	1.9006	2.4100	2.9194	2.0269	J	**Section 1**	**2.0269** Qualified Dioxin/Furan	**J** 91%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEC076: Row A	78.1	14.6 J	19300 J	1320	72500 J	1150	7.91 U			2840	7.94 J	449														
	value to use: Row B	78.1	14.6	19300	1320	72500	1150	7.91			2840	7.94	449														
4	**congener TEC: Row C**	0.00781	0.00438	0.579	0.0396	2.175	0.0345	0.791			0.0852	0.2382	0.01347	22%	3.1772	3.5727	3.9682	3.3024	J	**Section 1**	**3.3024** Qualified Dioxin/Furan	**J** 95%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEC502: Row A	119	17 J	16100 J	1310	65500 J	1240	7.98 U				7.48 U	577														
	value to use: Row B	119	17	16100	1310	65500	1240	7.98				7.48	577														
5	**congener TEC: Row C**	0.0119	0.0051	0.483	0.0393	1.965	0.0372	0.798				0.2244	0.01731	33%	2.55881	3.07001	3.58121	2.6690	J	**Section 1**	**2.6690** Qualified Dioxin/Furan	**J** 97%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEC508: Row A	102 J	8.58 U	30800 J	2110 J	127000 J	2280 J	100 J	10900 J		4730 J	7.15 U	805 J														
	value to use: Row B	102	8.58	30800	2110	127000	2280	100	10900		4730	7.15	805														
6	**congener TEC: Row C**	0.0102	0.002574	0.924	0.0633	3.81	0.0684	10	0.327		0.1419	0.2145	0.02415	1%	15.36895	15.4775	15.586024	15.4233	J	**Section 1**	**15.4233** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEN-COMP01: Row A	15.9 J	1.75 U	7260 J	363 J	25800 J	490 J	1.56 U	2410 J			1.46 U	225 J														
	value to use: Row B	15.9	1.75	7260	363	25800	490	1.56	2410			1.46	225														
7	**congener TEC: Row C**	0.00159	0.000525	0.2178	0.01089	0.774	0.0147	0.156	0.0723			0.0438	0.00675	17%	1.0980	1.1982	1.2984	1.1217	J	**Section 1**	**1.1217** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEN-COMP02: Row A	18.6 J	1.75 U	5540 J	292 J	20000 J	294 J		1950 J		947 J	2.49 J	186 J														
	value to use: Row B	18.6	1.75	5540	292	20000	294		1950		947	2.49	186														
8	**congener TEC: Row C**	0.00186	0.000525	0.1662	0.00876	0.6	0.00882		0.0585		0.02841	0.0747	0.00558	0%	0.9528	0.9531	0.9534	0.9534	J	**Section 1**	**0.9534** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEN-COMP03: Row A	61.7		24600 J	1380	84200 J	1530	7.94 U	7640 J		3030 J	7.45 U	580														
	value to use: Row B	61.7		24600	1380	84200	1530	7.94	7640		3030	7.45	580														
9	**congener TEC: Row C**	0.00617		0.738	0.0414	2.526	0.0459	0.794	0.2292		0.0909	0.2235	0.0174	24%	3.6950	4.2037	4.7125	3.8865	J	**Section 1**	**3.8865** Qualified Dioxin/Furan	**J** 98%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEN-COMP04: Row A	54.9		20300 J	1480	76200 J	1500	7.74 U	6080 J		2510	7.26 U	379														
	value to use: Row B	54.9		20300	1480	76200	1500	7.74	6080		2510	7.26	379														
10	**congener TEC: Row C**	0.00549		0.609	0.0444	2.286	0.045	0.774	0.1824		0.0753	0.2178	0.01137	26%	3.2590	3.7549	4.2508	3.4488	J	**Section 1**	**3.4488** Qualified Dioxin/Furan	**J** 96%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEN-COMP05: Row A	10.1 J	1.79 U	5670 J	313 J	18900 J	352 J	13.4 J	1540 J		711 J	1.49 U	105 J														
	value to use: Row B	10.1	1.79	5670	313	18900	352	13.4	1540		711	1.49	105														
11	**congener TEC: Row C**	0.00101	0.000537	0.1701	0.00939	0.567	0.01056	1.34	0.0462		0.02133	0.0447	0.00315	2%	2.1687	2.1914	2.2140	2.1769	J	**Section 1**	**2.1769** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAEN-COMP06: Row A	92.8		17300 J	960	59200 J	1020	7.91 U	5270		2380	7.42 U	487														
	value to use: Row B	92.8		17300	960	59200	1020	7.91	5270		2380	7.42	487														
12	**congener TEC: Row C**	0.00928		0.519	0.0288	1.776	0.0306	0.791	0.1581		0.0714	0.2226	0.01461	33%	2.6078	3.1146	3.6214	2.7704	J	**Section 1**	**2.7704** Qualified Dioxin/Furan	**J** 91%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAES-COMP01: Row A	24.4	8.73 U	6140 J	334	17200 J	305	7.76 U	2190		955	7.27 U	153														
	value to use: Row B	24.4	8.73	6140	334	17200	305	7.76	2190		955	7.27	153														
13	**congener TEC: Row C**	0.00244	0.002619	0.1842	0.01002	0.516	0.00915	0.776	0.0657		0.02865	0.2181	0.00459	76%	0.82075	1.31911	1.817469	1.6376	J	**Section 2, Treatment 1**			**1.6376** Qualified Dioxin/Furan	**J** 93%	1.6376 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAES018: Row A	40.7 J	1.8 U	27800 J	1450 J	90100 J	1550 J	1.6 U	8390 J			1.5 U	445 J														
	value to use: Row B	40.7	1.8	27800	1450	90100	1550	1.6	8390			1.5	445														
14	**congener TEC: Row C**	0.00407	0.00054	0.834	0.0435	2.703	0.0465	0.16	0.2517			0.045	0.01335	5%	3.89612	3.99889	4.10166	3.9326	J	**Section 1**	**3.9326** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAES019: Row A	30.8 J	1.79 U	16300 J	863 J	47000 J	1230 J	1.6 U	5450 J			1.5 U	328 J														
	value to use: Row B	30.8	1.79	16300	863	47000	1230	1.6	5450			1.5	328														
15	**congener TEC: Row C**	0.00308	0.000537	0.489	0.02589	1.41	0.0369	0.16	0.1635			0.045	0.00984	9%	2.1382	2.2410	2.3437	2.1692	J	**Section 1**	**2.1692** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAES347: Row A	52.7	8.75 U	11900 J	791	37300 J	794	268	3960		1720	7.3 U	294														
	value to use: Row B	52.7	8.75	11900	791	37300	794	268	3960		1720	7.3	294														
16	**congener TEC: Row C**	0.00527	0.002625	0.357	0.02373	1.119	0.02382	26.8	0.1188		0.0516	0.219	0.00882	1%	28.5080	28.6189	28.7297	28.5442	none	**Section 1**	**28.5442** Qualified Dioxin/Furan	**none** 6%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAES364: Row A	140	34.7	40200 J	2520	110000 J	2170	7.8 U				7.31 U	545														
	value to use: Row B	140	34.7	40200	2520	110000	2170	7.8				7.31	545														
17	**congener TEC: Row C**	0.014	0.01041	1.206	0.0756	3.3	0.0651	0.78				0.2193	0.01635	19%	4.6875	5.1871	5.6868	4.7600	J	**Section 1**	**4.7600** Qualified Dioxin/Furan	**J** 97%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FAES365: Row A	93.9	8.7 U	21900 J	1520	79100 J	1660	519				7.25 U	638														
	value to use: Row B	93.9	8.7	21900	1520	79100	1660	519				7.25	638														
18	**congener TEC: Row C**	0.00939	0.00261	0.657	0.0456	2.373	0.0498	51.9				0.2175	0.01914	0%	55.0539	55.1640	55.2740	55.0818	none	**Section 1**	**55.0818** Qualified Dioxin/Furan	**none** 6%				
	donor value to use: Row D																										
	donor TEC: Row E																										

EPA Advanced KM TEQ Calculator

Fish Fillet PCB TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1		(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values — Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	Sample ID:	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**														
	(must enter on Row A)																										
	NB03FBL-COMP01: Row A	166	7.3	1290 J	80.3	4910 J	87.3	9.41	455		217	1.49 U	42.7														
	value to use: Row B	166	7.3	1290	80.3	4910	87.3	9.41	455		217	1.49	42.7														
19	**congener TEC: Row C**	**0.0166**	**0.00219**	**0.0387**	**0.002409**	**0.1473**	**0.002619**	**0.941**	**0.01365**		**0.00651**	**0.0447**	**0.001281**	4%	1.1723	1.1946	1.2170	1.1828	none	**Section 1**	**1.1828** Qualified Dioxin/Furan	**none** 19%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBL-COMP02: Row A	53.5	2.19 J	1040 J	59.7	4650 J	68.1	14.2	501		250	1.46 U	44.9														
	value to use: Row B	53.5	2.19	1040	59.7	4650	68.1	14.2	501		250	1.46	44.9														
20	**congener TEC: Row C**	**0.00535**	**0.000657**	**0.0312**	**0.001791**	**0.1395**	**0.002043**	**1.42**	**0.01503**		**0.0075**	**0.0438**	**0.001347**	3%	1.6244	1.6463	1.6682	1.6325	none	**Section 1**	**1.6325** Qualified Dioxin/Furan	**none** 13%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBL-COMP03: Row A	62.8	1.76 U	774 J	44.1	3320 J	50.2	8.59	388		195	1.47 U	45.6														
	value to use: Row B	62.8	1.76	774	44.1	3320	50.2	8.59	388		195	1.47	45.6														
21	**congener TEC: Row C**	**0.00628**	**0.000528**	**0.02322**	**0.001323**	**0.0996**	**0.001506**	**0.859**	**0.01164**		**0.00585**	**0.0441**	**0.001368**	4%	1.009787	1.0321	1.054415	1.0168	none	**Section 1**	**1.0168** Qualified Dioxin/Furan	**none** 16%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBL-COMP04: Row A	20.2	1.74 U	435	24.4	1890 J	27.8	4.53 J	219			1.45 U	24														
	value to use: Row B	20.2	1.74	435	24.4	1890	27.8	4.53	219			1.45	24														
22	**congener TEC: Row C**	**0.00202**	**0.000522**	**0.01305**	**0.000732**	**0.0567**	**0.000834**	**0.453**	**0.00657**			**0.0435**	**0.00072**	8%	0.533626	0.55564	0.577648	0.5376	J	**Section 1**	**0.5376** Qualified Dioxin/Furan	**J** 96%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBL-COMP05: Row A	51	3.31 J	1220 J	72.3	5030 J	87.4	12.7	535		257	1.49 U	48														
	value to use: Row B	51	3.31	1220	72.3	5030	87.4	12.7	535		257	1.49	48														
23	**congener TEC: Row C**	**0.0051**	**0.000993**	**0.0366**	**0.002169**	**0.1509**	**0.002622**	**1.27**	**0.01605**		**0.00771**	**0.0447**	**0.00144**	3%	1.4936	1.5159	1.5383	1.5027	none	**Section 1**	**1.5027** Qualified Dioxin/Furan	**none** 15%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC468: Row A	83.2	3.4 J	937 J	50.6	3900 J	48.8	1.58 U	443		230	1.48 U	47.2														
	value to use: Row B	83.2	3.4	937	50.6	3900	48.8	1.58	443		230	1.48	47.2														
24	**congener TEC: Row C**	**0.00832**	**0.00102**	**0.02811**	**0.001518**	**0.117**	**0.001464**	**0.158**	**0.01329**		**0.0069**	**0.0444**	**0.001416**	72%	0.1790	0.2802	0.3814	0.3448	J	**Section 2, Treatment 1**			**0.3448** Qualified Dioxin/Furan	**J** 91%	0.3448 Qualified Dioxin/Furan	J 91%
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC469: Row A	88.2	1.72 U	1370 J	71.7	5960 J	71.2	80.3	608		303	1.44 U	55.1														
	value to use: Row B	88.2	1.72	1370	71.7	5960	71.2	80.3	608		303	1.44	55.1														
25	**congener TEC: Row C**	**0.00882**	**0.000516**	**0.0411**	**0.002151**	**0.1788**	**0.002136**	**8.03**	**0.01824**		**0.00909**	**0.0432**	**0.001653**	1%	8.2920	8.3138	8.3357	8.3030	none	**Section 1**	**8.3030** Qualified Dioxin/Furan	**none** 3%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC471: Row A	34.4	1.79 U	534	29.6	2280 J	26.8	1.59 U	291		152	1.49 U	32.3														
	value to use: Row B	34.4	1.79	534	29.6	2280	26.8	1.59	291		152	1.49	32.3														
26	**congener TEC: Row C**	**0.00344**	**0.000537**	**0.01602**	**0.000888**	**0.0684**	**0.000804**	**0.159**	**0.00873**		**0.00456**	**0.0447**	**0.000969**	99%	0.1038	0.2059	0.3080	0.2451	J	**Section 2, Treatment 1**			**0.2451** Qualified Dioxin/Furan	**J** 89%	0.2451 Qualified Dioxin/Furan	J 89%
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC475: Row A	14.1		498	30.2	2040 J	25.6	1.6 U	297		149	1.5 U	35.8														
	value to use: Row B	14.1		498	30.2	2040	25.6	1.6	297		149	1.5	35.8														
27	**congener TEC: Row C**	**0.00141**		**0.01494**	**0.000906**	**0.0612**	**0.000768**	**0.16**	**0.00891**		**0.00447**	**0.045**	**0.001074**	104%	0.0937	0.1962	0.2987	0.2583	J	**Section 2, Treatment 1**			**0.2583** Qualified Dioxin/Furan	**J** 89%	0.2583 Qualified Dioxin/Furan	J 89%
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC476: Row A	81.5	4.13 J	1350 J	82.4	5910 J	55	1.57 U	726		390	2.33 J	80.2														
	value to use: Row B	81.5	4.13	1350	82.4	5910	55	1.57	726		390	2.33	80.2														
28	**congener TEC: Row C**	**0.00815**	**0.001239**	**0.0405**	**0.002472**	**0.1773**	**0.00165**	**0.157**	**0.02178**		**0.0117**	**0.0699**	**0.002406**	38%	0.3371	0.4156	0.4941	0.3549	J	**Section 1**	**0.3549** Qualified Dioxin/Furan	**J** 90%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC478: Row A	50.6		641 J	35.4	2530 J	31	1.57 U	283		150	1.47 U	32.4														
	value to use: Row B	50.6		641	35.4	2530	31	1.57	283		150	1.47	32.4														
29	**congener TEC: Row C**	**0.00506**		**0.01923**	**0.001062**	**0.0759**	**0.00093**	**0.157**	**0.00849**		**0.0045**	**0.0441**	**0.000972**	93%	0.116144	0.21669	0.317244	0.2789	J	**Section 2, Treatment 1**			**0.2789** Qualified Dioxin/Furan	**J** 93%	0.2789 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC479: Row A	48.1	1.73 U	604 J	28.5	2620 J	28.7	1.54 U	355		194	2.5 J	49.4														
	value to use: Row B	48.1	1.73	604	28.5	2620	28.7	1.54	355		194	2.5	49.4														
30	**congener TEC: Row C**	**0.00481**	**0.000519**	**0.01812**	**0.000855**	**0.0786**	**0.000861**	**0.154**	**0.01065**		**0.00582**	**0.075**	**0.001482**	57%	0.196198	0.27346	0.350717	0.3215	J	**Section 2, Treatment 1**			**0.3215** Qualified Dioxin/Furan	**J** 93%	0.3215 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLC481: Row A	22		366	23.1	1430 J	19.7	15.3	166		85.8	1.46 U	18.9														
	value to use: Row B	22		366	23.1	1430	19.7	15.3	166		85.8	1.46	18.9														
31	**congener TEC: Row C**	**0.0022**		**0.01098**	**0.000693**	**0.0429**	**0.000591**	**1.53**	**0.00498**		**0.002574**	**0.0438**	**0.000567**	3%	1.5955	1.6174	1.6393	1.6037	none	**Section 1**	**1.6037** Qualified Dioxin/Furan	**none** 5%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLN404: Row A	65.9	1.78 U	1050 J	67	4130 J	82.4	10.5	504			1.48 U	61.2														
	value to use: Row B	65.9	1.78	1050	67	4130	82.4	10.5	504			1.48	61.2														
32	**congener TEC: Row C**	**0.00659**	**0.000534**	**0.0315**	**0.00201**	**0.1239**	**0.002472**	**1.05**	**0.01512**			**0.0444**	**0.001836**	4%	1.2334	1.2559	1.2784	1.2425	none	**Section 1**	**1.2425** Qualified Dioxin/Furan	**none** 16%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLN405: Row A	34	3.25 J	778 J	52	2920 J	54.7	7.88	350		161	1.48 U	36.6														
	value to use: Row B	34	3.25	778	52	2920	54.7	7.88	350		161	1.48	36.6														
33	**congener TEC: Row C**	**0.0034**	**0.000975**	**0.02334**	**0.00156**	**0.0876**	**0.001641**	**0.788**	**0.0105**		**0.00483**	**0.0444**	**0.001098**	5%	0.9229	0.9451	0.9673	0.9289	none	**Section 1**	**0.9289** Qualified Dioxin/Furan	**none** 16%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLN406: Row A	264		2240 J	144	9380 J	148	72.7	764		365	1.72 J	64.3														
	value to use: Row B	264		2240	144	9380	148	72.7	764		365	1.72	64.3														
34	**congener TEC: Row C**	**0.0264**		**0.0672**	**0.00432**	**0.2814**	**0.00444**	**7.27**	**0.02292**		**0.01095**	**0.0516**	**0.001929**	No difference	7.7412	7.7412	7.7412	7.7412	none	**Section 1**	**7.7412** Qualified Dioxin/Furan	**none** 5%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLS339: Row A	26		2150 J	140	9090 J	107	1.6 U	1010		461	1.5 U	83.8														
	value to use: Row B	26		2150	140	9090	107	1.6	1010		461	1.5	83.8														
35	**congener TEC: Row C**	**0.0026**		**0.0645**	**0.0042**	**0.2727**	**0.00321**	**0.16**	**0.0303**		**0.01383**	**0.045**	**0.002514**	41%	0.3939	0.4964	0.5989	0.4196	J	**Section 1**	**0.4196** Qualified Dioxin/Furan	**J** 91%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FBLS349: Row A	68.7	1.79 U	1240 J	71.4	5470 J	68.5	1.59 U	695		351	2.37 J	77														
	value to use: Row B	68.7	1.79	1240	71.4	5470	68.5	1.59	695		351	2.37	77														
36	**congener TEC: Row C**	**0.00687**	**0.000537**	**0.0372**	**0.002142**	**0.1641**	**0.002055**	**0.159**	**0.02085**		**0.01053**	**0.0711**	**0.00231**	40%	0.3172	0.3969	0.4767	0.3348	J	**Section 1**	**0.3348** Qualified Dioxin/Furan	**J** 91%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FSBS320: Row A	313	15	4470 J	298	25200 J	384 J	48.6	2700 J		1610 J	7.88	340														
	value to use: Row B	313	15	4470	298	25200	384	48.6	2700		1610	7.88	340														
37	**congener TEC: Row C**	**0.0313**	**0.0045**	**0.1341**	**0.00894**	**0.756**	**0.01152**	**4.86**	**0.081**		**0.0483**	**0.2364**	**0.0102**	No difference	6.18226	6.18226	6.18226	6.1823	none	**Section 1**	**6.1823** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																										
	donor TEC: Row E																										
	NB03FSBS321: Row A	167	1.73 U	2390 J	123	11600 J	97.7	28.2	1240 J		670 J	1.45 U	124														
	value to use: Row B	167	1.73	2390	123	11600	97.7	28.2	1240		670	1.45	124														
38	**congener TEC: Row C**	**0.0167**	**0.000519**	**0.0717**	**0.00369**	**0.348**	**0.002931**	**2.82**	**0.0372**		**0.0201**	**0.0435**	**0.00372**	1%	3.324041	3.34605	3.36806	3.3367	none	**Section 1**	**3.3367** Qualified Dioxin/Furan	**none** 15%				
	donor value to use: Row D																										
	donor TEC: Row E																										

EPA Advanced KM TEQ Calculator

Fish Fillet PCB TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2			
																					Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**													
	Sample ID:	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03FSBS322: Row A	132	1.75 U	2420 J	147	11500 J	160	28.3	1260 J		674 J	1.46 U	129													
	value to use: Row B	132	1.75	2420	147	11500	160	28.3	1260		674	1.46	129													
39	**congener TEC: Row C**	**0.0132**	**0.000525**	**0.0726**	**0.00441**	**0.345**	**0.0048**	**2.83**	**0.0378**		**0.02022**	**0.0438**	**0.00387**	1%	3.3319	3.3541	3.3762	3.3445	none	**Section 1**	**3.3445** Qualified Dioxin/Furan	**none** 15%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS323: Row A	95.3	1.79 U	1940 J	118	9860 J	111	18.6	1000		531	1.49 U	87.2													
	value to use: Row B	95.3	1.79	1940	118	9860	111	18.6	1000		531	1.49	87.2													
40	**congener TEC: Row C**	**0.00953**	**0.000537**	**0.0582**	**0.00354**	**0.2958**	**0.00333**	**1.86**	**0.03**		**0.01593**	**0.0447**	**0.002616**	2%	2.2789	2.3016	2.3242	2.2888	none	**Section 1**	**2.2888** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS324: Row A	237.5	11.1 J	3100 J	222	18050 J	202.5	5.44 U	1765		981	5.45 J	180.5													
	value to use: Row B	237.5	11.1	3100	222	18050	202.5	5.44	1765		981	5.45	180.5													
41	**congener TEC: Row C**	**0.02375**	**0.00333**	**0.093**	**0.00666**	**0.5415**	**0.006075**	**0.544**	**0.05295**		**0.02943**	**0.1635**	**0.005415**	45%	0.9256	1.1976	1.4696	1.4696	J	**Section 2, Treatment 1**			**1.4696** Qualified Dioxin/Furan	**J** 92%	1.4696 Qualified Dioxin/Furan	J 92%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS325: Row A	254 J	8.71 U	3250 J	168 J	14800 J	8.23 U	170	1600 J		910 J	7.26 U	157 J													
	value to use: Row B	254	8.71	3250	168	14800	8.23	170	1600		910	7.26	157													
42	**congener TEC: Row C**	**0.0254**	**0.002613**	**0.0975**	**0.00504**	**0.444**	**0.0002469**	**17**	**0.048**		**0.0273**	**0.2178**	**0.00471**	1%	17.6520	17.7623	17.8726	17.6785	none	**Section 1**	**17.6785** Qualified Dioxin/Furan	**none** 5%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS327: Row A	180	1.77 U	2420 J	137	12200 J	171	33.4	1250 J		689 J	1.47 U	131													
	value to use: Row B	180	1.77	2420	137	12200	171	33.4	1250		689	1.47	131													
43	**congener TEC: Row C**	**0.018**	**0.000531**	**0.0726**	**0.00411**	**0.366**	**0.00513**	**3.34**	**0.0375**		**0.02067**	**0.0441**	**0.00393**	1%	3.8679	3.8903	3.9126	3.8813	none	**Section 1**	**3.8813** Qualified Dioxin/Furan	**none** 14%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS328: Row A	159	5.1	1800 J	87.7	8410 J	91.5	24.8	856		483	1.5 U	83.2													
	value to use: Row B	159	5.1	1800	87.7	8410	91.5	24.8	856		483	1.5	83.2													
44	**congener TEC: Row C**	**0.0159**	**0.00153**	**0.054**	**0.002631**	**0.2523**	**0.002745**	**2.48**	**0.02568**		**0.01449**	**0.045**	**0.002496**	2%	2.8518	2.8743	2.8968	2.8611	none	**Section 1**	**2.8611** Qualified Dioxin/Furan	**none** 12%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS329: Row A	79.8	1.73 U	1300 J	62.6	6980 J	77.9	17.2	642		383	1.45 U	63													
	value to use: Row B	79.8	1.73	1300	62.6	6980	77.9	17.2	642		383	1.45	63													
45	**congener TEC: Row C**	**0.00798**	**0.000519**	**0.039**	**0.001878**	**0.2094**	**0.002337**	**1.72**	**0.01926**		**0.01149**	**0.0435**	**0.00189**	2%	2.013235	2.03524	2.057254	2.0243	none	**Section 1**	**2.0243** Qualified Dioxin/Furan	**none** 14%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS330: Row A	153	1.74 U	1870 J	141	7490 J	80	11.9	779		321	1.45 U	55.7													
	value to use: Row B	153	1.74	1870	141	7490	80	11.9	779		321	1.45	55.7													
46	**congener TEC: Row C**	**0.0153**	**0.000522**	**0.0561**	**0.00423**	**0.2247**	**0.0024**	**1.19**	**0.02337**		**0.00963**	**0.0435**	**0.001671**	3%	1.527401	1.54941	1.571423	1.5361	none	**Section 1**	**1.5361** Qualified Dioxin/Furan	**none** 21%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS331: Row A	2955 J			1750 J	75950 J	1316 J	367	6540 J		2590 J	10.705 U	514 J													
	value to use: Row B	2955			1750	75950	1316	367	6540		2590	10.705	514													
47	**congener TEC: Row C**	**0.2955**			**0.0525**	**2.2785**	**0.03948**	**36.7**	**0.1962**		**0.0777**	**0.32115**	**0.01542**	1%	39.6553	39.8159	39.9765	39.7681	none	**Section 1**	**39.7681** Qualified Dioxin/Furan	**none** 8%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS332: Row A	225	8.21	3040 J	167	14900 J	233	38	1370 J		669 J	1.49 U	94.7													
	value to use: Row B	225	8.21	3040	167	14900	233	38	1370		669	1.49	94.7													
48	**congener TEC: Row C**	**0.0225**	**0.002463**	**0.0912**	**0.00501**	**0.447**	**0.00699**	**3.8**	**0.0411**		**0.02007**	**0.0447**	**0.002841**	1%	4.4392	4.4615	4.4839	4.4536	none	**Section 1**	**4.4536** Qualified Dioxin/Furan	**none** 14%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS333: Row A	242 J	8.87 U	2610 J	182 J	13600 J	214 J	7.88 U	1150 J		662 J	7.39 U	83.6													
	value to use: Row B	242	8.87	2610	182	13600	214	7.88	1150		662	7.39	83.6													
49	**congener TEC: Row C**	**0.0242**	**0.002661**	**0.0783**	**0.00546**	**0.408**	**0.00642**	**0.788**	**0.0345**		**0.01986**	**0.2217**	**0.002508**	93%	0.5792	1.0854	1.5916	1.3915	J	**Section 2, Treatment 1**			**1.3915** Qualified Dioxin/Furan	**J** 100%	1.3915 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS334: Row A	177	8.75 U	2060 J	101	10900 J	8.26 U	7.77 U	1080		628	7.29 U	112													
	value to use: Row B	177	8.75	2060	101	10900	8.26	7.77	1080		628	7.29	112													
50	**congener TEC: Row C**	**0.0177**	**0.002625**	**0.0618**	**0.00303**	**0.327**	**0.0002478**	**0.777**	**0.0324**		**0.01884**	**0.2187**	**0.00336**	104%	0.4641	0.9634	1.4627	1.1520	J	**Section 2, Treatment 1**			**1.1520** Qualified Dioxin/Furan	**J** 95%	1.1520 Qualified Dioxin/Furan	J 95%
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS335: Row A	146	1.73 U	1510 J	82.7	7680 J	1.63 U	1.54 U	704		401	2.26 J	67.8													
	value to use: Row B	146	1.73	1510	82.7	7680	1.63	1.54	704		401	2.26	67.8													
51	**congener TEC: Row C**	**0.0146**	**0.000519**	**0.0453**	**0.002481**	**0.2304**	**0.0000489**	**0.154**	**0.02112**		**0.01203**	**0.0678**	**0.002034**	33%	0.3958	0.4730	0.5503	0.4142	J	**Section 1**	**0.4142** Qualified Dioxin/Furan	**J** 91%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS336: Row A	1460 J	73.2	13000 J	1020 J	57600 J	749 J	334 J	4610 J		1910 J	4.51 J	380													
	value to use: Row B	1460	73.2	13000	1020	57600	749	334	4610		1910	4.51	380													
52	**congener TEC: Row C**	**0.146**	**0.02196**	**0.39**	**0.0306**	**1.728**	**0.02247**	**33.4**	**0.1383**		**0.0573**	**0.1353**	**0.0114**	No difference	36.0813	36.0813	36.0813	36.0813	J	**Section 1**	**36.0813** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS337: Row A	253	15.5	3200 J	262.5	15250 J	210		1310 J		622.5 J	1.455 U	104.95													
	value to use: Row B	253	15.5	3200	262.5	15250	210		1310		622.5	1.455	104.95													
53	**congener TEC: Row C**	**0.0253**	**0.00465**	**0.096**	**0.007875**	**0.4575**	**0.0063**		**0.0393**		**0.018675**	**0.04365**	**0.0031485**	6%	0.6587	0.6806	0.7024	0.6738	J	**Section 1**	**0.6738** Qualified Dioxin/Furan	**J** 93%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSBS338: Row A	198	7.21	1840 J	101	8110 J	128	24.9	821		437	1.88 J	64.4													
	value to use: Row B	198	7.21	1840	101	8110	128	24.9	821		437	1.88	64.4													
54	**congener TEC: Row C**	**0.0198**	**0.002163**	**0.0552**	**0.00303**	**0.2433**	**0.00384**	**2.49**	**0.02463**		**0.01311**	**0.0564**	**0.001932**	No difference	2.9134	2.9134	2.9134	2.9134	none	**Section 1**	**2.9134** Qualified Dioxin/Furan	**none** 12%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSFC486: Row A	72.4	3.53 J	543	60.6	2810 J	39.2		307		134	1.44 U	18.5													
	value to use: Row B	72.4	3.53	543	60.6	2810	39.2		307		134	1.44	18.5													
55	**congener TEC: Row C**	**0.00724**	**0.001059**	**0.01629**	**0.001818**	**0.0843**	**0.001176**		**0.00921**		**0.00402**	**0.0432**	**0.000555**	29%	0.1257	0.1473	0.1689	0.1308	J	**Section 1**	**0.1308** Qualified Dioxin/Furan	**J** 76%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSFC487: Row A	41.5	2.76 J	479	41.6	1880 J	26.4		203		84.7	1.49 U	14.2													
	value to use: Row B	41.5	2.76	479	41.6	1880	26.4		203		84.7	1.49	14.2													
56	**congener TEC: Row C**	**0.00415**	**0.000828**	**0.01437**	**0.001248**	**0.0564**	**0.000792**		**0.00609**		**0.002541**	**0.0447**	**0.000426**	41%	0.0868	0.1092	0.1315	0.0907	J	**Section 1**	**0.0907** Qualified Dioxin/Furan	**J** 77%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSFC488: Row A	37.6	37.2	2280 J	183	10500 J	128		1110		476	1.49 U	85.2													
	value to use: Row B	37.6	37.2	2280	183	10500	128		1110		476	1.49	85.2													
57	**congener TEC: Row C**	**0.00376**	**0.01116**	**0.0684**	**0.00549**	**0.315**	**0.00384**		**0.0333**		**0.01428**	**0.0447**	**0.002556**	9%	0.4578	0.4801	0.5025	0.4684	J	**Section 1**	**0.4684** Qualified Dioxin/Furan	**J** 85%				
	donor value to use: Row D																									
	donor TEC: Row E																									
	NB03FSFC489: Row A	16.8	1.75 U	375	35.6	1650 J	22.3	11.9	180		77.4	1.46 U	11.8													
	value to use: Row B	16.8	1.75	375	35.6	1650	22.3	11.9	180		77.4	1.46	11.8													
58	**congener TEC: Row C**	**0.00168**	**0.000525**	**0.01125**	**0.001068**	**0.0495**	**0.000669**	**1.19**	**0.0054**		**0.002322**	**0.0438**	**0.000354**	3%	1.2622	1.2844	1.3066	1.2655	none	**Section 1**	**1.2655** Qualified Dioxin/Furan	**none** 7%				
	donor value to use: Row D																									
	donor TEC: Row E																									

EPA Advanced KM TEQ Calculator

Fish Fillet PCB TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29									
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003									
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values: Treatment 1 KM TEQ	Treatment 1 Qualifier and Qualifier Fractions	(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values: Treatment 1: Make highest U value a D KM TEQ	Treatment 1 Qualifier and Qualifier Fractions	Treatment 2: Substitute comparable "donor" value for highest U KM TEQ	Treatment 2 Qualifier and Qualifier Fractions
59	**NB03FSFC490: Row A**	113	1.76 U	1650 J	170	8110 J	95.2	57.6	956		440	1.46 U	60.6											
	value to use: Row B	113	1.76	1650	170	8110	95.2	57.6	956		440	1.46	60.6											
	congener TEC: Row C	0.0113	0.000528	0.0495	0.0051	0.2433	0.002856	5.76	0.02868		0.0132	0.0438	0.001818	1%	6.1158	6.1379	6.1601	6.1254	none	Section 1	**6.1254** Qualified Dioxin/Furan	none 5%				
	donor value to use: Row D																							
	donor TEC: Row E																							
60	**NB03FSFC491: Row A**	244	20.6	7340 J	615 J	29300 J	519	45.6	3140 J		1270 J	1.49 U	238											
	value to use: Row B	244	20.6	7340	615	29300	519	45.6	3140		1270	1.49	238											
	congener TEC: Row C	0.0244	0.00618	0.2202	0.01845	0.879	0.01557	4.56	0.0942		0.0381	0.0447	0.00714	1%	5.8632	5.8856	5.9079	5.8815	none	Section 1	**5.8815** Qualified Dioxin/Furan	none 22%				
	donor value to use: Row D																							
	donor TEC: Row E																							
61	**NB03FSFN407: Row A**	60.3	4.43 J	1160 J	98.8	3950 J	82.1	1.57 U	388		161	1.48 U	23.8											
	value to use: Row B	60.3	4.43	1160	98.8	3950	82.1	1.57	388		161	1.48	23.8											
	congener TEC: Row C	0.00603	0.001329	0.0348	0.002964	0.1185	0.002463	0.157	0.01164		0.00483	0.0444	0.000714	71%	0.1833	0.2840	0.3847	0.3484	J	Section 2, Treatment 1			**0.3484** Qualified Dioxin/Furan	**J** 93%	0.3484 Qualified Dioxin/Furan	J 93%
	donor value to use: Row D																							
	donor TEC: Row E																							
62	**NB03FSFN408: Row A**	42.9	2.74 J	569 J	47.1	1860 J	42.3	1.58 U	175		72.4	1.48 U	10.1											
	value to use: Row B	42.9	2.74	569	47.1	1860	42.3	1.58	175		72.4	1.48	10.1											
	congener TEC: Row C	0.00429	0.000822	0.01707	0.001413	0.0558	0.001269	0.158	0.00525		0.002172	0.0444	0.000303	107%	0.0884	0.1896	0.2908	0.2505	J	Section 2, Treatment 1			**0.2505** Qualified Dioxin/Furan	**J** 95%	0.2505 Qualified Dioxin/Furan	J 95%
	donor value to use: Row D																							
	donor TEC: Row E																							
63	**NB03FSFN409: Row A**	111	6.28	2980 J	244	11000 J	158	18.4	1140		431	1.44 U	77.2											
	value to use: Row B	111	6.28	2980	244	11000	158	18.4	1140		431	1.44	77.2											
	congener TEC: Row C	0.0111	0.001884	0.0894	0.00732	0.33	0.00474	1.84	0.0342		0.01293	0.0432	0.002316	2%	2.3339	2.3555	2.3771	2.3445	none	Section 1	**2.3445** Qualified Dioxin/Furan	none 19%				
	donor value to use: Row D																							
	donor TEC: Row E																							
64	**NB03FSFN410: Row A**	123	8.23	1850 J	151	6800 J	148	14.6	721			1.46 U	48.8											
	value to use: Row B	123	8.23	1850	151	6800	148	14.6	721			1.46	48.8											
	congener TEC: Row C	0.0123	0.002469	0.0555	0.00453	0.204	0.00444	1.46	0.02163			0.0438	0.001464	2%	1.7663	1.7882	1.8101	1.7741	none	Section 1	**1.7741** Qualified Dioxin/Furan	none 17%				
	donor value to use: Row D																							
	donor TEC: Row E																							
65	**NB03FSFN411: Row A**	25	1.72 U	963 J	68.5	3840 J	75.8	5.49	366		155	1.43 U	24.8											
	value to use: Row B	25	1.72	963	68.5	3840	75.8	5.49	366		155	1.43	24.8											
	congener TEC: Row C	0.0025	0.000516	0.02889	0.002055	0.1152	0.002274	0.549	0.01098		0.00465	0.0429	0.000744	6%	0.7163	0.7380	0.7597	0.7234	none	Section 1	**0.7234** Qualified Dioxin/Furan	none 25%				
	donor value to use: Row D																							
	donor TEC: Row E																							
66	**NB03FSFN412: Row A**	41	2.73 J	980 J	86	4190 J	62.9		411		184	1.45 U	28.9											
	value to use: Row B	41	2.73	980	86	4190	62.9		411		184	1.45	28.9											
	congener TEC: Row C	0.0041	0.000819	0.0294	0.00258	0.1257	0.001887		0.01233		0.00552	0.0435	0.000867	21%	0.1832	0.2050	0.2267	0.1904	J	Section 1	**0.1904** Qualified Dioxin/Furan	**J** 88%				
	donor value to use: Row D																							
	donor TEC: Row E																							
67	**NB03FSFS351: Row A**	192	10	2370 J	222	11300 J	172	1.56 U	1310 J		558	2.03 J	81.5											
	value to use: Row B	192	10	2370	222	11300	172	1.56	1310		558	2.03	81.5											
	congener TEC: Row C	0.0192	0.003	0.0711	0.00666	0.339	0.00516	0.156	0.0393		0.01674	0.0609	0.002445	24%	0.5635	0.6415	0.7195	0.5885	J	Section 1	**0.5885** Qualified Dioxin/Furan	**J** 93%				
	donor value to use: Row D																							
	donor TEC: Row E																							
68	**NB03FSFS354: Row A**	43.8			90.3	3970 J	43.5	26.4	486		201	1.46 U	32.4											
	value to use: Row B	43.8			90.3	3970	43.5	26.4	486		201	1.46	32.4											
	congener TEC: Row C	0.00438			0.002709	0.1191	0.001305	2.64	0.01458		0.00603	0.0438	0.000972	2%	2.7891	2.8110	2.8329	2.7941	none	Section 1	**2.7941** Qualified Dioxin/Furan	none 6%				
	donor value to use: Row D																							
	donor TEC: Row E																							
69	**NB03FSFS355: Row A**	182	1.73 U	4410 J	408	17500 J	299	112	1750 J		675 J	1.44 U	107											
	value to use: Row B	182	1.73	4410	408	17500	299	112	1750		675	1.44	107											
	congener TEC: Row C	0.0182	0.000519	0.1323	0.01224	0.525	0.00897	11.2	0.0525		0.02025	0.0432	0.00321	0%	11.9727	11.9945	12.0164	11.9838	none	Section 1	**11.9838** Qualified Dioxin/Furan	none 6%				
	donor value to use: Row D																							
	donor TEC: Row E																							
70	**NB03FSFS356: Row A**	233	16.1	1990 J	223	9050 J	107	55.5	963		388	1.48 U	51.7											
	value to use: Row B	233	16.1	1990	223	9050	107	55.5	963		388	1.48	51.7											
	congener TEC: Row C	0.0233	0.00483	0.0597	0.00669	0.2715	0.00321	5.55	0.02889		0.01164	0.0444	0.001551	1%	5.9613	5.9835	6.0057	5.9728	none	Section 1	**5.9728** Qualified Dioxin/Furan	none 6%				
	donor value to use: Row D																							
	donor TEC: Row E																							
71	**NB03FSFS357: Row A**	42.5	2.89 J	710 J	85.3	3250 J	1.68 U	21.2	395		160	1.48 U	24.4											
	value to use: Row B	42.5	2.89	710	85.3	3250	1.68	21.2	395		160	1.48	24.4											
	congener TEC: Row C	0.00425	0.000867	0.0213	0.002559	0.0975	0.0000504	2.12	0.01185		0.0048	0.0444	0.000732	2%	2.2639	2.2861	2.3083	2.2697	none	Section 1	**2.2697** Qualified Dioxin/Furan	none 7%				
	donor value to use: Row D																							
	donor TEC: Row E																							
72	**NB03FSFS359: Row A**	156	10.2	3310 J	300	12500 J	257	30.7	1250 J			1.48 U	80.7											
	value to use: Row B	156	10.2	3310	300	12500	257	30.7	1250			1.48	80.7											
	congener TEC: Row C	0.0156	0.00306	0.0993	0.009	0.375	0.00771	3.07	0.0375			0.0444	0.002421	1%	3.6196	3.6418	3.6640	3.6321	none	Section 1	**3.6321** Qualified Dioxin/Furan	none 15%				
	donor value to use: Row D																							
	donor TEC: Row E																							
73	**NB03FWPC-COMP07: Row A**	934	30.4	5370	389	19800 J	385	48.3	1900		736	7.24 U												
	value to use: Row B	934	30.4	5370	389	19800	385	48.3	1900		736	7.24												
	congener TEC: Row C	0.0934	0.00912	0.1611	0.01167	0.594	0.01155	4.83	0.057		0.02208	0.2172		4%	5.7899	5.8985	6.0071	5.8422	none	Section 1	**5.8422** Qualified Dioxin/Furan	none 14%				
	donor value to use: Row D																							
	donor TEC: Row E																							
74	**NB03FWPC-COMP08: Row A**	737	31.8	6000 J	466	23500 J	505	48.7	2180		896	7.23 U	165											
	value to use: Row B	737	31.8	6000	466	23500	505	48.7	2180		896	7.23	165											
	congener TEC: Row C	0.0737	0.00954	0.18	0.01398	0.705	0.01515	4.87	0.0654		0.02688	0.2169	0.00495	4%	5.9646	6.0731	6.1815	6.0133	none	Section 1	**6.0133** Qualified Dioxin/Furan	none 18%				
	donor value to use: Row D																							
	donor TEC: Row E																							
75	**NB03FWPC-COMP09: Row A**	1120	8.77 U	8950 J	660	34400 J	750	72.1	3350		1420	7.31 U												
	value to use: Row B	1120	8.77	8950	660	34400	750	72.1	3350		1420	7.31												
	congener TEC: Row C	0.112	0.002631	0.2685	0.0198	1.032	0.0225	7.21	0.1005		0.0426	0.2193		2%	8.8079	8.9189	9.0298	8.8605	none	Section 1	**8.8605** Qualified Dioxin/Furan	none 17%				
	donor value to use: Row D																							
	donor TEC: Row E																							
76	**NB03FWPC-COMP10: Row A**	1060	36.1	9150 J	694	33400 J	677	63.4	3250		1390	7.3 U	283											
	value to use: Row B	1060	36.1	9150	694	33400	677	63.4	3250		1390	7.3	283											
	congener TEC: Row C	0.106	0.01083	0.2745	0.02082	1.002	0.02031	6.34	0.0975		0.0417	0.219	0.00849	3%	7.9222	8.0317	8.1412	7.9658	none	Section 1	**7.9658** Qualified Dioxin/Furan	none 18%				
	donor value to use: Row D																							
	donor TEC: Row E																							
77	**NB03FWPC-COMP11: Row A**	1050	43.9	8020 J	632	30800 J	669	77.7	2870		1160	7.31 U												
	value to use: Row B	1050	43.9	8020	632	30800	669	77.7	2870		1160	7.31												
	congener TEC: Row C	0.105	0.01317	0.2406	0.01896	0.924	0.02007	7.77	0.0861		0.0348	0.2193		2%	9.2127	9.3224	9.4320	9.2591	none	Section 1	**9.2591** Qualified Dioxin/Furan	none 15%				
	donor value to use: Row D																							
	donor TEC: Row E																							
78	**NB03FWPC-COMP12: Row A**	908.5	39.25	5940 J	491	23000 J	464.5	59.85	2380		1009.5	7.415 U	181.5											
	value to use: Row B	908.5	39.25	5940	491	23000	464.5	59.85	2380		1009.5	7.415	181.5											
	congener TEC: Row C	0.09085	0.011775	0.1782	0.01473	0.69	0.013935	5.985	0.0714		0.030285	0.22245	0.005445	3%	7.0916	7.2028	7.3141	7.1437	none	Section 1	**7.1437** Qualified Dioxin/Furan	none 15%				
	donor value to use: Row D																							
	donor TEC: Row E																							

EPA Advanced KM TEQ Calculator

Fish Fillet PCB TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1		(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values — Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**														
	Sample ID: (must enter on Row A)	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**	**Summary of Sensitivity Analysis (relative percent difference)**	**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
79	**NB03FWPN-COMP07: Row A**	469	22.8 J	4280	314	14900 J	291	28.4	1510		602	7.35 U															
	value to use: Row B	469	22.8	4280	314	14900	291	28.4	1510		602	7.35															
	congener TEC: Row C	**0.0469**	**0.00684**	**0.1284**	**0.00942**	**0.447**	**0.00873**	**2.84**	**0.0453**		**0.01806**	**0.2205**		6%	3.5507	3.6609	3.7712	3.5883	none	**Section 1**	**3.5883** Qualified Dioxin/Furan	**none** 18%				
	donor value to use: Row D																										
	donor TEC: Row E																										
80	**NB03FWPN-COMP08: Row A**	1510	60.2	9930 J	772	37500 J	632	78.8	3710		1430	7.46 U	243														
	value to use: Row B	1510	60.2	9930	772	37500	632	78.8	3710		1430	7.46	243														
	congener TEC: Row C	**0.151**	**0.01806**	**0.2979**	**0.02316**	**1.125**	**0.01896**	**7.88**	**0.1113**		**0.0429**	**0.2238**	**0.00729**	2%	9.6756	9.7875	9.8994	9.7288	none	**Section 1**	**9.7288** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																										
	donor TEC: Row E																										
81	**NB03FWPN-COMP09: Row A**	789	8.88 U	7820 J	557	27400 J	543	50.9	2930		1070	7.4 U															
	value to use: Row B	789	8.88	7820	557	27400	543	50.9	2930		1070	7.4															
	congener TEC: Row C	**0.0789**	**0.002664**	**0.2346**	**0.01671**	**0.822**	**0.01629**	**5.09**	**0.0879**		**0.0321**	**0.222**		3%	6.3785	6.4908	6.6032	6.4203	none	**Section 1**	**6.4203** Qualified Dioxin/Furan	**none** 19%				
	donor value to use: Row D																										
	donor TEC: Row E																										
82	**NB03FWPN-COMP10: Row A**	539	24.8	4650	329	17500 J	262	44.7	1830		770	7.3 U															
	value to use: Row B	539	24.8	4650	329	17500	262	44.7	1830		770	7.3															
	congener TEC: Row C	**0.0539**	**0.00744**	**0.1395**	**0.00987**	**0.525**	**0.00786**	**4.47**	**0.0549**		**0.0231**	**0.219**		4%	5.2916	5.4011	5.5106	5.3339	none	**Section 1**	**5.3339** Qualified Dioxin/Furan	**none** 14%				
	donor value to use: Row D																										
	donor TEC: Row E																										
83	**NB03FWPN-COMP11: Row A**	759	37.9	7760 J	582	29400 J	508	65.6	3110		1340	7.42 U															
	value to use: Row B	759	37.9	7760	582	29400	508	65.6	3110		1340	7.42															
	congener TEC: Row C	**0.0759**	**0.01137**	**0.2328**	**0.01746**	**0.882**	**0.01524**	**6.56**	**0.0933**		**0.0402**	**0.2226**		3%	7.9283	8.0396	8.1509	7.9705	none	**Section 1**	**7.9705** Qualified Dioxin/Furan	**none** 16%				
	donor value to use: Row D																										
	donor TEC: Row E																										
84	**NB03FWPN-COMP12: Row A**	953.5	39.1	5000	419.5	20400 J	398.5	50.8	2250		917.5	7.3 U	179														
	value to use: Row B	953.5	39.1	5000	419.5	20400	398.5	50.8	2250		917.5	7.3	179														
	congener TEC: Row C	**0.09535**	**0.01173**	**0.15**	**0.012585**	**0.612**	**0.011955**	**5.08**	**0.0675**		**0.027525**	**0.219**	**0.00537**	4%	6.0740	6.1835	6.2930	6.1218	none	**Section 1**	**6.1218** Qualified Dioxin/Furan	**none** 13%				
	donor value to use: Row D																										
	donor TEC: Row E																										
85	**NB03FWPS-COMP07: Row A**	901	35.5	6110 J	465	23000 J	516	50.4	2290		884	7.35 U	159														
	value to use: Row B	901	35.5	6110	465	23000	516	50.4	2290		884	7.35	159														
	congener TEC: Row C	**0.0901**	**0.01065**	**0.1833**	**0.01395**	**0.69**	**0.01548**	**5.04**	**0.0687**		**0.02652**	**0.2205**	**0.00477**	4%	6.1435	6.2537	6.3640	6.1952	none	**Section 1**	**6.1952** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																										
	donor TEC: Row E																										
86	**NB03FWPS-COMP08: Row A**	594	21.1 J	4710	360	17000 J	364	33	1750		706	7.25 U	133														
	value to use: Row B	594	21.1	4710	360	17000	364	33	1750		706	7.25	133														
	congener TEC: Row C	**0.0594**	**0.00633**	**0.1413**	**0.0108**	**0.51**	**0.01092**	**3.3**	**0.0525**		**0.02118**	**0.2175**	**0.00399**	5%	4.1164	4.2252	4.3339	4.1547	none	**Section 1**	**4.1547** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																										
	donor TEC: Row E																										
87	**NB03FWPS-COMP09: Row A**	670	23.3 J	6340 J	476	22900 J	468	49.9	2630		1050	7.28 U	197														
	value to use: Row B	670	23.3	6340	476	22900	468	49.9	2630		1050	7.28	197														
	congener TEC: Row C	**0.067**	**0.00699**	**0.1902**	**0.01428**	**0.687**	**0.01404**	**4.99**	**0.0789**		**0.0315**	**0.2184**	**0.00591**	4%	6.0858	6.1950	6.3042	6.1369	none	**Section 1**	**6.1369** Qualified Dioxin/Furan	**none** 17%				
	donor value to use: Row D																										
	donor TEC: Row E																										
88	**NB03FWPS-COMP10: Row A**	1120	45.6	9370 J	698	35700 J	741	65.8	3590		1530	7.27 U	264														
	value to use: Row B	1120	45.6	9370	698	35700	741	65.8	3590		1530	7.27	264														
	congener TEC: Row C	**0.112**	**0.01368**	**0.2811**	**0.02094**	**1.071**	**0.02223**	**6.58**	**0.1077**		**0.0459**	**0.2181**	**0.00792**	3%	8.2625	8.3715	8.4806	8.3097	none	**Section 1**	**8.3097** Qualified Dioxin/Furan	**none** 19%				
	donor value to use: Row D																										
	donor TEC: Row E																										
89	**NB03FWPS-COMP11: Row A**	530 J	18.3 J	3310 J	272 J	13200 J	215 J	36.4	1800 J		727 J	7.25 U	126 J														
	value to use: Row B	530	18.3	3310	272	13200	215	36.4	1800		727	7.25	126														
	congener TEC: Row C	**0.053**	**0.00549**	**0.0993**	**0.00816**	**0.396**	**0.00645**	**3.64**	**0.054**		**0.02181**	**0.2175**	**0.00378**	5%	4.2880	4.3967	4.5055	4.3195	none	**Section 1**	**4.3195** Qualified Dioxin/Furan	**none** 19%				
	donor value to use: Row D																										
	donor TEC: Row E																										
90	**NB03FWPS-COMP12: Row A**	1020 J	36.6	6730 J	501 J	26600 J	486	58.4 J	2900 J		1160 J	7.42 U															
	value to use: Row B	1020	36.6	6730	501	26600	486	58.4	2900		1160	7.42															
	congener TEC: Row C	**0.102**	**0.01098**	**0.2019**	**0.01503**	**0.798**	**0.01458**	**5.84**	**0.087**		**0.0348**	**0.2226**		3%	7.1043	7.2156	7.3269	7.1709	J	**Section 1**	**7.1709** Qualified Dioxin/Furan	**J** 100%				
	donor value to use: Row D																										
	donor TEC: Row E																										

EPA Advanced KM TEQ Calculator

Fish Fillet PCB TEQ, for exposure point concentration calculation

Project Name: Glenn Springs Holdings - Newark Bay HHRA
Matrix: Fish fillet PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 6/27/18

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29												
WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2			
Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
Sample notes																				Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
																				KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions	KM TEQ	Qualifier and Qualifier Fractions

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03FAEC-COMP01	1.7661	J
Line #2	NB03FAEC-COMP02	1.3860	J
Line #3	NB03FAEC-COMP03	2.0269	J
Line #4	NB03FAEC076	3.3024	J
Line #5	NB03FAEC502	2.6690	J
Line #6	NB03FAEC508	15.4233	J
Line #7	NB03FAEN-COMP01	1.1217	J
Line #8	NB03FAEN-COMP02	0.9534	J
Line #9	NB03FAEN-COMP03	3.8865	J
Line #10	NB03FAEN-COMP04	3.4488	J
Line #11	NB03FAEN-COMP05	2.1769	J
Line #12	NB03FAEN-COMP06	2.7704	J
Line #13	NB03FAES-COMP01	1.6376	J
Line #14	NB03FAES018	3.9326	J
Line #15	NB03FAES019	2.1692	J
Line #16	NB03FAES347	28.5442	
Line #17	NB03FAES364	4.7600	J
Line #18	NB03FAES365	55.0818	
Line #19	NB03FBL-COMP01	1.1828	
Line #20	NB03FBL-COMP02	1.6325	
Line #21	NB03FBL-COMP03	1.0167794	
Line #22	NB03FBL-COMP04	0.5376406	J
Line #23	NB03FBL-COMP05	1.5026695	
Line #24	NB03FBLC468	0.3447927	J
Line #25	NB03FBLC469	8.3029892	
Line #26	NB03FBLC471	0.2450637	J
Line #27	NB03FBLC475	0.2583177	J
Line #28	NB03FBLC476	0.3548522	J
Line #29	NB03FBLC478	0.2788931	J
Line #30	NB03FBLC479	0.3214906	J
Line #31	NB03FBLC481	1.6036706	
Line #32	NB03FBLN404	1.2425423	
Line #33	NB03FBLN405	0.928862	
Line #34	NB03FBLN406	7.741159	
Line #35	NB03FBLS339	0.4196209	J
Line #36	NB03FBLS349	0.33476	J
Line #37	NB03FSBS320	6.18226	
Line #38	NB03FSBS321	3.3366829	
Line #39	NB03FSBS322	3.3445429	
Line #40	NB03FSBS323	2.2888377	
Line #41	NB03FSBS324	1.46961	J
Line #42	NB03FSBS325	17.678499	
Line #43	NB03FSBS327	3.8813097	
Line #44	NB03FSBS328	2.8611251	
Line #45	NB03FSBS329	2.0242983	
Line #46	NB03FSBS330	1.5360834	
Line #47	NB03FSBS331	39.7681	
Line #48	NB03FSBS332	4.4535989	
Line #49	NB03FSBS333	1.3914755	J
Line #50	NB03FSBS334	1.152048	J
Line #51	NB03FSBS335	0.4142476	J
Line #52	NB03FSBS336	36.08133	J
Line #53	NB03FSBS337	0.673784	J
Line #54	NB03FSBS338	2.913405	
Line #55	NB03FSFC486	0.130839	J
Line #56	NB03FSFC487	0.0906506	J
Line #57	NB03FSFC488	0.4684126	J
Line #58	NB03FSFC489	1.2654841	
Line #59	NB03FSFC490	6.1253509	
Line #60	NB03FSFC491	5.8815467	
Line #61	NB03FSFN407	0.3483662	J
Line #62	NB03FSFN408	0.2504626	J
Line #63	NB03FSFN409	2.3445314	
Line #64	NB03FSFN410	1.7741385	
Line #65	NB03FSFN411	0.7233851	
Line #66	NB03FSFN412	0.1903909	J
Line #67	NB03FSFS351	0.58845	J
Line #68	NB03FSFS354	2.794072	
Line #69	NB03FSFS355	11.983754	
Line #70	NB03FSFS356	5.9727554	
Line #71	NB03FSFS357	2.2697095	
Line #72	NB03FSFS359	3.6321395	
Line #73	NB03FWPC-COMP07	5.8421943	
Line #74	NB03FWPC-COMP08	6.0133	
Line #75	NB03FWPC-COMP09	8.8605362	
Line #76	NB03FWPC-COMP10	7.9658143	
Line #77	NB03FWPC-COMP11	9.25905	
Line #78	NB03FWPC-COMP12	7.1436975	
Line #79	NB03FWPN-COMP07	3.5883143	
Line #80	NB03FWPN-COMP08	9.7288086	
Line #81	NB03FWPN-COMP09	6.420258	
Line #82	NB03FWPN-COMP10	5.3339371	
Line #83	NB03FWPN-COMP11	7.970515	
Line #84	NB03FWPN-COMP12	6.1217669	
Line #85	NB03FWPS-COMP07	6.1951538	
Line #86	NB03FWPS-COMP08	4.1547225	
Line #87	NB03FWPS-COMP09	6.1369225	
Line #88	NB03FWPS-COMP10	8.3096657	
Line #89	NB03FWPS-COMP11	4.3194888	
Line #90	NB03FWPS-COMP12	7.1709029	J

EPA Advanced KM TEQ Calculator

Crab hepatopancreas-muscle TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep-Mus combo TCDD-TEQ **Data entered by:** Caroline Ring
Units: ng/kg **Date entered:** 2/13/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003									
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDi	1,4,9-HpCDi	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
1	**NB03-CRB-COMBHEPMUS-122: Row A**	32.071	0.90194 J	0.222758 J	0.71906 J	0.22977 J	0.7297 J	2.23994 J	11.0602 J	2.77578 J	6.93506 J	8.855 J	1.77054 J	0.117602 J	0.605264 J	7.90264 J	0.097226 J	0.57782 J								**37.5829**	**none**
	value to use: Row B	32.071	0.90194	0.222758	0.71906	0.22977	0.7297	2.23994	11.0602	2.77578	6.93506	8.855	1.77054	0.117602	0.605264	7.90264	0.097226	0.57782								Qualified	15%
	congener TEC: Row C	32.071	0.90194	0.0222758	0.071906	0.022977	0.007297	0.000672	1.10602	0.8832734	2.080518	0.8855	0.177054	0.0117602	0.0605264	0.0790264	0.0009723	0.0001733	No difference	37.5829	37.5829	37.5829	37.5829	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
2	**NB03-CRB-COMBHEPMUS-123: Row A**	27.1122	0.94238 J	0.15323 J	0.385804 J	0.158944 J	0.4103 J	0.92232 J	7.916 J	1.79216 J	4.33624 J	4.4424 J	1.13376 J	0.086756 J	0.265142 J	4.43946 J	0.04832 J	0.127188 J								**30.9127**	**none**
	value to use: Row B	27.1122	0.94238	0.15323	0.385804	0.158944	0.4103	0.92232	7.916	1.79216	4.33624	4.4424	1.13376	0.086756	0.265142	4.43946	0.04832	0.127188								Qualified	12%
	congener TEC: Row C	27.1122	0.94238	0.015323	0.0385804	0.0158944	0.004103	0.0002767	0.7916	0.0537648	1.300872	0.44424	0.113376	0.0086756	0.0265142	0.0443946	0.0004832	3.816E-05	No difference	30.9127	30.9127	30.9127	30.9127	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
3	**NB03-CRB-COMBHEPMUS-124: Row A**	16.8256 J	0.55623 J	0.15106 J	0.477358 J	0.154728 J	0.558484 J	1.85792 J	7.36124 J	1.67628 J	4.9284 J	2.91002 J	1.302666 J	0.030596 J	0.229508 J	3.250244 J	0.061498 J	0.180852 J								**20.2117**	**J**
	value to use: Row B	16.8256	0.55623	0.15106	0.477358	0.154728	0.558484	1.85792	7.36124	1.67628	4.9284	2.91002	1.302666	0.030596	0.229508	3.250244	0.061498	0.180852								Qualified	100%
	congener TEC: Row C	16.8256	0.55623	0.015106	0.0477358	0.0154728	0.0055848	0.0005574	0.736124	0.0502884	1.47852	0.291002	0.1302666	0.0030596	0.0229508	0.0325024	0.000615	5.426E-05	No difference	20.2117	20.2117	20.2117	20.2117	J	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
4	**NB03-CRB-COMBHEPMUS-125: Row A**	14.2598	0.41264 J	0.099002 J	0.32382 J	0.1354 J	0.44386 J	1.3006 J	6.0766 J	1.31188 J	2.42806 J	1.797 J	0.76108 J	0.074838 J	0.190422 J	1.88464 J	0.058792 J	0.153808 J								**16.4103**	**none**
	value to use: Row B	14.2598	0.41264	0.099002	0.32382	0.1354	0.44386	1.3006	6.0766	1.31188	2.42806	1.797	0.76108	0.074838	0.190422	1.88464	0.058792	0.153808								Qualified	13%
	congener TEC: Row C	14.2598	0.41264	0.0099002	0.032382	0.01354	0.0044386	0.0003902	0.60766	0.0393564	0.728418	0.1797	0.076108	0.0074838	0.0190422	0.0188464	0.0005879	4.614E-05	No difference	16.4103	16.4103	16.4103	16.4103	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
5	**NB03-CRB-COMBHEPMUS-126: Row A**	17.0542 J	0.484456 J	0.156222 J	0.383536 J	0.147776 J	0.425904 J	1.52026 J	7.31594 J	1.55162 J	3.688718 J	1.93616 J	0.8074 J	0.054734 J	0.193088 J	2.46154 J	0.054326 J	0.129816 J								**19.8212**	**J**
	value to use: Row B	17.0542	0.484456	0.156222	0.383536	0.147776	0.425904	1.52026	7.31594	1.55162	3.688718	1.93616	0.8074	0.054734	0.193088	2.46154	0.054326	0.129816								Qualified	100%
	congener TEC: Row C	17.0542	0.484456	0.0156222	0.0383536	0.0147776	0.004259	0.0004561	0.731594	0.0465486	1.066154	0.193616	0.08074	0.0054734	0.0193088	0.0246154	0.0005433	3.894E-05	No difference	19.821218	19.821	19.82121832	19.8212	J	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
6	**NB03-CRB-COMBHEPMUS-127: Row A**	15.5436	0.094202 J	0.125958 J	0.355472 J	0.12354 J	0.39896 J	1.68436 J	7.7654 J	1.48406 J	2.74396 J	1.29856 J	0.57132 J	0.094198 J	0.18545 J	1.41666 J	0.056164 J	0.18102 J								**17.5768**	**none**
	value to use: Row B	15.5436	0.094202	0.125958	0.355472	0.12354	0.39896	1.68436	7.7654	1.48406	2.74396	1.29856	0.57132	0.094198	0.18545	1.41666	0.056164	0.18102								Qualified	12%
	congener TEC: Row C	15.5436	0.094202	0.0125958	0.0355472	0.012354	0.0039896	0.0005053	0.77654	0.0445218	0.823188	0.129856	0.057132	0.0094198	0.018545	0.0141666	0.0005616	5.431E-05	No difference	17.576779	17.577	17.57677905	17.5768	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
7	**NB03-CRB-COMBHEPMUS-129: Row A**	12.964	0.69242 J	0.150112 J	0.427286 J	0.159772 J	0.5056 J	1.62672 J	8.0972 J	1.60116 J	3.12132 J	1.44636 J	0.935716 J	0.083324 J	0.231066 J	2.22888 J	0.040038 U	0.149218 J								**15.8219**	**none**
	value to use: Row B	12.964	0.69242	0.150112	0.427286	0.159772	0.5056	1.62672	8.0972	1.60116	3.12132	1.44636	0.935716	0.083324	0.231066	2.22888	0.040038	0.149218								Qualified	18%
	congener TEC: Row C	12.964	0.69242	0.0150112	0.0427286	0.0159772	0.005056	0.000488	0.80972	0.0480348	0.936396	0.144636	0.0935716	0.0083324	0.0231066	0.0222888	0.0004004	4.477E-05	0%	15.8218	15.8220	15.8222	15.8219	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
8	**NB03-CRB-COMBHEPMUS-130: Row A**	21.5812	0.085346 J	0.190636 J	0.566048 J	0.179912 J	0.60766 J	1.57466 J	9.20954 J	1.70952 J	3.76752 J	1.93018 J	0.971884 J	0.085954 J	0.273416 J	2.46536 J	0.075532 J	0.161868 J								**24.2209**	**none**
	value to use: Row B	21.5812	0.085346	0.190636	0.566048	0.179912	0.60766	1.57466	9.20954	1.70952	3.76752	1.93018	0.971884	0.085954	0.273416	2.46536	0.075532	0.161868								Qualified	11%
	congener TEC: Row C	21.5812	0.085346	0.0190636	0.0566048	0.0179912	0.0060766	0.0004724	0.920954	0.0512856	1.130256	0.193018	0.0971884	0.0085954	0.0273416	0.0246536	0.0007553	4.856E-05	No difference	24.2209	24.2209	24.2209	24.2209	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
9	**NB03-CRB-COMBHEPMUS-131: Row A**	20.5598	0.5969 J	0.146184 J	0.42746 J	0.16531 J	0.65672 J	2.15858 J	9.47206 J	1.50986 J	3.112 J	1.57416 J	0.801058 J	0.042108 J	0.22525 J	2.37754 J	0.045152 U	0.189256 J								**23.4521**	**none**
	value to use: Row B	20.5598	0.5969	0.146184	0.42746	0.16531	0.65672	2.15858	9.47206	1.50986	3.112	1.57416	0.801058	0.042108	0.22525	2.37754	0.045152	0.189256								Qualified	12%
	congener TEC: Row C	20.5598	0.5969	0.0146184	0.042746	0.016531	0.0065672	0.0006476	0.947206	0.0452958	0.9336	0.157416	0.0801058	0.0042108	0.022525	0.0237754	0.0004515	5.678E-05	0%	23.4520	23.4522	23.4525	23.4521	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
10	**NB03-CRB-COMBHEPMUS-132: Row A**	31.9626	1.26064 J	0.247668 J	0.74675 J	0.245776 J	0.80714 J	1.56366 J	10.8912 J	2.39546 J	5.79764 J	6.9289 J	1.47412 J	0.070926 J	0.531158 J	5.45426 J	0.054336 J	0.23614 J								**37.2117**	**none**
	value to use: Row B	31.9626	1.26064	0.247668	0.74675	0.245776	0.80714	1.56366	10.8912	2.39546	5.79764	6.9289	1.47412	0.070926	0.531158	5.45426	0.054336	0.23614								Qualified	14%
	congener TEC: Row C	31.9626	1.26064	0.0247668	0.074675	0.0245776	0.0080714	0.0004691	1.08912	0.0718638	1.739292	0.69289	0.147412	0.0070926	0.0531158	0.0545426	0.0005434	7.084E-05	No difference	37.2117	37.2117	37.2117	37.2117	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
11	**NB03-CRB-COMBHEPMUS-133: Row A**	41.394	1.07864 J	0.257566 J	0.754312 J	0.260792 J	0.87202 J	1.8885 J	10.1796 J	2.69056 J	5.88386 J	7.6036 J	1.97148 J	0.097978 J	0.544492 J	9.54394 J	0.05262 J	0.32262 J								**46.5908**	**none**
	value to use: Row B	41.394	1.07864	0.257566	0.754312	0.260792	0.87202	1.8885	10.1796	2.69056	5.88386	7.6036	1.97148	0.097978	0.544492	9.54394	0.05262	0.32262								Qualified	11%
	congener TEC: Row C	41.394	1.07864	0.0257566	0.0754312	0.0260792	0.0087202	0.0005666	1.01796	0.0807168	1.765158	0.76036	0.197148	0.0097978	0.0544492	0.0954394	0.0005262	9.679E-05	No difference	46.5908	46.5908	46.5908	46.5908	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
12	**NB03-CRB-COMBHEPMUS-134: Row A**	5.0514	0.86428 J	0.166566 J	0.47726 J	0.168286 J	0.63706 J	1.39842 J	5.8172 J	1.13062 J	1.74112 J	0.6759 J	0.490464 J	0.090616 J	0.20011 J	1.01164 J	0.047554 J	0.10538 J								**7.2980**	**none**
	value to use: Row B	5.0514	0.86428	0.166566	0.47726	0.168286	0.63706	1.39842	5.8172	1.13062	1.74112	0.6759	0.490464	0.090616	0.20011	1.01164	0.047554	0.10538								Qualified	31%
	congener TEC: Row C	5.0514	0.86428	0.0166566	0.047726	0.0168286	0.0063706	0.0004195	0.58172	0.0339186	0.522336	0.06759	0.0490464	0.0090616	0.020011	0.0101164	0.0004755	3.161E-05	No difference	7.2980	7.2980	7.2980	7.2980	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
13	**NB03-CRB-COMBHEPMUS-C001: Row A**	23.2202	0.64688 J	0.154598 J	0.627668 J	0.228452 J	0.7078 J	1.4797 J	9.1898 J	1.8214 J	5.06732 J	3.69652 J	1.2952 J	0.079656 J	0.370136 J	3.0523 J	0.089694 J	0.190906 J								**27.0451**	**none**
	value to use: Row B	23.2202	0.64688	0.154598	0.627668	0.228452	0.7078	1.4797	9.1898	1.8214	5.06732	3.69652	1.2952	0.079656	0.370136	3.0523	0.089694	0.190906								Qualified	14%
	congener TEC: Row C	23.2202	0.64688	0.0154598	0.0627668	0.0228452	0.007078	0.0004439	0.91898	0.054642	1.520196	0.369652	0.12952	0.0079656	0.0370136	0.030523	0.0008969	5.727E-05	No difference	27.04512	27.045	27.04512012	27.0451	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
14	**NB03-CRB-COMBHEPMUS-C002: Row A**	28.593	0.82874 J	0.243068 J	0.664326 J	0.25792 J	0.72658 J	1.41342 J	11.64328 J	2.43478 J	5.87002 J	5.0618 J	1.8636 J	0.070602 J	0.388726 J	5.8976 J	0.05561 J	0.148018 J								**33.3424**	**none**
	value to use: Row B	28.593	0.82874	0.243068	0.664326	0.25792	0.72658	1.41342	11.64328	2.43478	5.87002	5.0618	1.8636	0.070602	0.388726	5.8976	0.05561	0.148018								Qualified	14%
	congener TEC: Row C	28.593	0.82874	0.0243068	0.0664326	0.025792	0.0072658	0.000424	1.164328	0.0730434	1.761006	0.50618	0.18636	0.0070602	0.0388726	0.058976	0.0005561	4.441E-05	No difference	33.342388	33.342	33.34238793	33.3424	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
15	**NB03-CRB-COMBHEPMUS-C003: Row A**	23.3776	0.80986 J	0.213198 J	0.593242 J	0.224942 J	0.70836 J	1.52272 J	9.30086 J	2.30074 J	5.39866 J	4.63494 J	1.43266 J	0.105438 J	0.394606 J	3.98386 J	0.054758 J	0.194294 J								**27.6141**	**none**
	value to use: Row B	23.3776	0.80986	0.213198	0.593242	0.224942	0.70836	1.52272	9.30086	2.30074	5.39866	4.63494	1.43266	0.105438	0.394606	3.98386	0.054758	0.194294								Qualified	15%
	congener TEC: Row C	23.3776	0.80986	0.0213198	0.0593242	0.0224942	0.0070836	0.0004568	0.930086	0.0690222	1.619598	0.463494	0.143266	0.0105438	0.0394606	0.0398386	0.0005476	5.829E-05	No difference	27.6141	27.6141	27.6141	27.6141	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
16	**NB03-CRB-COMBHEPMUS-C004: Row A**	31.9606 J	0.705022 J	0.177326 J	0.57077 J	0.170824 J	0.5226 J	1.39164 J	8.2386 J	1.9953 J	4.92632 J	3.3197 J	1.324206 J	0.039288 J	0.228204 J	4.15772 J	0.049898 U	0.126224 J								**35.6578**	**J**
	value to use: Row B	31.9606	0.705022	0.177326	0.57077	0.170824	0.5226	1.39164	8.2386	1.9953	4.92632	3.3197	1.324206	0.039288	0.228204	4.15772	0.049898	0.126224								Qualified	100%
	congener TEC: Row C	31.9606	0.705022	0.0177326	0.057077	0.0170824	0.005226	0.0004175	0.82386	0.059859	1.477896	0.33197	0.1324206	0.0039288	0.0228204	0.0415772	0.000499	3.787E-05	0%	35.6575	35.6578	35.6580	35.6578	J	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
17	**NB03-CRB-COMBHEPMUS-C005: Row A**	27.331	0.70268 J	0.204714 J	0.517008 J	0.203788 J	0.62072 J	1.60014 J	8.1722 J	1.79282 J	3.38576 J	3.27056 J	1.13302 J	0.06817 J	0.250002 J	3.7358 J	0.069114 J	0.181802 J								**30.5299**	**none**
	value to use: Row B	27.331	0.70268	0.204714	0.517008	0.203788	0.62072	1.60014	8.1722	1.79282	3.38576	3.27056	1.13302	0.06817	0.250002	3.7358	0.069114	0.181802								Qualified	10%
	congener TEC: Row C	27.331	0.70268	0.0204714	0.0517008	0.0203788	0.0062072	0.00048	0.81722	0.0537846	1.015728	0.327056	0.113302	0.006817	0.0250002	0.037358	0.0006911	5.454E-05	No difference	30.5299	30.5299	30.5299	30.5299	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
18	**NB03-CRB-COMBHEPMUS-C006: Row A**	25.68634 J	0.807178 J	0.217846 J	0.583144 J	0.235154 J	0.666228 J	1.23514 J	10.39688 J	2.3022 J	5.16001 J	5.26946 J	1.6472 J	0.09259 J	0.366446 J	4.86614 J	0.071798 J	0.201142 J								**30.0479**	**J**
	value to use: Row B	25.68634	0.807178	0.217846	0.583144	0.235154	0.666228	1.23514	10.39688	2.3022	5.16001	5.26946	1.6472	0.09259	0.366446	4.86614	0.071798	0.201142								Qualified	100%
	congener TEC: Row C	25.68634	0.807178	0.0217846	0.0583144	0.0235154	0.0066623	0.0003705	1.039688	0.069066	1.548003	0.526946	0.16472	0.009259	0.0366446	0.0486614	0.000718	6.034E-05	No difference	30.0479	30.0479	30.0479	30.0479	J	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										
19	**NB03-CRB-COMBHEPMUS-C007: Row A**	23.8634	0.104282 J	0.239714 J	0.63503 J	0.238494 J	0.681888 J	1.49352 J	12.40794 J	2.4691 J	5.26166 J	4.42596 J	1.372216 J	0.087252 J	0.349262 J	4.10296 J	0.03776 J	0.21202 J								**27.6446**	**none**
	value to use: Row B	23.8634	0.104282	0.239714	0.63503	0.238494	0.681888	1.49352	12.40794	2.4691	5.26166	4.42596	1.372216	0.087252	0.349262	4.10296	0.03776	0.21202								Qualified	14%
	congener TEC: Row C	23.8634	0.104282	0.0239714	0.063503	0.0238494	0.0068189	0.0004481	1.240794	0.074073	1.578498	0.442596	0.1372216	0.0087252	0.0349262	0.0410296	0.0003776	6.361E-05	No difference	27.6446	27.6446	27.6446	27.6446	none	**Section 1**	Dioxin/Furan	100%
	donor value to use: Row D																										
	donor TEC: Row E																										

EPA Advanced KM TEQ Calculator

Crab hepatopancreas-muscle TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep-Mus combo TCDD-TEQ
Units: ng/kg
Data entered by: Caroline Ring
Date entered: 2/13/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
		WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003								
	Sample ID: (must enter on Row A)		TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDf	1,4,9-HpCDf	OCDF		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03-CRB-COMBHEPMUS-C008:	Row A	36.7842	0.89374 J	0.267104 J	0.70032 J	0.288426 J	0.765206 J	1.83114 J	11.02786 J	2.7387 J	5.91042 J	5.61164 J	1.8204 J	0.099204 J	0.413576 J	5.62176 J	0.051478 J	0.162944 J									
	value to use:	Row B	36.7842	0.89374	0.267104	0.70032	0.288426	0.765206	1.83114	11.02786	2.7387	5.91042	5.61164	1.8204	0.099204	0.413576	5.62176	0.051478	0.162944									
20	congener TEC:	Row C	36.7842	0.89374	0.0267104	0.070032	0.0288426	0.0076521	0.0005493	1.102786	0.082161	1.773126	0.561164	0.18204	0.0099204	0.0413576	0.0562176	0.0005148	4.888E-05	No difference	41.6211	41.6211	41.6211	41.6211	none	Section 1	41.6211 Qualified Dioxin/Furan	none 12% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N001:	Row A	22.577	0.67174 J	0.227598 J	0.72474 J	0.269918 J	0.9013 J	2.72342 J	7.5512 J	2.04818 J	6.18832 J	7.3736 J	1.7814 J	0.098436 J	0.55024 J	7.1662 J	0.126026 J	0.56972 J									
	value to use:	Row B	22.577	0.67174	0.227598	0.72474	0.269918	0.9013	2.72342	7.5512	2.04818	6.18832	7.3736	1.7814	0.098436	0.55024	7.1662	0.126026	0.56972									
21	congener TEC:	Row C	22.577	0.67174	0.0227598	0.072474	0.0269918	0.009013	0.000817	0.75512	0.0614454	1.856496	0.73736	0.17814	0.0098436	0.055024	0.071662	0.0012603	0.0001709	No difference	27.107318	27.107	27.1073178	27.1073	none	Section 1	27.1073 Qualified Dioxin/Furan	none 17% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N002:	Row A	19.9016	0.64303 J	0.1778 J	0.54438 J	0.182884 J	0.633904 J	1.96144 J	7.80974 J	2.00428 J	5.0464 J	5.95344 J	1.64958 J	0.092886 J	0.419334 J	5.84244 J	0.06485 J	0.34326 J									
	value to use:	Row B	19.9016	0.64303	0.1778	0.54438	0.182884	0.633904	1.96144	7.80974	2.00428	5.0464	5.95344	1.64958	0.092886	0.419334	5.84244	0.06485	0.34326									
22	congener TEC:	Row C	19.9016	0.64303	0.01778	0.054438	0.0182884	0.006339	0.0005884	0.780974	0.0601284	1.51392	0.595344	0.164958	0.0092886	0.0419334	0.0584244	0.0006485	0.000103	No difference	23.867786	23.868	23.86778615	23.8678	none	Section 1	23.8678 Qualified Dioxin/Furan	none 17% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N003:	Row A	24.6034	0.781388 J	0.231386 J	0.652948 J	0.250034 J	0.84466 J	2.50454 J	10.15136 J	2.89704 J	6.71814 J	8.09436 J	2.15968 J	0.131584 J	0.514196 J	6.17614 J	0.088612 J	0.39686 J									
	value to use:	Row B	24.6034	0.781388	0.231386	0.652948	0.250034	0.84466	2.50454	10.15136	2.89704	6.71814	8.09436	2.15968	0.131584	0.514196	6.17614	0.088612	0.39686									
23	congener TEC:	Row C	24.6034	0.781388	0.0231386	0.0652948	0.0250034	0.0084466	0.0007514	1.015136	0.0869112	2.015442	0.809436	0.215968	0.0131584	0.0514196	0.0617614	0.0008861	0.0001191	No difference	29.7777	29.7777	29.7777	29.7777	none	Section 1	29.7777 Qualified Dioxin/Furan	none 17% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N004:	Row A	31.365	0.039774 U	0.198476 J	0.60028 J	0.184932 J	0.62688 J	1.71766 J	8.4312 J	2.02582 J	4.97554 J	5.70536 J	1.74016 J	0.08181 J	0.379484 J	5.9111 J	0.058124 J	0.31984 J									
	value to use:	Row B	31.365	0.039774	0.198476	0.60028	0.184932	0.62688	1.71766	8.4312	2.02582	4.97554	5.70536	1.74016	0.08181	0.379484	5.9111	0.058124	0.31984									
24	congener TEC:	Row C	31.365	0.039774	0.0198476	0.060028	0.0184932	0.0062688	0.0005153	0.84312	0.0607746	1.492662	0.570536	0.174016	0.008181	0.0379484	0.059111	0.0005812	9.595E-05	0%	34.7172	34.7371	34.7570	34.7287	none	Section 1	34.7287 Qualified Dioxin/Furan	none 10% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N005:	Row A	44.8536	0.820488 J	0.294228 J	0.884762 J	0.263546 J	0.92492 J	1.87514 J	9.78466 J	2.86404 J	6.06228 J	7.45276 J	2.235424 J	0.082452 J	0.552348 J	9.43912 J	0.140672 J	0.31536 J									
	value to use:	Row B	44.8536	0.820488	0.294228	0.884762	0.263546	0.92492	1.87514	9.78466	2.86404	6.06228	7.45276	2.235424	0.082452	0.552348	9.43912	0.140672	0.31536									
25	congener TEC:	Row C	44.8536	0.820488	0.0294228	0.0884762	0.0263546	0.0092492	0.0005625	0.978466	0.0859212	1.818684	0.745276	0.2235424	0.0082452	0.0552348	0.0943912	0.0014067	9.461E-05	No difference	49.8394	49.8394	49.8394	49.8394	none	Section 1	49.8394 Qualified Dioxin/Furan	none 10% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N006:	Row A	31.4534	0.96066 J	0.215556 J	0.5776 J	0.202142 J	0.67734 J	1.84592 J	8.0104 J	1.80818 J	4.79862 J	5.4978 J	1.21678 J	0.086984 J	0.383806 J	3.76184 J	0.054494 J	0.223392 J									
	value to use:	Row B	31.4534	0.96066	0.215556	0.5776	0.202142	0.67734	1.84592	8.0104	1.80818	4.79862	5.4978	1.21678	0.086984	0.383806	3.76184	0.054494	0.223392									
26	congener TEC:	Row C	31.4534	0.96066	0.0215556	0.05776	0.0202142	0.0067734	0.0005538	0.80104	0.0542454	1.439586	0.54978	0.121678	0.0086984	0.0383806	0.0376184	0.0005449	6.702E-05	No difference	35.5726	35.5726	35.5726	35.5726	none	Section 1	35.5726 Qualified Dioxin/Furan	none 12% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N007:	Row A	38.7782	0.96846 J	0.221646 J	0.730256 J	0.229088 J	0.81102 J	1.88744 J	10.656 J	2.25018 J	6.34002 J	7.7594 J	1.80732 J	0.06696 J	0.539618 J	6.7541 J	0.021392 J	0.209184 J									
	value to use:	Row B	38.7782	0.96846	0.221646	0.730256	0.229088	0.81102	1.88744	10.656	2.25018	6.34002	7.7594	1.80732	0.06696	0.539618	6.7541	0.021392	0.209184									
27	congener TEC:	Row C	38.7782	0.96846	0.0221646	0.0730256	0.0229088	0.0081102	0.0005662	1.0656	0.0675054	1.902006	0.77594	0.180732	0.006696	0.0539618	0.067541	0.0002139	6.276E-05	No difference	43.9937	43.9937	43.9937	43.9937	none	Section 1	43.9937 Qualified Dioxin/Furan	none 12% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-N008:	Row A	33.6262 J	0.109132 J	0.177026 J	0.583704 J	0.19552 J	0.9378 J	5.94706 J	8.1274 J	1.98022 J	5.21488 J	4.50992 J	1.40552 J	0.070664 J	0.306996 J	4.39576 J	0.064536 J	0.3103 J									
	value to use:	Row B	33.6262	0.109132	0.177026	0.583704	0.19552	0.9378	5.94706	8.1274	1.98022	5.21488	4.50992	1.40552	0.070664	0.306996	4.39576	0.064536	0.3103									
28	congener TEC:	Row C	33.6262	0.109132	0.0177026	0.0583704	0.019552	0.009378	0.0017841	0.81274	0.0594066	1.564464	0.450992	0.140552	0.0070664	0.0306996	0.0439576	0.0006454	9.309E-05	No difference	36.9527	36.9527	36.9527	36.9527	J	Section 1	36.9527 Qualified Dioxin/Furan	J 100% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S001:	Row A	14.6916	0.513672 J	0.152412 J	0.463374 J	0.197214 J	0.67144 J	1.74554 J	8.978 J	1.69652 J	3.24412 J	2.04658 J	0.846966 J	0.071262 J	0.265322 J	2.26226 J	0.049152 U	0.134164 J									
	value to use:	Row B	14.6916	0.513672	0.152412	0.463374	0.197214	0.67144	1.74554	8.978	1.69652	3.24412	2.04658	0.846966	0.071262	0.265322	2.26226	0.049152	0.134164									
29	congener TEC:	Row C	14.6916	0.513672	0.0152412	0.0463374	0.0197214	0.0067144	0.0005237	0.8978	0.0508956	0.973236	0.204658	0.0846966	0.0071262	0.0265322	0.0226226	0.0004915	4.025E-05	0%	17.561418	17.562	17.56190903	17.5615	none	Section 1	17.5615 Qualified Dioxin/Furan	none 16% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S002:	Row A	25.9622	0.06987 J	0.182032 J	0.547602 J	0.180708 J	0.565588 J	1.33804 J	9.61228 J	1.90124 J	4.15654 J	3.02088 J	1.206092 J	0.106826 J	0.271198 J	3.7325 J	0.04221 J	0.157164 J									
	value to use:	Row B	25.9622	0.06987	0.182032	0.547602	0.180708	0.565588	1.33804	9.61228	1.90124	4.15654	3.02088	1.206092	0.106826	0.271198	3.7325	0.04221	0.157164									
30	congener TEC:	Row C	25.9622	0.06987	0.0182032	0.0547602	0.0180708	0.0056559	0.0004014	0.961228	0.0570372	1.246962	0.302088	0.1206092	0.0106826	0.0271198	0.037325	0.0004221	4.715E-05	No difference	28.892683	28.893	28.89268254	28.8927	none	Section 1	28.8927 Qualified Dioxin/Furan	none 10% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S003:	Row A	17.492	0.070418 J	0.141352 J	0.389974 J	0.144234 J	0.4866 J	1.04214 J	8.48134 J	1.58874 J	3.13918 J	2.26246 J	0.72035 J	0.086086 J	0.183368 J	1.81696 J	0.056186 J	0.120912 J									
	value to use:	Row B	17.492	0.070418	0.141352	0.389974	0.144234	0.4866	1.04214	8.48134	1.58874	3.13918	2.26246	0.72035	0.086086	0.183368	1.81696	0.056186	0.120912									
31	congener TEC:	Row C	17.492	0.070418	0.0141352	0.0389974	0.0144234	0.004866	0.0003126	0.848134	0.0476622	0.941754	0.226246	0.072035	0.0086086	0.0183368	0.0181696	0.0005619	3.627E-05	No difference	19.8167	19.8167	19.8167	19.8167	none	Section 1	19.8167 Qualified Dioxin/Furan	none 12% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S004:	Row A	23.2582	0.68662 J	0.186306 J	0.620594 J	0.204428 J	0.631644 J	1.56632 J	9.49624 J	1.83856 J	4.22556 J	2.68904 J	1.090518 J	0.074694 J	0.29263 J	2.5996 J	0.058516 J	0.149838 J									
	value to use:	Row B	23.2582	0.68662	0.186306	0.620594	0.204428	0.631644	1.56632	9.49624	1.83856	4.22556	2.68904	1.090518	0.074694	0.29263	2.5996	0.058516	0.149838									
32	congener TEC:	Row C	23.2582	0.68662	0.0186306	0.0620594	0.0204428	0.0063164	0.0004699	0.949624	0.0551568	1.267668	0.268904	0.1090518	0.0074694	0.029263	0.025996	0.0005852	4.495E-05	No difference	26.7665	26.7665	26.7665	26.7665	none	Section 1	26.7665 Qualified Dioxin/Furan	none 13% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S005:	Row A	21.0592	0.074022 J	0.1903766 J	0.600594 J	0.1724228 J	0.621748 J	1.61662 J	8.95858 J	1.94968 J	4.45798 J	4.14746 J	1.118788 J	0.072906 J	0.281937 J	3.63664 J	0.0250538 U	0.114816 J									
	value to use:	Row B	21.0592	0.074022	0.1903766	0.600594	0.1724228	0.621748	1.61662	8.95858	1.94968	4.45798	4.14746	1.118788	0.072906	0.281937	3.63664	0.0250538	0.114816									
33	congener TEC:	Row C	21.0592	0.074022	0.01903766	0.0600594	0.0172423	0.0062175	0.000485	0.895858	0.0584904	1.337394	0.414746	0.1118788	0.0072906	0.0281937	0.0363664	0.0002505	3.444E-05	0%	24.1265	24.1266	24.1268	24.1266	none	Section 1	24.1266 Qualified Dioxin/Furan	none 13% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S006:	Row A	11.91112 J	0.473676 J	0.152166 J	0.468876 J	0.182584 J	0.421924 J	1.6232 J	8.68408 J	1.48504 J	3.264378 J	1.8185 J	0.795258 J	0.07552 J	0.196902 J	1.889936 J	0.080508 J	0.113404 J									
	value to use:	Row B	11.91112	0.473676	0.152166	0.468876	0.182584	0.421924	1.6232	8.68408	1.48504	3.264378	1.8185	0.795258	0.07552	0.196902	1.889936	0.080508	0.113404									
34	congener TEC:	Row C	11.91112	0.473676	0.0152166	0.0468876	0.0182584	0.0042192	0.000487	0.868408	0.0445512	0.9793134	0.18185	0.0795258	0.007552	0.0196902	0.0188994	0.0008051	3.402E-05	No difference	14.6705	14.6705	14.6705	14.6705	J	Section 1	14.6705 Qualified Dioxin/Furan	J 100% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S007:	Row A	12.532	0.56957 J	0.150244 J	0.390966 J	0.184426 J	0.4478 J	1.65988 J	9.16558 J	1.5566 J	3.13716 J	1.49414 J	0.857012 J	0.063318 J	0.25669 J	1.47944 J	0.045616 U	0.181348 J									
	value to use:	Row B	12.532	0.56957	0.150244	0.390966	0.184426	0.4478	1.65988	9.16558	1.5566	3.13716	1.49414	0.857012	0.063318	0.25669	1.47944	0.045616	0.181348									
35	congener TEC:	Row C	12.532	0.56957	0.0150244	0.0390966	0.0184426	0.004478	0.000498	0.916558	0.046698	0.941148	0.149414	0.0857012	0.0063318	0.025669	0.0147944	0.0004562	5.44E-05	0%	15.3655	15.3657	15.3659	15.3655	none	Section 1	15.3655 Qualified Dioxin/Furan	none 18% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S008:	Row A	10.3152	0.514762 J	0.13065 J	0.353392 J	0.137188 J	0.40674 J	1.1497 J	6.86042 J	1.39168 J	2.54834 J	1.47942 J	0.667148 J	0.083636 J	0.173172 J	1.80444 J	0.06688 U	0.109302 J									
	value to use:	Row B	10.3152	0.514762	0.13065	0.353392	0.137188	0.40674	1.1497	6.86042	1.39168	2.54834	1.47942	0.667148	0.083636	0.173172	1.80444	0.06688	0.109302									
36	congener TEC:	Row C	10.3152	0.514762	0.013065	0.0353392	0.0137188	0.0040674	0.0003449	0.686042	0.0417504	0.764502	0.147942	0.0667148	0.0083636	0.0173172	0.0180444	0.0006688	3.279E-05	0%	12.6472	12.6475	12.6479	12.6474	none	Section 1	12.6474 Qualified Dioxin/Furan	none 18% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									
	NB03-CRB-COMBHEPMUS-S009:	Row A	17.999	0.77051 J	0.143992 J	0.419408 J	0.173922 J	0.532646 J	1.58556 J	15.97314 J	2.13092 J	3.6322 J	1.80804 J	0.75275 J	0.047718 J	0.232024 J	1.80072 J	0.031138 J	0.109028 J									
	value to use:	Row B	17.999	0.77051	0.143992	0.419408	0.173922	0.532646	1.58556	15.97314	2.13092	3.6322	1.80804	0.75275	0.047718	0.232024	1.80072	0.031138	0.109028									
37	congener TEC:	Row C	17.999	0.77051	0.0143992	0.0419408	0.0173922	0.0053265	0.0004757	1.597314	0.0639276	1.08966	0.180804	0.075275	0.0047718	0.0232024	0.0180072	0.0003114	3.271E-05	No difference	21.90235	21.902	21.90235042	21.9024	none	Section 1	21.9024 Qualified Dioxin/Furan	none 18% 100%
	donor value to use:	Row D																									
	donor TEC:	Row E																									

EPA Advanced KM TEQ Calculator

Crab hepatopancreas-muscle TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep-Mus combo TCDD-TEQ
Units: ng/kg
Data entered by: Caroline Ring
Date entered: 2/13/17

protect/unprotect sheet password = dioxin

SITE DATA

| | | |

EPA Advanced KM TEQ Calculator

Crab hepatopancreas-muscle PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep-Mus combo PCB-TEQ **Data entered by:** Caroline Ring
Units: ng/kg **Date entered:** 3/27/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003								Treatment 1	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
1	NB03-CRB-COMBHEPMUS-122: Row A	2171.82 J	103.414	13524.2 J	1071.64 J	48406.2 J	1014.85 J	86.0202	4165.02 J		1710.44 J	6.1206 J	292.714									
	value to use: Row B	2171.82	103.414	13524.2	1071.64	48406.2	1014.85	86.0202	4165.02		1710.44	6.1206	292.714									
	congener TEC: Row C	0.217182	0.0310242	0.405726	0.0321492	1.452186	0.0304455	8.60202	0.1249506		0.0513132	0.183618	0.0087814	No difference	11.1394	11.1394	11.1394	11.1394	none	Section 1	11.1394	none
	donor value to use: Row D																				Qualified	22%
	donor TEC: Row E																				Dioxin/Furan	
2	NB03-CRB-COMBHEPMUS-123: Row A	1805.96 J	89.41	11403.4 J	1087.24 J	56779 J	1011.14 J	99.736	4266.8 J		1841.92 J	3.003 U	347.832									
	value to use: Row B	1805.96	89.41	11403.4	1087.24	56779	1011.14	99.736	4266.8		1841.92	3.003	347.832									
	congener TEC: Row C	0.180596	0.026823	0.342102	0.0326172	1.70337	0.0303342	9.9736	0.128004		0.0552576	0.09009	0.010435	1%	12.4831	12.5282	12.5732	12.5142	none	Section 1	12.5142	none
	donor value to use: Row D																				Qualified	20%
	donor TEC: Row E																				Dioxin/Furan	
3	NB03-CRB-COMBHEPMUS-124: Row A		61.09 J	8936.24 J	775.45 J	40548.6 J	753.772	83.1742 J	3377.48 J		1455.066 J	2.959 U	237.8146 J									
	value to use: Row B		61.09	8936.24	775.45	40548.6	753.772	83.1742	3377.48		1455.066	2.959	237.8146									
	congener TEC: Row C		0.018327	0.2680872	0.0232635	1.216458	0.02261316	8.31742	0.1013244		0.043652	0.08877	0.0071344	1%	10.0183	10.0627	10.1070	10.0413	J	Section 1	10.0413	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
4	NB03-CRB-COMBHEPMUS-125: Row A	745.74 J	41.6036	4117.54 J	421.266 J	21176.6 J	417.872 J	42.8454	1750.92 J		759.28 J	3.3732 J	116.298									
	value to use: Row B	745.74	41.6036	4117.54	421.266	21176.6	417.872	42.8454	1750.92		759.28	3.3732	116.298									
	congener TEC: Row C	0.074574	0.0124811	0.1235262	0.012638	0.635298	0.01253616	4.28454	0.0525276		0.0227784	0.101196	0.0034889	No difference	5.3356	5.3356	5.3356	5.3356	none	Section 1	5.3356	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
5	NB03-CRB-COMBHEPMUS-126: Row A		52.0362	6112.34 J	582.634 J	33925.2 J	538.158 J	6.3256 J	2525.06 J		1018.496 J	1.46 U	159.2798 J									
	value to use: Row B		52.0362	6112.34	582.634	33925.2	538.158	6.3256	2525.06		1018.496	1.46	159.2798									
	congener TEC: Row C		0.0156109	0.1833702	0.017479	1.017756	0.01614474	0.63256	0.0757518		0.0305549	0.0438	0.0047784	2%	1.9940059	2.01591	2.037805894	2.0109	J	Section 1	2.0109	J
	donor value to use: Row D																				Qualified	99%
	donor TEC: Row E																				Dioxin/Furan	
6	NB03-CRB-COMBHEPMUS-127: Row A		64.296 J	5590.6 J	614 J	38740.8 J	618.86 J	67.676 J	2962.16 J		1463.72 J	3.9364 U	149.83 J									
	value to use: Row B		64.296	5590.6	614	38740.8	618.86	67.676	2962.16		1463.72	3.9364	149.83									
	congener TEC: Row C		0.0192888	0.167718	0.01842	1.162224	0.0185658	6.7676	0.0888648		0.0439116	0.118092	0.0044949	1%	8.2910879	8.35013	8.4091799	8.3233	J	Section 1	8.3233	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
7	NB03-CRB-COMBHEPMUS-129: Row A		113.41 J	11535.98 J	1134.278	51003.8 J	1045.104	138.5792 J	4797.46 J		1976.332 J	5.9046 U	299.118									
	value to use: Row B		113.41	11535.98	1134.278	51003.8	1045.104	138.5792	4797.46		1976.332	5.9046	299.118									
	congener TEC: Row C		0.034023	0.3460794	0.0340283	1.530114	0.03135312	13.85792	0.1439238		0.05929	0.177138	0.0089735	1%	16.0457	16.1343	16.2228	16.0976	J	Section 1	16.0976	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
8	NB03-CRB-COMBHEPMUS-130: Row A		92.228	9575.8 J	856.22 J	37377.2 J	706.708 J	99.736	3332.38 J		1335.34 J	2.9926 U	206.626									
	value to use: Row B		92.228	9575.8	856.22	37377.2	706.708	99.736	3332.38		1335.34	2.9926	206.626									
	congener TEC: Row C		0.0276684	0.287274	0.0256866	1.121316	0.02120124	9.9736	0.0999714		0.0400602	0.089778	0.0061988	1%	11.6030	11.6479	11.6928	11.6271	none	Section 1	11.6271	none
	donor value to use: Row D																				Qualified	14%
	donor TEC: Row E																				Dioxin/Furan	
9	NB03-CRB-COMBHEPMUS-131: Row A		97.97 J	9932.48 J	934.568 J	46098.4 J	786.314 J	81.5866 J	3861.712 J		1466.754 J	2.9484 U	245.7038 J									
	value to use: Row B		97.97	9932.48	934.568	46098.4	786.314	81.5866	3861.712		1466.754	2.9484	245.7038									
	congener TEC: Row C		0.029391	0.2979744	0.028037	1.382952	0.02358942	8.15866	0.1158514		0.0440026	0.088452	0.0073711	1%	10.0878	10.1321	10.1763	10.1143	J	Section 1	10.1143	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
10	NB03-CRB-COMBHEPMUS-132: Row A	2216.7 J	85.2106	11481.6 J	820.334	45497.4 J	778.162	83.7952	3102.18 J		1288.2 J	3.0522 U	219.104									
	value to use: Row B	2216.7	85.2106	11481.6	820.334	45497.4	778.162	83.7952	3102.18		1288.2	3.0522	219.104									
	congener TEC: Row C	0.22167	0.0255632	0.344448	0.02461	1.364922	0.02334486	8.37952	0.0930654		0.038646	0.091566	0.0065731	1%	10.5224	10.5681	10.6139	10.5461	none	Section 1	10.5461	none
	donor value to use: Row D																				Qualified	20%
	donor TEC: Row E																				Dioxin/Furan	
11	NB03-CRB-COMBHEPMUS-133: Row A		94.674	12100.2 J	1024 J	53913 J	915.22 J	114.36 J	4433.4 J		1822.38 J	54.893 J	343.332									
	value to use: Row B		94.674	12100.2	1024	53913	915.22	114.36	4433.4		1822.38	54.893	343.332									
	congener TEC: Row C		0.0284022	0.363006	0.03072	1.61739	0.0274566	11.436	0.133002		0.0546714	1.64679	0.0103	No difference	15.3477	15.3477	15.3477	15.3477	J	Section 1	15.3477	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
12	NB03-CRB-COMBHEPMUS-134: Row A		56.896 J	10220 J	816.34 J	40302 J	730.34	89.524 J	4531.4 J		1732.16 J	12.856 J	285.572 J									
	value to use: Row B		56.896	10220	816.34	40302	730.34	89.524	4531.4		1732.16	12.856	285.572									
	congener TEC: Row C		0.0170688	0.3066	0.0244902	1.20906	0.0219102	8.9524	0.135942		0.0519648	0.38568	0.0085672	No difference	11.1137	11.1137	11.1137	11.1137	J	Section 1	11.1137	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
13	NB03-CRB-COMBHEPMUS-C001: Row A		54.3176	7090.92 J	589.394	29084.4 J	604.19	66.1834 J	2416.44 J		1034.408 J	3.1504 J	168.643									
	value to use: Row B		54.3176	7090.92	589.394	29084.4	604.19	66.1834	2416.44		1034.408	3.1504	168.643									
	congener TEC: Row C		0.0162953	0.2127276	0.0176818	0.872532	0.0181257	6.61834	0.0724932		0.0310322	0.094512	0.0050593	No difference	7.9587991	7.9588	7.95879913	7.9588	J	Section 1	7.9588	J
	donor value to use: Row D																				Qualified	99%
	donor TEC: Row E																				Dioxin/Furan	
14	NB03-CRB-COMBHEPMUS-C002: Row A	2506.324 J	117.7804 J	13957.5 J	1105.828 J		989.874 J	113.4428 J	5123.65 J		2032.972 J	2.9676 U	387.6934 J									
	value to use: Row B	2506.324	117.7804	13957.5	1105.828		989.874	113.4428	5123.65		2032.972	2.9676	387.6934									
	congener TEC: Row C	0.2506324	0.0353341	0.418725	0.0331748		0.02969622	11.34428	0.1537095		0.0609892	0.089028	0.0116308	1%	12.338172	12.3827	12.42720004	12.3723	J	Section 1	12.3723	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
15	NB03-CRB-COMBHEPMUS-C003: Row A	1995.58 J	93.3314	11934.12 J	941.632 J	51584 J	883.534 J	83.8668	3860.08 J		1618.766 J	3.0352 U	269.9482									
	value to use: Row B	1995.58	93.3314	11934.12	941.632	51584	883.534	83.8668	3860.08		1618.766	3.0352	269.9482									
	congener TEC: Row C	0.199558	0.0279994	0.3580236	0.028249	1.54752	0.02650602	8.38668	0.1158024		0.048563	0.091056	0.0080984	1%	10.7470	10.7925	10.8381	10.7749	none	Section 1	10.7749	none
	donor value to use: Row D																				Qualified	22%
	donor TEC: Row E																				Dioxin/Furan	
16	NB03-CRB-COMBHEPMUS-C004: Row A		53.1236	6621.24 J	625.798 J	36280 J	539.076 J	62.6178	2608.6 J		1069.598 J	1.4744 U	179.332 J									
	value to use: Row B		53.1236	6621.24	625.798	36280	539.076	62.6178	2608.6		1069.598	1.4744	179.332									
	congener TEC: Row C		0.0159371	0.1986372	0.0187739	1.0884	0.01617228	6.26178	0.078258		0.0320879	0.044232	0.00538	1%	7.7154	7.7375	7.7597	7.7331	none	Section 1	7.7331	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Crab hepatopancreas-muscle PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep-Mus combo PCB-TEQ **Data entered by:** Caroline Ring
Units: ng/kg **Date entered:** 3/27/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																					Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003								Treatment 1	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03-CRB-COMBHEPMUS-C005: Row A	1129.33 J	54.0932 J	5707.8 J	524.73 J	27087.8 J	469.104 J	46.4166 J	2386.46 J		983.854 J	3.0058 U	177.9804									
	value to use: Row B	1129.33	54.0932	5707.8	524.73	27087.8	469.104	46.4166	2386.46		983.854	3.0058	177.9804									
17	congener TEC: Row C	0.112933	0.016228	0.171234	0.0157419	0.812634	0.01407312	4.64166	0.0715938		0.0295156	0.090174	0.0053394	2%	5.8910	5.9360	5.9811	5.9164	J	Section 1	5.9164	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-C006: Row A		95.1402 J	11664.62 J	940.346 J	58921.06 J	972.74 J	111.6396 J	4450.932 J		1797.892 J	2.9844 U	316.1096 J									
	value to use: Row B		95.1402	11664.62	940.346	58921.06	972.74	111.6396	4450.932		1797.892	2.9844	316.1096									
18	congener TEC: Row C		0.0285421	0.3499386	0.0282104	1.7676318	0.0291822	11.16396	0.133528		0.0539368	0.089532	0.0094833	1%	13.5644	13.6092	13.6539	13.5943	J	Section 1	13.5943	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-C007: Row A		81.2688	11316.54 J	873.776 J	57038.6 J	958.55 J	106.6996 J	3585.38 J		1575.366 J	5.545 J	243.245 J									
	value to use: Row B		81.2688	11316.54	873.776	57038.6	958.55	106.6996	3585.38		1575.366	5.545	243.245									
19	congener TEC: Row C		0.0243806	0.3394962	0.0262133	1.711158	0.0287565	10.66996	0.1075614		0.047261	0.16635	0.0072974	No difference	13.1284	13.1284	13.1284	13.1284	J	Section 1	13.1284	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-C008: Row A	1840.12 J	79.8642	9977.22 J	851.032 J	47076.2 J	756.702 J	97.1224 J	3473.88 J		1525.048 J	1.4974 U	242.2634 J									
	value to use: Row B	1840.12	79.8642	9977.22	851.032	47076.2	756.702	97.1224	3473.88		1525.048	1.4974	242.2634									
20	congener TEC: Row C	0.184012	0.0239593	0.2993166	0.025531	1.412286	0.02270106	9.71224	0.1042164		0.0457514	0.044922	0.0072679	0%	11.8373	11.8597	11.8822	11.8571	J	Section 1	11.8571	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N001: Row A		109.052 J	14191.4 J	1123.96 J	58024.2 J	1155.58 J	136.432 J	4353.48 J		1840.02 J	7.4058 J	321.97 J									
	value to use: Row B		109.052	14191.4	1123.96	58024.2	1155.58	136.432	4353.48		1840.02	7.4058	321.97									
21	congener TEC: Row C		0.0327156	0.425742	0.0337188	1.740726	0.0346674	13.6432	0.1306044		0.0552006	0.222174	0.0096591	No difference	16.328408	16.3284	16.3284079	16.3284	J	Section 1	16.3284	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N002: Row A		84.57	9902.4 J	835.02 J	46221.6 J	787.12 J	100.144	3589.86 J		1393.2 J	1.4678 U	250.398 J									
	value to use: Row B		84.57	9902.4	835.02	46221.6	787.12	100.144	3589.86		1393.2	1.4678	250.398									
22	congener TEC: Row C		0.025371	0.297072	0.0250506	1.386648	0.0236136	10.0144	0.1076958		0.041796	0.044034	0.0075119	0%	11.929159	11.9512	11.97319294	11.9538	none	Section 1	11.9538	none
	donor value to use: Row D																				Qualified Dioxin/Furan	16%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N003: Row A		102.41	14764 J	1143.3 J	67079.8 J	1020.38 J	122.874	4762.08 J		2000.46 J	2.9302 U	382.436									
	value to use: Row B		102.41	14764	1143.3	67079.8	1020.38	122.874	4762.08		2000.46	2.9302	382.436									
23	congener TEC: Row C		0.030723	0.44292	0.034299	2.012394	0.0306114	12.2874	0.1428624		0.0600138	0.087906	0.0114731	1%	15.0527	15.0966	15.1406	15.0861	none	Section 1	15.0861	none
	donor value to use: Row D																				Qualified Dioxin/Furan	19%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N004: Row A		74.0646	9657.4 J	823.55	43482 J	757.416	87.987 J	3273.52 J		1321.54 J	3.855 J	240.998									
	value to use: Row B		74.0646	9657.4	823.55	43482	757.416	87.987	3273.52		1321.54	3.855	240.998									
24	congener TEC: Row C		0.0222194	0.289722	0.0247065	1.30446	0.02272248	8.7987	0.0982056		0.0396462	0.11565	0.0072299	No difference	10.7233	10.7233	10.7233	10.7233	J	Section 1	10.7233	J
	donor value to use: Row D																				Qualified Dioxin/Furan	99%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N005: Row A		98.422	11301 J	911.8 J	49952.8 J	811.56	108.6 J	3982.42 J		1505.56 J	8.2328 J	310.356									
	value to use: Row B		98.422	11301	911.8	49952.8	811.56	108.6	3982.42		1505.56	8.2328	310.356									
25	congener TEC: Row C		0.0295266	0.33903	0.027354	1.498584	0.0243468	10.86	0.1194726		0.0451668	0.246984	0.0093107	No difference	13.1998	13.1998	13.1998	13.1998	J	Section 1	13.1998	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N006: Row A	1929.76 J	84.7784	11013.6 J	940.624 J	56140.6 J	827.216	85.7454	3540.28 J		1502.82 J	3.0188 U	285.136									
	value to use: Row B	1929.76	84.7784	11013.6	940.624	56140.6	827.216	85.7454	3540.28		1502.82	3.0188	285.136									
26	congener TEC: Row C	0.192976	0.0254335	0.330408	0.0282187	1.684218	0.02481648	8.57454	0.1062084		0.0450846	0.090564	0.0085541	1%	11.0205	11.0657	11.1110	11.0469	none	Section 1	11.0469	none
	donor value to use: Row D																				Qualified Dioxin/Furan	22%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N007: Row A		142.18	15717.8 J	1390.24	68949.6 J	1245.04	158.19	5340.64 J		2257.78 J	4.6312 U	404.188									
	value to use: Row B		142.18	15717.8	1390.24	68949.6	1245.04	158.19	5340.64		2257.78	4.6312	404.188									
27	congener TEC: Row C		0.042654	0.471534	0.0417072	2.068488	0.0373512	15.819	0.1602192		0.0677334	0.138936	0.0121256	1%	18.7208	18.7903	18.8597	18.7611	none	Section 1	18.7611	none
	donor value to use: Row D																				Qualified Dioxin/Furan	15%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-N008: Row A		64.312	7944.82 J	661.848	33576.4 J	608.842	78.7166	2815.54 J		1240.468 J	4.5162 J	246.374									
	value to use: Row B		64.312	7944.82	661.848	33576.4	608.842	78.7166	2815.54		1240.468	4.5162	246.374									
28	congener TEC: Row C		0.0192936	0.2383446	0.0198554	1.007292	0.01826526	7.87166	0.0844662		0.037214	0.135486	0.0073912	No difference	9.4393	9.4393	9.4393	9.4393	none	Section 1	9.4393	none
	donor value to use: Row D																				Qualified Dioxin/Furan	16%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S001: Row A		65.7176	7441.7 J	649.046	32457 J	612.202	71.782 J	2916.68 J		1289.76 J	2.9914 U	223.014									
	value to use: Row B		65.7176	7441.7	649.046	32457	612.202	71.782	2916.68		1289.76	2.9914	223.014									
29	congener TEC: Row C		0.0197153	0.223251	0.0194714	0.97371	0.01836606	7.1782	0.0875004		0.0386928	0.089742	0.0066904	1%	8.5655973	8.61047	8.65533934	8.5973	J	Section 1	8.5973	J
	donor value to use: Row D																				Qualified Dioxin/Furan	99%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S002: Row A		76.7798 J	8595.38 J	829.68 J	38899.8 J	713.662	87.207 J	3245.926 J		1388.29 J	3.1868 J	220.1912									
	value to use: Row B		76.7798	8595.38	829.68	38899.8	713.662	87.207	3245.926		1388.29	3.1868	220.1912									
30	congener TEC: Row C		0.0230339	0.2578614	0.0248904	1.166994	0.02140986	8.7207	0.0973778		0.0416487	0.095604	0.0066057	No difference	10.456126	10.4561	10.45612582	10.4561	J	Section 1	10.4561	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S003: Row A		45.5378	5142.7 J	494.092	25113.6 J	450.134	59.7312	2262.62 J		1068.538 J	3.4876 J	160.9732									
	value to use: Row B		45.5378	5142.7	494.092	25113.6	450.134	59.7312	2262.62		1068.538	3.4876	160.9732									
31	congener TEC: Row C		0.0136613	0.154281	0.0148228	0.753408	0.01350402	5.97312	0.0678786		0.0320561	0.104628	0.0048292	No difference	7.1322	7.1322	7.1322	7.1322	none	Section 1	7.1322	none
	donor value to use: Row D																				Qualified Dioxin/Furan	16%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S004: Row A	1337.94 J	61.2424 J	7323 J	641.478 J	38957 J	596.78 J	81.0902	3027.44 J		1269.286 J	1.4822 U	211.9826 J									
	value to use: Row B	1337.94	61.2424	7323	641.478	38957	596.78	81.0902	3027.44		1269.286	1.4822	211.9826									
32	congener TEC: Row C	0.133794	0.0183727	0.21969	0.0192443	1.16871	0.0179034	8.10902	0.0908232		0.0380786	0.044466	0.0063595	0%	9.8220	9.8442	9.8665	9.8420	none	Section 1	9.8420	none
	donor value to use: Row D																				Qualified Dioxin/Furan	18%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S005: Row A		78.4108 J	9848.8 J	772.914 J	46193.6 J	728.65 J	87.384 J	3368.5 J		1461.504 J	4.386 J	238.3586 J									
	value to use: Row B		78.4108	9848.8	772.914	46193.6	728.65	87.384	3368.5		1461.504	4.386	238.3586									
33	congener TEC: Row C		0.0235232	0.295464	0.0231874	1.385808	0.0218595	8.7384	0.101055		0.0438451	0.13158	0.0071508	No difference	10.7719	10.7719	10.7719	10.7719	J	Section 1	10.7719	J
	donor value to use: Row D																				Qualified Dioxin/Furan	100%
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S006: Row A		52.096	6863.14 J	536.6582 J	34091 J	508.37 J	68.2308	2599.16 J		1141.136 J	1.4482 U	184.1996 J									
	value to use: Row B		52.096	6863.14	536.6582	34091	508.37	68.2308	2599.16		1141.136	1.4482	184.1996									
34	congener TEC: Row C		0.0156288	0.2058942	0.0160997	1.02273	0.0152511	6.82308	0.0779748		0.0342341	0.043446	0.005526	1%	8.2164	8.2381	8.2599	8.2338	none	Section 1	8.2338	none
	donor value to use: Row D																				Qualified Dioxin/Furan	17%
	donor TEC: Row E																					

EPA Advanced KM TEQ Calculator

Crab hepatopancreas-muscle PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep-Mus combo PCB-TEQ **Data entered by:** Caroline Ring
Units: ng/kg **Date entered:** 3/27/17

protect/unprotect sheet password = dioxin

SITE DATA

	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29							
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003							
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	(Quasi) Sensitivity Analysis SECTION 1: Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1: KM TEQ	Treatment 1: Qualifier and Qualifier Fractions
	NB03-CRB-COMBHEPMUS-S007: Row A	1198.528 J	62.0456 J	6469.84 J	640.886 J	31054.4 J	575.906 J		2609.64 J		1078.184 J	4.8392 J	179.307 J									
	value to use: Row B	1198.528	62.0456	6469.84	640.886	31054.4	575.906		2609.64		1078.184	4.8392	179.307									
35	congener TEC: Row C	0.1198528	0.0186137	0.1940952	0.0192266	0.931632	0.01727718		0.0782892		0.0323455	0.145176	0.0053792	No difference	1.5619	1.5619	1.5619	1.5619	J	Section 1	1.5619 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S008: Row A	1044.31 J	52.3334 J	5870.76 J	494.818 J	26791.8 J	511.39 J	65.2742 J	2534.75 J		1054.982 J	2.9658 U	190.7836 J									
	value to use: Row B	1044.31	52.3334	5870.76	494.818	26791.8	511.39	65.2742	2534.75		1054.982	2.9658	190.7836									
36	congener TEC: Row C	0.104431	0.0157	0.1761228	0.0148445	0.803754	0.0153417	6.52742	0.0760425		0.0316495	0.088974	0.0057235	1%	7.7710	7.8155	7.8600	7.7976	J	Section 1	7.7976 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																					
	donor TEC: Row E																					
	NB03-CRB-COMBHEPMUS-S009: Row A		80.5994 J	8611.96 J	799.768 J	39197.06 J	756.244 J	105.1672 J	3720.76 J		1625.438 J	3.996 U	246.4108 J									
	value to use: Row B		80.5994	8611.96	799.768	39197.06	756.244	105.1672	3720.76		1625.438	3.996	246.4108									
37	congener TEC: Row C		0.0241798	0.2583588	0.023993	1.1759118	0.02268732	10.51672	0.1116228		0.0487631	0.11988	0.0073923	1%	12.189629	12.2496	12.30950904	12.2294	J	Section 1	12.2294 Qualified Dioxin/Furan	J 100%
	donor value to use: Row D																					
	donor TEC: Row E																					

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03-CRB-COMBHEPMUS-122	11.1394	
Line #2	NB03-CRB-COMBHEPMUS-123	12.5142	
Line #3	NB03-CRB-COMBHEPMUS-124	10.0413	J
Line #4	NB03-CRB-COMBHEPMUS-125	5.3356	
Line #5	NB03-CRB-COMBHEPMUS-126	2.0109	J
Line #6	NB03-CRB-COMBHEPMUS-127	8.3233	J
Line #7	NB03-CRB-COMBHEPMUS-129	16.0976	J
Line #8	NB03-CRB-COMBHEPMUS-130	11.6271	
Line #9	NB03-CRB-COMBHEPMUS-131	10.1143	J
Line #10	NB03-CRB-COMBHEPMUS-132	10.5461	
Line #11	NB03-CRB-COMBHEPMUS-133	15.3477	J
Line #12	NB03-CRB-COMBHEPMUS-134	11.1137	J
Line #13	NB03-CRB-COMBHEPMUS-C001	7.9588	J
Line #14	NB03-CRB-COMBHEPMUS-C002	12.3723	J
Line #15	NB03-CRB-COMBHEPMUS-C003	10.7749	
Line #16	NB03-CRB-COMBHEPMUS-C004	7.7331	
Line #17	NB03-CRB-COMBHEPMUS-C005	5.9164	J
Line #18	NB03-CRB-COMBHEPMUS-C006	13.5943	J
Line #19	NB03-CRB-COMBHEPMUS-C007	13.1284	J
Line #20	NB03-CRB-COMBHEPMUS-C008	11.8571	J
Line #21	NB03-CRB-COMBHEPMUS-N001	16.328408	J
Line #22	NB03-CRB-COMBHEPMUS-N002	11.953828	
Line #23	NB03-CRB-COMBHEPMUS-N003	15.086121	
Line #24	NB03-CRB-COMBHEPMUS-N004	10.723262	J
Line #25	NB03-CRB-COMBHEPMUS-N005	13.199775	J
Line #26	NB03-CRB-COMBHEPMUS-N006	11.046879	
Line #27	NB03-CRB-COMBHEPMUS-N007	18.761127	
Line #28	NB03-CRB-COMBHEPMUS-N008	9.4392684	
Line #29	NB03-CRB-COMBHEPMUS-S001	8.5973367	J
Line #30	NB03-CRB-COMBHEPMUS-S002	10.456126	J
Line #31	NB03-CRB-COMBHEPMUS-S003	7.1321891	
Line #32	NB03-CRB-COMBHEPMUS-S004	9.8419874	
Line #33	NB03-CRB-COMBHEPMUS-S005	10.771873	J
Line #34	NB03-CRB-COMBHEPMUS-S006	8.2337667	
Line #35	NB03-CRB-COMBHEPMUS-S007	1.5618874	J
Line #36	NB03-CRB-COMBHEPMUS-S008	7.7975798	J
Line #37	NB03-CRB-COMBHEPMUS-S009	12.229402	J

EPA Advanced KM TEQ Calculator

Crab hepatopancreas TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003								Treatment 1	
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDI	1,4,9-HpCDI	OCDF	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
1	**NB03CRB-HEP-C001: Row A**	80.4	1.97 J	0.53 J	2.22 J	0.828 J	2.21 J	4.51 J	32.3 J	6.55 J	18.3 J	12.8 J	4.64 J	0.143 J	1.32 J	10.9 J	0.265 J	0.578 J									
	value to use: Row B	80.4	1.97	0.53	2.22	0.828	2.21	4.51	32.3	6.55	18.3	12.8	4.64	0.143	1.32	10.9	0.265	0.578									
	congener TEC: Row C	80.4	1.97	0.053	0.222	0.0828	0.0221	0.001353	3.23	0.1965	5.49	1.28	0.464	0.0143	0.132	0.109	0.00265	0.0001734	No difference	93.6699	93.6699	93.6699	93.6699	none	Section 1	**93.6699**	**none**
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
2	**NB03CRB-HEP-C002: Row A**	103	2.9 J	0.866 J	2.47 J	0.881 J	2.49 J	4.83 J	42.3 J	8.69 J	21.8 J	18.7 J	6.94 J	0.0985 U	1.41 J	22 J	0.147 U	0.388 J									
	value to use: Row B	103	2.9	0.866	2.47	0.881	2.49	4.83	42.3	8.69	21.8	18.7	6.94	0.0985	1.41	22	0.147	0.388									
	congener TEC: Row C	103	2.9	0.0866	0.247	0.0881	0.0249	0.001449	4.23	0.2607	6.54	1.87	0.694	0.00985	0.141	0.22	0.00147	0.0001164	0%	120.3039	######	120.3152	120.3054	none	Section 1	**120.3054**	**none**
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
3	**NB03CRB-HEP-C003: Row A**	82.4	2.52 J	0.744 J	2.13 J	0.796 J	2.4 J	4.98 J	33.1 J	8.22 J	19.6 J	16.6 J	5.2 J	0.136 J	1.37 J	14.5 J	0.109 J	0.525 J									
	value to use: Row B	82.4	2.52	0.744	2.13	0.796	2.4	4.98	33.1	8.22	19.6	16.6	5.2	0.136	1.37	14.5	0.109	0.525									
	congener TEC: Row C	82.4	2.52	0.0744	0.213	0.0796	0.024	0.001494	3.31	0.2466	5.88	1.66	0.52	0.0136	0.137	0.145	0.00109	0.0001575	No difference	97.2259	97.2259	97.2259	97.2259	none	Section 1	**97.2259**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
4	**NB03CRB-HEP-C004: Row A**	111 J	2.54 J	0.614 J	2.08 J	0.587 J	1.64 J	4.14 J	28.3 J	6.92 J	17.9 J	11.9 J	4.86 J	0.0643 J	0.802 J	15.2 J	0.133 U	0.313 J									
	value to use: Row B	111	2.54	0.614	2.08	0.587	1.64	4.14	28.3	6.92	17.9	11.9	4.86	0.0643	0.802	15.2	0.133	0.313									
	congener TEC: Row C	111	2.54	0.0614	0.208	0.0587	0.0164	0.001242	2.83	0.2076	5.37	1.19	0.486	0.00643	0.0802	0.152	0.00133	0.0000939	0%	124.2081	######	124.2094	124.2087	J	Section 1	**124.2087**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
5	**NB03CRB-HEP-C005: Row A**	95.3	2.27 J	0.696 J	1.82 J	0.695 J	2.08 J	5.07 J	28.5 J	6.09 J	12.1 J	11.6 J	4.15 J	0.127 J	0.881 J	13.6 J	0.146 U	0.428 J									
	value to use: Row B	95.3	2.27	0.696	1.82	0.695	2.08	5.07	28.5	6.09	12.1	11.6	4.15	0.127	0.881	13.6	0.146	0.428									
	congener TEC: Row C	95.3	2.27	0.0696	0.182	0.0695	0.0208	0.001521	2.85	0.1827	3.63	1.16	0.415	0.0127	0.0881	0.136	0.00146	0.0001284	0%	106.38805	106.39	106.3895094	106.3882	none	Section 1	**106.3882**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
6	**NB03CRB-HEP-C006: Row A**	96.4	3.02 J	0.767 J	2.17 J	0.833 J	2.3 J	4.15 J	39.1 J	8.57 J	19.6 J	19.9 J	6.25 J	0.127 J	1.33 J	18.4 J	0.129 U	0.528 J									
	value to use: Row B	96.4	3.02	0.767	2.17	0.833	2.3	4.15	39.1	8.57	19.6	19.9	6.25	0.127	1.33	18.4	0.129	0.528									
	congener TEC: Row C	96.4	3.02	0.0767	0.217	0.0833	0.023	0.001245	3.91	0.2571	5.88	1.99	0.625	0.0127	0.133	0.184	0.00129	0.0001584	0%	112.8132	112.81	112.8144934	112.8139	none	Section 1	**112.8139**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
7	**NB03CRB-HEP-C007: Row A**	87.2	0.0937 U	0.879 J	2.33 J	0.806 J	2.42 J	5.01 J	45.5 J	8.97 J	19.5 J	16.3 J	5.14 J	0.0948 J	1.24 J	15.2 J	0.0977 U	0.528 J									
	value to use: Row B	87.2	0.0937	0.879	2.33	0.806	2.42	5.01	45.5	8.97	19.5	16.3	5.14	0.0948	1.24	15.2	0.0977	0.528									
	congener TEC: Row C	87.2	0.0937	0.0879	0.233	0.0806	0.0242	0.001503	4.55	0.2691	5.85	1.63	0.514	0.00948	0.124	0.152	0.000977	0.0001584	0%	100.7259	######	100.8206	100.7552	none	Section 1	**100.7552**	**none**
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
8	**NB03CRB-HEP-C008: Row A**	132	3.15 J	0.926 J	2.5 J	1.01 J	2.71 J	5.93 J	39.6 J	9.95 J	21.5 J	20.2 J	6.66 J	0.192 J	1.47 J	20.7 J	0.122 U	0.477 J									
	value to use: Row B	132	3.15	0.926	2.5	1.01	2.71	5.93	39.6	9.95	21.5	20.2	6.66	0.192	1.47	20.7	0.122	0.477									
	congener TEC: Row C	132	3.15	0.0926	0.25	0.101	0.0271	0.001779	3.96	0.2985	6.45	2.02	0.666	0.0192	0.147	0.207	0.00122	0.0001431	0%	149.3903	######	149.3915	149.3905	none	Section 1	**149.3905**	**none**
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
9	**NB03CRB-HEP-N001: Row A**	73.6	2.04 J	0.788 J	2.5 J	0.891 J	2.94 J	8.73 J	25.4 J	6.89 J	21.9 J	25.4 J	6.14 J	0.164 J	1.9 J	25.2 J	0.337 J	1.77 J									
	value to use: Row B	73.6	2.04	0.788	2.5	0.891	2.94	8.73	25.4	6.89	21.9	25.4	6.14	0.164	1.9	25.2	0.337	1.77									
	congener TEC: Row C	73.6	2.04	0.0788	0.25	0.0891	0.0294	0.002619	2.54	0.2067	6.57	2.54	0.614	0.0164	0.19	0.252	0.00337	0.000531	No difference	89.0229	89.0229	89.0229	89.0229	none	Section 1	**89.0229**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
10	**NB03CRB-HEP-N002: Row A**	69.6	2.19 J	0.644 J	1.96 J	0.659 J	2.24 J	6.73 J	27.9 J	7.02 J	18.1 J	21.6 J	6.04 J	0.127 J	1.53 J	21.6 J	0.174 J	1.01 J									
	value to use: Row B	69.6	2.19	0.644	1.96	0.659	2.24	6.73	27.9	7.02	18.1	21.6	6.04	0.127	1.53	21.6	0.174	1.01									
	congener TEC: Row C	69.6	2.19	0.0644	0.196	0.0659	0.0224	0.002019	2.79	0.2106	5.43	2.16	0.604	0.0127	0.153	0.216	0.00174	0.000303	No difference	83.7191	83.7191	83.7191	83.7191	none	Section 1	**83.7191**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
11	**NB03CRB-HEP-N003: Row A**	87.2	2.76 J	0.765 J	2.34 J	0.839 J	2.91 J	8.52 J	36.3 J	10.3 J	24.1 J	29.1 J	7.76 J	0.271 J	1.82 J	22.3 J	0.219 J	1.33 J									
	value to use: Row B	87.2	2.76	0.765	2.34	0.839	2.91	8.52	36.3	10.3	24.1	29.1	7.76	0.271	1.82	22.3	0.219	1.33									
	congener TEC: Row C	87.2	2.76	0.0765	0.234	0.0839	0.0291	0.002556	3.63	0.309	7.23	2.91	0.776	0.0271	0.182	0.223	0.00219	0.000399	No difference	105.6757	######	105.6757	105.6757	none	Section 1	**105.6757**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
12	**NB03CRB-HEP-N004: Row A**	100	0.073 U	0.637 J	1.99 J	0.561 J	1.95 J	5.3 J	28.5 J	6.73 J	16.8 J	19.2 J	5.97 J	0.0918 J	1.27 J	20.7 J	0.071 U	0.826 J									
	value to use: Row B	100	0.073	0.637	1.99	0.561	1.95	5.3	28.5	6.73	16.8	19.2	5.97	0.0918	1.27	20.7	0.071	0.826									
	congener TEC: Row C	100	0.073	0.0637	0.199	0.0561	0.0195	0.00159	2.85	0.2019	5.04	1.92	0.597	0.00918	0.127	0.207	0.00071	0.0002478	0%	111.2922	######	111.3659	111.3140	none	Section 1	**111.3140**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
13	**NB03CRB-HEP-N005: Row A**	165	3.01 J	1.04 J	3.2 J	0.957 J	3.25 J	6.27 J	35.9 J	10.6 J	22.4 J	27.6 J	8.32 J	0.0937 J	2.01 J	35.2 J	0.368 J	0.86 J									
	value to use: Row B	165	3.01	1.04	3.2	0.957	3.25	6.27	35.9	10.6	22.4	27.6	8.32	0.0937	2.01	35.2	0.368	0.86									
	congener TEC: Row C	165	3.01	0.104	0.32	0.0957	0.0325	0.001881	3.59	0.318	6.72	2.76	0.832	0.00937	0.201	0.352	0.00368	0.000258	No difference	183.35039	183.35	183.350389	183.3504	none	Section 1	**183.3504**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
14	**NB03CRB-HEP-N006: Row A**	99.6	2.36 J	0.697 J	1.88 J	0.677 J	2.09 J	5.91 J	25.8 J	5.91 J	16 J	18.1 J	3.92 J	0.0895 J	1.3 J	13 J	0.141 J	0.652 J									
	value to use: Row B	99.6	2.36	0.697	1.88	0.677	2.09	5.91	25.8	5.91	16	18.1	3.92	0.0895	1.3	13	0.141	0.652									
	congener TEC: Row C	99.6	2.36	0.0697	0.188	0.0677	0.0209	0.001773	2.58	0.1773	4.8	1.81	0.392	0.00895	0.13	0.13	0.00141	0.0001956	No difference	112.33793	112.34	112.3379286	112.3379	none	Section 1	**112.3379**	**none**
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
15	**NB03CRB-HEP-N007: Row A**	128	2.76 J	0.793 J	2.54 J	0.798 J	2.57 J	5.99 J	37 J	7.61 J	21.9 J	26.4 J	6.16 J	0.101 J	1.86 J	23.8 J	0.0504 J	0.578 J									
	value to use: Row B	128	2.76	0.793	2.54	0.798	2.57	5.99	37	7.61	21.9	26.4	6.16	0.101	1.86	23.8	0.0504	0.578									
	congener TEC: Row C	128	2.76	0.0793	0.254	0.0798	0.0257	0.001797	3.7	0.2283	6.57	2.64	0.616	0.0101	0.186	0.238	0.000504	0.0001734	No difference	145.3897	######	145.3897	145.3897	none	Section 1	**145.3897**	**none**
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
16	**NB03CRB-HEP-N008: Row A**	119	0.0782 U	0.61 J	1.99 J	0.567 J	3.18 J	20.4 J	28.1 J	6.64 J	18.6 J	15.9 J	5.07 J	0.0902 J	1.08 J	15.7 J	0.0857 U	0.795 J									
	value to use: Row B	119	0.0782	0.61	1.99	0.567	3.18	20.4	28.1	6.64	18.6	15.9	5.07	0.0902	1.08	15.7	0.0857	0.795									
	congener TEC: Row C	119	0.0782	0.061	0.199	0.0567	0.0318	0.00612	2.81	0.1992	5.58	1.59	0.507	0.00902	0.108	0.157	0.000857	0.0002385	0%	130.3151	######	130.3941	130.3389	none	Section 1	**130.3389**	**none**
	donor value to use: Row D																									Qualified	9%
	donor TEC: Row E																									Dioxin/Furan	100%
17	**NB03CRB-HEP-S001: Row A**	50.7	1.74 J	0.527 J	1.54 J	0.67 J	2.11 J	5.8 J	31.4 J	5.99 J	11.8 J	7.14 J	3.07 J	0.0629 J	0.883 J	8.22 J	0.127 U	0.372 J									
	value to use: Row B	50.7	1.74	0.527	1.54	0.67	2.11	5.8	31.4	5.99	11.8	7.14	3.07	0.0629	0.883	8.22	0.127	0.372									
	congener TEC: Row C	50.7	1.74	0.0527	0.154	0.067	0.0211	0.00174	3.14	0.1797	3.54	0.714	0.307	0.00629	0.0883	0.0822	0.00127	0.0001116	0%	60.7941	60.7948	60.7954	60.7943	none	Section 1	**60.7943**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Crab hepatopancreas TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003								Treatment 1	
	Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDs	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDs	1,4,9-HpCDs	OCDF	Summary of Sensitivity Analysis (relative percent difference)	U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
18	NB03CRB-HEP-S002: Row A	95.5	0.0547 U	0.658 J	2 J	0.629 J	1.93 J	4.56 J	35.2 J	6.84 J	15.5 J	11.3 J	4.48 J	0.155 J	0.95 J	14 J	0.0818 U	0.358 J									
	value to use: Row B	95.5	0.0547	0.658	2	0.629	1.93	4.56	35.2	6.84	15.5	11.3	4.48	0.155	0.95	14	0.0818	0.358									
	congener TEC: Row C	95.5	0.0547	0.0658	0.2	0.0629	0.0193	0.001368	3.52	0.2052	4.65	1.13	0.448	0.0155	0.095	0.14	0.000818	0.0001074	0%	106.0532	######	106.1087	106.0606	none	Section 1	106.0606	none
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
19	NB03CRB-HEP-S003: Row A	61.3	0.081 U	0.493 J	1.4 J	0.452 J	1.53 J	3.18 J	29.8 J	5.51 J	11.2 J	8.05 J	2.55 J	0.135 J	0.625 J	6.55 J	0.0755 U	0.255 J									
	value to use: Row B	61.3	0.081	0.493	1.4	0.452	1.53	3.18	29.8	5.51	11.2	8.05	2.55	0.135	0.625	6.55	0.0755	0.255									
	congener TEC: Row C	61.3	0.081	0.0493	0.14	0.0452	0.0153	0.000954	2.98	0.1653	3.36	0.805	0.255	0.0135	0.0625	0.0655	0.000755	0.0000765	0%	69.2576	69.2985	69.3394	69.2858	none	Section 1	69.2858	none
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
20	NB03CRB-HEP-S004: Row A	85.1	2.49 J	0.64 J	2.25 J	0.706 J	2.2 J	4.92 J	34.6 J	6.69 J	15.7 J	9.87 J	4.05 J	0.102 J	1.07 J	9.6 J	0.13 U	0.395 J									
	value to use: Row B	85.1	2.49	0.64	2.25	0.706	2.2	4.92	34.6	6.69	15.7	9.87	4.05	0.102	1.07	9.6	0.13	0.395									
	congener TEC: Row C	85.1	2.49	0.064	0.225	0.0706	0.022	0.001476	3.46	0.2007	4.71	0.987	0.405	0.0102	0.107	0.096	0.0013	0.0001185	0%	97.9491	97.9497	97.9504	97.9492	none	Section 1	97.9492	none
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
21	NB03CRB-HEP-S005: Row A	76.5	0.0738 U	0.722 J	2.23 J	0.654 J	2.22 J	5.64 J	32.7 J	7.18 J	16.5 J	15.3 J	4.2 J	0.127 J	1.07 J	13.6 J	0.0788 U	0.375 J									
	value to use: Row B	76.5	0.0738	0.722	2.23	0.654	2.22	5.64	32.7	7.18	16.5	15.3	4.2	0.127	1.07	13.6	0.0788	0.375									
	congener TEC: Row C	76.5	0.0738	0.0722	0.223	0.0654	0.0222	0.001692	3.27	0.2154	4.95	1.53	0.42	0.0127	0.107	0.136	0.000788	0.0001125	0%	87.525705	87.563	87.6002925	87.5507	none	Section 1	87.5507	none
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
22	NB03CRB-HEP-S006: Row A	43 J	1.63 J	0.466 J	1.64 J	0.544 J	1.53 J	5.19 J	32 J	5.41 J	12.3 J	6.61 J	2.94 J	0.114 J	0.691 J	7.08 J	0.181 J	0.369 J									
	value to use: Row B	43	1.63	0.466	1.64	0.544	1.53	5.19	32	5.41	12.3	6.61	2.94	0.114	0.691	7.08	0.181	0.369									
	congener TEC: Row C	43	1.63	0.0466	0.164	0.0544	0.0153	0.001557	3.2	0.1623	3.69	0.661	0.294	0.0114	0.0691	0.0708	0.00181	0.0001107	No difference	53.072378	53.072	53.0723777	53.0724	J	Section 1	53.0724	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
23	NB03CRB-HEP-S007: Row A	44.5	1.99 J	0.505 J	1.43 J	0.573 J	1.58 J	5.61 J	32.5 J	5.56 J	11.4 J	5.26 J	3.2 J	0.122 J	0.872 J	5.36 J	0.106 U	0.529 J									
	value to use: Row B	44.5	1.99	0.505	1.43	0.573	1.58	5.61	32.5	5.56	11.4	5.26	3.2	0.122	0.872	5.36	0.106	0.529									
	congener TEC: Row C	44.5	1.99	0.0505	0.143	0.0573	0.0158	0.001683	3.25	0.1668	3.42	0.526	0.32	0.0122	0.0872	0.0536	0.00106	0.0001587	0%	54.5942	54.5948	54.5953	54.5944	none	Section 1	54.5944	none
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
24	NB03CRB-HEP-S008: Row A	36.6	1.72 J	0.447 J	1.3 J	0.473 J	1.22 J	3.44 J	24.3 J	4.92 J	9.4 J	5.34 J	2.48 J	0.164 U	0.604 J	6.61 J	0.206 U	0.337 J									
	value to use: Row B	36.6	1.72	0.447	1.3	0.473	1.22	3.44	24.3	4.92	9.4	5.34	2.48	0.164	0.604	6.61	0.206	0.337									
	congener TEC: Row C	36.6	1.72	0.0447	0.13	0.0473	0.0122	0.001032	2.43	0.1476	2.82	0.534	0.248	0.0164	0.0604	0.0661	0.00206	0.0001011	0%	44.8614	44.8707	44.8799	44.8655	none	Section 1	44.8655	none
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
25	NB03CRB-HEP-S009: Row A	65.1	2.76 J	0.506 J	1.53 J	0.577 J	1.77 J	5.29 J	58.7 J	7.86 J	13.6 J	6.51 J	2.76 J	0.099 J	0.811 J	6.59 J	0.0691 U	0.322 J									
	value to use: Row B	65.1	2.76	0.506	1.53	0.577	1.77	5.29	58.7	7.86	13.6	6.51	2.76	0.099	0.811	6.59	0.0691	0.322									
	congener TEC: Row C	65.1	2.76	0.0506	0.153	0.0577	0.0177	0.001587	5.87	0.2358	4.08	0.651	0.276	0.0099	0.0811	0.0659	0.000691	0.0000966	0%	79.4104	79.4107	79.4111	79.4105	none	Section 1	79.4105	none
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
26	NB03CRB-HEP122: Row A	103	2.84 J	0.758 J	2.37 J	0.777 J	2.28 J	6.62 J	37.9 J	9.29 J	24.2 J	30.5 J	6.01 J	0.312 J	2.09 J	28.3 J	0.323 J	1.73 J									
	value to use: Row B	103	2.84	0.758	2.37	0.777	2.28	6.62	37.9	9.29	24.2	30.5	6.01	0.312	2.09	28.3	0.323	1.73									
	congener TEC: Row C	103	2.84	0.0758	0.237	0.0777	0.0228	0.001986	3.79	0.2787	7.26	3.05	0.601	0.0312	0.209	0.283	0.00323	0.000519	No difference	121.7619	######	121.7619	121.7619	none	Section 1	121.7619	none
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
27	NB03CRB-HEP123: Row A	80	2.58 J	0.531 J	1.3 J	0.436 J	1.08 J	2.5 J	23.9 J	5.43 J	13.9 J	13.5 J	3.41 J	0.0872 J	0.888 J	15 J	0.109 J	0.352 J									
	value to use: Row B	80	2.58	0.531	1.3	0.436	1.08	2.5	23.9	5.43	13.9	13.5	3.41	0.0872	0.888	15	0.109	0.352									
	congener TEC: Row C	80	2.58	0.0531	0.13	0.0436	0.0108	0.00075	2.39	0.1629	4.17	1.35	0.341	0.00872	0.0888	0.15	0.00109	0.0001056	No difference	91.4809	91.4809	91.4809	91.4809	none	Section 1	91.4809	none
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
28	NB03CRB-HEP124: Row A	60.9 J	1.97 J	0.507 J	1.76 J	0.512 J	1.93 J	5.33 J	27.1 J	6.1 J	18.5 J	10.7 J	4.78 J	0.0525 J	0.811 J	12.3 J	0.152 J	0.44 J									
	value to use: Row B	60.9	1.97	0.507	1.76	0.512	1.93	5.33	27.1	6.1	18.5	10.7	4.78	0.0525	0.811	12.3	0.152	0.44									
	congener TEC: Row C	60.9	1.97	0.0507	0.176	0.0512	0.0193	0.001599	2.71	0.183	5.55	1.07	0.478	0.00525	0.0811	0.123	0.00152	0.000132	No difference	73.3708	73.3708	73.3708	73.3708	J	Section 1	73.3708	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
29	NB03CRB-HEP125: Row A	44.4	1.2 J	0.286 J	1.18 J	0.35 J	1.34 J	3.75 J	19.7 J	4.3 J	8.63 J	5.83 J	2.58 J	0.135 J	0.612 J	6.52 J	0.11 U	0.369 J									
	value to use: Row B	44.4	1.2	0.286	1.18	0.35	1.34	3.75	19.7	4.3	8.63	5.83	2.58	0.135	0.612	6.52	0.11	0.369									
	congener TEC: Row C	44.4	1.2	0.0286	0.118	0.035	0.0134	0.001125	1.97	0.129	2.589	0.583	0.258	0.0135	0.0612	0.0652	0.0011	0.0001107	0%	51.465136	51.466	51.4662357	51.4652	none	Section 1	51.4652	none
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
30	NB03CRB-HEP126: Row A	60.1 J	1.68 J	0.526 J	1.4 J	0.479 J	1.44 J	4.74 J	26.2 J	5.39 J	14.1 J	6.98 J	3.02 J	0.0739 J	0.688 J	9.18 J	0.121 U	0.316 J									
	value to use: Row B	60.1	1.68	0.526	1.4	0.479	1.44	4.74	26.2	5.39	14.1	6.98	3.02	0.0739	0.688	9.18	0.121	0.316									
	congener TEC: Row C	60.1	1.68	0.0526	0.14	0.0479	0.0144	0.001422	2.62	0.1617	4.23	0.698	0.302	0.00739	0.0688	0.0918	0.00121	0.0000948	0%	70.216107	70.217	70.2173168	70.2162	J	Section 1	70.2162	J
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
31	NB03CRB-HEP127: Row A	48	0.0999 U	0.417 J	1.16 J	0.404 J	1.21 J	4.56 J	25 J	4.8 J	9.29 J	4.3 J	1.89 J	0.107 J	0.561 J	4.74 J	0.109 U	0.386 J									
	value to use: Row B	48	0.0999	0.417	1.16	0.404	1.21	4.56	25	4.8	9.29	4.3	1.89	0.107	0.561	4.74	0.109	0.386									
	congener TEC: Row C	48	0.0999	0.0417	0.116	0.0404	0.0121	0.001368	2.5	0.144	2.787	0.43	0.189	0.0107	0.0561	0.0474	0.00109	0.0001158	0%	54.3759	54.4264	54.4769	54.3993	none	Section 1	54.3993	none
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
32	NB03CRB-HEP129: Row A	43.6	2.37 J	0.521 J	1.49 J	0.524 J	1.66 J	5.38 J	27.5 J	5.35 J	11.1 J	4.84 J	3.39 J	0.111 J	0.815 J	8.14 J	0.115 U	0.33 J									
	value to use: Row B	43.6	2.37	0.521	1.49	0.524	1.66	5.38	27.5	5.35	11.1	4.84	3.39	0.111	0.815	8.14	0.115	0.33									
	congener TEC: Row C	43.6	2.37	0.0521	0.149	0.0524	0.0166	0.001614	2.75	0.1605	3.33	0.484	0.339	0.0111	0.0815	0.0814	0.00115	0.000099	0%	53.4793	53.4799	53.4805	53.4794	none	Section 1	53.4794	none
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
33	NB03CRB-HEP130: Row A	76.8	0.0869 U	0.641 J	2.02 J	0.61 J	1.97 J	4.75 J	32.8 J	6.04 J	13.5 J	6.92 J	3.52 J	0.114 J	0.948 J	8.93 J	0.2 J	0.363 J									
	value to use: Row B	76.8	0.0869	0.641	2.02	0.61	1.97	4.75	32.8	6.04	13.5	6.92	3.52	0.114	0.948	8.93	0.2	0.363									
	congener TEC: Row C	76.8	0.0869	0.0641	0.202	0.061	0.0197	0.001425	3.28	0.1812	4.05	0.692	0.352	0.0114	0.0948	0.0893	0.002	0.0001089	0%	85.9010	85.9445	85.9879	85.9239	none	Section 1	85.9239	none
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
34	NB03CRB-HEP131: Row A	72.9	1.94 J	0.515 J	1.59 J	0.586 J	2.19 J	6.29 J	34.1 J	5.44 J	11.4 J	5.73 J	2.82 J	0.0649 J	0.771 J	8.8 J	0.123 U	0.445 J									
	value to use: Row B	72.9	1.94	0.515	1.59	0.586	2.19	6.29	34.1	5.44	11.4	5.73	2.82	0.0649	0.771	8.8	0.123	0.445									
	congener TEC: Row C	72.9	1.94	0.0515	0.159	0.0586	0.0219	0.001887	3.41	0.1632	3.42	0.573	0.282	0.00649	0.0771	0.088	0.00123	0.0001335	0%	83.1528	83.1534	83.1540	83.1529	none	Section 1	83.1529	none
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
35	NB03CRB-HEP132: Row A	113	3.38 J	0.841 J	2.68 J	0.873 J	2.76 J	4.85 J	39.1 J	8.59 J	21.2 J	24.7 J	5.22 J	0.108 J	1.91 J	19.7 J	0.131 U	0.561 J									
	value to use: Row B	113	3.38	0.841	2.68	0.873	2.76	4.85	39.1	8.59	21.2	24.7	5.22	0.108	1.91	19.7	0.131	0.561									
	congener TEC: Row C	113	3.38	0.0841	0.268	0.0873	0.0276	0.001455	3.91	0.2577	6.36	2.47	0.522	0.0108	0.191	0.197	0.00131	0.0001683	0%	130.7671	######	130.7684	130.7673	none	Section 1	130.7673	none
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
36	NB03CRB-HEP133: Row A	139	3.05 J	0.934 J	2.62 J	0.867 J	2.89 J	5.94 J	34.2 J	9.17 J	20.1 J	26 J	6.78 J	0.15 J	1.85 J	34.2 J	0.117 U	0.868 J									
	value to use: Row B	139	3.05	0.934	2.62	0.867	2.89	5.94	34.2	9.17	20.1	26	6.78	0.15	1.85	34.2	0.117	0.868									
	congener TEC: Row C	139	3.05	0.0934	0.262	0.0867	0.0289	0.001782	3.42	0.2751	6.03	2.6	0.678	0.015	0.185	0.342	0.00117	0.0002604	0%	156.0681	######	156.0693	156.0684	none	Section 1	156.0684	none
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Crab hepatopancreas TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17						
WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**						
Sample notes	**Sample ID: (must enter on Row A)**	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDL	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDL	1,4,9-HpCDL	OCDF	**Summary of Sensitivity Analysis (relative percent difference)**	**TEQs from Substitution**			**KM Method**			**(Quasi) Sensitivity Analysis SECTION 1**	
																				U = 0 & sum	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	Highest TEC value is a DETECT, and there are no rejected ("R") values	
																										Treatment 1	
																										KM TEQ	**Qualifier and Qualifier Fractions**
	NB03CRB-HEP134: Row A	15.7	1.81 J	0.51 J	1.44 J	0.565 J	1.77 J	3.52 J	19.3 J	3.6 J	5.82 J	2.13 J	1.62 J	0.0881 J	0.606 J	3.39 J	0.0756 J	0.189 J										
	value to use: Row B	15.7	1.81	0.51	1.44	0.565	1.77	3.52	19.3	3.6	5.82	2.13	1.62	0.0881	0.606	3.39	0.0756	0.189										
37	**congener TEC: Row C**	**15.7**	**1.81**	**0.051**	**0.144**	**0.0565**	**0.0177**	**0.001056**	**1.93**	**0.108**	**1.746**	**0.213**	**0.162**	**0.00881**	**0.0606**	**0.0339**	**0.000756**	**0.0000567**	No difference	22.043379	22.043	22.0433787	22.0434	none	**Section 1**	**22.0434**	**none**
	donor value to use: Row D																									Qualified	29%
	donor TEC: Row E																									Dioxin/Furan	100%

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03CRB-HEP-C001	93.6699	
Line #2	NB03CRB-HEP-C002	120.3054	
Line #3	NB03CRB-HEP-C003	97.2259	
Line #4	NB03CRB-HEP-C004	124.2087	J
Line #5	NB03CRB-HEP-C005	106.3882	
Line #6	NB03CRB-HEP-C006	112.8139	
Line #7	NB03CRB-HEP-C007	100.7552	
Line #8	NB03CRB-HEP-C008	149.3905	
Line #9	NB03CRB-HEP-N001	89.0229	
Line #10	NB03CRB-HEP-N002	83.7191	
Line #11	NB03CRB-HEP-N003	105.6757	
Line #12	NB03CRB-HEP-N004	111.3140	
Line #13	NB03CRB-HEP-N005	183.3504	
Line #14	NB03CRB-HEP-N006	112.3379	
Line #15	NB03CRB-HEP-N007	145.3897	
Line #16	NB03CRB-HEP-N008	130.3389	
Line #17	NB03CRB-HEP-S001	60.7943	
Line #18	NB03CRB-HEP-S002	106.0606	
Line #19	NB03CRB-HEP-S003	69.2858	
Line #20	NB03CRB-HEP-S004	97.9492	
Line #21	NB03CRB-HEP-S005	87.550734	
Line #22	NB03CRB-HEP-S006	53.072378	J
Line #23	NB03CRB-HEP-S007	54.5944	
Line #24	NB03CRB-HEP-S008	44.865475	
Line #25	NB03CRB-HEP-S009	79.41048	
Line #26	NB03CRB-HEP122	121.76194	
Line #27	NB03CRB-HEP123	91.480866	
Line #28	NB03CRB-HEP124	73.370801	J
Line #29	NB03CRB-HEP125	51.465246	
Line #30	NB03CRB-HEP126	70.216202	J
Line #31	NB03CRB-HEP127	54.399333	
Line #32	NB03CRB-HEP129	53.479412	
Line #33	NB03CRB-HEP130	85.923853	
Line #34	NB03CRB-HEP131	83.152944	
Line #35	NB03CRB-HEP132	130.76729	
Line #36	NB03CRB-HEP133	156.0684	
Line #37	NB03CRB-HEP134	22.043379	

EPA Advanced KM TEQ Calculator

Crab hepatopancreas PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 2/1/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29		TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003	Summary of Sensitivity Analysis (relative percent difference)							Treatment 1	
	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189		U = 0 & sum	U = 1/2 DL & sum	U = DL & sum	Sample KM TEQ	Qualifier	Select KM TEQ	KM TEQ	Qualifier and Qualifier Fractions
	NB03CRB-HEP-C001: Row A		194	25400 J	2130	106000 J	2200	242	8850 J		3810 J	7.99 J	626									
	value to use: Row B		194	25400	2130	106000	2200	242	8850		3810	7.99	626									
1	congener TEC: Row C		0.0582	0.762	0.0639	3.18	0.066	24.2	0.2655		0.1143	0.2397	0.01878	No difference	28.9684	28.9684	28.9684	28.9684	none	Section 1	28.9684	none
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C002: Row A	9490 J	446	52900 J	4190 J		3750 J	430 J	19500 J		7740 J	7.23 U	1480									
	value to use: Row B	9490	446	52900	4190		3750	430	19500		7740	7.23	1480									
2	congener TEC: Row C	0.949	0.1338	1.587	0.1257		0.1125	43	0.585		0.2322	0.2169	0.0444	0%	46.7696	46.8781	46.9865	46.8737	J	Section 1	46.8737	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C003: Row A	7200 J	343	43800 J	3460 J	191000 J	3230 J	306	14300 J		6010 J	7.49 U	1010									
	value to use: Row B	7200	343	43800	3460	191000	3230	306	14300		6010	7.49	1010									
3	congener TEC: Row C	0.72	0.1029	1.314	0.1038	5.73	0.0969	30.6	0.429		0.1803	0.2247	0.0303	1%	39.3072	39.4196	39.5319	39.4100	none	Section 1	39.4100	none
	donor value to use: Row D																				Qualified	22%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C004: Row A		184	23400 J	2200 J	131000 J	1910 J	221	9350 J		3850 J	1.43 U	659 J									
	value to use: Row B		184	23400	2200	131000	1910	221	9350		3850	1.43	659									
4	congener TEC: Row C		0.0552	0.702	0.066	3.93	0.0573	22.1	0.2805		0.1155	0.0429	0.01977	0%	27.3263	27.3477	27.3692	27.3460	none	Section 1	27.3460	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C005: Row A	4160 J	199	20900 J	1920 J	100000 J	1720 J	174 J	8840 J		3650 J	7.32 U	669									
	value to use: Row B	4160	199	20900	1920	100000	1720	174	8840		3650	7.32	669									
5	congener TEC: Row C	0.416	0.0597	0.627	0.0576	3	0.0516	17.4	0.2652		0.1095	0.2196	0.02007	1%	22.00667	22.1165	22.22627	22.0664	J	Section 1	22.0664	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C006: Row A		361	44400 J	3580 J	225000 J	3710 J	425	17000 J		6870 J	7.38 U	1210									
	value to use: Row B		361	44400	3580	225000	3710	425	17000		6870	7.38	1210									
6	congener TEC: Row C		0.1083	1.332	0.1074	6.75	0.1113	42.5	0.51		0.2061	0.2214	0.0363	0%	51.6614	51.7721	51.8828	51.7753	none	Section 1	51.7753	none
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C007: Row A		298	41900 J	3240 J	214000 J	3580 J	406	13400 J		5900 J	17.2	932 J									
	value to use: Row B		298	41900	3240	214000	3580	406	13400		5900	17.2	932									
7	congener TEC: Row C		0.0894	1.257	0.0972	6.42	0.1074	40.6	0.402		0.177	0.516	0.02796	No difference	49.6940	49.6940	49.6940	49.6940	none	Section 1	49.6940	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-C008: Row A	6770 J	292	36800 J	3140 J	175000 J	2790 J	360	12900 J		5680 J	1.49 U	905 J									
	value to use: Row B	6770	292	36800	3140	175000	2790	360	12900		5680	1.49	905									
8	congener TEC: Row C	0.677	0.0876	1.104	0.0942	5.25	0.0837	36	0.387		0.1704	0.0447	0.02715	0%	43.8811	43.9034	43.9258	43.9082	none	Section 1	43.9082	none
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N001: Row A		383 J	50000 J	3970 J	208000 J	4140 J	494 J	15600 J		6670 J	24.3 J	1180 J									
	value to use: Row B		383	50000	3970	208000	4140	494	15600		6670	24.3	1180									
9	congener TEC: Row C		0.1149	1.5	0.1191	6.24	0.1242	49.4	0.468		0.2001	0.729	0.0354	No difference	58.9307	58.9307	58.9307	58.9307	J	Section 1	58.9307	J
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N002: Row A		284	34500 J	2890 J	164000 J	2720 J	355	12700 J		4960 J	1.49 U	907 J									
	value to use: Row B		284	34500	2890	164000	2720	355	12700		4960	1.49	907									
10	congener TEC: Row C		0.0852	1.035	0.0867	4.92	0.0816	35.5	0.381		0.1488	0.0447	0.02721	0%	42.2655	42.2879	42.3102	42.2927	none	Section 1	42.2927	none
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N003: Row A		364	52800 J	4070 J	243000 J	3620 J	441	17200 J		7270 J	7.2 U	1410									
	value to use: Row B		364	52800	4070	243000	3620	441	17200		7270	7.2	1410									
11	congener TEC: Row C		0.1092	1.584	0.1221	7.29	0.1086	44.1	0.516		0.2181	0.216	0.0423	0%	54.0903	54.1983	54.3063	54.1859	none	Section 1	54.1859	none
	donor value to use: Row D																				Qualified	19%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N004: Row A		257	33700 J	2890	155000 J	2690	334	11600 J		4710 J	10.7 J	868									
	value to use: Row B		257	33700	2890	155000	2690	334	11600		4710	10.7	868									
12	congener TEC: Row C		0.0771	1.011	0.0867	4.65	0.0807	33.4	0.348		0.1413	0.321	0.02604	No difference	40.1418	40.1418	40.1418	40.1418	none	Section 1	40.1418	none
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N005: Row A		335	38200 J	3080 J	173000 J	2740	375	13800 J		5210 J	18.8 J	1110									
	value to use: Row B		335	38200	3080	173000	2740	375	13800		5210	18.8	1110									
13	congener TEC: Row C		0.1005	1.146	0.0924	5.19	0.0822	37.5	0.414		0.1563	0.564	0.0333	No difference	45.2787	45.2787	45.2787	45.2787	none	Section 1	45.2787	none
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N006: Row A	6870 J	300	39400 J	3340 J	204000 J	2930	305	12700 J		5430 J	7.37 U	1050									
	value to use: Row B	6870	300	39400	3340	204000	2930	305	12700		5430	7.37	1050									
14	congener TEC: Row C	0.687	0.09	1.182	0.1002	6.12	0.0879	30.5	0.381		0.1629	0.2211	0.0315	1%	39.3425	39.4531	39.5636	39.4370	none	Section 1	39.4370	none
	donor value to use: Row D																				Qualified	22%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-N007: Row A		507	55700 J	4960	248000 J	4430	570	19300 J		8180 J	13.6 U	1480									
	value to use: Row B		507	55700	4960	248000	4430	570	19300		8180	13.6	1480									
15	congener TEC: Row C		0.1521	1.671	0.1488	7.44	0.1329	57	0.579		0.2454	0.408	0.0444	1%	67.4136	67.6176	67.8216	67.5583	none	Section 1	67.5583	none
	donor value to use: Row D																				Qualified	15%
	donor TEC: Row E																				Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Crab hepatopancreas PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 2/1/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**									
	Sample ID: **(must enter on Row A)**	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	NB03CRB-HEP-N008: Row A		228	28300 J	2360	121000 J	2190	284	10200 J		4520 J	13.3 J	916									
	value to use: Row B		228	28300	2360	121000	2190	284	10200		4520	13.3	916									
16	**congener TEC: Row C**		**0.0684**	**0.849**	**0.0708**	**3.63**	**0.0657**	**28.4**	**0.306**		**0.1356**	**0.399**	**0.02748**	No difference	33.9520	33.9520	33.9520	33.9520	none	**Section 1**	**33.9520**	**none**
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S001: Row A		235	26900 J	2360	119000 J	2220	261 J	10700 J		4750 J	7.35 U	829									
	value to use: Row B		235	26900	2360	119000	2220	261	10700		4750	7.35	829									
17	**congener TEC: Row C**		**0.0705**	**0.807**	**0.0708**	**3.57**	**0.0666**	**26.1**	**0.321**		**0.1425**	**0.2205**	**0.02487**	1%	31.1733	31.2835	31.3938	31.2483	J	**Section 1**	**31.2483**	**J**
	donor value to use: Row D																				Qualified	99%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S002: Row A		286	32100 J	3100 J	146000 J	2670	331	12200 J		5230 J	8.13 J	833									
	value to use: Row B		286	32100	3100	146000	2670	331	12200		5230	8.13	833									
18	**congener TEC: Row C**		**0.0858**	**0.963**	**0.093**	**4.38**	**0.0801**	**33.1**	**0.366**		**0.1569**	**0.2439**	**0.02499**	No difference	39.4937	39.4937	39.4937	39.4937	none	**Section 1**	**39.4937**	**none**
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S003: Row A		161	18200 J	1770	90500 J	1620	213	8210 J		3900 J	9.23 J	593									
	value to use: Row B		161	18200	1770	90500	1620	213	8210		3900	9.23	593									
19	**congener TEC: Row C**		**0.0483**	**0.546**	**0.0531**	**2.715**	**0.0486**	**21.3**	**0.2463**		**0.117**	**0.2769**	**0.01779**	No difference	25.3690	25.3690	25.3690	25.3690	none	**Section 1**	**25.3690**	**none**
	donor value to use: Row D																				Qualified	15%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S004: Row A	4830 J	222	26600 J	2340 J	144000 J	2190 J	297	11200 J		4700 J	1.46 U	794 J									
	value to use: Row B	4830	222	26600	2340	144000	2190	297	11200		4700	1.46	794									
20	**congener TEC: Row C**	**0.483**	**0.0666**	**0.798**	**0.0702**	**4.32**	**0.0657**	**29.7**	**0.336**		**0.141**	**0.0438**	**0.02382**	0%	36.0043	36.0262	36.0481	36.0281	none	**Section 1**	**36.0281**	**none**
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S005: Row A		289 J	36400 J	2870 J	173000 J	2710 J	323 J	12600 J		5480 J	12.6 J	900 J									
	value to use: Row B		289	36400	2870	173000	2710	323	12600		5480	12.6	900									
21	**congener TEC: Row C**		**0.0867**	**1.092**	**0.0861**	**5.19**	**0.0813**	**32.3**	**0.378**		**0.1644**	**0.378**	**0.027**	No difference	39.7835	39.7835	39.7835	39.7835	J	**Section 1**	**39.7835**	**J**
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S006: Row A		185	24800 J	2060 J	125000 J	1840 J	247	9530 J		4200 J	1.5 U	687 J									
	value to use: Row B		185	24800	2060	125000	1840	247	9530		4200	1.5	687									
22	**congener TEC: Row C**		**0.0555**	**0.744**	**0.0618**	**3.75**	**0.0552**	**24.7**	**0.2859**		**0.126**	**0.045**	**0.02061**	0%	29.79901	29.8215	29.84401	29.8196	none	**Section 1**	**29.8196**	**none**
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S007: Row A	4390 J	226 J	23700 J	2340 J	115000 J	2110 J		9650 J		4000 J	14.4 J	671 J									
	value to use: Row B	4390	226	23700	2340	115000	2110		9650		4000	14.4	671									
23	**congener TEC: Row C**	**0.439**	**0.0678**	**0.711**	**0.0702**	**3.45**	**0.0633**		**0.2895**		**0.12**	**0.432**	**0.02013**	No difference	5.6629	5.6629	5.6629	5.6629	J	**Section 1**	**5.6629**	**J**
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S008: Row A	3870 J	193	21800 J	1830	100000 J	1900	243	9500 J		3960 J	7.28 U	722									
	value to use: Row B	3870	193	21800	1830	100000	1900	243	9500		3960	7.28	722									
24	**congener TEC: Row C**	**0.387**	**0.0579**	**0.654**	**0.0549**	**3**	**0.057**	**24.3**	**0.285**		**0.1188**	**0.2184**	**0.02166**	1%	28.9363	29.0455	29.1547	28.9983	none	**Section 1**	**28.9983**	**none**
	donor value to use: Row D																				Qualified	16%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP-S009: Row A		302	32400 J	3010	148000 J	2850	398	14100 J		6170 J	11.1 U	938									
	value to use: Row B		302	32400	3010	148000	2850	398	14100		6170	11.1	938									
25	**congener TEC: Row C**		**0.0906**	**0.972**	**0.0903**	**4.44**	**0.0855**	**39.8**	**0.423**		**0.1851**	**0.333**	**0.02814**	1%	46.1146	46.2811	46.4476	46.2106	none	**Section 1**	**46.2106**	**none**
	donor value to use: Row D																				Qualified	14%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP122: Row A	7690 J	369	48800 J	3820 J	173000 J	3640 J	306	15100 J		6220 J	19.3 J	1080									
	value to use: Row B	7690	369	48800	3820	173000	3640	306	15100		6220	19.3	1080									
26	**congener TEC: Row C**	**0.769**	**0.1107**	**1.464**	**0.1146**	**5.19**	**0.1092**	**30.6**	**0.453**		**0.1866**	**0.579**	**0.0324**	No difference	39.6085	39.6085	39.6085	39.6085	none	**Section 1**	**39.6085**	**none**
	donor value to use: Row D																				Qualified	22%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP123: Row A	6280 J	314	40700 J	3880 J	206000 J	3630 J	354	15500 J		6720 J	7.48 U	1290									
	value to use: Row B	6280	314	40700	3880	206000	3630	354	15500		6720	7.48	1290									
27	**congener TEC: Row C**	**0.628**	**0.0942**	**1.221**	**0.1164**	**6.18**	**0.1089**	**35.4**	**0.465**		**0.2016**	**0.2244**	**0.0387**	1%	44.4538	44.5660	44.6782	44.5658	none	**Section 1**	**44.5658**	**none**
	donor value to use: Row D																				Qualified	20%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP124: Row A	4370 J	225	33300 J	2890 J	152000 J	2820	309	12700 J		5480 J	7.14 U	911									
	value to use: Row B	4370	225	33300	2890	152000	2820	309	12700		5480	7.14	911									
28	**congener TEC: Row C**	**0.437**	**0.0675**	**0.999**	**0.0867**	**4.56**	**0.0846**	**30.9**	**0.381**		**0.1644**	**0.2142**	**0.02733**	1%	37.7075	37.8146	37.9217	37.7936	none	**Section 1**	**37.7936**	**none**
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP125: Row A	2410 J	134	13500 J	1390 J	71800 J	1400 J	140	6000 J		2630 J	8.79	414									
	value to use: Row B	2410	134	13500	1390	71800	1400	140	6000		2630	8.79	414									
29	**congener TEC: Row C**	**0.241**	**0.0402**	**0.405**	**0.0417**	**2.154**	**0.042**	**14**	**0.18**		**0.0789**	**0.2637**	**0.01242**	No difference	17.45892	17.4589	17.45892	17.4589	none	**Section 1**	**17.4589**	**none**
	donor value to use: Row D																				Qualified	18%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP126: Row A		177	21400 J	2030 J	122000 J	1880 J	1.56 U	9060 J		3660 J	1.46 U	609 J									
	value to use: Row B		177	21400	2030	122000	1880	1.56	9060		3660	1.46	609									
30	**congener TEC: Row C**		**0.0531**	**0.642**	**0.0609**	**3.66**	**0.0564**	**0.156**	**0.2718**		**0.1098**	**0.0438**	**0.01827**	4%	4.87227	4.97217	5.07207	4.9433	J	**Section 1**	**4.9433**	**J**
	donor value to use: Row D																				Qualified	99%
	donor TEC: Row E																				Dioxin/Furan	
	NB03CRB-HEP127: Row A		212 J	18400 J	2020 J	135000 J	2070 J	225 J	10300 J		5180 J	1.45 U	535									
	value to use: Row B		212	18400	2020	135000	2070	225	10300		5180	1.45	535									
31	**congener TEC: Row C**		**0.0636**	**0.552**	**0.0606**	**4.05**	**0.0621**	**22.5**	**0.309**		**0.1554**	**0.0435**	**0.01605**	0%	27.7688	27.7905	27.8123	27.7848	J	**Section 1**	**27.7848**	**J**
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Crab hepatopancreas PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Hep PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 2/1/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1 Highest TEC value is a DETECT, and there are no rejected ("R") values Treatment 1	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**									
	Sample ID: (must enter on Row A)	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
32	**NB03CRB-HEP129: Row A**	7150 J	412	42300 J	4150	188000 J	3850	510	17800 J		7340 J	14.2 U	1120									
	value to use: Row B	7150	412	42300	4150	188000	3850	510	17800		7340	14.2	1120									
	congener TEC: Row C	**0.715**	**0.1236**	**1.269**	**0.1245**	**5.64**	**0.1155**	**51**	**0.534**		**0.2202**	**0.426**	**0.0336**	1%	59.7754	59.9884	60.2014	59.8989	none	**Section 1**	**59.8989**	**none**
	donor value to use: Row D																				Qualified	15%
	donor TEC: Row E																				Dioxin/Furan	
33	**NB03CRB-HEP130: Row A**		320	33500 J	3000 J	133000 J	2450	354	12000 J		4820 J	7.44 U	758									
	value to use: Row B		320	33500	3000	133000	2450	354	12000		4820	7.44	758									
	congener TEC: Row C		**0.096**	**1.005**	**0.09**	**3.99**	**0.0735**	**35.4**	**0.36**		**0.1446**	**0.2232**	**0.02274**	1%	41.1818	41.2934	41.4050	41.2672	none	**Section 1**	**41.2672**	**none**
	donor value to use: Row D																				Qualified	14%
	donor TEC: Row E																				Dioxin/Furan	
34	**NB03CRB-HEP131: Row A**		364	37200 J	3500 J	174000 J	2950 J	305 J	14600 J		5550 J	7.27 U	934									
	value to use: Row B		364	37200	3500	174000	2950	305	14600		5550	7.27	934									
	congener TEC: Row C		**0.1092**	**1.116**	**0.105**	**5.22**	**0.0885**	**30.5**	**0.438**		**0.1665**	**0.2181**	**0.02802**	1%	37.7712	37.8803	37.9893	37.8707	J	**Section 1**	**37.8707**	**J**
	donor value to use: Row D																				Qualified	100%
	donor TEC: Row E																				Dioxin/Furan	
35	**NB03CRB-HEP132: Row A**	7800 J	303	41200 J	2930	165000 J	2790	301	11200 J		4670 J	7.47 U	804									
	value to use: Row B	7800	303	41200	2930	165000	2790	301	11200		4670	7.47	804									
	congener TEC: Row C	**0.78**	**0.0909**	**1.236**	**0.0879**	**4.95**	**0.0837**	**30.1**	**0.336**		**0.1401**	**0.2241**	**0.02412**	1%	37.8287	37.9408	38.0528	37.9141	none	**Section 1**	**37.9141**	**none**
	donor value to use: Row D																				Qualified	20%
	donor TEC: Row E																				Dioxin/Furan	
36	**NB03CRB-HEP133: Row A**		324	41900 J	3540 J	189000 J	3170 J	400 J	15600 J		6420 J	207	1230									
	value to use: Row B		324	41900	3540	189000	3170	400	15600		6420	207	1230									
	congener TEC: Row C		**0.0972**	**1.257**	**0.1062**	**5.67**	**0.0951**	**40**	**0.468**		**0.1926**	**6.21**	**0.0369**	No difference	54.1330	54.1330	54.1330	54.1330	J	**Section 1**	**54.1330**	**J**
	donor value to use: Row D																				Qualified	88%
	donor TEC: Row E																				Dioxin/Furan	
37	**NB03CRB-HEP134: Row A**		175	30200 J	2340 J	120000 J	2180	280	13700 J		5370 J	17 J	968									
	value to use: Row B		175	30200	2340	120000	2180	280	13700		5370	17	968									
	congener TEC: Row C		**0.0525**	**0.906**	**0.0702**	**3.6**	**0.0654**	**28**	**0.411**		**0.1611**	**0.51**	**0.02904**	No difference	33.80524	33.8052	33.80524	33.8052	none	**Section 1**	**33.8052**	**none**
	donor value to use: Row D																				Qualified	17%
	donor TEC: Row E																				Dioxin/Furan	

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03CRB-HEP-C001	28.9684	
Line #2	NB03CRB-HEP-C002	46.8737	J
Line #3	NB03CRB-HEP-C003	39.4100	
Line #4	NB03CRB-HEP-C004	27.3460	
Line #5	NB03CRB-HEP-C005	22.0664	J
Line #6	NB03CRB-HEP-C006	51.7753	
Line #7	NB03CRB-HEP-C007	49.6940	
Line #8	NB03CRB-HEP-C008	43.9082	
Line #9	NB03CRB-HEP-N001	58.9307	J
Line #10	NB03CRB-HEP-N002	42.2927	
Line #11	NB03CRB-HEP-N003	54.1859	
Line #12	NB03CRB-HEP-N004	40.1418	
Line #13	NB03CRB-HEP-N005	45.2787	
Line #14	NB03CRB-HEP-N006	39.4370	
Line #15	NB03CRB-HEP-N007	67.5583	
Line #16	NB03CRB-HEP-N008	33.9520	
Line #17	NB03CRB-HEP-S001	31.2483	J
Line #18	NB03CRB-HEP-S002	39.4937	
Line #19	NB03CRB-HEP-S003	25.3690	
Line #20	NB03CRB-HEP-S004	36.0281	
Line #21	NB03CRB-HEP-S005	39.7835	J
Line #22	NB03CRB-HEP-S006	29.81962	
Line #23	NB03CRB-HEP-S007	5.66293	J
Line #24	NB03CRB-HEP-S008	28.998312	
Line #25	NB03CRB-HEP-S009	46.210568	
Line #26	NB03CRB-HEP122	39.6085	
Line #27	NB03CRB-HEP123	44.56576	
Line #28	NB03CRB-HEP124	37.793636	
Line #29	NB03CRB-HEP125	17.45892	
Line #30	NB03CRB-HEP126	4.94333	J
Line #31	NB03CRB-HEP127	27.7848	J
Line #32	NB03CRB-HEP129	59.89888	
Line #33	NB03CRB-HEP130	41.267208	
Line #34	NB03CRB-HEP131	37.870664	J
Line #35	NB03CRB-HEP132	37.914064	
Line #36	NB03CRB-HEP133	54.133	J
Line #37	NB03CRB-HEP134	33.80524	

EPA Advanced KM TEQ Calculator

Crab muscle TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Mus TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**								**Treatment 1**	
	Sample ID: (must enter on Row A)	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDD**	**OCDD**	**TCDF**	**1-PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDF**	**1,4,9-HpCDF**	**OCDF**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
1	**NB03CRB-MUS-C001: Row A**	3.13	0.182 J	0.0227 J	0.0682 J	0.0178 U	0.18 J	0.415 J	1.07 J	0.16 J	0.418 J	0.498 J	0.12 J	0.0574 J	0.0364 J	0.295 J	0.0281 J	0.0549 J									
	value to use: Row B	3.13	0.182	0.0227	0.0682	0.0178	0.18	0.415	1.07	0.16	0.418	0.498	0.12	0.0574	0.0364	0.295	0.0281	0.0549									
	congener TEC: Row C	**3.13**	**0.182**	**0.00227**	**0.00682**	**0.00178**	**0.0018**	**0.0001245**	**0.107**	**0.0048**	**0.1254**	**0.0498**	**0.012**	**0.00574**	**0.00364**	**0.00295**	**0.000281**	**1.647E-05**	0%	3.6346	3.6355	3.6364	3.6348	none	**Section 1**	**3.6348**	**none**
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
2	**NB03CRB-MUS-C002: Row A**	2.45	0.101 J	0.0242 U	0.0299 U	0.039 J	0.107 J	0.213 J	0.872 J	0.237 J	0.273 J	0.27 J	0.08 J	0.0608 J	0.0299 J	0.24 J	0.0235 J	0.0637 J									
	value to use: Row B	2.45	0.101	0.0242	0.0299	0.039	0.107	0.213	0.872	0.237	0.273	0.27	0.08	0.0608	0.0299	0.24	0.0235	0.0637									
	congener TEC: Row C	**2.45**	**0.101**	**0.00242**	**0.00299**	**0.0039**	**0.00107**	**0.0000639**	**0.0872**	**0.00711**	**0.0819**	**0.027**	**0.008**	**0.00608**	**0.00299**	**0.0024**	**0.000235**	**1.911E-05**	0%	2.7790	2.7817	2.7844	2.7805	none	**Section 1**	**2.7805**	**none**
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
3	**NB03CRB-MUS-C003: Row A**	2.64	0.209 J	0.0267 J	0.0533 J	0.0243 J	0.114 J	0.308 J	0.939 J	0.221 J	0.409 J	0.431 J	0.109 J	0.0947 J	0.0519 J	0.289 J	0.0357 J	0.0781 J									
	value to use: Row B	2.64	0.209	0.0267	0.0533	0.0243	0.114	0.308	0.939	0.221	0.409	0.431	0.109	0.0947	0.0519	0.289	0.0357	0.0781									
	congener TEC: Row C	**2.64**	**0.209**	**0.00267**	**0.00533**	**0.00243**	**0.00114**	**0.0000924**	**0.0939**	**0.00663**	**0.1227**	**0.0431**	**0.0109**	**0.00947**	**0.00519**	**0.00289**	**0.000357**	**2.343E-05**	No difference	3.1558	3.1558	3.1558	3.1558	none	**Section 1**	**3.1558**	**none**
	donor value to use: Row D																									Qualified	16%
	donor TEC: Row E																									Dioxin/Furan	100%
4	**NB03CRB-MUS-C004: Row A**	4.19 J	0.0603 U	0.0239 U	0.0405 J	0.0246 U	0.13 J	0.426 J	1.19 J	0.265 J	0.368 J	0.305 J	0.0819 J	0.0305 J	0.0266 J	0.278 J	0.0207 U	0.0606 J									
	value to use: Row B	4.19	0.0603	0.0239	0.0405	0.0246	0.13	0.426	1.19	0.265	0.368	0.305	0.0819	0.0305	0.0266	0.278	0.0207	0.0606									
	congener TEC: Row C	**4.19**	**0.0603**	**0.00239**	**0.00405**	**0.00246**	**0.0013**	**0.0001278**	**0.119**	**0.00795**	**0.1104**	**0.0305**	**0.00819**	**0.00305**	**0.00266**	**0.00278**	**0.000207**	**1.818E-05**	1%	4.4800	4.5127	4.5454	4.4856	J	**Section 1**	**4.4856**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
5	**NB03CRB-MUS-C005: Row A**	3.45	0.152 J	0.0321 U	0.0592 J	0.0312 U	0.108 J	0.381 J	1.03 J	0.283 J	0.324 J	0.344 J	0.073 J	0.0475 J	0.0283 J	0.27 J	0.0421 J	0.0953 J									
	value to use: Row B	3.45	0.152	0.0321	0.0592	0.0312	0.108	0.381	1.03	0.283	0.324	0.344	0.073	0.0475	0.0283	0.27	0.0421	0.0953									
	congener TEC: Row C	**3.45**	**0.152**	**0.00321**	**0.00592**	**0.00312**	**0.00108**	**0.0001143**	**0.103**	**0.00849**	**0.0972**	**0.0344**	**0.0073**	**0.00475**	**0.00283**	**0.0027**	**0.000421**	**2.859E-05**	0%	3.8702339	3.8734	3.87656389	3.8726	none	**Section 1**	**3.8726**	**none**
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
6	**NB03CRB-MUS-C006: Row A**	0.841 J	0.0297 U	0.0249 J	0.0256 J	0.0251 J	0.0922 J	0.211 J	0.312 J	0.1 J	0.0865 J	0.129 J	0.03 J	0.0805 J	0.0279 J	0.111 J	0.0517 J	0.0863 J									
	value to use: Row B	0.841	0.0297	0.0249	0.0256	0.0251	0.0922	0.211	0.312	0.1	0.0865	0.129	0.03	0.0805	0.0279	0.111	0.0517	0.0863									
	congener TEC: Row C	**0.841**	**0.0297**	**0.00249**	**0.00256**	**0.00251**	**0.000922**	**0.0000633**	**0.0312**	**0.003**	**0.02595**	**0.0129**	**0.003**	**0.00805**	**0.00279**	**0.00111**	**0.000517**	**2.589E-05**	3%	0.9380882	0.95294	0.96778819	0.9428	J	**Section 1**	**0.9428**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
7	**NB03CRB-MUS-C007: Row A**	1.61	0.108 J	0.0151 J	0.0395 J	0.0391 J	0.0712 J	0.258 J	0.781 J	0.185 J	0.259 J	0.254 J	0.0484 J	0.0846 J	0.0363 J	0.204 J	0.0167 J	0.101 J									
	value to use: Row B	1.61	0.108	0.0151	0.0395	0.0391	0.0712	0.258	0.781	0.185	0.259	0.254	0.0484	0.0846	0.0363	0.204	0.0167	0.101									
	congener TEC: Row C	**1.61**	**0.108**	**0.00151**	**0.00395**	**0.00391**	**0.000712**	**0.0000774**	**0.0781**	**0.00555**	**0.0777**	**0.0254**	**0.00484**	**0.00846**	**0.00363**	**0.00204**	**0.000167**	**0.0000303**	No difference	1.9341	1.9341	1.9341	1.9341	none	**Section 1**	**1.9341**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
8	**NB03CRB-MUS-C008: Row A**	3.33	0.101 J	0.0356 J	0.068 J	0.0349 J	0.0819 J	0.391 J	0.989 J	0.205 J	0.433 J	0.486 J	0.12 J	0.0666 J	0.0424 J	0.324 J	0.0267 J	0.0526 J									
	value to use: Row B	3.33	0.101	0.0356	0.068	0.0349	0.0819	0.391	0.989	0.205	0.433	0.486	0.12	0.0666	0.0424	0.324	0.0267	0.0526									
	congener TEC: Row C	**3.33**	**0.101**	**0.00356**	**0.0068**	**0.00349**	**0.000819**	**0.0001173**	**0.0989**	**0.00615**	**0.1299**	**0.0486**	**0.012**	**0.00666**	**0.00424**	**0.00324**	**0.000267**	**1.578E-05**	No difference	3.7558	3.7558	3.7558	3.7558	none	**Section 1**	**3.7558**	**none**
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
9	**NB03CRB-MUS-N001: Row A**	4.65	0.191 J	0.0307 J	0.101 J	0.0517 J	0.185 J	0.613 J	1.28 J	0.347 J	0.668 J	1.04 J	0.25 J	0.0754 J	0.076 J	0.83 J	0.0519 J	0.148 J									
	value to use: Row B	4.65	0.191	0.0307	0.101	0.0517	0.185	0.613	1.28	0.347	0.668	1.04	0.25	0.0754	0.076	0.83	0.0519	0.148									
	congener TEC: Row C	**4.65**	**0.191**	**0.00307**	**0.0101**	**0.00517**	**0.00185**	**0.0001839**	**0.128**	**0.01041**	**0.2004**	**0.104**	**0.025**	**0.00754**	**0.0076**	**0.0083**	**0.000519**	**0.0000444**	No difference	5.3532	5.3532	5.3532	5.3532	none	**Section 1**	**5.3532**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
10	**NB03CRB-MUS-N002: Row A**	2.44	0.0995 J	0.014 U	0.047 J	0.0156 U	0.0696 J	0.286 J	0.751 J	0.242 J	0.46 J	0.456 J	0.107 J	0.0809 J	0.0291 J	0.306 J	0.0265 J	0.109 J									
	value to use: Row B	2.44	0.0995	0.014	0.047	0.0156	0.0696	0.286	0.751	0.242	0.46	0.456	0.107	0.0809	0.0291	0.306	0.0265	0.109									
	congener TEC: Row C	**2.44**	**0.0995**	**0.0014**	**0.0047**	**0.00156**	**0.000696**	**0.0000858**	**0.0751**	**0.00726**	**0.138**	**0.0456**	**0.0107**	**0.00809**	**0.00291**	**0.00306**	**0.000265**	**0.0000327**	0%	2.8360	2.8375	2.8390	2.8365	none	**Section 1**	**2.8365**	**none**
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%
11	**NB03CRB-MUS-N003: Row A**	2.61	0.0862 J	0.0439 J	0.0602 J	0.0431 J	0.119 J	0.391 J	0.964 J	0.296 J	0.611 J	0.714 J	0.192 J	0.0826 J	0.0554 J	0.511 J	0.0428 J	0.069 J									
	value to use: Row B	2.61	0.0862	0.0439	0.0602	0.0431	0.119	0.391	0.964	0.296	0.611	0.714	0.192	0.0826	0.0554	0.511	0.0428	0.069									
	congener TEC: Row C	**2.61**	**0.0862**	**0.00439**	**0.00602**	**0.00431**	**0.00119**	**0.0001173**	**0.0964**	**0.00888**	**0.1833**	**0.0714**	**0.0192**	**0.00826**	**0.00554**	**0.00511**	**0.000428**	**0.0000207**	No difference	3.1108	3.1108	3.1108	3.1108	none	**Section 1**	**3.1108**	**none**
	donor value to use: Row D																									Qualified	16%
	donor TEC: Row E																									Dioxin/Furan	100%
12	**NB03CRB-MUS-N004: Row A**	7.25	0.0281 U	0.0444 J	0.112 J	0.0528 J	0.162 J	0.459 J	1.38 J	0.373 J	0.821 J	0.964 J	0.254 J	0.0783 J	0.0666 J	0.715 J	0.0536 J	0.142 J									
	value to use: Row B	7.25	0.0281	0.0444	0.112	0.0528	0.162	0.459	1.38	0.373	0.821	0.964	0.254	0.0783	0.0666	0.715	0.0536	0.142									
	congener TEC: Row C	**7.25**	**0.0281**	**0.00444**	**0.0112**	**0.00528**	**0.00162**	**0.0001377**	**0.138**	**0.01119**	**0.2463**	**0.0964**	**0.0254**	**0.00783**	**0.00666**	**0.00715**	**0.000536**	**0.0000426**	0%	7.8122	7.8262	7.8403	7.8190	none	**Section 1**	**7.8190**	**none**
	donor value to use: Row D																									Qualified	8%
	donor TEC: Row E																									Dioxin/Furan	100%
13	**NB03CRB-MUS-N005: Row A**	2.64	0.0512 J	0.0322 J	0.0713 J	0.0199 J	0.108 J	0.331 J	0.609 J	0.146 J	0.322 J	0.374 J	0.0976 J	0.0785 J	0.0402 J	0.388 J	0.0608 J	0.124 J									
	value to use: Row B	2.64	0.0512	0.0322	0.0713	0.0199	0.108	0.331	0.609	0.146	0.322	0.374	0.0976	0.0785	0.0402	0.388	0.0608	0.124									
	congener TEC: Row C	**2.64**	**0.0512**	**0.00322**	**0.00713**	**0.00199**	**0.00108**	**0.0000993**	**0.0609**	**0.00438**	**0.0966**	**0.0374**	**0.00976**	**0.00785**	**0.00402**	**0.00388**	**0.000608**	**0.0000372**	No difference	2.9301545	2.93015	2.9301545	2.9302	none	**Section 1**	**2.9302**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
14	**NB03CRB-MUS-N006: Row A**	7.51	0.469 J	0.0464 J	0.12 J	0.0353 J	0.181 J	0.418 J	1.76 J	0.367 J	0.863 J	1.07 J	0.267 J	0.0861 J	0.0619 J	0.516 J	0.0241 J	0.0728 J									
	value to use: Row B	7.51	0.469	0.0464	0.12	0.0353	0.181	0.418	1.76	0.367	0.863	1.07	0.267	0.0861	0.0619	0.516	0.0241	0.0728									
	congener TEC: Row C	**7.51**	**0.469**	**0.00464**	**0.012**	**0.00353**	**0.00181**	**0.0001254**	**0.176**	**0.01101**	**0.2589**	**0.107**	**0.0267**	**0.00861**	**0.00619**	**0.00516**	**0.000241**	**2.184E-05**	No difference	8.6009382	8.60094	8.60093824	8.6009	none	**Section 1**	**8.6009**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
15	**NB03CRB-MUS-N007: Row A**	7.43	0.339 J	0.0209 J	0.0944 J	0.0292 J	0.193 J	0.446 J	1.4 J	0.367 J	0.873 J	1.21 J	0.278 J	0.055 J	0.0757 J	0.765 J	0.0112 U	0.0796 J									
	value to use: Row B	7.43	0.339	0.0209	0.0944	0.0292	0.193	0.446	1.4	0.367	0.873	1.21	0.278	0.055	0.0757	0.765	0.0112	0.0796									
	congener TEC: Row C	**7.43**	**0.339**	**0.00209**	**0.00944**	**0.00292**	**0.00193**	**0.0001338**	**0.14**	**0.01101**	**0.2619**	**0.121**	**0.0278**	**0.0055**	**0.00757**	**0.00765**	**0.000112**	**2.388E-05**	0%	8.3680	8.3680	8.3681	8.3680	none	**Section 1**	**8.3680**	**none**
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
16	**NB03CRB-MUS-N008: Row A**	3.63 J	0.12 J	0.0249 U	0.0896 J	0.065 J	0.15 J	0.869 J	1.11 J	0.343 J	0.512 J	0.508 J	0.118 J	0.0638 J	0.0354 J	0.424 J	0.0571 J	0.14 J									
	value to use: Row B	3.63	0.12	0.0249	0.0896	0.065	0.15	0.869	1.11	0.343	0.512	0.508	0.118	0.0638	0.0354	0.424	0.0571	0.14									
	congener TEC: Row C	**3.63**	**0.12**	**0.00249**	**0.00896**	**0.0065**	**0.0015**	**0.0002607**	**0.111**	**0.01029**	**0.1536**	**0.0508**	**0.0118**	**0.00638**	**0.00354**	**0.00424**	**0.000571**	**0.000042**	0%	4.1195	4.1207	4.1220	4.1201	J	**Section 1**	**4.1201**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
17	**NB03CRB-MUS-S001: Row A**	2.04	0.0828 J	0.0208 J	0.0851 J	0.0311 J	0.166 J	0.321 J	1.1 J	0.188 J	0.238 J	0.257 J	0.0659 J	0.0742 J	0.0483 J	0.169 J	0.0218 U	0.0506 J									
	value to use: Row B	2.04	0.0828	0.0208	0.0851	0.0311	0.166	0.321	1.1	0.188	0.238	0.257	0.0659	0.0742	0.0483	0.169	0.0218	0.0506									
	congener TEC: Row C	**2.04**	**0.0828**	**0.00208**	**0.00851**	**0.00311**	**0.00166**	**0.0000963**	**0.11**	**0.00564**	**0.0714**	**0.0257**	**0.00659**	**0.00742**	**0.00483**	**0.00169**	**0.000218**	**1.518E-05**	0%	2.3715	2.3717	2.3718	2.3716	none	**Section 1**	**2.3716**	**none**
	donor value to use: Row D																									Qualified	14%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Crab muscle TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Mus TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1	
																										Highest TEC value is a DETECT, and there are no rejected ("R") values	
	WHO 2005 TEFs =	**1**	**1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.0003**	**0.1**	**0.03**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**0.0003**								**Treatment 1**	
	Sample ID: (must enter on Row A)	**TCDD**	**PeCDD**	**1,4-HxCDD**	**1,6-HxCDD**	**1,9-HxCDD**	**1,4,6-HpCDs**	**OCDD**	**TCDF**	**1-PeCDF**	**4-PeCDF**	**1,4-HxCDF**	**1,6-HxCDF**	**1,9-HxCDF**	**4,6-HxCDF**	**1,4,6-HpCDs**	**1,4,9-HpCDs**	**OCDF**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**
18	**NB03CRB-MUS-S002: Row A**	1.53	0.0752 J	0.0148 J	0.0373 J	0.0232 J	0.0862 J	0.206 J	0.622 J	0.166 J	0.171 J	0.112 J	0.0558 J	0.0899 J	0.0327 J	0.125 J	0.0283 J	0.0866 J									
	value to use: Row B	1.53	0.0752	0.0148	0.0373	0.0232	0.0862	0.206	0.622	0.166	0.171	0.112	0.0558	0.0899	0.0327	0.125	0.0283	0.0866									
	congener TEC: Row C	**1.53**	**0.0752**	**0.00148**	**0.00373**	**0.00232**	**0.000862**	**0.0000618**	**0.0622**	**0.00498**	**0.0513**	**0.0112**	**0.00558**	**0.00899**	**0.00327**	**0.00125**	**0.000283**	**2.598E-05**	No difference	1.7627	1.7627	1.7627	1.7627	none	**Section 1**	**1.7627**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
19	**NB03CRB-MUS-S003: Row A**	2.1	0.0667 J	0.0178 J	0.0351 J	0.0361 J	0.12 J	0.291 J	0.991 J	0.211 J	0.307 J	0.229 J	0.0775 J	0.0689 J	0.0282 J	0.154 J	0.0494 J	0.0738 J									
	value to use: Row B	2.1	0.0667	0.0178	0.0351	0.0361	0.12	0.291	0.991	0.211	0.307	0.229	0.0775	0.0689	0.0282	0.154	0.0494	0.0738									
	congener TEC: Row C	**2.1**	**0.0667**	**0.00178**	**0.00351**	**0.00361**	**0.0012**	**0.0000873**	**0.0991**	**0.00633**	**0.0921**	**0.0229**	**0.00775**	**0.00689**	**0.00282**	**0.00154**	**0.000494**	**2.214E-05**	No difference	2.4168	2.4168	2.4168	2.4168	none	**Section 1**	**2.4168**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
20	**NB03CRB-MUS-S004: Row A**	1.53	0.053 J	0.0269 J	0.0481 J	0.0282 J	0.0806 J	0.388 J	0.676 J	0.134 J	0.194 J	0.166 J	0.0507 J	0.0651 J	0.0195 J	0.14 J	0.0334 J	0.0637 J									
	value to use: Row B	1.53	0.053	0.0269	0.0481	0.0282	0.0806	0.388	0.676	0.134	0.194	0.166	0.0507	0.0651	0.0195	0.14	0.0334	0.0637									
	congener TEC: Row C	**1.53**	**0.053**	**0.00269**	**0.00481**	**0.00282**	**0.000806**	**0.0001164**	**0.0676**	**0.00402**	**0.0582**	**0.0166**	**0.00507**	**0.00651**	**0.00195**	**0.0014**	**0.000334**	**1.911E-05**	No difference	1.7559	1.7559	1.7559	1.7559	none	**Section 1**	**1.7559**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
21	**NB03CRB-MUS-S005: Row A**	1.58	0.0741 J	0.00359 U	0.0281 J	0.00322 U	0.0602 J	0.203 J	0.617 J	0.112 J	0.227 J	0.229 J	0.0362 J	0.0539 J	0.00505 J	0.136 J	0.00617 U	0.0234 J									
	value to use: Row B	1.58	0.0741	0.00359	0.0281	0.00322	0.0602	0.203	0.617	0.112	0.227	0.229	0.0362	0.0539	0.00505	0.136	0.00617	0.0234									
	congener TEC: Row C	**1.58**	**0.0741**	**0.000359**	**0.00281**	**0.000322**	**0.000602**	**0.0000609**	**0.0617**	**0.00336**	**0.0681**	**0.0229**	**0.00362**	**0.00539**	**0.000505**	**0.00136**	**0.0000617**	**7.02E-06**	0%	1.8245149	1.82489	1.82525762	1.8246	none	**Section 1**	**1.8246**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
22	**NB03CRB-MUS-S006: Row A**	0.988 J	0.0674 U	0.0419 J	0.0574 J	0.0556 J	0.0326 J	0.37 J	0.492 J	0.106 J	0.0897 J	0.135 J	0.0417 J	0.062 J	0.0233 J	0.0664 J	0.0452 J	0.0236 J									
	value to use: Row B	0.988	0.0674	0.0419	0.0574	0.0556	0.0326	0.37	0.492	0.106	0.0897	0.135	0.0417	0.062	0.0233	0.0664	0.0452	0.0236									
	congener TEC: Row C	**0.988**	**0.0674**	**0.00419**	**0.00574**	**0.00556**	**0.000326**	**0.000111**	**0.0492**	**0.00318**	**0.02691**	**0.0135**	**0.00417**	**0.0062**	**0.00233**	**0.000664**	**0.000452**	**7.08E-06**	6%	1.1105401	1.14424	1.17794008	1.1187	J	**Section 1**	**1.1187**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
23	**NB03CRB-MUS-S007: Row A**	1.3	0.0705 U	0.0256 U	0.0259 U	0.0479 J	0.05 J	0.272 J	0.967 J	0.15 J	0.234 J	0.171 J	0.0338 J	0.0427 J	0.0405 J	0.116 J	0.0244 U	0.0592 J									
	value to use: Row B	1.3	0.0705	0.0256	0.0259	0.0479	0.05	0.272	0.967	0.15	0.234	0.171	0.0338	0.0427	0.0405	0.116	0.0244	0.0592									
	congener TEC: Row C	**1.3**	**0.0705**	**0.00256**	**0.00259**	**0.00479**	**0.0005**	**0.0000816**	**0.0967**	**0.0045**	**0.0702**	**0.0171**	**0.00338**	**0.00427**	**0.00405**	**0.00116**	**0.000244**	**1.776E-05**	5%	1.5067	1.5447	1.5826	1.5154	none	**Section 1**	**1.5154**	**none**
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
24	**NB03CRB-MUS-S008: Row A**	1.08	0.0913 J	0.0195 U	0.0208 U	0.0192 U	0.121 J	0.345 J	0.733 J	0.152 J	0.141 J	0.123 J	0.0302 J	0.0554 J	0.0218 U	0.116 J	0.018 U	0.0293 U									
	value to use: Row B	1.08	0.0913	0.0195	0.0208	0.0192	0.121	0.345	0.733	0.152	0.141	0.123	0.0302	0.0554	0.0218	0.116	0.018	0.0293									
	congener TEC: Row C	**1.08**	**0.0913**	**0.00195**	**0.00208**	**0.00192**	**0.00121**	**0.0001035**	**0.0733**	**0.00456**	**0.0423**	**0.0123**	**0.00302**	**0.00554**	**0.00218**	**0.00116**	**0.00018**	**8.79E-06**	1%	1.3148	1.3190	1.3231	1.3169	none	**Section 1**	**1.3169**	**none**
	donor value to use: Row D																									Qualified	18%
	donor TEC: Row E																									Dioxin/Furan	100%
25	**NB03CRB-MUS-S009: Row A**	1.45	0.0715 J	0.0168 U	0.0292 J	0.0323 J	0.0979 J	0.284 J	0.961 J	0.118 J	0.13 J	0.156 J	0.0475 J	0.0297 J	0.0286 J	0.118 J	0.0178 J	0.0342 J									
	value to use: Row B	1.45	0.0715	0.0168	0.0292	0.0323	0.0979	0.284	0.961	0.118	0.13	0.156	0.0475	0.0297	0.0286	0.118	0.0178	0.0342									
	congener TEC: Row C	**1.45**	**0.0715**	**0.00168**	**0.00292**	**0.00323**	**0.000979**	**0.0000852**	**0.0961**	**0.00354**	**0.039**	**0.0156**	**0.00475**	**0.00297**	**0.00286**	**0.00118**	**0.000178**	**1.026E-05**	0%	1.6949	1.6957	1.6966	1.6954	none	**Section 1**	**1.6954**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
26	**NB03CRB-MUS122: Row A**	7.15	0.221 J	0.0347 J	0.139 J	0.0375 J	0.185 J	0.701 J	1.63 J	0.487 J	0.869 J	1.25 J	0.281 J	0.0493 J	0.0836 J	0.736 J	0.0179 U	0.173 J									
	value to use: Row B	7.15	0.221	0.0347	0.139	0.0375	0.185	0.701	1.63	0.487	0.869	1.25	0.281	0.0493	0.0836	0.736	0.0179	0.173									
	congener TEC: Row C	**7.15**	**0.221**	**0.00347**	**0.0139**	**0.00375**	**0.00185**	**0.0002103**	**0.163**	**0.01461**	**0.2607**	**0.125**	**0.0281**	**0.00493**	**0.00836**	**0.00736**	**0.000179**	**0.0000519**	0%	8.0063	8.0064	8.0065	8.0063	none	**Section 1**	**8.0063**	**none**
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
27	**NB03CRB-MUS123: Row A**	8.53	0.367 J	0.0205 J	0.0646 J	0.0616 J	0.175 J	0.368 J	2.3 J	0.514 J	0.976 J	1.26 J	0.334 J	0.0866 J	0.0463 J	0.729 J	0.027 U	0.0482 J									
	value to use: Row B	8.53	0.367	0.0205	0.0646	0.0616	0.175	0.368	2.3	0.514	0.976	1.26	0.334	0.0866	0.0463	0.729	0.027	0.0482									
	congener TEC: Row C	**8.53**	**0.367**	**0.00205**	**0.00646**	**0.00616**	**0.00175**	**0.0001104**	**0.23**	**0.01542**	**0.2928**	**0.126**	**0.0334**	**0.00866**	**0.00463**	**0.00729**	**0.00027**	**1.446E-05**	0%	9.6317	9.6319	9.6320	9.6318	none	**Section 1**	**9.6318**	**none**
	donor value to use: Row D																									Qualified	11%
	donor TEC: Row E																									Dioxin/Furan	100%
28	**NB03CRB-MUS124: Row A**	1.34 J	0.0595 U	0.026 J	0.0267 J	0.0292 U	0.0766 J	0.638 J	0.426 J	0.122 J	0.16 J	0.173 J	0.0809 J	0.0229 J	0.0252 J	0.0706 J	0.0297 J	0.0898 J									
	value to use: Row B	1.34	0.0595	0.026	0.0267	0.0292	0.0766	0.638	0.426	0.122	0.16	0.173	0.0809	0.0229	0.0252	0.0706	0.0297	0.0898									
	congener TEC: Row C	**1.34**	**0.0595**	**0.0026**	**0.00267**	**0.00292**	**0.000766**	**0.0001914**	**0.0426**	**0.00366**	**0.048**	**0.0173**	**0.00809**	**0.00229**	**0.00252**	**0.000706**	**0.000297**	**2.694E-05**	4%	1.4717	1.5029	1.5341	1.4819	J	**Section 1**	**1.4819**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
29	**NB03CRB-MUS125: Row A**	3.67	0.136 J	0.0333 J	0.023 J	0.06 J	0.129 J	0.44 J	1.29 J	0.262 J	0.249 J	0.38 J	0.122 J	0.0537 J	0.0423 J	0.256 J	0.0408 J	0.0782 J									
	value to use: Row B	3.67	0.136	0.0333	0.023	0.06	0.129	0.44	1.29	0.262	0.249	0.38	0.122	0.0537	0.0423	0.256	0.0408	0.0782									
	congener TEC: Row C	**3.67**	**0.136**	**0.00333**	**0.0023**	**0.006**	**0.00129**	**0.000132**	**0.129**	**0.00786**	**0.0747**	**0.038**	**0.0122**	**0.00537**	**0.00423**	**0.00256**	**0.000408**	**2.346E-05**	No difference	4.0934035	4.0934	4.09340346	4.0934	none	**Section 1**	**4.0934**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
30	**NB03CRB-MUS126: Row A**	1.93 J	0.0644 U	0.0263 U	0.0264 U	0.0314 J	0.0696 J	0.389 J	0.681 J	0.203 J	0.0307 U	0.164 J	0.03 J	0.048 J	0.0192 U	0.101 J	0.0309 J	0.0644 J									
	value to use: Row B	1.93	0.0644	0.0263	0.0264	0.0314	0.0696	0.389	0.681	0.203	0.0307	0.164	0.03	0.048	0.0192	0.101	0.0309	0.0644									
	congener TEC: Row C	**1.93**	**0.0644**	**0.00263**	**0.00264**	**0.00314**	**0.000696**	**0.0001167**	**0.0681**	**0.00609**	**0.00921**	**0.0164**	**0.003**	**0.0048**	**0.00192**	**0.00101**	**0.000309**	**1.932E-05**	4%	2.033681	2.07408	2.11448102	2.0394	J	**Section 1**	**2.0394**	**J**
	donor value to use: Row D																									Qualified	100%
	donor TEC: Row E																									Dioxin/Furan	100%
31	**NB03CRB-MUS127: Row A**	4.14	0.0922 J	0.0237 U	0.0728 J	0.025 U	0.114 J	0.674 J	1.71 J	0.319 J	0.444 J	0.244 J	0.108 J	0.0897 J	0.0535 J	0.249 J	0.0376 J	0.109 J									
	value to use: Row B	4.14	0.0922	0.0237	0.0728	0.025	0.114	0.674	1.71	0.319	0.444	0.244	0.108	0.0897	0.0535	0.249	0.0376	0.109									
	congener TEC: Row C	**4.14**	**0.0922**	**0.00237**	**0.00728**	**0.0025**	**0.00114**	**0.0002022**	**0.171**	**0.00957**	**0.1332**	**0.0244**	**0.0108**	**0.00897**	**0.00535**	**0.00249**	**0.000376**	**0.0000327**	0%	4.6070	4.6094	4.6119	4.6082	none	**Section 1**	**4.6082**	**none**
	donor value to use: Row D																									Qualified	10%
	donor TEC: Row E																									Dioxin/Furan	100%
32	**NB03CRB-MUS129: Row A**	2.2	0.103 J	0.0198 J	0.0539 J	0.0318 J	0.1 J	0.308 J	1.28 J	0.284 J	0.318 J	0.254 J	0.0734 J	0.0736 J	0.0259 J	0.152 J	0.0137 U	0.0857 J									
	value to use: Row B	2.2	0.103	0.0198	0.0539	0.0318	0.1	0.308	1.28	0.284	0.318	0.254	0.0734	0.0736	0.0259	0.152	0.0137	0.0857									
	congener TEC: Row C	**2.2**	**0.103**	**0.00198**	**0.00539**	**0.00318**	**0.001**	**0.0000924**	**0.128**	**0.00852**	**0.0954**	**0.0254**	**0.00734**	**0.00736**	**0.00259**	**0.00152**	**0.000137**	**2.571E-05**	0%	2.5908	2.5909	2.5909	2.5909	none	**Section 1**	**2.5909**	**none**
	donor value to use: Row D																									Qualified	15%
	donor TEC: Row E																									Dioxin/Furan	100%
33	**NB03CRB-MUS130: Row A**	2.18	0.0848 J	0.0324 J	0.0552 J	0.0288 J	0.129 J	0.459 J	0.921 J	0.188 J	0.348 J	0.177 J	0.0766 J	0.0761 J	0.0364 J	0.194 J	0.0318 J	0.0912 J									
	value to use: Row B	2.18	0.0848	0.0324	0.0552	0.0288	0.129	0.459	0.921	0.188	0.348	0.177	0.0766	0.0761	0.0364	0.194	0.0318	0.0912									
	congener TEC: Row C	**2.18**	**0.0848**	**0.00324**	**0.00552**	**0.00288**	**0.00129**	**0.0001377**	**0.0921**	**0.00564**	**0.1044**	**0.0177**	**0.00766**	**0.00761**	**0.00364**	**0.00194**	**0.000318**	**2.736E-05**	No difference	2.5189	2.5189	2.5189	2.5189	none	**Section 1**	**2.5189**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%
34	**NB03CRB-MUS131: Row A**	2.17	0.125 J	0.0166 U	0.019 J	0.0175 U	0.118 J	0.707 J	0.819 J	0.129 J	0.2 J	0.114 J	0.0917 J	0.0341 J	0.0335 J	0.121 J	0.0178 U	0.0994 J									
	value to use: Row B	2.17	0.125	0.0166	0.019	0.0175	0.118	0.707	0.819	0.129	0.2	0.114	0.0917	0.0341	0.0335	0.121	0.0178	0.0994									
	congener TEC: Row C	**2.17**	**0.125**	**0.00166**	**0.0019**	**0.00175**	**0.00118**	**0.0002121**	**0.0819**	**0.00387**	**0.06**	**0.0114**	**0.00917**	**0.00341**	**0.00335**	**0.00121**	**0.000178**	**2.982E-05**	0%	2.4726	2.4744	2.4762	2.4737	none	**Section 1**	**2.4737**	**none**
	donor value to use: Row D																									Qualified	12%
	donor TEC: Row E																									Dioxin/Furan	100%
35	**NB03CRB-MUS132: Row A**	3.49	0.516 J	0.0392 J	0.0675 J	0.0254 J	0.121 J	0.409 J	0.98	0.219 J	0.386 J	0.685 J	0.158 J	0.0579 J	0.0467 J	0.449 J	0.0274 J	0.122 J									
	value to use: Row B	3.49	0.516	0.0392	0.0675	0.0254	0.121	0.409	0.98	0.219	0.386	0.685	0.158	0.0579	0.0467	0.449	0.0274	0.122									
	congener TEC: Row C	**3.49**	**0.516**	**0.00392**	**0.00675**	**0.00254**	**0.00121**	**0.0001227**	**0.098**	**0.00657**	**0.1158**	**0.0685**	**0.0158**	**0.00579**	**0.00467**	**0.00449**	**0.000274**	**0.0000366**	No difference	4.3405	4.3405	4.3405	4.3405	none	**Section 1**	**4.3405**	**none**
	donor value to use: Row D																									Qualified	17%
	donor TEC: Row E																									Dioxin/Furan	100%
36	**NB03CRB-MUS133: Row A**	7.1	0.386 J	0.0199 U	0.0988 J	0.0478 J	0.163 J	0.465 J	1.74 J	0.414 J	0.889 J	1.14 J	0.282 J	0.0797 J	0.0858 J	0.881 J	0.03 J	0.131 J									
	value to use: Row B	7.1	0.386	0.0199	0.0988	0.0478	0.163	0.465	1.74	0.414	0.889	1.14	0.282	0.0797	0.0858	0.881	0.03	0.131									
	congener TEC: Row C	**7.1**	**0.386**	**0.00199**	**0.00988**	**0.00478**	**0.00163**	**0.0001395**	**0.174**	**0.01242**	**0.2667**	**0.114**	**0.0282**	**0.00797**	**0.00858**	**0.00881**	**0.0003**	**0.0000393**	0%	8.1234	8.1244	8.1254	8.1240	none	**Section 1**	**8.1240**	**none**
	donor value to use: Row D																									Qualified	13%
	donor TEC: Row E																									Dioxin/Furan	100%

EPA Advanced KM TEQ Calculator

Crab muscle TCDD-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Mus TCDD-TEQ
Units: ng/kg
Data entered by: Francis Loko
Date entered: 1/30/17

protect/unprotect sheet password = dioxin

SITE DATA

Chemical Sort Order:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17							
WHO 2005 TEFs =	1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1	0.1	0.1	0.1	0.01	0.01	0.0003							
Sample ID: (must enter on Row A)	TCDD	PeCDD	1,4-HxCDD	1,6-HxCDD	1,9-HxCDD	1,4,6-HpCDs	OCDD	TCDF	1-PeCDF	4-PeCDF	1,4-HxCDF	1,6-HxCDF	1,9-HxCDF	4,6-HxCDF	1,4,6-HpCDs	1,4,9-HpCDs	OCDF	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	Treatment 1: KM TEQ	Treatment 1: Qualifier and Qualifier Fractions
Sample notes																										
NB03CRB-MUS134: Row A	1.31	0.532 J	0.0459 J	0.139 J	0.0289 U	0.239 J	0.653 J	1.08 J	0.263 J	0.308 J	0.165 J	0.0936 J	0.0915 J	0.0575 J	0.176 J	0.0377 J	0.076 J									
value to use: Row B	1.31	0.532	0.0459	0.139	0.0289	0.239	0.653	1.08	0.263	0.308	0.165	0.0936	0.0915	0.0575	0.176	0.0377	0.076									
37 congener TEC: Row C	1.31	0.532	0.00459	0.0139	0.00289	0.00239	0.0001959	0.108	0.00789	0.0924	0.0165	0.00936	0.00915	0.00575	0.00176	0.000377	0.0000228	0%	2.1142857	2.11573	2.1171757	2.1152	none	Section 1	2.1152	none
donor value to use: Row D																									Qualified	38%
donor TEC: Row E																									Dioxin/Furan	100%

(Quasi) Sensitivity Analysis SECTION 1

Highest TEC value is a DETECT, and there are no rejected ("R") values

DATA LIST

List of TEQ results to copy and paste into other spreadsheets, such as ProUCL
CAUTION: double-check entries and gray cells for anomalous entries

Line	Sample ID	TEQ Result	Qualifier
Line #1	NB03CRB-MUS-C001	3.6348	
Line #2	NB03CRB-MUS-C002	2.7805	
Line #3	NB03CRB-MUS-C003	3.1558	
Line #4	NB03CRB-MUS-C004	4.4856	J
Line #5	NB03CRB-MUS-C005	3.8726	
Line #6	NB03CRB-MUS-C006	0.9428	J
Line #7	NB03CRB-MUS-C007	1.9341	
Line #8	NB03CRB-MUS-C008	3.7558	
Line #9	NB03CRB-MUS-N001	5.3532	
Line #10	NB03CRB-MUS-N002	2.8365	
Line #11	NB03CRB-MUS-N003	3.1108	
Line #12	NB03CRB-MUS-N004	7.8190	
Line #13	NB03CRB-MUS-N005	2.9302	
Line #14	NB03CRB-MUS-N006	8.6009	
Line #15	NB03CRB-MUS-N007	8.3680	
Line #16	NB03CRB-MUS-N008	4.1201	J
Line #17	NB03CRB-MUS-S001	2.3716	
Line #18	NB03CRB-MUS-S002	1.7627	
Line #19	NB03CRB-MUS-S003	2.4168	
Line #20	NB03CRB-MUS-S004	1.7559	
Line #21	NB03CRB-MUS-S005	1.8246168	
Line #22	NB03CRB-MUS-S006	1.1187094	J
Line #23	NB03CRB-MUS-S007	1.5154386	
Line #24	NB03CRB-MUS-S008	1.3168892	
Line #25	NB03CRB-MUS-S009	1.695389	
Line #26	NB03CRB-MUS122	8.0063441	
Line #27	NB03CRB-MUS123	9.6318073	
Line #28	NB03CRB-MUS124	1.4819287	J
Line #29	NB03CRB-MUS125	4.0934035	
Line #30	NB03CRB-MUS126	2.0394331	J
Line #31	NB03CRB-MUS127	4.6082284	
Line #32	NB03CRB-MUS129	2.5908572	
Line #33	NB03CRB-MUS130	2.5189031	
Line #34	NB03CRB-MUS131	2.4737264	
Line #35	NB03CRB-MUS132	4.3404733	
Line #36	NB03CRB-MUS133	8.123976	
Line #37	NB03CRB-MUS134	2.1152348	

EPA Advanced KM TEQ Calculator

Crab muscle PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Mus PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 2/1/17

protect/unprotect sheet password = dioxin

SITE DATA

Sample notes	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution			KM Method			(Quasi) Sensitivity Analysis SECTION 1		(Quasi) Sensitivity Analysis SECTION 2			
																					Highest TEC value is a DETECT, and there are no rejected ("R") values		Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values			
																					Treatment 1		Treatment 1: Make highest U value a D		Treatment 2: Substitute comparable "donor" value for highest U	
	WHO 2005 TEFs =	**0.0001**	**0.0003**	**0.00003**	**0.00003**	**0.00003**	**0.00003**	**0.1**	**0.00003**	**0.00003**	**0.00003**	**0.03**	**0.00003**													
	Sample ID:	**PCB 77**	**PCB 81**	**PCB 105**	**PCB 114**	**PCB 118**	**PCB 123**	**PCB 126**	**PCB 156**	**PCB 157**	**PCB 167**	**PCB 169**	**PCB 189**		**U = 0 & sum**	**U = 1/2 DL & sum**	**U = DL & sum**	**Sample KM TEQ**	**Qualifier**	**Select KM TEQ**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**	**KM TEQ**	**Qualifier and Qualifier Fractions**
	(must enter on Row A)																									
1	**NB03CRB-MUS-C001:** **Row A**	140	5.24	658 J	48.1	2060 J	43.5	4.41 J	156		59.2	1.45 U	7.95													
	value to use: Row B	140	5.24	658	48.1	2060	43.5	4.41	156		59.2	1.45	7.95													
	congener TEC: Row C	**0.014**	**0.001572**	**0.01974**	**0.001443**	**0.0618**	**0.001305**	**0.441**	**0.00468**		**0.001776**	**0.0435**	**0.0002385**	8%	0.5476	0.5693	0.5911	0.5531	J	**Section 1**	**0.5531**	**J**				
	donor value to use: Row D																				Qualified	96%				
	donor TEC: Row E																				Dioxin/Furan					
2	**NB03CRB-MUS-C002:** **Row A**	52.6	2.46 J	275	22.2	999 J	20.1	2.22 J	72.5		27.8	1.47 U	3.91 J													
	value to use: Row B	52.6	2.46	275	22.2	999	20.1	2.22	72.5		27.8	1.47	3.91													
	congener TEC: Row C	**0.00526**	**0.000738**	**0.00825**	**0.000666**	**0.02997**	**0.000603**	**0.222**	**0.002175**		**0.000834**	**0.0441**	**0.0001173**	15%	0.2706	0.2927	0.3147	0.2760	J	**Section 1**	**0.2760**	**J**				
	donor value to use: Row D																				Qualified	94%				
	donor TEC: Row E																				Dioxin/Furan					
3	**NB03CRB-MUS-C003:** **Row A**	167	5.61	738 J	56.8	2600 J	59.1	5.82	192		75.9	1.47 U	9.93													
	value to use: Row B	167	5.61	738	56.8	2600	59.1	5.82	192		75.9	1.47	9.93													
	congener TEC: Row C	**0.0167**	**0.001683**	**0.02214**	**0.001704**	**0.078**	**0.001773**	**0.582**	**0.00576**		**0.002277**	**0.0441**	**0.0002979**	6%	0.7123	0.7344	0.7564	0.7189	none	**Section 1**	**0.7189**	**none**				
	donor value to use: Row D																				Qualified	19%				
	donor TEC: Row E																				Dioxin/Furan					
4	**NB03CRB-MUS-C004:** **Row A**		7.14	726 J	72.7	3000 J	57.4	6.97	240		92.7	1.49 U	10.8													
	value to use: Row B		7.14	726	72.7	3000	57.4	6.97	240		92.7	1.49	10.8													
	congener TEC: Row C		**0.002142**	**0.02178**	**0.002181**	**0.09**	**0.001722**	**0.697**	**0.0072**		**0.002781**	**0.0447**	**0.000324**	5%	0.8251	0.8475	0.8698	0.8306	none	**Section 1**	**0.8306**	**none**				
	donor value to use: Row D																				Qualified	18%				
	donor TEC: Row E																				Dioxin/Furan					
5	**NB03CRB-MUS-C005:** **Row A**	64.5	3.18 J	370	34.5	1470 J	29.6	1.59 U	119		47.1	1.49 U	5.46													
	value to use: Row B	64.5	3.18	370	34.5	1470	29.6	1.59	119		47.1	1.49	5.46													
	congener TEC: Row C	**0.00645**	**0.000954**	**0.0111**	**0.001035**	**0.0441**	**0.000888**	**0.159**	**0.00357**		**0.001413**	**0.0447**	**0.0001638**	119%	0.0696738	0.17152	0.2733738	0.2364	J	**Section 2, Treatment 1**			**0.2364**	**J**	0.2364	J
	donor value to use: Row D																						Qualified	91%	Qualified	91%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
6	**NB03CRB-MUS-C006:** **Row A**	31.8	1.73 U	163	12.9	569 J	11	1.54 U	41.8		15.8	1.44 U	2.04 J													
	value to use: Row B	31.8	1.73	163	12.9	569	11	1.54	41.8		15.8	1.44	2.04													
	congener TEC: Row C	**0.00318**	**0.000519**	**0.00489**	**0.000387**	**0.01707**	**0.00033**	**0.154**	**0.001254**		**0.000474**	**0.0432**	**0.0000612**	156%	0.0276462	0.12651	0.2253652	0.1851	J	**Section 2, Treatment 1**			**0.1851**	**J**	0.1851	J
	donor value to use: Row D																						Qualified	95%	Qualified	95%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
7	**NB03CRB-MUS-C007:** **Row A**	120	5.12	571 J	42.4	1890 J	37.5	1.54 U	137		55.9	1.45 U	1.25 U													
	value to use: Row B	120	5.12	571	42.4	1890	37.5	1.54	137		55.9	1.45	1.25													
	congener TEC: Row C	**0.012**	**0.001536**	**0.01713**	**0.001272**	**0.0567**	**0.001125**	**0.154**	**0.00411**		**0.001677**	**0.0435**	**0.0000375**	102%	0.0956	0.1943	0.2931	0.2327	J	**Section 2, Treatment 1**			**0.2327**	**J**	0.2327	J
	donor value to use: Row D																						Qualified	93%	Qualified	93%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
8	**NB03CRB-MUS-C008:** **Row A**	108	5.33	553 J	46.8	2130 J	42.3	4.76 J	162		65.2	1.5 U	9.41													
	value to use: Row B	108	5.33	553	46.8	2130	42.3	4.76	162		65.2	1.5	9.41													
	congener TEC: Row C	**0.0108**	**0.001599**	**0.01659**	**0.001404**	**0.0639**	**0.001269**	**0.476**	**0.00486**		**0.001956**	**0.045**	**0.0002823**	7%	0.5787	0.6012	0.6237	0.5835	J	**Section 1**	**0.5835**	**J**				
	donor value to use: Row D																				Qualified	96%				
	donor TEC: Row E																				Dioxin/Furan					
9	**NB03CRB-MUS-N001:** **Row A**	332	12.8	1610 J	124	5330 J	107	10.8	402		143	1.47 U	20.5													
	value to use: Row B	332	12.8	1610	124	5330	107	10.8	402		143	1.47	20.5													
	congener TEC: Row C	**0.0332**	**0.00384**	**0.0483**	**0.00372**	**0.1599**	**0.00321**	**1.08**	**0.01206**		**0.00429**	**0.0441**	**0.000615**	3%	1.3491	1.3712	1.3932	1.3578	none	**Section 1**	**1.3578**	**none**				
	donor value to use: Row D																				Qualified	18%				
	donor TEC: Row E																				Dioxin/Furan					
10	**NB03CRB-MUS-N002:** **Row A**		14.5	1260 J	113	4840 J	108	10.6	389		140	1.46 U	19.7													
	value to use: Row B		14.5	1260	113	4840	108	10.6	389		140	1.46	19.7													
	congener TEC: Row C		**0.00435**	**0.0378**	**0.00339**	**0.1452**	**0.00324**	**1.06**	**0.01167**		**0.0042**	**0.0438**	**0.000591**	3%	1.2704	1.2923	1.3142	1.2798	none	**Section 1**	**1.2798**	**none**				
	donor value to use: Row D																				Qualified	17%				
	donor TEC: Row E																				Dioxin/Furan					
11	**NB03CRB-MUS-N003:** **Row A**	273	10.5	1400 J	115	5270 J	107	11.1	392		149	1.43 U	21.4													
	value to use: Row B	273	10.5	1400	115	5270	107	11.1	392		149	1.43	21.4													
	congener TEC: Row C	**0.0273**	**0.00315**	**0.042**	**0.00345**	**0.1581**	**0.00321**	**1.11**	**0.01176**		**0.00447**	**0.0429**	**0.000642**	3%	1.3641	1.3855	1.4070	1.3761	none	**Section 1**	**1.3761**	**none**				
	donor value to use: Row D																				Qualified	17%				
	donor TEC: Row E																				Dioxin/Furan					
12	**NB03CRB-MUS-N004:** **Row A**	224	9.79	1210 J	97.5	4300 J	78.4	1.55 U	348		131	1.45 U	20.7													
	value to use: Row B	224	9.79	1210	97.5	4300	78.4	1.55	348		131	1.45	20.7													
	congener TEC: Row C	**0.0224**	**0.002937**	**0.0363**	**0.002925**	**0.129**	**0.002352**	**0.155**	**0.01044**		**0.00393**	**0.0435**	**0.000621**	64%	0.2109	0.3102	0.4094	0.3761	J	**Section 2, Treatment 1**			**0.3761**	**J**	0.3761	J
	donor value to use: Row D																						Qualified	89%	Qualified	89%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	
13	**NB03CRB-MUS-N005:** **Row A**		15.3	1850 J	150	6720 J	134	15 J	533 J		204 J	4.52 U	29.4													
	value to use: Row B		15.3	1850	150	6720	134	15	533		204	4.52	29.4													
	congener TEC: Row C		**0.00459**	**0.0555**	**0.0045**	**0.2016**	**0.00402**	**1.5**	**0.01599**		**0.00612**	**0.1356**	**0.000882**	7%	1.793202	1.861	1.928802	1.8063	J	**Section 1**	**1.8063**	**J**				
	donor value to use: Row D																				Qualified	99%				
	donor TEC: Row E																				Dioxin/Furan					
14	**NB03CRB-MUS-N006:** **Row A**	194	9.16	1040 J	97.6	4190 J	88.4	8.71	322		123	1.49 U	16.4													
	value to use: Row B	194	9.16	1040	97.6	4190	88.4	8.71	322		123	1.49	16.4													
	congener TEC: Row C	**0.0194**	**0.002748**	**0.0312**	**0.002928**	**0.1257**	**0.002652**	**0.871**	**0.00966**		**0.00369**	**0.0447**	**0.000492**	4%	1.06947	1.09182	1.11417	1.0786	none	**Section 1**	**1.0786**	**none**				
	donor value to use: Row D																				Qualified	18%				
	donor TEC: Row E																				Dioxin/Furan					
15	**NB03CRB-MUS-N007:** **Row A**	360	14	1670 J	136	6040 J	126	13.5	436		177	1.48 U	26.2													
	value to use: Row B	360	14	1670	136	6040	126	13.5	436		177	1.48	26.2													
	congener TEC: Row C	**0.036**	**0.0042**	**0.0501**	**0.00408**	**0.1812**	**0.00378**	**1.35**	**0.01308**		**0.00531**	**0.0444**	**0.000786**	3%	1.6485	1.6707	1.6929	1.6581	none	**Section 1**	**1.6581**	**none**				
	donor value to use: Row D																				Qualified	16%				
	donor TEC: Row E																				Dioxin/Furan					
16	**NB03CRB-MUS-N008:** **Row A**		6.8	793 J	65.2	2860 J	53.3	6.59	221		88.2	1.43 U	11.1													
	value to use: Row B		6.8	793	65.2	2860	53.3	6.59	221		88.2	1.43	11.1													
	congener TEC: Row C		**0.00204**	**0.02379**	**0.001956**	**0.0858**	**0.001599**	**0.659**	**0.00663**		**0.002646**	**0.0429**	**0.000333**	5%	0.7838	0.8052	0.8267	0.7894	none	**Section 1**	**0.7894**	**none**				
	donor value to use: Row D																				Qualified	18%				
	donor TEC: Row E																				Dioxin/Furan					
17	**NB03CRB-MUS-S001:** **Row A**		6.24	605 J	47.9	2050 J	47.3	5.3	182		74	1.46 U	10.1													
	value to use: Row B		6.24	605	47.9	2050	47.3	5.3	182		74	1.46	10.1													
	congener TEC: Row C		**0.001872**	**0.01815**	**0.001437**	**0.0615**	**0.001419**	**0.53**	**0.00546**		**0.00222**	**0.0438**	**0.000303**	7%	0.6224	0.6443	0.6662	0.6268	none	**Section 1**	**0.6268**	**none**				
	donor value to use: Row D																				Qualified	19%				
	donor TEC: Row E																				Dioxin/Furan					
18	**NB03CRB-MUS-S002:** **Row A**	61	3.27 J	337 J	32	1270 J	26.3	1.55 U	99.9		38.5	1.45 U	4.88													
	value to use: Row B	61	3.27	337	32	1270	26.3	1.55	99.9		38.5	1.45	4.88													
	congener TEC: Row C	**0.0061**	**0.000981**	**0.01011**	**0.00096**	**0.0381**	**0.000789**	**0.155**	**0.002997**		**0.001155**	**0.0435**	**0.0001464**	124%	0.0613	0.1606	0.2598	0.2232	J	**Section 2, Treatment 1**			**0.2232**	**J**	0.2232	J
	donor value to use: Row D																						Qualified	95%	Qualified	95%
	donor TEC: Row E																						Dioxin/Furan		Dioxin/Furan	

EPA Advanced KM TEQ Calculator

Crab muscle PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Mus PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 2/1/17

protect/unprotect sheet password = dioxin

SITE DATA

	Chemical Sort Order:	18	19	20	21	22	23	24	25	26	27	28	29											
	WHO 2005 TEFs =	0.0001	0.0003	0.00003	0.00003	0.00003	0.00003	0.1	0.00003	0.00003	0.00003	0.03	0.00003											
Sample notes	Sample ID: (must enter on Row A)	PCB 77	PCB 81	PCB 105	PCB 114	PCB 118	PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	Summary of Sensitivity Analysis (relative percent difference)	TEQs from Substitution: U = 0 & sum	TEQs from Substitution: U = 1/2 DL & sum	TEQs from Substitution: U = DL & sum	KM Method: Sample KM TEQ	KM Method: Qualifier	KM Method: Select KM TEQ	(Quasi) Sensitivity Analysis SECTION 1 — Highest TEC value is a DETECT, and there are no rejected ("R") values — Treatment 1: KM TEQ	Treatment 1: Qualifier and Qualifier Fractions	(Quasi) Sensitivity Analysis SECTION 2 — Highest TEC value is a NONDETECT ("U" or "ND"), and there are no rejected ("R") values — Treatment 1: Make highest U value a D: KM TEQ	Treatment 1: Make highest U value a D: Qualifier and Qualifier Fractions	Treatment 2: Substitute comparable "donor" value for highest U: KM TEQ	Treatment 2: Substitute comparable "donor" value for highest U: Qualifier and Qualifier Fractions
19	NB03CRB-MUS-S003: Row A	108	4.97	555 J	45.8	2140 J	39.1	5.88	173		73.7	1.47 U	9.18											
	value to use: Row B	108	4.97	555	45.8	2140	39.1	5.88	173		73.7	1.47	9.18											
	congener TEC: Row C	0.0108	0.001491	0.01665	0.001374	0.0642	0.001173	0.588	0.00519		0.002211	0.0441	0.0002754	6%	0.6914	0.7134	0.7355	0.6963	none	Section 1	0.6963 Qualified Dioxin/Furan	none 17%				
	donor value to use: Row D																							
	donor TEC: Row E																							
20	NB03CRB-MUS-S004: Row A	111	4.76 J	550 J	44.7	2050 J	37	5.23	156		63.9	1.49 U	7.49											
	value to use: Row B	111	4.76	550	44.7	2050	37	5.23	156		63.9	1.49	7.49											
	congener TEC: Row C	0.0111	0.001428	0.0165	0.001341	0.0615	0.00111	0.523	0.00468		0.001917	0.0447	0.0002247	7%	0.6228	0.6452	0.6675	0.6276	none	Section 1	0.6276 Qualified Dioxin/Furan	none 19%				
	donor value to use: Row D																							
	donor TEC: Row E																							
21	NB03CRB-MUS-S005: Row A	122	4.42 J	520 J	36.1	1640 J	32.5	4.6 J	125		49.6	1.5 U	5.89											
	value to use: Row B	122	4.42	520	36.1	1640	32.5	4.6	125		49.6	1.5	5.89											
	congener TEC: Row C	0.0122	0.001326	0.0156	0.001083	0.0492	0.000975	0.46	0.00375		0.001488	0.045	0.0001767	8%	0.5457987	0.5683	0.5907987	0.5504	J	Section 1	0.5504 Qualified Dioxin/Furan	J 97%				
	donor value to use: Row D																							
	donor TEC: Row E																							
22	NB03CRB-MUS-S006: Row A		5.4	561	1.43 U	2150 J	40.5	5.42	164		66.4	1.43 U	7.54											
	value to use: Row B		5.4	561	1.43	2150	40.5	5.42	164		66.4	1.43	7.54											
	congener TEC: Row C		0.00162	0.01683	0.0000429	0.0645	0.001215	0.542	0.00492		0.001992	0.0429	0.0002262	7%	0.6333032	0.65477	0.6762461	0.6372	none	Section 1	0.6372 Qualified Dioxin/Furan	none 16%				
	donor value to use: Row D																							
	donor TEC: Row E																							
23	NB03CRB-MUS-S007: Row A	77.2 J	4.44 J	416 J	43.9 J	1560 J	36.9 J		136 J		51.6 J	1.48 U	6.55 J											
	value to use: Row B	77.2	4.44	416	43.9	1560	36.9		136		51.6	1.48	6.55											
	congener TEC: Row C	0.00772	0.001332	0.01248	0.001317	0.0468	0.001107		0.00408		0.001548	0.0444	0.0001965	45%	0.0766	0.0988	0.1210	0.0803	J	Section 1	0.0803 Qualified Dioxin/Furan	J 100%				
	donor value to use: Row D																							
	donor TEC: Row E																							
24	NB03CRB-MUS-S008: Row A	51.5 J	2.91 J	274 J	25.7 J	1070 J	23.5 J	2.83 J	87.5 J		34.3 J	1.45 U	4.14 J											
	value to use: Row B	51.5	2.91	274	25.7	1070	23.5	2.83	87.5		34.3	1.45	4.14											
	congener TEC: Row C	0.00515	0.000873	0.00822	0.000771	0.0321	0.000705	0.283	0.002625		0.001029	0.0435	0.0001242	12%	0.3346	0.3563	0.3781	0.3403	J	Section 1	0.3403 Qualified Dioxin/Furan	J 100%				
	donor value to use: Row D																							
	donor TEC: Row E																							
25	NB03CRB-MUS-S009: Row A	53.4 J	2.81 J	254 J	23.2 J	969 J	20.6 J	2.28 J	74 J		28.7 J	1.5 U	3.42 J											
	value to use: Row B	53.4	2.81	254	23.2	969	20.6	2.28	74		28.7	1.5	3.42											
	congener TEC: Row C	0.00534	0.000843	0.00762	0.000696	0.02907	0.000618	0.228	0.00222		0.000861	0.045	0.0001026	15%	0.2754	0.2979	0.3204	0.2806	J	Section 1	0.2806 Qualified Dioxin/Furan	J 100%				
	donor value to use: Row D																							
	donor TEC: Row E																							
26	NB03CRB-MUS122: Row A	233	10.1	1130 J	106	4630 J	92.5	8.73	323		126	1.49 U	16.1											
	value to use: Row B	233	10.1	1130	106	4630	92.5	8.73	323		126	1.49	16.1											
	congener TEC: Row C	0.0233	0.00303	0.0339	0.00318	0.1389	0.002775	0.873	0.00969		0.00378	0.0447	0.000483	4%	1.0920	1.1144	1.1367	1.1021	none	Section 1	1.1021 Qualified Dioxin/Furan	none 19%				
	donor value to use: Row D																							
	donor TEC: Row E																							
27	NB03CRB-MUS123: Row A	234	10.5	1110 J	106	4350 J	91	10.4	320		128	1.43 U	16.8											
	value to use: Row B	234	10.5	1110	106	4350	91	10.4	320		128	1.43	16.8											
	congener TEC: Row C	0.0234	0.00315	0.0333	0.00318	0.1305	0.00273	1.04	0.0096		0.00384	0.0429	0.000504	3%	1.2502	1.2717	1.2931	1.2602	none	Section 1	1.2602 Qualified Dioxin/Furan	none 16%				
	donor value to use: Row D																							
	donor TEC: Row E																							
28	NB03CRB-MUS124: Row A		3.5 J	376	32.5	1390 J	27.8	3.83 J	102		40.9	1.49 U	1.29 U											
	value to use: Row B		3.5	376	32.5	1390	27.8	3.83	102		40.9	1.49	1.29											
	congener TEC: Row C		0.00105	0.01128	0.000975	0.0417	0.000834	0.383	0.00306		0.001227	0.0447	0.0000387	10%	0.4431	0.4655	0.4879	0.4507	J	Section 1	0.4507 Qualified Dioxin/Furan	J 96%				
	donor value to use: Row D																							
	donor TEC: Row E																							
29	NB03CRB-MUS125: Row A	161	9.14	821 J	80.9	3390 J	72.8	8.71	258		102	1.47 U	11.7											
	value to use: Row B	161	9.14	821	80.9	3390	72.8	8.71	258		102	1.47	11.7											
	congener TEC: Row C	0.0161	0.002742	0.02463	0.002427	0.1017	0.002184	0.871	0.00774		0.00306	0.0441	0.000351	4%	1.031934	1.05398	1.076034	1.0393	none	Section 1	1.0393 Qualified Dioxin/Furan	none 16%				
	donor value to use: Row D																							
	donor TEC: Row E																							
30	NB03CRB-MUS126: Row A		8.13	741 J	74.1	2980 J	66.7	8	229		90.4	1.46 U	1.27 U											
	value to use: Row B		8.13	741	74.1	2980	66.7	8	229		90.4	1.46	1.27											
	congener TEC: Row C		0.002439	0.02223	0.002223	0.0894	0.002001	0.8	0.00687		0.002712	0.0438	0.0000381	5%	0.927875	0.94979	0.9717131	0.9334	none	Section 1	0.9334 Qualified Dioxin/Furan	none 16%				
	donor value to use: Row D																							
	donor TEC: Row E																							
31	NB03CRB-MUS127: Row A		12.4 J	1090 J	120	4920 J	109	12.4 J	384		158	4.81 U	14.5 J											
	value to use: Row B		12.4	1090	120	4920	109	12.4	384		158	4.81	14.5											
	congener TEC: Row C		0.00372	0.0327	0.0036	0.1476	0.00327	1.24	0.01152		0.00474	0.1443	0.000435	9%	1.4476	1.5197	1.5919	1.4562	J	Section 1	1.4562 Qualified Dioxin/Furan	J 99%				
	donor value to use: Row D																							
	donor TEC: Row E																							
32	NB03CRB-MUS129: Row A		8.5 J	727 J	74.7	2870 J	59.6	8.08 J	229		91.8	2.99 U	10.7											
	value to use: Row B		8.5	727	74.7	2870	59.6	8.08	229		91.8	2.99	10.7											
	congener TEC: Row C		0.00255	0.02181	0.002241	0.0861	0.001788	0.808	0.00687		0.002754	0.0897	0.000321	9%	0.9324	0.9773	1.0221	0.9480	J	Section 1	0.9480 Qualified Dioxin/Furan	J 99%				
	donor value to use: Row D																							
	donor TEC: Row E																							
33	NB03CRB-MUS130: Row A		12.2	1170 J	103 J	3780 J	94.2 J	10.4	287 J		111 J	1.43 U	12.9											
	value to use: Row B		12.2	1170	103	3780	94.2	10.4	287		111	1.43	12.9											
	congener TEC: Row C		0.00366	0.0351	0.00309	0.1134	0.002826	1.04	0.00861		0.00333	0.0429	0.000387	3%	1.2104	1.2319	1.2533	1.2185	none	Section 1	1.2185 Qualified Dioxin/Furan	none 17%				
	donor value to use: Row D																							
	donor TEC: Row E																							
34	NB03CRB-MUS131: Row A		4.5 J	352	33.2	1160 J	26.1	3.09 J	88.8		32.1	1.43 U	3.87 J											
	value to use: Row B		4.5	352	33.2	1160	26.1	3.09	88.8		32.1	1.43	3.87											
	congener TEC: Row C		0.00135	0.01056	0.000996	0.0348	0.000783	0.309	0.002664		0.000963	0.0429	0.0001161	11%	0.3612	0.3827	0.4041	0.3678	J	Section 1	0.3678 Qualified Dioxin/Furan	J 96%				
	donor value to use: Row D																							
	donor TEC: Row E																							
35	NB03CRB-MUS132: Row A	255	8.69	1040 J	79.1	3510 J	71.3	7.48	257		100	1.5 U	13.6											
	value to use: Row B	255	8.69	1040	79.1	3510	71.3	7.48	257		100	1.5	13.6											
	congener TEC: Row C	0.0255	0.002607	0.0312	0.002373	0.1053	0.002139	0.748	0.00771		0.003	0.045	0.000408	5%	0.9282	0.9507	0.9732	0.9376	none	Section 1	0.9376 Qualified Dioxin/Furan	none 19%				
	donor value to use: Row D																							
	donor TEC: Row E																							
36	NB03CRB-MUS133: Row A	356	14.1	1630 J	140	6450 J	123	14	510		207	1.45 U	31.8											
	value to use: Row B	356	14.1	1630	140	6450	123	14	510		207	1.45	31.8											
	congener TEC: Row C	0.0356	0.00423	0.0489	0.0042	0.1935	0.00369	1.4	0.0153		0.00621	0.0435	0.000954	3%	1.7126	1.7343	1.7561	1.7226	none	Section 1	1.7226 Qualified Dioxin/Furan	none 16%				
	donor value to use: Row D																							
	donor TEC: Row E																							
37	NB03CRB-MUS134: Row A	237	15.4 J	3200 J	281	12300 J	221	22.6 J	1310		454	11.4 U	45.8 J											
	value to use: Row B	237	15.4	3200	281	12300	221	22.6	1310		454	11.4	45.8											
	congener TEC: Row C	0.0237	0.00462	0.096	0.00843	0.369	0.00663	2.26	0.0393		0.01362	0.342	0.001374	11%	2.822674	2.99367	3.164674	2.8469	J	Section 1	2.8469 Qualified Dioxin/Furan	J 97%				
	donor value to use: Row D																							
	donor TEC: Row E																							

EPA Advanced KM TEQ Calculator

Crab muscle PCB-TEQ

Project Name: Tierra - Newark Bay HHRA
Matrix: Crab Mus PCB-TEQ **Data entered by:** Francis Loko
Units: ng/kg **Date entered:** 2/1/17

protect/unprotect sheet password = dioxin

SITE DATA

| | | |

Appendix E

APPENDIX E
LEAD RISK CHARACTERIZATION

E-1 Introduction

Lead was identified as a chemical of potential concern (COPC) based on the COPC selection process described in Section 3.3 of the main text of this Baseline Human Health Risk Assessment (BHHRA) report. This appendix presents the results of blood lead modeling that was conducted to assess the potential adverse health effects associated with exposure to lead. This approach is consistent with that used in the BHHRA for the Lower Passaic River Study Area (LPRSA) (AECOM, 2017).

The selection of COPCs for lead is summarized below and in Table E-1.

- **Accessible Surface Sediment.** The maximum detected concentration of lead is 2,190 mg/kg. As discussed in Section 3.3.4 of the main text of this BHHRA report, USEPA's current residential RSL (USEPA 2019) for lead in soil is 400 mg/kg, based on the regulatory target of no more than 5% of young children in a population having a blood-lead level exceeding 10 µg/dL. USEPA now recommends targeting blood lead levels below 10 µg/dL; in fact, USEPA (2017b) recommends updates to lead methodologies and includes examples targeting a blood level of 5 µg/dL. Therefore, as recommended by USEPA and NJDEP (2019), 200 mg/kg is used as the screening level for lead in sediment, which is lower than the maximum detected concentration in sediment.
- Therefore, lead was selected as a COPC in accessible surface sediment.
- **Surface Water.** The maximum detected concentration of lead in surface water, 8.5 µg/L, is below the EPA drinking-water action level of 15 µg/L.[1] Therefore, lead was not selected as a COPC in surface water.
- **Fish Tissue.** For all species, the maximum detected concentration of lead in fish, 0.152 mg/kg, is below the Federal Drug Administration (FDA) action level for lead in crustacea of 1.5 mg/kg (FDA, 2007). Therefore, lead was not selected as a COPC in fish.
- **Crab Tissue.** Lead was detected below the FDA action level for lead in crustacea of 1.5 mg/kg (FDA, 2007) in samples of muscle tissue, and samples of muscle and hepatopancreas combined. However, lead was detected at a maximum concentration of 2.52 mg/kg in samples of hepatopancreas tissue, which is above the action level of 1.5 mg/kg. Therefore, lead was selected as a COPC in crab hepatopancreas tissue, even though it is very unlikely that an individual would consume only the hepatopancreas, especially on any kind of regular basis.

Receptors evaluated in this assessment include an angler/sportsman, swimmer, wader, boater, and worker. Receptors are evaluated by age group:

- The adult is assumed to be >18 years of age, and is assumed to crab, swim, wade, or boat on Newark Bay.

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[1] https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations#Inorganic

- The child is considered to be 1 to <7 years of age, and this age group is considered to be able to swim or wade in Newark Bay, or to eat crab brought home by an angler/sportsman.
- The adolescent is considered to be 7 to <19 years of age, and is assumed to crab, swim, wade, or boat on Newark Bay.

Each receptor group is considered separately; however, exposures via multiple pathways for the same receptor are included in this assessment. For example, the angler/sportsman (adult and adolescent) is assumed to be exposed via direct contact with sediment and via consumption of crab.

The EPA Integrated Exposure Uptake Biokinetic (IEUBK) model (Version 1.1, Build 11) was used to quantify potential exposures to lead for children younger than 7 years of age (USEPA, 1994a,b). This model correlates lead levels in the environment to blood lead levels (PbB) in children. The IEUBK model comprises a four-step process that predicts PbBs associated with environmental lead exposures from multiple sources and routes for a population of children (0–84 months of age). For this assessment, PbBs were estimated for children 12–72 months, which is the same 6-year time period as for the child scenario evaluated in the main text of the BHHRA report for other COPCs.

The model developed by Bowers et al. (1994) was used to quantify exposures to lead for adolescent and adult receptors. Similar to the IEUBK model, the Bowers et al. model accounts for exposure to lead present in multiple environmental media, including air, soil, and water. The component of the model for soil is the same as that used in the EPA Adult Lead Methodology (ALM) spreadsheet (USEPA, 2001, 2017a). The ALM could not be used on its own because it does not account for exposure to lead via pathways other than soil (e.g., food).

While the preferred lead risk assessment tool for non-residential exposure scenarios is the Adult Lead Methodology, the Bowers model does accommodate non-soil exposures. And in fact, the Bowers et al. (1994) model was not included in US EPA review (2001) of adult lead models because of the similarity between the Bowers and ALM models, i.e., the basic algorithms for the Bowers model form the basis for the ALM model (USEPA, 2001).

E-2 Exposure Assessment

As discussed in Section 4.4 of the main text of the BHHRA report, the exposure-point concentration (EPC) represents the concentration in each environmental medium to which a receptor is assumed to be exposed during the exposure period. Unlike for other chemicals, the arithmetic mean concentration is used as the EPC in evaluating exposures (USEPA, 2003, 1994a). Table E-1 provides the summary statistics and the selected EPCs:

- **Accessible Surface Sediment.** Lead concentrations ranged from 26.1 mg/kg to 2,190 mg/kg, with an average of 205.7 mg/kg. The average concentration is slightly above the currently recommended screening level for lead in surface soil of 200 mg/kg (USEPA, 2017b; USEPA and NJDEP, 2019).
- **Blue Crab (Hepatopancreas).** Lead concentrations ranged from less than 0.0257 mg/kg to 2.52 mg/kg, with an average of 0.411 mg/kg. The average concentration is below the FDA action level for lead in crustacea of 1.5 mg/kg (FDA, 2007).

Exposure was assessed for anglers/sportsmen, swimmers, waders, and boaters (child, adolescent, and adult, as applicable), as well as adult workers. Exposure assumptions required for the IEUBK model and/or ALM include body weight, exposure frequency, exposure duration, averaging time, sediment ingestion rate, and crab ingestion rate. In the main BHHRA report, separate assumptions were made for both the central tendency exposure (CTE) and the reasonable maximum exposure (RME); however, for purposes of this

assessment of lead exposure, only RME assumptions were used. The values used for these parameters in the lead models are summarized in Table E-2. With two exceptions, these are the same values used to evaluate other COPCs for the NBSA. The rationale and references for these exposure parameters are found in Tables 4-2 through 4-6, 4-8, and 4-10 of the main BHHRA report.

The first exception is the exposure frequency for child swimmers and waders exposed to sediment. As described in Section 4.3.7.6 of the main BHHRA report, child swimmers and waders under the RME scenario are assumed to be exposed to sediment 1 day per week for 3 months, or 13 days per year. However, the IEUBK model assumes exposure occurs for 365 days per year and cannot be changed in the model. Accordingly, an exposure frequency of 365 days per year was used.

The second exception is the averaging time for adolescent and adult anglers, swimmers, waders, and boaters exposed to sediment. As also described in Section 4.3.7.6, adolescent and adult crabbers under the RME scenario are assumed to be exposed to sediment 2 days per week for 3.5 months, or 30 days per year. For adolescent and adult waders, simmers, and waders, exposure to sediment was assumed to occur 3 days per week or 1 day per week for 3 months, or 39 or 13 days/year respectively, under the RME scenario. However, for purposes of predicting blood level levels from exposure to sediment, it is more appropriate to use the actual duration of exposure, i.e., 105 days or 90 days, as the averaging time, rather than the standard assumption of 365 days.

E-3 Estimating Potential Exposures of Children to Lead

As noted above, the IEUBK model was used to calculate PbBs for the child (1 to <7 years) age group. Calculations were performed using the IEUBK v1.1, Build 11 software. Key assumptions in the IEUBK model are discussed below.

E-3.1 Sediment

The mean lead concentration in accessible surface sediment is 205.7 mg/kg, which is applicable to the swimmer and wader receptors. The child angler/sportsman is assumed to not participate in crabbing, and boating is considered to be not applicable to a child; thus, no direct contact with accessible surface sediment is assumed. The child swimmer and wader are assumed to ingest 0.1 grams of sediment per day (g/day). Due to default parameters inherent in IEUBK v1.1, Build 11, averaging times and exposure frequencies of 365 days per year were used, even though RME child swimmers and waders in the main BHHRA report are assumed to be exposed to sediment 1 day per week for 3 months. Accordingly, the estimated blood lead concentrations for the child wader (and swimmer) were based on exposure 365 days per year, overstating the contribution of lead in sediment to child blood lead levels. Since the mean lead concentration in sediment is 205.7 mg/kg, which is only slightly higher than the 200 mg/kg screening level recommended in EPA's comments, any time-weighted concentration based on average state or county data would be below 200 mg/kg.

E-3.2 Air

Exposure to airborne particulates from sediment is not a complete pathway in the conceptual site model for Newark Bay. Thus, the air concentration was entered as zero in this assessment.

E-3.3 Diet

IEUBK v1.1, Build 11 assumes an average ingestion of lead from diet of about 2 µg/day (1.95 to 2.26) for each age range within the child group. The model default value of 50% for fractional absorption (uptake) of lead ingested from the diet was used in the "GI Values/Bioavailability" option of the IEUBK software

(USEPA, 1994a). A crab ingestion rate of 7g/day ($6.9\overline{6}$ g/day) for the child angler/sportsman was used, which is one-third of the adult crab ingestion rate (USEPA, 2012). Therefore, excess crab intake was calculated as:

$$\frac{EPC_{Pb_{crab\ hepatopancreas}} \cdot IR_{crab\ hepatopancreas} \cdot EF_{crab\ hepatopancreas}}{AT_{crab\ hepatopancreas}} = \frac{0.411 \cdot 6.9\overline{6} \cdot 365}{365} = 2.863\ ug/day$$

Here:

$EPC_{Pb_{crab\ hepatopancreas}}$ is Exposure Point Concentration in mg/kg,

$IR_{crab\ hepatopancreas}$ is Ingestion Rate in g/day,

$EF_{crab\ hepatopancreas}$ is Exposure Frequency in days/year, and

$AT_{crab\ hepatopancreas}$ is Averaging Time in days/year.

For the purpose of simplicity and to obtain a more conservative estimate of risk from diet, it was assumed that the consumption of crab was in excess of the default consumption of food. In other words, the dietary lead intake used in this assessment was the sum of the default lead intake plus the intake due to crab, as shown in the following table.

Age Group	IEUBK Default (µg/day)	Total Intake (µg/day)
1-2	1.96	4.823
2-3	2.13	4.993
3-4	2.04	4.903
4-5	1.95	4.813
5-6	2.05	4.913
6-7	2.22	5.083

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E-3.4 Surface Water

As discussed previously, lead is not a COPC for the surface-water pathway for Newark Bay. Therefore, the lead concentration was entered as zero in this assessment.

E-4 Estimating Potential Exposures of Adolescents and Adults to Lead

The EPA's recommended approach for assessing nonresidential adult risks associated with lead exposure uses a method that relates soil lead intake to PbBs in women of child-bearing age (USEPA, 2003). The predicted PbB is then used to predict the PbB of an exposed fetus. This approach assumes that cleanup goals protective of a fetus will also be protective of male and female adult workers (USEPA, 2001). While EPA's ALM is useful for assessing most sites where other than residential exposures may occur, the ALM spreadsheet provided on the USEPA website addresses only the soil pathway. As noted, the basic algorithms for the Bowers et al. (1994) model were used as the basis for the current ALM. Accordingly, the adult lead exposure model of Bowers et al. (1994) was adapted to calculate the PRG and to estimate the PbB in adults to evaluate potential exposures to lead via crab ingestion, as well as accessible surface sediment. As with EPA's ALM, the Bowers et al. (1994) model uses a biokinetic slope factor (BKSF) to represent lead biokinetics and an exposure model in which all exposure pathways, other than soil ingestion,

are represented by a background PbB concentration. The adult lead model was applied to adolescents (7 to <19 years) in accordance with USEPA recommendations.[2]

Model inputs are presented in Table E-3. The model incorporates ingestion and absorption rates specific to each potential exposure pathway based on the assumption that there is a baseline PbB in the U.S. adult population that reflects typical exposures, primarily due to lead in the diet. The ALM is different from the IEUBK model, in that the BKSF is used to relate total uptake of lead in adults to blood lead, rather than the multicompartment distribution model used in the IEUBK model (Bowers et al. 1994). The Bowers model defines the adult PbB as the baseline PbB (PbB0) plus the increase in PbB from lead uptake from other sources, as follows:

$$PbB_{adult} = \left(BKSF \times \sum_{i=1}^{n} uptake_i \right) + PbB_0 \quad (1)$$

where:

PbBadult = Geometric mean of adult blood lead concentration (µg/dL)
$Uptake_i$ = Medium-specific lead incidental ingestion uptake
BKSF = Biokinetic slope factor [(µg/dL) per (µg/day)]
PbB0 = Baseline blood lead concentration (µg/dL).

The lead uptake (in units of µg/day) from accessible surface sediment and crab tissue is calculated using the following equation:

$$uptake_i = \frac{Pb_i \times IR_i \times AF_i \times EF_i}{AT_i} \quad (2)$$

where:

i = Media: sed (sediment); fish (fish); crab (crab tissue)
Pb_i = Average media lead concentration (mg/kg)
IR_i = Media ingestion rate (g/day)
AF_i = Media Absorption fraction (dimensionless)
EF_i = Medium-specific Exposure frequency (days/year)
ATi = Media- specific Averaging time (days/year).

Once the adult PbB is determined, the geometric mean of the fetal blood lead concentration can be predicted thus:

$$PbB_{fetal} = PbB_{adult} \times R_{fetal/maternal} \quad (3)$$

where:

PbBfetal = Geometric mean of blood lead concentration among fetuses of adults (µg/dL)

[2] https://www.epa.gov/superfund/lead-superfund-sites-frequent-questions-risk-assessors-adult-lead-methodology#ALM

Rfetal/maternal = Fetal/maternal blood lead ratio (dimensionless).

The 95th percentile of either the adult or fetal blood lead concentration can be calculated by simply multiplying the geometric mean by the geometric standard deviation of blood lead concentration:

$$PbB_{adult,0.95} = PbB_{adult} \times GSD^{1.645} \quad (4)$$

where:

PbBadult, 0.95 = 95th percentile of blood lead concentration among adults (µg/dL)

GSD = Geometric standard deviation of blood lead concentration (dimensionless).

E-4.1 Preliminary Remediation Goals

PRGs are calculated based on Equations 3 and 4 in USEPA (2003) using the following equation:

$$PRG_i = \frac{\left(\left[\frac{PbB_{fetal,0.95}}{R_{fetal/maternal} \times GSD^{1.645}}\right] - PbB_0\right) \times AT_i}{BKSF \times IR_i \times AF_i \times EF_i} \quad (5)$$

where:

i = Media: sed (sediment); fish (fish tissue); crab (crab tissue)

PRGi = Medium-specific Preliminary Remediation Goal (mg/kg)

PbBfetal,0.95 = 95th percentile blood lead concentration among fetuses of adults (µg/dL)

Rfetal/maternal = Fetal/maternal blood lead ratio (dimensionless)

GSD = Geometric standard deviation of blood lead concentration (dimensionless)

PbB0 = Baseline blood lead concentration (µg/dL)

ATi = Medium-specific Averaging time (days/year)

BKSF = Biokinetic slope factor [(µg/dL) per (µg/day)]

IRi = Media ingestion rate (g/day)

AFi = Media Absorption fraction (dimensionless)

EFi = Media- specific Exposure frequency (days/year).

E-4.2 Probability of Exceeding Target Fetal Blood Lead Level

The risk to the fetus can be estimated from the probability distribution of fetal PbB. In the ALM, the probability of exceeding the target blood lead level of concern (PbBt) is based on a lognormal probability model for PbBs in adult women, coupled with an estimated constant of proportionality between fetal and maternal blood lead levels (USEPA 2003). These relationships specify that the distribution of fetal PbB is lognormal (i.e., PbBfetal ~ Lognormal [GM, GSD]). Exceedance probabilities for the lognormal model can be determined after the GM of PbBfetal (from Equation 3), GSD, and exceedance criterion (PbBt) are converted to log scale, and a “standard normal deviate” or “z-value” is calculated as follows:

$$z = \frac{ln(PbB_t) - ln(GM)}{\ln(GSD)} \quad (6)$$

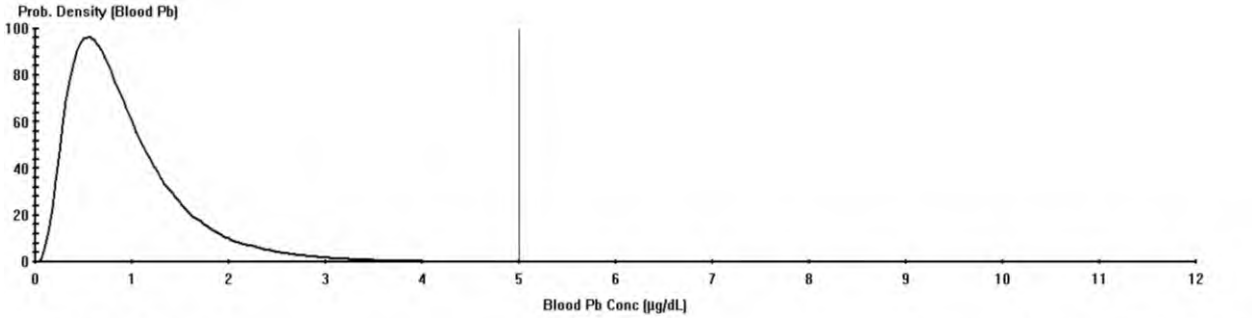
Using standard normal probability tables, the probability (p) of a lesser value than z can be identified. The probability that the PbBfetal exceeds PbBt is estimated as (1-p)×100 (USEPA, 2003). In this assessment,

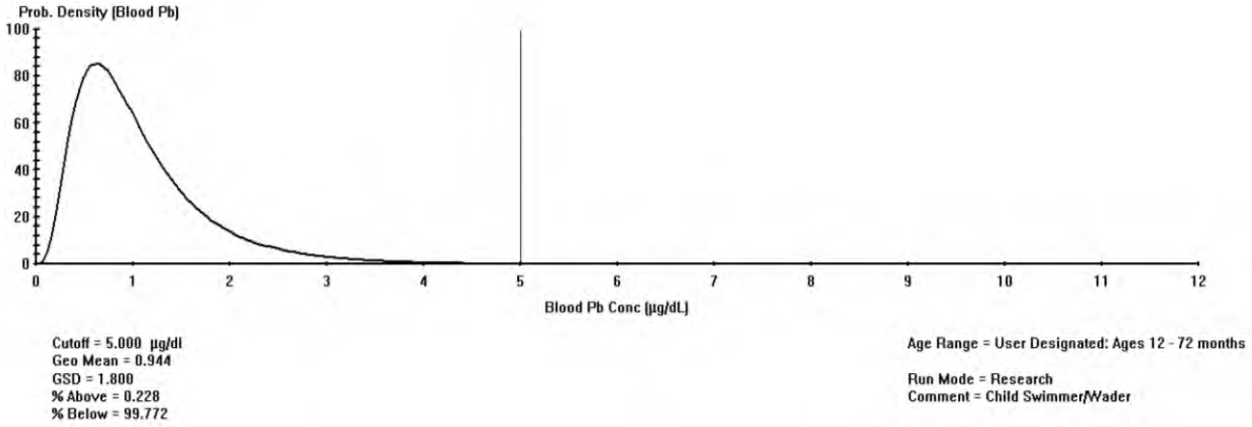
the PbBt was set to 5 µg/dL, which is the USEPA's target blood lead level used in the ALM spreadsheet (USEPA, 2017a) and subsequent ALM guidance (USEPA, 2017b), and consistent with the Centers for Disease Control (CDC) current reference value for lead (CDC, 2012). The current regulatory target is that no more than 5% of young children in a population have a blood-lead level exceeding 5 µg/dL (USEPA, 2017b).

E-5 Results

E-5.1 Children

The IEUBK model calculates a distribution of blood lead concentration in children. The results are presented in graphical format below, and the model output is provided in Attachment E-A. As can be seen in the figures below, <5% of child anglers/sportsmen, swimmers, and waders potentially exposed to lead under the conditions summarized above are predicted to have blood lead levels greater than 5 ug/dL (<1%). Therefore, under the conditions described above, no adverse health effects are expected for children potentially exposed to lead in accessible surface sediment or crab tissue at Newark Bay.





E-5.2 Adults

Based on the Bowers et al. (1994) model, the 95th percentile of predicted PbB levels in the fetus for all adolescent and adult receptors is below 5 µg/dL (0.46 to 3.44 µg/dL). In addition, <5% of fetuses potentially exposed to lead under the conditions summarized above are predicted to have blood lead levels greater

than 5 ug/dL (0.009 to 1.1%). Finally, all media concentrations are below the calculated PRGs. The PbB and PRG calculations and assumptions for each receptor are provided in Table E¬3. Accordingly, under the conditions evaluated, no adverse health effects are expected for adults or adolescents, including their offspring, potentially exposed to lead in accessible surface sediment or crab tissue at Newark Bay.

E-6 Uncertainties

The IEUBK model is designed to simulate PbBs for children up to 84 months of age, which is different from the child receptor evaluated in the BHHRA (aged 1 to <7 years). Accordingly, the IEUBK evaluation was limited to 72 months, from the first birthday until the day before the seventh birthday. This difference is not expected to affect the conclusions of the evaluation.

As discussed above, in the main BHHRA report, child swimmers and waders under the RME scenario are assumed to be exposed to sediment 1 day per week for 3 months, or 13 days per year. However, the IEUBK model assumes exposure occurs for 365 days per year, and these assumptions cannot be changed in the model. Accordingly, an exposure frequency and averaging time of 365 days per year was used. The 365 days per year assumptions overstate the contribution of lead in sediment to child blood lead levels, and yield an even lower percentage of child swimmers and waders potentially exposed to lead who would be predicted to exhibit PbBs higher than 5 µg/dL than if the lower 13 days per year value was used.

Lead risk assessment methods are different from those used for other chemicals, because they use cumulative exposures to predict PbBs, rather than exposures to discreet sources. Accordingly, uncertainties are compounded by the many sources of exposure, in addition to uncertainties arising from the incidental ingestion of sediment and crab tissue.

Fetal risk estimates share common sources of uncertainties with the estimates for child risks, including the assumed crab lead concentrations and crab consumption rates. Uncertainties unique to the ALM include the assumed baseline blood lead level and geometric standard deviation parameters from the National Health and Nutrition Examination Survey (USEPA, 2017b). The results are based on the highest recommended values for the baseline blood lead levels and the geometric standard deviation. They are unlikely to underestimate risk. Blood lead levels for adolescents were evaluated using the ALM. This introduces some uncertainty to the evaluation; however, given the limitations of currently available modeling tools, USEPA states that it is reasonable to apply the ALM to adolescent receptors. To account for the potential that lead absorption is higher in adolescents than adults, the absorption fraction for lead in sediment was assumed to be 0.3 for adolescents, rather than the default of 0.12 for adults.

Potential exposure to lead in crab was evaluated based on the mean concentration of lead in hepatopancreas tissue (0.411 mg/kg) because this was the only tissue in which the maximum lead concentration exceeded the screening level. Had the assessment been done on the mean concentration in hepatopancreas and muscle combined (0.0553 mg/kg) or muscle only (0.0207 mg/kg), the estimated blood lead concentrations would have been even lower.

Finally, the mean concentration of lead in sediment of 205.7 mg/kg is approximately a factor of 10 lower than the maximum concentration of 2,190 mg/kg. Only one other value is over 1,000 mg/kg, and only 10 values are over 200 mg/kg. Accordingly, while it is possible that some individuals may be exposed to higher concentrations of lead in sediment on an intermittent basis, the difference is not expected to affect the conclusions of the evaluation.

E-7 References

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Tables

Table E-1
Summary of Exposure Point Concentrations for Lead at Newark Bay
Baseline Human Health Risk Assessment
Newark Bay Study Area

Matrix	Tissue	Species	Units	Detection Frequency Ratio (a)	Minimum Concentration	Maximum Concentration	Mean	EPC for Lead Modeling (b)
Crab	Hep + Muscle combined		mg/kg	36:36	0.039568	0.90384	0.151	NA
Crab	Hepatopancreas		mg/kg	36:37	0.0257	2.52	0.411	0.411
Crab	Muscle		mg/kg	31:36	0.0248	0.336	0.0553	NA
Fish	Fillet	American Eel	mg/kg	5:18	0.0177	0.0339	0.0207	NA
Fish	Fillet	Bluefish	mg/kg	3:18	0.0175	0.152	0.0264	NA
Fish	Fillet	Striped Bass	mg/kg	1:21	0.0178	0.0358	--	NA
Fish	Fillet	Summer Flounder	mg/kg	0:18	0.0188	0.026	--	NA
Fish	Fillet	White Perch	mg/kg	15:20	0.0226	0.103	0.0392	NA
Fish	Fillet	All Species Combined	mg/kg	24:95	0.0175	0.152	0.0243	NA
Surface Water			µg/L	131:131	0.533	8.5	1.767	NA
Sediment			mg/kg	41:41	26.1	2190	205.7	205.7

Notes
Highlighted values used in this assessment
EPC - Exposure Point Concentration.
NA - Not Applicable
(a) Number of samples detected: Total number of samples.
(b) The mean detected concentration is selected as the EPC for lead based on the models used to evaluate lead exposures (USEPA 1994 and 2003)

References

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Table E-2
Lead Modeling Exposure Assumptions - Human Health Risk Assessment - Newark Bay
Baseline Human Health Risk Assessment
Newark Bay Study Area

Parameter (a)	Angler/Sportsman			Swimmer			Wader			Boater			Worker
	Child (1 to <7 yrs)	Adolescent (7 to <19 yrs)	Adult	Child (1 to <7 yrs)	Adolescent (7 to <19 yrs)	Adult	Child (1 to <7 yrs)	Adolescent (7 to <19 yrs)	Adult	Child (1 to <7 yrs)	Adolescent (7 to <19 yrs)	Adult	Adult
General Assumptions													
Mean Body Weight (Kg)	17	52	80	17	52	80	17	52	80	NA	52	80	80
Exposure Duration (years)	6	12	20	6	12	20	6	12	20	NA	12	20	25
Lifetime (years)	70	70	70	70	70	70	70	70	70	NA	70	70	70
Sediment Incidental Ingestion													
Incidental Ingestion Rate (g/day)	NA	0.05	0.05	0.10	0.05	0.05	0.10	0.05	0.05	NA	0.05	0.05	0.05
Exposure Frequency (days) (b)	NA	30	30	365	39	13	365	39	13	NA	39	13	50
Averaging time (days) (c)	NA	105	105	365	90	90	365	90	90	NA	90	90	365
Crab Tissue Ingestion													
Ingestion Rate (g/day)	7	13.9	20.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Exposure Frequency (days)	365	365	365	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
NA - Not Applicable; receptor is not assumed to be exposed via this pathway.
(a) - Tables 4-2 to 4-6; 4-8, and 4-10 of the main text of this baseline human health risk assessment (BHHRA) provide the references for the exposure parameters, except as noted.
(b) - The exposure frequency for the child swimmer and wader was assumed to be 365 days per year because that is the default value in the IEUBK model.
(c) - The averaging time for the adolecent and adult angler (3.5 months or 105 days) and adolescent and adult swimmer, wader and boater (3 months or 90 days) is equal to the number of days over which exposure is assumed to occur.

Table E-3
Evaluation of Adolescent and Adult Exposure to Lead in Various Media
Baseline Human Health Risk Assessment
Newark Bay Study Area

Parameter	Description	Units	Adolescent Angler/ Sportsman	Adult Angler/ Sportsman	Adolescent Swimmer	Adult Swimmer	Adolescent Wader	Adult Wader	Adolescent Boater	Adult Boater	Worker	Notes
Lead Parameters												
$PbB_{0,\ adult}$	Baseline Blood Lead Concentration	ug/dL	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	[a]
BKSF	Biokinetic Slope Factor	ug/dL	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	[b]
$PbB_{fetal,\ 0.95,\ goal}$	95_{th} percentile PbB in fetus (ug/dL)	ug/dL	5	5	5	5	5	5	5	5	5	[b], [g]
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	unitless	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	[b]
GSD	Geometric standard deviation PbB	unitless	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	[c]
Sediment Incidental Ingestion												
Pbsed	Sediment Concentration	ug/g	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	[d]
AFsed	Sediment Absorption Factor	unitless	0.30	0.12	0.30	0.12	0.30	0.12	0.30	0.12	0.12	[l]
IRsed	Sediment Ingestion Rate	g/day	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	[e]
EFsed	Exposure Frequency	days	30	30	39	13	39	13	39	13	50	[f]
ATsed	Averaging Time	days	105	105	90	90	90	90	90	90	365	[m]
UPTAKEsed	Uptake from Lead in Sediment	ug/day	0.4	0.2	0.3	0.0	0.3	0.0	0.3	0.0	0.2	[h]
PRGsed	PRG for Sediment (using 95th percentile fetal blood level goal)	ug/g	1,917	4,792	2,359	17,695	2,359	17,695	2,359	17,695	4,601	[i]
Crab Hepatopancreas Ingestion												
Pbcrab	Crab Tissue Concentration	ug/g	0.411	0.411	NA	NA	NA	NA	NA	NA	NA	[d]
AFcrab	Crab Absorption Factor	unitless	0.23	0.23	NA	NA	NA	NA	NA	NA	NA	[b]
IRcrab	Crab Ingestion Rate	g/day	13.9	20.9	NA	NA	NA	NA	NA	NA	NA	[e]
EFcrab	Exposure Frequency	days	365	365	NA	NA	NA	NA	NA	NA	NA	[f]
ATcrab	Averaging Time	days	365	365	NA	NA	NA	NA	NA	NA	NA	[b]
UPTAKEcrab	Uptake from Lead in Crab	ug/day	1.3	2.0	NA	NA	NA	NA	NA	NA	NA	[h]
PRGcrab	PRG for Crab Tissue (using 95th percentile fetal blood level goal)	ug/g	1.2	0.8	NA	NA	NA	NA	NA	NA	NA	[i]
Total Uptake												
UPTAKEtot	Total Uptake	ug/day	1.72	2.14	0.33	0.044	0.33	0.044	0.33	0.04	0.17	
PbB adult, central	Central estimate of blood lead concentration in adult women	ug/dL	1.29	1.46	0.73	0.62	0.73	0.62	0.73	0.62	0.67	[j]
PbB fetal, central	Central estimate of blood lead concentration in fetuses	ug/dL	1.16	1.31	0.66	0.56	0.66	0.56	0.66	0.56	0.60	
PbB adult, 0.95	95th percentile of blood lead concentration in adult women	ug/dL	3.39	3.83	1.92	1.62	1.92	1.62	1.92	1.62	1.76	
PbB fetal, 0.95	95th percentile of blood lead concentration in fetuses	ug/dL	3.05	3.44	1.73	1.46	1.73	1.46	1.73	1.46	1.58	
PbB_t	Target Blood Lead Level of Concern	ug/dL	5	5	5	5	5	5	5	5	5	[b], [g]
z	Standard Normal Deviate of PbB fetal, central	unitless	2.485	2.279	3.448	3.737	3.448	3.737	3.448	3.737	3.605	
p	probability of z	unitless	0.994	0.989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
$p(PbB_{fetal} > PbB_t)$	Probability that fetal PbB > PbB_t	%	0.647%	1.133%	0.028%	0.009%	0.028%	0.009%	0.028%	0.009%	0.016%	[k]

Table E-3
Evaluation of Adolescent and Adult Exposure to Lead in Various Media
Baseline Human Health Risk Assessment
Newark Bay Study Area

Notes
NA = Not applicable
ug/dL = micrograms per deciliter
ug/day = micrograms per day
mg/kg = milligrams per kilogram
g/day = grams per day
RME = reasonable maximum exposure
PbB = blood lead concentration
PRG = preliminary remediation goal
Media: sed = sediment; crab = crab hepatopancreas tissue
[a] Baseline blood lead level (PbB0) recommended value of 0.6 ug/dL for entire US population for NHANES 2009-2014 (USEPA 2017a,b).
[b] USEPA recommended default values (USEPA 2003).
[c] Geometric standard deviation of blood lead level (GSDi) recommended value of 1.8 for entire US population for NHANES 2009-2014 (USEPA 2017a,b).
[d] Average media concentration as presented in EPC Summary Table.
[e] RME soil ingestion rate as presented in Exposure Assumptions Table.
[f] RME exposure frequency as presented in Exposure Assumptions Table.
[g] The current target level of concern for lead is 10 µg/dL, however CDC has recommended reducing said target to 5 µg/dL. EPA is currently reviewing this recommendation. The 5 µg/dL level appears on the latest version of the ALM spreadsheet (USEPA 2017a) and subsequent guidance (USEPA 2017b); therefore, it has been used here.
[h] Calculated using Equation 2.
[i] Calculated using Equation 5.
[j] Calculated using Equation 1.
[k] Calculated using Equation 6, assuming lognormal distribution.
[l] USEPA default of 12% for adults (USEPA 2003). For adolescents, 30% has been used, based on USEPA recommendation: http://www.epa.gov/superfund/lead-superfund-sites-frequent-questions-risk-assessors-adult-lead-methodology#ALM.
[m] Site-specific values. See Tables 4-2 to 4-6; 4-8, and 4-10 of the main text of this baseline human health risk assessment (BHHRA).

References
USEPA. 2017a. Spreadsheet for calculation of PRGs: Appendix B of ALM document. Download from: https://www.epa.gov/sites/production/files/2017-07/alm_update_with_2009-2014_nhanes_pbbo_and_gsdi_06202017.xlsx.
USEPA. 2017b. Transmittal of update to the Adult Lead Methodology's default baseline blood lead concentration and geometric standard deviation parameters. Memorandum from Schatzi Fitz-James, Acting Director, Assessment and Remediation Division, Office of Superfund Remediation and Technology Innovation, to Superfund National Policy Mangers, Regions 1-10. Office of Land and Emergency Management, OLEM Directive
USEPA. 2003. Recommendations of the Technical Review Workgroup for Lead for an approach to assessing risks associated with adult exposures to lead in soil. EPA-540-R-03-001. US Environmental Protection Agency, Technical Review Workgroup for Lead, Washington, DC.

Attachment E-A

IEUBK Model Output

Child Angler (1 to <7) – IEUBK Model Results

LEAD MODEL FOR WINDOWS Version 1.1

==========

Model Version: 1.1 Build11
User Name:
Date:
Site Name:
Operable Unit:
Run Mode: Research

==========

******** Air ********

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (μg Pb/m^3)
.5-1	1.000	2.000	32.000	0.000
1-2	2.000	3.000	32.000	0.000
2-3	3.000	5.000	32.000	0.000
3-4	4.000	5.000	32.000	0.000
4-5	4.000	5.000	32.000	0.000
5-6	4.000	7.000	32.000	0.000
6-7	4.000	7.000	32.000	0.000

******** Diet ********

Age	Diet Intake(μg/day)
.5-1	0.000
1-2	4.823
2-3	4.993
3-4	4.903
4-5	4.813

5-6 4.913
6-7 5.083

******** Drinking Water ********

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 0.000 μg Pb/L

******** Soil & Dust ********

Multiple Source Analysis Used
Average multiple source concentration: 0.000 μg/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Age	Soil (μg Pb/g)	House Dust (μg Pb/g)
.5-1	0.000	0.000
1-2	0.000	0.000
2-3	0.000	0.000
3-4	0.000	0.000
4-5	0.000	0.000
5-6	0.000	0.000
6-7	0.000	0.000

******** Alternate Intake ********

Age	Alternate (μg Pb/day)

.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 1.000 µg Pb/dL

****

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

****

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.000	0.000	0.000	0.000
1-2	0.000	2.363	0.000	0.000
2-3	0.000	2.452	0.000	0.000
3-4	0.000	2.415	0.000	0.000
4-5	0.000	2.376	0.000	0.000
5-6	0.000	2.428	0.000	0.000
6-7	0.000	2.513	0.000	0.000

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
.5-1	0.000	0.000	0.0
1-2	0.000	2.363	0.8
2-3	0.000	2.452	0.9
3-4	0.000	2.415	0.9
4-5	0.000	2.376	0.8
5-6	0.000	2.428	0.8
6-7	0.000	2.513	0.7

Child Swimmer/Wader (1 to <7) – IEUBK Model Results

LEAD MODEL FOR WINDOWS Version 1.1

==========

Model Version: 1.1 Build11
User Name:
Date:
Site Name:
Operable Unit:
Run Mode: Research

==========

******** Air ********

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (μg Pb/m^3)
.5-1	1.000	2.000	32.000	0.000
1-2	2.000	3.000	32.000	0.000
2-3	3.000	5.000	32.000	0.000
3-4	4.000	5.000	32.000	0.000
4-5	4.000	5.000	32.000	0.000
5-6	4.000	7.000	32.000	0.000
6-7	4.000	7.000	32.000	0.000

******** Diet ********

Age	Diet Intake(μg/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000

5-6 0.000
6-7 0.000

******** Drinking Water ********

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 0.000 µg Pb/L

******** Soil & Dust ********

Age	Soil (µg Pb/g)	House Dust (µg Pb/g)
.5-1	205.700	0.000
1-2	205.700	0.000
2-3	205.700	0.000
3-4	205.700	0.000
4-5	205.700	0.000
5-6	205.700	0.000
6-7	205.700	0.000

******** Alternate Intake ********

Age	Alternate (µg Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000

6-7 0.000

******** Maternal Contribution: Infant Model ********

Maternal Blood Concentration: 1.000 µg Pb/dL

****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.000	0.000	0.000	0.000
1-2	0.000	0.000	0.000	0.000
2-3	0.000	0.000	0.000	0.000
3-4	0.000	0.000	0.000	0.000
4-5	0.000	0.000	0.000	0.000
5-6	0.000	0.000	0.000	0.000
6-7	0.000	0.000	0.000	0.000

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
.5-1	0.000	0.000	0.0
1-2	2.712	2.712	1.0
2-3	2.722	2.722	1.0
3-4	2.730	2.730	1.0
4-5	2.736	2.736	0.9
5-6	2.740	2.740	0.9
6-7	2.743	2.743	0.8

Appendix F

APPENDIX F
RAGS PART D TABLE 7 SERIES – CALCULATION OF CANCER RISKS AND NON-CANCER HAZARDS

This appendix contains the Risk Assessment Guidance for Superfund (RAGS) Part D Table 7 Series for the Newark Bay Study Area (NBSA) Baseline Human Health Risk Assessment (BHHRA). Separate tables are provided for each receptor (i.e., adult, adolescent, child, and combined adult and child angler/sportsman; adult worker; and adult, adolescent, child and combined adult and child wader, swimmer, or boater) for both the reasonable maximum exposure (RME) and central tendency estimate (CTE) scenarios. Information provided in the table for each chemical of potential concern (COPC) in each medium and for each exposure route includes:

- Exposure point concentration (EPC)
- Intake
- Cancer slope factor (CSF) and reference dose (RfD)
- Estimated cancer risk and noncancer hazard quotient (HQ)

In addition, total cancer risk and non-cancer hazard index (HI) is provided for several groups of chemicals, including all dioxin-like compounds (DLCs), total polychorlinated dibenzo-p-dioxins and furans (PCDD/Fs), total dioxin-like PCBs (DL-PCBs), total non-dioxin-like PCBs (Non-DL PCBs), total PCBs (DL & Non-DL PCBs), total polyaromatic hydrocarbons (PAHs), total organics and total inorganics.

For PCDD/Fs and DL-PCBs (collectively referred to as DLCs), cancer risks and hazard indices were estimated for the individual congeners, as well as in terms of a total toxicity equivalence (TEQ) for PCDD/Fs and PCBs (TEQ DF and TEQ PCB, respectively). The toxicity criteria for these compounds are based on the cancer and noncancer criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) and congener-specific toxicity equivalency factors (TEFs). The TEQ DF and TEQ PCB were calculated by two methods: (1) using USEPA's Kaplan-Meier (KM) calculator (Version 9.1; issued July 2014), and (2) manually based on the TEQ concentration for each congener. The first method is denoted as "based on KM TEQs" and the second method is denoted as "excluding KM TEQ." Cumulative risk/hazard estimates accounting for all COPCs are also presented as "based on KM TEQ" and "excluding KM TEQ." As shown in the tables, and discussed in the main text of this BHHRA, there is essentially no difference in the risk/hazard estimates between the two methods; however, the latter method allows for identification of the specific congeners that contribute most to the overall risk/hazard.

A list of the tables in this appendix is as follows:

RAGS D Table 7.1 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adult Angler/Sportsman – RME Scenario
RAGS D Table 7.2 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adolescent Angler/Sportsman – RME Scenario
RAGS D Table 7.3 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Child Angler/Sportsman – RME Scenario
RAGS D Table 7.A RME	Calculation of Chemical Cancer Risks – Combined Adult and Child Angler/Sportsman – RME Scenario
RAGS D Table 7.4 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adult Worker – RME Scenario
RAGS D Table 7.5 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adult Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 7.6 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adolescent Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 7.7 RME	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Child Wader and Swimmer – RME Scenario

RAGS D Table 7.B RME	Calculation of Chemical Cancer Risks – Combined Adult and Child Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 7.1 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adult Angler/Sportsman – CTE Scenario
RAGS D Table 7.2 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adolescent Angler/Sportsman – CTE Scenario
RAGS D Table 7.3 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Child Angler/Sportsman – CTE Scenario
RAGS D Table 7.A CTE	Calculation of Chemical Cancer Risks – Combined Adult and Child Angler/Sportsman – CTE Scenario
RAGS D Table 7.4 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adult Worker – CTE Scenario
RAGS D Table 7.5 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adult Wader, Swimmer, and Boater – CTE Scenario
RAGS D Table 7.6 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Adolescent Wader, Swimmer, and Boater – CTE Scenario
RAGS D Table 7.7 CTE	Calculation of Chemical Cancer Risks and Non-Chemical Hazards – Child Wader and Swimmer – CTE Scenario
RAGS D Table 7.B CTE	Calculation of Chemical Cancer Risks – Combined Adult and Child Wader, Swimmer, and Boater – CTE Scenario

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-06	mg/kg	1.0E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-04	--	3.6E-09	mg/kg-day	7.0E-10	mg/kg-day	5.1E+00
				1,2,3,7,8-PeCDD	4E-07	mg/kg	5.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-06	--	1.9E-10	mg/kg-day	7.0E-10	mg/kg-day	2.7E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-07	--	8.8E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	7.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-06	--	2.7E-10	mg/kg-day	7.0E-09	mg/kg-day	3.9E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-07	--	6.5E-11	mg/kg-day	7.0E-09	mg/kg-day	9.2E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	8.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-07	--	3.1E-10	mg/kg-day	7.0E-08	mg/kg-day	4.4E-03
				OCDD	4E-06	mg/kg	5.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-08	--	1.8E-09	mg/kg-day	2.3E-06	mg/kg-day	7.7E-04
				2,3,7,8-TCDF	2E-06	mg/kg	2.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-06	--	7.3E-10	mg/kg-day	7.0E-09	mg/kg-day	1.0E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.9E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.5E-07	--	6.6E-10	mg/kg-day	2.3E-08	mg/kg-day	2.8E-02
				2,3,4,7,8-PeCDF	2E-06	mg/kg	3.0E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.4E-05	--	1.1E-09	mg/kg-day	2.3E-09	mg/kg-day	4.5E-01
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	1.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-06	--	4.7E-10	mg/kg-day	7.0E-09	mg/kg-day	6.8E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-06	--	4.3E-10	mg/kg-day	7.0E-09	mg/kg-day	6.1E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-07	--	4.9E-11	mg/kg-day	7.0E-09	mg/kg-day	7.0E-03
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	2.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-07	--	7.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.0E-02
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	2.9E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-07	--	1.0E-09	mg/kg-day	7.0E-08	mg/kg-day	1.4E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-08	--	4.7E-11	mg/kg-day	7.0E-08	mg/kg-day	6.7E-04
				OCDF	2E-07	mg/kg	2.8E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-09	--	9.8E-11	mg/kg-day	2.3E-06	mg/kg-day	4.2E-05
				KM TEQ DF	1E-05	mg/kg	1.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-04	--	4.2E-09	mg/kg-day	7.0E-10	mg/kg-day	6.1E+00
				PCB-77	5E-04	mg/kg	6.0E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.0E-07	--	2.1E-07	mg/kg-day	7.0E-06	mg/kg-day	3.0E-02
				PCB-81	2E-05	mg/kg	2.4E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-07	--	8.2E-09	mg/kg-day	2.3E-06	mg/kg-day	3.5E-03
				PCB-105	8E-03	mg/kg	9.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-06	--	3.3E-06	mg/kg-day	2.3E-05	mg/kg-day	1.4E-01
				PCB-114	6E-04	mg/kg	7.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-118	3E-02	mg/kg	3.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-05	--	1.3E-05	mg/kg-day	2.3E-05	mg/kg-day	5.7E-01
				PCB-123	6E-04	mg/kg	6.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-07	--	2.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-126	9E-05	mg/kg	1.1E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-04	--	3.9E-08	mg/kg-day	7.0E-09	mg/kg-day	5.6E+00
				PCB-156/157	3E-03	mg/kg	3.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-06	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.2E-02
				PCB-167	1E-03	mg/kg	1.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.8E-07	--	5.3E-07	mg/kg-day	2.3E-05	mg/kg-day	2.3E-02
				PCB-169	4E-06	mg/kg	4.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.1E-06	--	1.6E-09	mg/kg-day	2.3E-08	mg/kg-day	7.0E-02
				PCB-189	2E-04	mg/kg	2.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-07	--	9.7E-08	mg/kg-day	2.3E-05	mg/kg-day	4.2E-03
				KM TEQ PCB	1E-05	mg/kg	1.4E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-04	--	5.0E-09	mg/kg-day	7.0E-10	mg/kg-day	7.1E+00
				Non-DL PCBs													
				Total Non-DL PCBs	4E-01	mg/kg	5.0E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.0E-04	--	1.8E-04	mg/kg-day	2.0E-05	mg/kg-day	8.8E+00
				PAHs													
				Benz(a)anthracene	8E-03	mg/kg	1.0E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	3.6E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	8E-03	mg/kg	1.0E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(b)fluoranthene	8E-03	mg/kg	1.0E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	3.6E-06	mg/kg-day	--	--	--
				Chrysene	8E-03	mg/kg	1.0E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.0E-09	M	3.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	8E-03	mg/kg	1.0E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	3.6E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	1.0E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	3.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-02	mg/kg	2.2E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.4E-07	--	7.9E-06	mg/kg-day	3.0E-05	mg/kg-day	2.6E-01
				2,4'-DDE	6E-03	mg/kg	7.2E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-07	--	2.5E-06	mg/kg-day	3.0E-04	mg/kg-day	8.4E-03
				2,4'-DDT	3E-03	mg/kg	4.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-07	--	1.5E-06	mg/kg-day	5.0E-04	mg/kg-day	3.0E-03
				4,4'-DDD	9E-02	mg/kg	1.1E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.7E-06	--	3.9E-05	mg/kg-day	3.0E-05	mg/kg-day	1.3E+00
				4,4'-DDE	1E-01	mg/kg	1.5E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.2E-06	--	5.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				4,4'-DDT	1E-02	mg/kg	1.8E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.0E-07	--	6.1E-06	mg/kg-day	5.0E-04	mg/kg-day	1.2E-02
				Benzaldehyde	1E+00	mg/kg	1.6E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	6.4E-07	--	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				Chlordane, alpha (cis)	2E-02	mg/kg	2.0E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.0E-07	--	7.0E-06	mg/kg-day	5.0E-04	mg/kg-day	1.4E-02
				Chlordane, gamma (trans)	4E-03	mg/kg	4.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-07	--	1.6E-06	mg/kg-day	5.0E-04	mg/kg-day	3.1E-03
				Dieldrin	8E-03	mg/kg	9.5E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.5E-05	--	3.3E-06	mg/kg-day	5.0E-05	mg/kg-day	6.6E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	2.3E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.1E-06	--	8.0E-07	mg/kg-day	1.3E-05	mg/kg-day	6.2E-02

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Heptachlor epoxide, trans-	9E-05	mg/kg	1.1E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.0E-07	--	3.9E-08	mg/kg-day	1.3E-05	mg/kg-day	3.0E-03
				Hexachlorobenzene	1E-03	mg/kg	1.8E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.9E-07	--	6.4E-07	mg/kg-day	8.0E-04	mg/kg-day	8.0E-04
				Mirex	3E-04	mg/kg	3.1E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	5.6E-07	--	1.1E-07	mg/kg-day	2.0E-04	mg/kg-day	5.5E-04
				Nonachlor, cis-	6E-03	mg/kg	7.9E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.8E-07	--	2.8E-06	mg/kg-day	1.0E-04	mg/kg-day	2.8E-02
				Nonachlor, trans-	2E-02	mg/kg	1.9E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.7E-07	--	6.7E-06	mg/kg-day	1.6E-05	mg/kg-day	4.3E-01
				Oxychlordane	5E-03	mg/kg	5.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-07	--	2.0E-06	mg/kg-day	8.9E-05	mg/kg-day	2.2E-02
				Pyridine	1E+00	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	1.0E-03	mg/kg-day	5.6E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	7.9E-04	mg/kg-day	--	--	--	--	2.8E-03	mg/kg-day	1.0E+00	mg/kg-day	2.8E-03
				Arsenic, organic	1E+00	mg/kg	1.3E-04	mg/kg-day	--	--	--	--	4.5E-04	mg/kg-day	2.0E-02	mg/kg-day	2.2E-02
				Arsenic, inorganic	1E-01	mg/kg	1.4E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-05	--	5.0E-05	mg/kg-day	3.0E-04	mg/kg-day	1.7E-01
				Cadmium	5E-02	mg/kg	5.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	6E-01	mg/kg	8.0E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	1.5E+00	mg/kg-day	1.9E-04
				Cobalt	2E-01	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	9.7E-05	mg/kg-day	3.0E-04	mg/kg-day	3.2E-01
				Copper	5E-01	mg/kg	5.9E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	1.0E-03	mg/kg-day	2.1E-01
				Iron	7E+00	mg/kg	8.7E-04	mg/kg-day	--	--	--	--	3.1E-03	mg/kg-day	7.0E-01	mg/kg-day	4.4E-03
				Lead	4E-02	mg/kg	4.4E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	3.5E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	1.4E-01	mg/kg-day	8.9E-04
				Mercury	3E-01	mg/kg	3.7E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.4E-01
				Methyl Mercury	4E-01	mg/kg	4.5E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	1.0E-04	mg/kg-day	1.6E+00
				Selenium	5E-01	mg/kg	6.7E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	5.0E-03	mg/kg-day	4.7E-02
				Silver	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.6E-06	mg/kg-day	5.0E-03	mg/kg-day	1.7E-03
				Vanadium	3E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	1.2E-05	mg/kg-day	5.0E-03	mg/kg-day	2.4E-03
				Zinc	1E+01	mg/kg	1.8E-03	mg/kg-day	--	--	--	--	6.3E-03	mg/kg-day	3.0E-01	mg/kg-day	2.1E-02
				Total DLCs (excluding KM TEQs)							3.8E-04						1.3E+01
				Total DLCs (based on KM TEQs)							3.9E-04						1.3E+01
				Total PCDD/Fs (excluding KM TEQ)							1.9E-04						6.2E+00
				Total PCDD/Fs (based on KM TEQ)							1.8E-04						6.1E+00
				Total DL-PCBs (excluding KM TEQ)							1.9E-04						6.5E+00
				Total DL-PCBs (based on KM TEQ)							2.1E-04						7.1E+00
				Total Non-DL PCBs							1.0E-04						8.8E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							3.0E-04						1.5E+01
				Total PCBs (DL & NDL; based on KM TEQ)							3.1E-04						1.6E+01
				Total PAHs							2.4E-06						1.2E-02
				Total Organics							3.0E-05						3.0E+00
				Total Inorganics							2.1E-05						2.8E+00
		Mixed Fish/All Species Total (excluding KM TEQs)									5.3E-04						2.7E+01
		Mixed Fish/All Species Total (based on KM TEQs)									5.5E-04						2.8E+01
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	1.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-04	--	3.8E-09	mg/kg-day	7.0E-10	mg/kg-day	5.4E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	8.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-05	--	3.0E-10	mg/kg-day	7.0E-10	mg/kg-day	4.3E-01
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	5.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	2.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-06	--	8.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.2E-01
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	4.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-07	--	1.5E-10	mg/kg-day	7.0E-09	mg/kg-day	2.1E-02
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	1.6E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-07	--	5.6E-10	mg/kg-day	7.0E-08	mg/kg-day	8.0E-03
				OCDD	3E-06	mg/kg	3.9E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-08	--	1.4E-09	mg/kg-day	2.3E-06	mg/kg-day	5.9E-04
				2,3,7,8-TCDF	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--	4.5E-11	mg/kg-day	7.0E-09	mg/kg-day	6.5E-03
				1,2,3,7,8-PeCDF	1E-06	mg/kg	1.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.8E-07	--	6.0E-10	mg/kg-day	2.3E-08	mg/kg-day	2.6E-02
				2,3,4,7,8-PeCDF	4E-06	mg/kg	4.8E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.1E-05	--	1.7E-09	mg/kg-day	2.3E-09	mg/kg-day	7.1E-01
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	3.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-06	--	1.2E-09	mg/kg-day	7.0E-09	mg/kg-day	1.7E-01
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	2.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-06	--	8.7E-10	mg/kg-day	7.0E-09	mg/kg-day	1.2E-01

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-07	--	4.9E-11	mg/kg-day	7.0E-09	mg/kg-day	7.0E-03
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	4.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-07	--	1.6E-10	mg/kg-day	7.0E-09	mg/kg-day	2.2E-02
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	5.9E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.8E-07	--	2.1E-09	mg/kg-day	7.0E-08	mg/kg-day	2.9E-02
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-08	--	7.0E-11	mg/kg-day	7.0E-08	mg/kg-day	1.0E-03
				OCDF	4E-07	mg/kg	4.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--	1.6E-10	mg/kg-day	2.3E-06	mg/kg-day	6.7E-05
				KM TEQ DF	1E-05	mg/kg	1.4E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-04	--	4.9E-09	mg/kg-day	7.0E-10	mg/kg-day	6.9E+00
				PCB-77	7E-05	mg/kg	9.3E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-07	--	3.2E-08	mg/kg-day	7.0E-06	mg/kg-day	4.6E-03
				PCB-81	1E-05	mg/kg	1.4E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.5E-08	--	5.1E-09	mg/kg-day	2.3E-06	mg/kg-day	2.2E-03
				PCB-105	2E-02	mg/kg	2.6E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-05	--	9.0E-06	mg/kg-day	2.3E-05	mg/kg-day	3.8E-01
				PCB-114	1E-03	mg/kg	1.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.3E-07	--	5.7E-07	mg/kg-day	2.3E-05	mg/kg-day	2.4E-02
				PCB-118	7E-02	mg/kg	8.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-05	--	3.1E-05	mg/kg-day	2.3E-05	mg/kg-day	1.3E+00
				PCB-123	1E-03	mg/kg	1.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-07	--	6.1E-07	mg/kg-day	2.3E-05	mg/kg-day	2.6E-02
				PCB-126	1E-04	mg/kg	1.5E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-04	--	5.2E-08	mg/kg-day	7.0E-09	mg/kg-day	7.4E+00
				PCB-156/157	6E-03	mg/kg	7.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-06	--	2.7E-06	mg/kg-day	2.3E-05	mg/kg-day	1.1E-01
				PCB-167	3E-03	mg/kg	3.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-06	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.0E-02
				PCB-169	4E-06	mg/kg	5.4E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-06	--	1.9E-09	mg/kg-day	2.3E-08	mg/kg-day	8.1E-02
				PCB-189	5E-04	mg/kg	6.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-07	--	2.1E-07	mg/kg-day	2.3E-05	mg/kg-day	8.9E-03
				KM TEQ PCB	2E-05	mg/kg	2.7E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.0E-04	--	9.3E-09	mg/kg-day	7.0E-10	mg/kg-day	1.3E+01
				Non-DL PCBs													
				Total Non-DL PCBs	6E-01	mg/kg	7.3E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-04	--	2.6E-04	mg/kg-day	2.0E-05	mg/kg-day	1.3E+01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-06	M	5.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-09	M	5.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-06	M	5.6E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	3.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.1E-08	--	1.3E-06	mg/kg-day	3.0E-05	mg/kg-day	4.4E-02
				2,4'-DDE	2E-03	mg/kg	2.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.3E-08	--	8.5E-07	mg/kg-day	3.0E-04	mg/kg-day	2.8E-03
				2,4'-DDT	4E-04	mg/kg	4.4E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-08	--	1.5E-07	mg/kg-day	5.0E-04	mg/kg-day	3.1E-04
				4,4'-DDD	1E-01	mg/kg	1.6E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.9E-06	--	5.7E-05	mg/kg-day	3.0E-05	mg/kg-day	1.9E+00
				4,4'-DDE	3E-01	mg/kg	3.4E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-05	--	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	4.0E-01
				4,4'-DDT	8E-03	mg/kg	9.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.2E-07	--	3.3E-06	mg/kg-day	5.0E-04	mg/kg-day	6.7E-03
				Benzaldehyde	1E+00	mg/kg	1.6E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	6.4E-07	--	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				Chlordane, alpha (cis)	1E-02	mg/kg	1.7E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.1E-07	--	6.1E-06	mg/kg-day	5.0E-04	mg/kg-day	1.2E-02
				Chlordane, gamma (trans)	4E-03	mg/kg	4.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-07	--	1.7E-06	mg/kg-day	5.0E-04	mg/kg-day	3.4E-03
				Dieldrin	1E-02	mg/kg	1.8E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.8E-05	--	6.2E-06	mg/kg-day	5.0E-05	mg/kg-day	1.2E-01
				Heptachlor epoxide, cis-	4E-03	mg/kg	4.6E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.2E-06	--	1.6E-06	mg/kg-day	1.3E-05	mg/kg-day	1.2E-01
				Heptachlor epoxide, trans-	4E-04	mg/kg	4.7E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.3E-07	--	1.6E-07	mg/kg-day	1.3E-05	mg/kg-day	1.3E-02
				Hexachlorobenzene	4E-03	mg/kg	5.0E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	8.0E-07	--	1.8E-06	mg/kg-day	8.0E-04	mg/kg-day	2.2E-03
				Mirex	4E-04	mg/kg	5.2E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.3E-07	--	1.8E-07	mg/kg-day	2.0E-04	mg/kg-day	9.0E-04
				Nonachlor, cis-	1E-02	mg/kg	1.3E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.7E-07	--	4.7E-06	mg/kg-day	1.0E-04	mg/kg-day	4.7E-02
				Nonachlor, trans-	3E-02	mg/kg	3.2E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-06	--	1.1E-05	mg/kg-day	1.6E-05	mg/kg-day	7.3E-01
				Oxychlordane	1E-02	mg/kg	1.8E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.2E-07	--	6.2E-06	mg/kg-day	8.9E-05	mg/kg-day	6.9E-02
				Pyridine	1E+00	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	1.0E-03	mg/kg-day	5.6E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	7.7E-04	mg/kg-day	--	--	--	--	2.7E-03	mg/kg-day	1.0E+00	mg/kg-day	2.7E-03
				Arsenic, organic	1E+00	mg/kg	1.3E-04	mg/kg-day	--	--	--	--	4.6E-04	mg/kg-day	2.0E-02	mg/kg-day	2.3E-02
				Arsenic, inorganic	1E-01	mg/kg	1.5E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.2E-05	--	5.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.7E-01
				Cadmium	5E-02	mg/kg	5.6E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium [as Cr(III)]	2E+00	mg/kg	3.0E-04	mg/kg-day	--	--	--	--	1.0E-03	mg/kg-day	1.5E+00	mg/kg-day	7.0E-04
				Cobalt	7E-03	mg/kg	8.7E-07	mg/kg-day	--	--	--	--	3.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.0E-02
				Copper	2E-01	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	9.1E-05	mg/kg-day	1.0E-03	mg/kg-day	9.1E-02
				Iron	8E+00	mg/kg	9.3E-04	mg/kg-day	--	--	--	--	3.3E-03	mg/kg-day	7.0E-01	mg/kg-day	4.7E-03
				Lead	2E-02	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	9.9E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	4.2E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	1.4E-01	mg/kg-day	1.1E-03
				Mercury	4E-01	mg/kg	5.2E-05	mg/kg-day	--	--	--	--	1.8E-04	mg/kg-day	3.0E-04	mg/kg-day	6.0E-01
				Methyl Mercury	5E-01	mg/kg	5.7E-05	mg/kg-day	--	--	--	--	2.0E-04	mg/kg-day	1.0E-04	mg/kg-day	2.0E+00
				Selenium	5E-01	mg/kg	6.3E-05	mg/kg-day	--	--	--	--	2.2E-04	mg/kg-day	5.0E-03	mg/kg-day	4.4E-02
				Silver	2E-02	mg/kg	2.4E-06	mg/kg-day	--	--	--	--	8.6E-06	mg/kg-day	5.0E-03	mg/kg-day	1.7E-03
				Vanadium	2E-02	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	9.8E-06	mg/kg-day	5.0E-03	mg/kg-day	2.0E-03
				Zinc	3E+01	mg/kg	3.6E-03	mg/kg-day	--	--	--	--	1.3E-02	mg/kg-day	3.0E-01	mg/kg-day	4.2E-02
				Total DLCs (excluding KM TEQs)							5.0E-04						1.7E+01
				Total DLCs (based on KM TEQs)							6.1E-04						2.0E+01
				Total PCDD/Fs (excluding KM TEQ)							2.1E-04						7.1E+00
				Total PCDD/Fs (based on KM TEQ)							2.1E-04						6.9E+00
				Total DL-PCBs (excluding KM TEQ)							2.8E-04						9.4E+00
				Total DL-PCBs (based on KM TEQ)							4.0E-04						1.3E+01
				Total Non-DL PCBs							1.5E-04						1.3E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							4.3E-04						2.2E+01
				Total PCBs (DL & NDL; based on KM TEQ)							5.5E-04						2.6E+01
				Total PAHs							3.7E-06						1.9E-02
				Total Organics							5.4E-05						4.0E+00
				Total Inorganics							2.2E-05						3.0E+00
		American Eel Total (excluding KM TEQs)									7.2E-04						3.6E+01
		American Eel Total (based on KM TEQs)									8.4E-04						4.0E+01
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-05	--	6.4E-10	mg/kg-day	7.0E-10	mg/kg-day	9.2E-01
				1,2,3,7,8-PeCDD	3E-07	mg/kg	3.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.5E-06	--	1.3E-10	mg/kg-day	7.0E-10	mg/kg-day	1.8E-01
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	9.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-07	--	3.1E-11	mg/kg-day	7.0E-09	mg/kg-day	4.5E-03
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-07	--	8.6E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	8.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-07	--	3.0E-11	mg/kg-day	7.0E-09	mg/kg-day	4.3E-03
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	1.7E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.6E-08	--	6.1E-11	mg/kg-day	7.0E-08	mg/kg-day	8.7E-04
				OCDD	3E-07	mg/kg	3.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-09	--	1.1E-10	mg/kg-day	2.3E-06	mg/kg-day	4.8E-05
				2,3,7,8-TCDF	4E-07	mg/kg	4.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.1E-07	--	1.7E-10	mg/kg-day	7.0E-09	mg/kg-day	2.4E-02
				1,2,3,7,8-PeCDF	7E-07	mg/kg	8.2E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.7E-07	--	2.9E-10	mg/kg-day	2.3E-08	mg/kg-day	1.2E-02
				2,3,4,7,8-PeCDF	8E-07	mg/kg	9.3E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.2E-06	--	3.2E-10	mg/kg-day	2.3E-09	mg/kg-day	1.4E-01
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-07	--	4.1E-11	mg/kg-day	7.0E-09	mg/kg-day	5.8E-03
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	2.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-07	--	9.9E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	3.7E-11	mg/kg-day	7.0E-09	mg/kg-day	5.3E-03
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	6.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--	2.4E-11	mg/kg-day	7.0E-09	mg/kg-day	3.5E-03
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	8.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-07	--	2.9E-10	mg/kg-day	7.0E-08	mg/kg-day	4.1E-03
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	9.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-08	--	3.3E-11	mg/kg-day	7.0E-08	mg/kg-day	4.7E-04
				OCDF	2E-07	mg/kg	2.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.5E-10	--	7.4E-11	mg/kg-day	2.3E-06	mg/kg-day	3.2E-05
				KM TEQ DF	2E-06	mg/kg	2.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-05	--	8.7E-10	mg/kg-day	7.0E-10	mg/kg-day	1.2E+00
				PCB-77	1E-04	mg/kg	1.2E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.8E-07	--	4.2E-08	mg/kg-day	7.0E-06	mg/kg-day	6.0E-03
				PCB-81	4E-06	mg/kg	4.4E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-08	--	1.5E-09	mg/kg-day	2.3E-06	mg/kg-day	6.6E-04
				PCB-105	1E-03	mg/kg	1.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-07	--	5.4E-07	mg/kg-day	2.3E-05	mg/kg-day	2.3E-02
				PCB-114	8E-05	mg/kg	9.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-08	--	3.3E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-118	5E-03	mg/kg	6.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-06	--	2.3E-06	mg/kg-day	2.3E-05	mg/kg-day	9.7E-02
				PCB-123	7E-05	mg/kg	9.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-08	--	3.2E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03

TABLE 7.1 RME
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-126	4E-05	mg/kg	4.7E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.1E-05	--	1.7E-08	mg/kg-day	7.0E-09	mg/kg-day	2.4E+00
				PCB-156/157	6E-04	mg/kg	7.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-167	3E-04	mg/kg	3.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-07	--	1.3E-07	mg/kg-day	2.3E-05	mg/kg-day	5.4E-03
				PCB-169	2E-06	mg/kg	2.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.9E-07	--	7.7E-10	mg/kg-day	2.3E-08	mg/kg-day	3.3E-02
				PCB-189	6E-05	mg/kg	7.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-08	--	2.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.0E-03
				KM TEQ PCB	4E-06	mg/kg	5.0E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.5E-05	--	1.7E-09	mg/kg-day	7.0E-10	mg/kg-day	2.5E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	1.5E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.9E-05	--	5.1E-05	mg/kg-day	2.0E-05	mg/kg-day	2.6E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.5E-07	M	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.6E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.5E-10	M	2.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.5E-07	M	2.3E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	6E-04	mg/kg	7.0E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.7E-08	--	2.4E-07	mg/kg-day	3.0E-05	mg/kg-day	8.1E-03
				2,4'-DDE	1E-03	mg/kg	1.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-08	--	4.5E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03
				2,4'-DDT	2E-04	mg/kg	2.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.2E-09	--	9.5E-08	mg/kg-day	5.0E-04	mg/kg-day	1.9E-04
				4,4'-DDD	6E-03	mg/kg	8.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.9E-07	--	2.8E-06	mg/kg-day	3.0E-05	mg/kg-day	9.4E-02
				4,4'-DDE	3E-02	mg/kg	3.7E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-06	--	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	4.4E-02
				4,4'-DDT	2E-02	mg/kg	2.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.7E-07	--	9.0E-06	mg/kg-day	5.0E-04	mg/kg-day	1.8E-02
				Benzaldehyde	1E+00	mg/kg	1.6E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	6.4E-07	--	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				Chlordane, alpha (cis)	6E-03	mg/kg	7.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-07	--	2.5E-06	mg/kg-day	5.0E-04	mg/kg-day	5.1E-03
				Chlordane, gamma (trans)	2E-03	mg/kg	2.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.8E-08	--	9.8E-07	mg/kg-day	5.0E-04	mg/kg-day	2.0E-03
				Dieldrin	5E-03	mg/kg	5.6E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	8.9E-06	--	2.0E-06	mg/kg-day	5.0E-05	mg/kg-day	3.9E-02
				Heptachlor epoxide, cis-	1E-03	mg/kg	1.5E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-06	--	5.2E-07	mg/kg-day	1.3E-05	mg/kg-day	4.0E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	2.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.9E-08	--	7.4E-09	mg/kg-day	1.3E-05	mg/kg-day	5.7E-04
				Hexachlorobenzene	5E-04	mg/kg	6.6E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.1E-07	--	2.3E-07	mg/kg-day	8.0E-04	mg/kg-day	2.9E-04
				Mirex	1E-04	mg/kg	1.6E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.0E-07	--	5.8E-08	mg/kg-day	2.0E-04	mg/kg-day	2.9E-04
				Nonachlor, cis-	2E-03	mg/kg	2.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.2E-08	--	7.2E-07	mg/kg-day	1.0E-04	mg/kg-day	7.2E-03
				Nonachlor, trans-	3E-03	mg/kg	3.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--	1.3E-06	mg/kg-day	1.6E-05	mg/kg-day	8.5E-02
				Oxychlordane	3E-04	mg/kg	4.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-08	--	1.5E-07	mg/kg-day	8.9E-05	mg/kg-day	1.7E-03
				Pyridine	1E+00	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	1.0E-03	mg/kg-day	5.6E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	7.4E-04	mg/kg-day	--	--	--	--	2.6E-03	mg/kg-day	1.0E+00	mg/kg-day	2.6E-03
				Arsenic, organic	6E-01	mg/kg	8.0E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	2.0E-02	mg/kg-day	1.4E-02
				Arsenic, inorganic	7E-02	mg/kg	8.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-05	--	3.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
				Cadmium	5E-02	mg/kg	5.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	9E-02	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	3.8E-05	mg/kg-day	1.5E+00	mg/kg-day	2.6E-05
				Cobalt	2E-01	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	9.6E-05	mg/kg-day	3.0E-04	mg/kg-day	3.2E-01
				Copper	8E-01	mg/kg	9.8E-05	mg/kg-day	--	--	--	--	3.4E-04	mg/kg-day	1.0E-03	mg/kg-day	3.4E-01
				Iron	1E+01	mg/kg	1.2E-03	mg/kg-day	--	--	--	--	4.3E-03	mg/kg-day	7.0E-01	mg/kg-day	6.1E-03
				Lead	4E-02	mg/kg	5.2E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	7.9E-05	mg/kg-day	1.4E-01	mg/kg-day	5.6E-04
				Mercury	3E-01	mg/kg	4.0E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	3.0E-04	mg/kg-day	4.7E-01
				Methyl Mercury	4E-01	mg/kg	4.8E-05	mg/kg-day	--	--	--	--	1.7E-04	mg/kg-day	1.0E-04	mg/kg-day	1.7E+00
				Selenium	5E-01	mg/kg	6.7E-05	mg/kg-day	--	--	--	--	2.3E-04	mg/kg-day	5.0E-03	mg/kg-day	4.7E-02
				Silver	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	5.0E-03	mg/kg-day	1.7E-03
				Vanadium	2E-02	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	9.9E-06	mg/kg-day	5.0E-03	mg/kg-day	2.0E-03
				Zinc	2E+01	mg/kg	2.2E-03	mg/kg-day	--	--	--	--	7.5E-03	mg/kg-day	3.0E-01	mg/kg-day	2.5E-02

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total DLCs (excluding KM TEQs)							1.2E-04						3.9E+00
				Total DLCs (based on KM TEQs)							1.1E-04						3.7E+00
				Total PCDD/Fs (excluding KM TEQ)							4.0E-05						1.3E+00
				Total PCDD/Fs (based on KM TEQ)							3.7E-05						1.2E+00
				Total DL-PCBs (excluding KM TEQ)							7.7E-05						2.6E+00
				Total DL-PCBs (based on KM TEQ)							7.5E-05						2.5E+00
				Total Non-DL PCBs							2.9E-05						2.6E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-04						5.1E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-04						5.1E+00
				Total PAHs							1.5E-06						7.6E-03
				Total Organics							1.4E-05						9.1E-01
				Total Inorganics							1.3E-05						3.0E+00
		Bluefish Total (excluding KM TEQs)									1.8E-04						1.0E+01
		Bluefish Total (based on KM TEQs)									1.7E-04						1.0E+01
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	1.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-04	--	4.1E-09	mg/kg-day	7.0E-10	mg/kg-day	5.8E+00
				1,2,3,7,8-PeCDD	5E-07	mg/kg	6.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-05	--	2.4E-10	mg/kg-day	7.0E-10	mg/kg-day	3.4E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-07	--	8.8E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	2.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-07	--	9.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	3.7E-11	mg/kg-day	7.0E-09	mg/kg-day	5.3E-03
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-07	--	6.2E-10	mg/kg-day	7.0E-08	mg/kg-day	8.9E-03
				OCDD	2E-05	mg/kg	2.0E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.9E-08	--	6.9E-09	mg/kg-day	2.3E-06	mg/kg-day	3.0E-03
				2,3,7,8-TCDF	4E-06	mg/kg	4.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.0E-06	--	1.6E-09	mg/kg-day	7.0E-09	mg/kg-day	2.3E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	2.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-06	--	9.5E-10	mg/kg-day	2.3E-08	mg/kg-day	4.1E-02
				2,3,4,7,8-PeCDF	3E-06	mg/kg	4.0E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.8E-05	--	1.4E-09	mg/kg-day	2.3E-09	mg/kg-day	6.0E-01
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	5.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-06	--	5.3E-10	mg/kg-day	7.0E-09	mg/kg-day	7.5E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-07	--	5.2E-11	mg/kg-day	7.0E-09	mg/kg-day	7.5E-03
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-07	--	4.2E-11	mg/kg-day	7.0E-09	mg/kg-day	6.1E-03
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	4.1E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.1E-07	--	1.4E-09	mg/kg-day	7.0E-08	mg/kg-day	2.0E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-08	--	4.7E-11	mg/kg-day	7.0E-08	mg/kg-day	6.7E-04
				OCDF	2E-07	mg/kg	2.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-09	--	8.2E-11	mg/kg-day	2.3E-06	mg/kg-day	3.5E-05
				KM TEQ DF	1E-05	mg/kg	1.4E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-04	--	5.0E-09	mg/kg-day	7.0E-10	mg/kg-day	7.2E+00
				PCB-77	1E-03	mg/kg	1.4E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-06	--	4.9E-07	mg/kg-day	7.0E-06	mg/kg-day	7.0E-02
				PCB-81	3E-05	mg/kg	3.5E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-07	--	1.2E-08	mg/kg-day	2.3E-06	mg/kg-day	5.2E-03
				PCB-105	6E-03	mg/kg	7.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-06	--	2.6E-06	mg/kg-day	2.3E-05	mg/kg-day	1.1E-01
				PCB-114	7E-04	mg/kg	8.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-07	--	3.1E-07	mg/kg-day	2.3E-05	mg/kg-day	1.3E-02
				PCB-118	4E-02	mg/kg	4.6E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-05	--	1.6E-05	mg/kg-day	2.3E-05	mg/kg-day	6.9E-01
				PCB-123	6E-04	mg/kg	7.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-07	--	2.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-126	2E-04	mg/kg	2.3E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-04	--	8.2E-08	mg/kg-day	7.0E-09	mg/kg-day	1.2E+01
				PCB-156/157	3E-03	mg/kg	4.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-06	--	1.4E-06	mg/kg-day	2.3E-05	mg/kg-day	6.1E-02
				PCB-167	1E-03	mg/kg	1.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-07	--	6.3E-07	mg/kg-day	2.3E-05	mg/kg-day	2.7E-02
				PCB-169	3E-06	mg/kg	4.1E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-06	--	1.4E-09	mg/kg-day	2.3E-08	mg/kg-day	6.2E-02
				PCB-189	3E-04	mg/kg	3.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-07	--	1.2E-07	mg/kg-day	2.3E-05	mg/kg-day	5.3E-03
				KM TEQ PCB	2E-05	mg/kg	2.4E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-04	--	8.4E-09	mg/kg-day	7.0E-10	mg/kg-day	1.2E+01
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	8.8E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.8E-04	--	3.1E-04	mg/kg-day	2.0E-05	mg/kg-day	1.5E+01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.5E-07	M	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.6E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.5E-10	M	2.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.5E-07	M	2.3E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-02	mg/kg	4.0E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.7E-07	--	1.4E-05	mg/kg-day	3.0E-05	mg/kg-day	4.7E-01
				2,4'-DDE	1E-02	mg/kg	1.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.4E-07	--	5.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				2,4'-DDT	3E-03	mg/kg	3.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-07	--	1.2E-06	mg/kg-day	5.0E-04	mg/kg-day	2.3E-03
				4,4'-DDD	1E-01	mg/kg	1.7E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.0E-06	--	5.9E-05	mg/kg-day	3.0E-05	mg/kg-day	2.0E+00
				4,4'-DDE	2E-01	mg/kg	1.9E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.5E-06	--	6.7E-05	mg/kg-day	3.0E-04	mg/kg-day	2.2E-01
				4,4'-DDT	1E-02	mg/kg	1.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.5E-07	--	5.7E-06	mg/kg-day	5.0E-04	mg/kg-day	1.1E-02
				Benzaldehyde	1E+00	mg/kg	1.6E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	6.4E-07	--	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				Chlordane, alpha (cis)	4E-02	mg/kg	4.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-06	--	1.5E-05	mg/kg-day	5.0E-04	mg/kg-day	3.1E-02
				Chlordane, gamma (trans)	6E-03	mg/kg	7.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.7E-07	--	2.7E-06	mg/kg-day	5.0E-04	mg/kg-day	5.4E-03
				Dieldrin	1E-02	mg/kg	1.3E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.1E-05	--	4.7E-06	mg/kg-day	5.0E-05	mg/kg-day	9.3E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	2.3E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.1E-06	--	8.0E-07	mg/kg-day	1.3E-05	mg/kg-day	6.1E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	2.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.9E-08	--	7.4E-09	mg/kg-day	1.3E-05	mg/kg-day	5.7E-04
				Hexachlorobenzene	1E-03	mg/kg	1.3E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.1E-07	--	4.5E-07	mg/kg-day	8.0E-04	mg/kg-day	5.6E-04
				Mirex	3E-04	mg/kg	3.7E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	6.6E-07	--	1.3E-07	mg/kg-day	2.0E-04	mg/kg-day	6.4E-04
				Nonachlor, cis-	1E-02	mg/kg	1.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-07	--	4.8E-06	mg/kg-day	1.0E-04	mg/kg-day	4.8E-02
				Nonachlor, trans-	3E-02	mg/kg	3.3E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-06	--	1.1E-05	mg/kg-day	1.6E-05	mg/kg-day	7.4E-01
				Oxychlordane	4E-03	mg/kg	4.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-07	--	1.7E-06	mg/kg-day	8.9E-05	mg/kg-day	1.9E-02
				Pyridine	1E+00	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	1.0E-03	mg/kg-day	5.6E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	6.9E-04	mg/kg-day	--	--	--	--	2.4E-03	mg/kg-day	1.0E+00	mg/kg-day	2.4E-03
				Arsenic, organic	1E+00	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	5.0E-04	mg/kg-day	2.0E-02	mg/kg-day	2.5E-02
				Arsenic, inorganic	1E-01	mg/kg	1.6E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.4E-05	--	5.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				Cadmium	5E-02	mg/kg	5.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	1E-01	mg/kg	1.5E-05	mg/kg-day	--	--	--	--	5.3E-05	mg/kg-day	1.5E+00	mg/kg-day	3.5E-05
				Cobalt	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Copper	6E-01	mg/kg	7.0E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	1.0E-03	mg/kg-day	2.4E-01
				Iron	7E+00	mg/kg	8.3E-04	mg/kg-day	--	--	--	--	2.9E-03	mg/kg-day	7.0E-01	mg/kg-day	4.1E-03
				Lead	4E-02	mg/kg	4.4E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	9.3E-05	mg/kg-day	1.4E-01	mg/kg-day	6.7E-04
				Mercury	3E-01	mg/kg	3.5E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	4.1E-01
				Methyl Mercury	3E-01	mg/kg	4.2E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	1.0E-04	mg/kg-day	1.5E+00
				Selenium	4E-01	mg/kg	4.7E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	5.0E-03	mg/kg-day	3.3E-02
				Silver	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	5.0E-03	mg/kg-day	1.7E-03
				Vanadium	3E-02	mg/kg	3.7E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	5.0E-03	mg/kg-day	2.6E-03
				Zinc	7E+00	mg/kg	9.1E-04	mg/kg-day	--	--	--	--	3.2E-03	mg/kg-day	3.0E-01	mg/kg-day	1.1E-02
				Total DLCs (excluding KM TEQs)							6.0E-04						2.0E+01
				Total DLCs (based on KM TEQs)							5.8E-04						1.9E+01
				Total PCDD/Fs (excluding KM TEQ)							2.2E-04						7.2E+00
				Total PCDD/Fs (based on KM TEQ)							2.2E-04						7.2E+00
				Total DL-PCBs (excluding KM TEQ)							3.8E-04						1.3E+01
				Total DL-PCBs (based on KM TEQ)							3.6E-04						1.2E+01
				Total Non-DL PCBs							1.8E-04						1.5E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							5.6E-04						2.8E+01
				Total PCBs (DL & NDL; based on KM TEQ)							5.4E-04						2.7E+01
				Total PAHs							1.5E-06						7.6E-03
				Total Organics							4.1E-05						4.3E+00
				Total Inorganics							2.4E-05						2.4E+00

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
		Striped Bass Total (excluding KM TEQs)									8.4E-04						4.2E+01
		Striped Bass Total (based on KM TEQs)									8.2E-04						4.1E+01
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	5E-06	mg/kg	6.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-04	--	2.4E-09	mg/kg-day	7.0E-10	mg/kg-day	3.4E+00
				1,2,3,7,8-PeCDD	2E-07	mg/kg	3.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-06	--	1.1E-10	mg/kg-day	7.0E-10	mg/kg-day	1.5E-01
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--	3.5E-11	mg/kg-day	7.0E-09	mg/kg-day	5.0E-03
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	3.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-07	--	1.1E-10	mg/kg-day	7.0E-09	mg/kg-day	1.6E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-07	--	4.7E-11	mg/kg-day	7.0E-09	mg/kg-day	6.6E-03
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	3.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.7E-08	--	1.3E-10	mg/kg-day	7.0E-08	mg/kg-day	1.9E-03
				OCDD	5E-07	mg/kg	5.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-09	--	1.9E-10	mg/kg-day	2.3E-06	mg/kg-day	8.3E-05
				2,3,7,8-TCDF	3E-07	mg/kg	3.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.7E-02
				1,2,3,7,8-PeCDF	3E-07	mg/kg	4.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-07	--	1.5E-10	mg/kg-day	2.3E-08	mg/kg-day	6.5E-03
				2,3,4,7,8-PeCDF	9E-07	mg/kg	1.1E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.0E-06	--	3.9E-10	mg/kg-day	2.3E-09	mg/kg-day	1.7E-01
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	8.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-06	--	2.8E-10	mg/kg-day	7.0E-09	mg/kg-day	4.0E-02
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	3.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-07	--	1.1E-10	mg/kg-day	7.0E-09	mg/kg-day	1.6E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-07	--	6.2E-11	mg/kg-day	7.0E-09	mg/kg-day	8.8E-03
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-07	--	4.7E-11	mg/kg-day	7.0E-09	mg/kg-day	6.7E-03
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	6.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.2E-08	--	2.1E-10	mg/kg-day	7.0E-08	mg/kg-day	3.1E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-08	--	4.6E-11	mg/kg-day	7.0E-08	mg/kg-day	6.6E-04
				OCDF	2E-07	mg/kg	2.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-09	--	8.6E-11	mg/kg-day	2.3E-06	mg/kg-day	3.7E-05
				KM TEQ DF	6E-06	mg/kg	7.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-04	--	2.6E-09	mg/kg-day	7.0E-10	mg/kg-day	3.7E+00
				PCB-77	1E-04	mg/kg	1.8E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-07	--	6.2E-08	mg/kg-day	7.0E-06	mg/kg-day	8.8E-03
				PCB-81	1E-05	mg/kg	1.8E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.2E-08	--	6.4E-09	mg/kg-day	2.3E-06	mg/kg-day	2.7E-03
				PCB-105	3E-03	mg/kg	3.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-06	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.1E-02
				PCB-114	2E-04	mg/kg	2.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-07	--	1.0E-07	mg/kg-day	2.3E-05	mg/kg-day	4.4E-03
				PCB-118	1E-02	mg/kg	1.4E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-06	--	5.1E-06	mg/kg-day	2.3E-05	mg/kg-day	2.2E-01
				PCB-123	2E-04	mg/kg	2.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.9E-08	--	7.7E-08	mg/kg-day	2.3E-05	mg/kg-day	3.3E-03
				PCB-126	4E-05	mg/kg	5.4E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-05	--	1.9E-08	mg/kg-day	7.0E-09	mg/kg-day	2.7E+00
				PCB-156/157	1E-03	mg/kg	1.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-07	--	5.0E-07	mg/kg-day	2.3E-05	mg/kg-day	2.1E-02
				PCB-167	5E-04	mg/kg	6.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-07	--	2.3E-07	mg/kg-day	2.3E-05	mg/kg-day	9.8E-03
				PCB-169	2E-06	mg/kg	2.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-06	--	8.8E-10	mg/kg-day	2.3E-08	mg/kg-day	3.8E-02
				PCB-189	8E-05	mg/kg	9.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-08	--	3.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.5E-03
				KM TEQ PCB	5E-06	mg/kg	5.9E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.9E-05	--	2.1E-09	mg/kg-day	7.0E-10	mg/kg-day	3.0E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	1.8E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.7E-05	--	6.4E-05	mg/kg-day	2.0E-05	mg/kg-day	3.2E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.5E-07	M	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.6E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.5E-10	M	2.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.5E-07	M	2.3E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	6.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.5E-08	M	2.3E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	4.1E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.8E-08	--	1.4E-06	mg/kg-day	3.0E-05	mg/kg-day	4.8E-02
				2,4'-DDE	3E-03	mg/kg	3.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-07	--	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.0E-03
				2,4'-DDT	2E-04	mg/kg	2.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.1E-09	--	9.4E-08	mg/kg-day	5.0E-04	mg/kg-day	1.9E-04
				4,4'-DDD	2E-02	mg/kg	2.3E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.6E-07	--	8.2E-06	mg/kg-day	3.0E-05	mg/kg-day	2.7E-01
				4,4'-DDE	4E-02	mg/kg	5.0E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-06	--	1.8E-05	mg/kg-day	3.0E-04	mg/kg-day	5.8E-02
				4,4'-DDT	1E-03	mg/kg	1.8E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.1E-08	--	6.3E-07	mg/kg-day	5.0E-04	mg/kg-day	1.3E-03
				Benzaldehyde	1E+00	mg/kg	1.6E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	6.4E-07	--	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				Chlordane, alpha (cis)	2E-03	mg/kg	2.6E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.0E-08	--	9.0E-07	mg/kg-day	5.0E-04	mg/kg-day	1.8E-03

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chlordane, gamma (trans)	7E-04	mg/kg	8.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-08	--	3.0E-07	mg/kg-day	5.0E-04	mg/kg-day	6.0E-04
				Dieldrin	1E-03	mg/kg	1.8E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.8E-06	--	6.1E-07	mg/kg-day	5.0E-05	mg/kg-day	1.2E-02
				Heptachlor epoxide, cis-	3E-04	mg/kg	4.2E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.8E-07	--	1.5E-07	mg/kg-day	1.3E-05	mg/kg-day	1.1E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	2.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.9E-08	--	7.4E-09	mg/kg-day	1.3E-05	mg/kg-day	5.7E-04
				Hexachlorobenzene	5E-04	mg/kg	6.0E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	9.7E-08	--	2.1E-07	mg/kg-day	8.0E-04	mg/kg-day	2.6E-04
				Mirex	6E-05	mg/kg	7.8E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.4E-07	--	2.7E-08	mg/kg-day	2.0E-04	mg/kg-day	1.4E-04
				Nonachlor, cis-	1E-03	mg/kg	1.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-08	--	4.8E-07	mg/kg-day	1.0E-04	mg/kg-day	4.8E-03
				Nonachlor, trans-	3E-03	mg/kg	3.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-07	--	1.2E-06	mg/kg-day	1.6E-05	mg/kg-day	7.8E-02
				Oxychlordane	1E-03	mg/kg	1.6E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.5E-08	--	5.5E-07	mg/kg-day	8.9E-05	mg/kg-day	6.2E-03
				Pyridine	1E+00	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	1.0E-03	mg/kg-day	5.6E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	6.9E-04	mg/kg-day	--	--	--	--	2.4E-03	mg/kg-day	1.0E+00	mg/kg-day	2.4E-03
				Arsenic, organic	2E+00	mg/kg	2.0E-04	mg/kg-day	--	--	--	--	7.1E-04	mg/kg-day	2.0E-02	mg/kg-day	3.6E-02
				Arsenic, inorganic	2E-01	mg/kg	2.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-05	--	7.9E-05	mg/kg-day	3.0E-04	mg/kg-day	2.6E-01
				Cadmium	5E-02	mg/kg	5.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	5E-01	mg/kg	5.7E-05	mg/kg-day	--	--	--	--	2.0E-04	mg/kg-day	1.5E+00	mg/kg-day	1.3E-04
				Cobalt	9E-01	mg/kg	1.1E-04	mg/kg-day	--	--	--	--	3.7E-04	mg/kg-day	3.0E-04	mg/kg-day	1.2E+00
				Copper	2E-01	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	9.1E-05	mg/kg-day	1.0E-03	mg/kg-day	9.1E-02
				Iron	5E+00	mg/kg	6.3E-04	mg/kg-day	--	--	--	--	2.2E-03	mg/kg-day	7.0E-01	mg/kg-day	3.2E-03
				Lead	3E-02	mg/kg	3.2E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	3.9E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	1.4E-01	mg/kg-day	9.8E-04
				Mercury	2E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	7.8E-05	mg/kg-day	3.0E-04	mg/kg-day	2.6E-01
				Methyl Mercury	2E-01	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	9.2E-05	mg/kg-day	1.0E-04	mg/kg-day	9.2E-01
				Selenium	6E-01	mg/kg	7.9E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	5.0E-03	mg/kg-day	5.6E-02
				Silver	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	5.0E-03	mg/kg-day	1.7E-03
				Vanadium	3E-02	mg/kg	3.7E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	5.0E-03	mg/kg-day	2.6E-03
				Zinc	7E+00	mg/kg	8.5E-04	mg/kg-day	--	--	--	--	3.0E-03	mg/kg-day	3.0E-01	mg/kg-day	9.9E-03
				Total DLCs (excluding KM TEQs)							2.1E-04						6.9E+00
				Total DLCs (based on KM TEQs)							2.0E-04						6.7E+00
				Total PCDD/Fs (excluding KM TEQ)							1.1E-04						3.8E+00
				Total PCDD/Fs (based on KM TEQ)							1.1E-04						3.7E+00
				Total DL-PCBs (excluding KM TEQ)							9.1E-05						3.0E+00
				Total DL-PCBs (based on KM TEQ)							8.9E-05						3.0E+00
				Total Non-DL PCBs							3.7E-05						3.2E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-04						6.2E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-04						6.2E+00
				Total PAHs							1.5E-06						7.6E-03
				Total Organics							7.0E-06						1.1E+00
				Total Inorganics							3.4E-05						2.9E+00
		Summer Flounder Total (excluding KM TEQs)									2.8E-04						1.4E+01
		Summer Flounder Total (based on KM TEQs)									2.8E-04						1.4E+01
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	2E-05	mg/kg	2.0E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-04	--	7.0E-09	mg/kg-day	7.0E-10	mg/kg-day	9.9E+00
				1,2,3,7,8-PeCDD	4E-07	mg/kg	5.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.8E-06	--	1.8E-10	mg/kg-day	7.0E-10	mg/kg-day	2.6E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	3.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-07	--	1.0E-10	mg/kg-day	7.0E-09	mg/kg-day	1.5E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	7.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--	2.6E-10	mg/kg-day	7.0E-09	mg/kg-day	3.7E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	1.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-07	--	6.1E-11	mg/kg-day	7.0E-09	mg/kg-day	8.6E-03
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	4.6E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.9E-08	--	1.6E-10	mg/kg-day	7.0E-08	mg/kg-day	2.3E-03
				OCDD	8E-07	mg/kg	1.0E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-09	--	3.7E-10	mg/kg-day	2.3E-06	mg/kg-day	1.6E-04
				2,3,7,8-TCDF	4E-06	mg/kg	4.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-06	--	1.7E-09	mg/kg-day	7.0E-09	mg/kg-day	2.4E-01
				1,2,3,7,8-PeCDF	3E-06	mg/kg	3.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-06	--	1.3E-09	mg/kg-day	2.3E-08	mg/kg-day	5.6E-02

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,7,8-PeCDF	3E-06	mg/kg	4.2E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-05	--	1.5E-09	mg/kg-day	2.3E-09	mg/kg-day	6.3E-01
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	2.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-06	--	7.0E-10	mg/kg-day	7.0E-09	mg/kg-day	1.0E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-06	--	5.1E-10	mg/kg-day	7.0E-09	mg/kg-day	7.3E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--	4.5E-11	mg/kg-day	7.0E-09	mg/kg-day	6.5E-03
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	2.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-07	--	9.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	3.0E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-07	--	1.0E-09	mg/kg-day	7.0E-08	mg/kg-day	1.5E-02
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	1.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-08	--	3.8E-11	mg/kg-day	7.0E-08	mg/kg-day	5.4E-04
				OCDF	2E-07	mg/kg	2.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--	9.4E-11	mg/kg-day	2.3E-06	mg/kg-day	4.0E-05
				KM TEQ DF	2E-05	mg/kg	2.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-04	--	7.9E-09	mg/kg-day	7.0E-10	mg/kg-day	1.1E+01
				PCB-77	1E-03	mg/kg	1.2E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.8E-06	--	4.2E-07	mg/kg-day	7.0E-06	mg/kg-day	6.0E-02
				PCB-81	4E-05	mg/kg	4.5E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-07	--	1.6E-08	mg/kg-day	2.3E-06	mg/kg-day	6.8E-03
				PCB-105	7E-03	mg/kg	9.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-06	--	3.2E-06	mg/kg-day	2.3E-05	mg/kg-day	1.4E-01
				PCB-114	6E-04	mg/kg	7.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-07	--	2.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-118	3E-02	mg/kg	3.5E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-05	--	1.2E-05	mg/kg-day	2.3E-05	mg/kg-day	5.2E-01
				PCB-123	6E-04	mg/kg	6.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-07	--	2.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-126	6E-05	mg/kg	7.5E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-04	--	2.6E-08	mg/kg-day	7.0E-09	mg/kg-day	3.7E+00
				PCB-156/157	3E-03	mg/kg	3.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-06	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.3E-02
				PCB-167	1E-03	mg/kg	1.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-07	--	5.0E-07	mg/kg-day	2.3E-05	mg/kg-day	2.2E-02
				PCB-169	7E-06	mg/kg	9.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.1E-06	--	3.2E-09	mg/kg-day	2.3E-08	mg/kg-day	1.4E-01
				PCB-189	2E-04	mg/kg	2.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--	9.7E-08	mg/kg-day	2.3E-05	mg/kg-day	4.2E-03
				KM TEQ PCB	7E-06	mg/kg	9.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-04	--	3.2E-09	mg/kg-day	7.0E-10	mg/kg-day	4.6E+00
				Non-DL PCBs													
				Total Non-DL PCBs	5E-01	mg/kg	5.8E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.2E-04	--	2.0E-04	mg/kg-day	2.0E-05	mg/kg-day	1.0E+01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-06	M	5.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-09	M	5.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-06	M	5.6E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	5E-02	mg/kg	6.3E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.5E-06	--	2.2E-05	mg/kg-day	3.0E-05	mg/kg-day	7.4E-01
				2,4'-DDE	1E-02	mg/kg	1.3E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-07	--	4.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
				2,4'-DDT	1E-02	mg/kg	1.7E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.8E-07	--	6.0E-06	mg/kg-day	5.0E-04	mg/kg-day	1.2E-02
				4,4'-DDD	2E-01	mg/kg	1.9E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.6E-06	--	6.7E-05	mg/kg-day	3.0E-05	mg/kg-day	2.2E+00
				4,4'-DDE	1E-01	mg/kg	1.5E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.0E-06	--	5.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.7E-01
				4,4'-DDT	3E-02	mg/kg	3.4E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-06	--	1.2E-05	mg/kg-day	5.0E-04	mg/kg-day	2.4E-02
				Benzaldehyde	1E+00	mg/kg	1.6E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	6.4E-07	--	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				Chlordane, alpha (cis)	2E-02	mg/kg	2.9E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-06	--	1.0E-05	mg/kg-day	5.0E-04	mg/kg-day	2.1E-02
				Chlordane, gamma (trans)	5E-03	mg/kg	6.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.1E-07	--	2.1E-06	mg/kg-day	5.0E-04	mg/kg-day	4.2E-03
				Dieldrin	7E-03	mg/kg	9.0E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.4E-05	--	3.2E-06	mg/kg-day	5.0E-05	mg/kg-day	6.3E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	2.6E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.4E-06	--	9.1E-07	mg/kg-day	1.3E-05	mg/kg-day	7.0E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	2.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.9E-08	--	7.4E-09	mg/kg-day	1.3E-05	mg/kg-day	5.7E-04
				Hexachlorobenzene	1E-03	mg/kg	1.6E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.5E-07	--	5.4E-07	mg/kg-day	8.0E-04	mg/kg-day	6.8E-04
				Mirex	4E-04	mg/kg	4.4E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	8.0E-07	--	1.5E-07	mg/kg-day	2.0E-04	mg/kg-day	7.7E-04
				Nonachlor, cis-	8E-03	mg/kg	9.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.2E-07	--	3.2E-06	mg/kg-day	1.0E-04	mg/kg-day	3.2E-02
				Nonachlor, trans-	2E-02	mg/kg	2.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.3E-07	--	8.3E-06	mg/kg-day	1.6E-05	mg/kg-day	5.4E-01
				Oxychlordane	3E-03	mg/kg	3.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--	1.3E-06	mg/kg-day	8.9E-05	mg/kg-day	1.5E-02
				Pyridine	1E+00	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	1.0E-03	mg/kg-day	5.6E-01
				Inorganics													
				Aluminum	9E+00	mg/kg	1.1E-03	mg/kg-day	--	--	--	--	3.8E-03	mg/kg-day	1.0E+00	mg/kg-day	3.8E-03

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, organic	7E-01	mg/kg	8.5E-05	mg/kg-day	--	--	--	--	3.0E-04	mg/kg-day	2.0E-02	mg/kg-day	1.5E-02
				Arsenic, inorganic	8E-02	mg/kg	9.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-05	--	3.3E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Cadmium	5E-02	mg/kg	5.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	1E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	6.2E-05	mg/kg-day	1.5E+00	mg/kg-day	4.2E-05
				Cobalt	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Copper	6E-01	mg/kg	7.8E-05	mg/kg-day	--	--	--	--	2.7E-04	mg/kg-day	1.0E-03	mg/kg-day	2.7E-01
				Iron	6E+00	mg/kg	7.6E-04	mg/kg-day	--	--	--	--	2.6E-03	mg/kg-day	7.0E-01	mg/kg-day	3.8E-03
				Lead	5E-02	mg/kg	6.2E-06	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	--	--	--
				Manganese	4E-01	mg/kg	4.7E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	1.4E-01	mg/kg-day	1.2E-03
				Mercury	3E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.4E-01
				Methyl Mercury	4E-01	mg/kg	5.1E-05	mg/kg-day	--	--	--	--	1.8E-04	mg/kg-day	1.0E-04	mg/kg-day	1.8E+00
				Selenium	7E-01	mg/kg	8.0E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	5.0E-03	mg/kg-day	5.6E-02
				Silver	2E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	5.0E-03	mg/kg-day	1.7E-03
				Vanadium	3E-02	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	5.0E-03	mg/kg-day	3.0E-03
				Zinc	1E+01	mg/kg	1.5E-03	mg/kg-day	--	--	--	--	5.4E-03	mg/kg-day	3.0E-01	mg/kg-day	1.8E-02
				Total DLCs (excluding KM TEQs)							4.8E-04						1.6E+01
				Total DLCs (based on KM TEQs)							4.7E-04						1.6E+01
				Total PCDD/Fs (excluding KM TEQ)							3.4E-04						1.1E+01
				Total PCDD/Fs (based on KM TEQ)							3.4E-04						1.1E+01
				Total DL-PCBs (excluding KM TEQ)							1.4E-04						4.7E+00
				Total DL-PCBs (based on KM TEQ)							1.4E-04						4.6E+00
				Total Non-DL PCBs							1.2E-04						1.0E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-04						1.5E+01
				Total PCBs (DL & NDL; based on KM TEQ)							2.5E-04						1.5E+01
				Total PAHs							3.7E-06						1.9E-02
				Total Organics							3.4E-05						4.5E+00
				Total Inorganics							1.4E-05						2.8E+00
		White Perch Total (excluding KM TEQs)									6.5E-04						3.4E+01
		White Perch Total (based on KM TEQs)									6.4E-04						3.3E+01
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	3E-05	mg/kg	2.0E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-04	--	6.9E-09	mg/kg-day	7.0E-10	mg/kg-day	9.8E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	5.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.7E-06	--	1.8E-10	mg/kg-day	7.0E-10	mg/kg-day	2.6E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-07	--	5.2E-11	mg/kg-day	7.0E-09	mg/kg-day	7.5E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	4.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-07	--	1.5E-10	mg/kg-day	7.0E-09	mg/kg-day	2.2E-02
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	1.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-07	--	5.5E-11	mg/kg-day	7.0E-09	mg/kg-day	7.8E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	5.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.6E-08	--	1.8E-10	mg/kg-day	7.0E-08	mg/kg-day	2.5E-03
				OCDD	2E-06	mg/kg	1.5E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.7E-09	--	5.2E-10	mg/kg-day	2.3E-06	mg/kg-day	2.2E-04
				2,3,7,8-TCDF	1E-05	mg/kg	7.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-05	--	2.5E-09	mg/kg-day	7.0E-09	mg/kg-day	3.6E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.6E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.0E-07	--	5.5E-10	mg/kg-day	2.3E-08	mg/kg-day	2.3E-02
				2,3,4,7,8-PeCDF	5E-06	mg/kg	3.6E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-05	--	1.3E-09	mg/kg-day	2.3E-09	mg/kg-day	5.5E-01
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	3.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-06	--	1.2E-09	mg/kg-day	7.0E-09	mg/kg-day	1.8E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-06	--	3.7E-10	mg/kg-day	7.0E-09	mg/kg-day	5.2E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	6.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-08	--	2.2E-11	mg/kg-day	7.0E-09	mg/kg-day	3.2E-03
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	2.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-07	--	9.7E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	3.5E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-07	--	1.2E-09	mg/kg-day	7.0E-08	mg/kg-day	1.7E-02
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	5.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.4E-09	--	1.7E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				OCDF	2E-07	mg/kg	1.8E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.2E-10	--	6.4E-11	mg/kg-day	2.3E-06	mg/kg-day	2.7E-05
				KM TEQ DF	3E-05	mg/kg	2.3E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-04	--	7.9E-09	mg/kg-day	7.0E-10	mg/kg-day	1.1E+01
				PCB-77	2E-03	mg/kg	1.5E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.2E-06	--	5.1E-07	mg/kg-day	7.0E-06	mg/kg-day	7.3E-02
				PCB-81	9E-05	mg/kg	6.4E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-07	--	2.2E-08	mg/kg-day	2.3E-06	mg/kg-day	9.5E-03
				PCB-105	1E-02	mg/kg	7.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-06	--	2.7E-06	mg/kg-day	2.3E-05	mg/kg-day	1.2E-01

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-114	9E-04	mg/kg	6.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-07	--	2.3E-07	mg/kg-day	2.3E-05	mg/kg-day	9.9E-03
				PCB-118	5E-02	mg/kg	3.5E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-05	--	1.2E-05	mg/kg-day	2.3E-05	mg/kg-day	5.2E-01
				PCB-123	8E-04	mg/kg	6.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-07	--	2.1E-07	mg/kg-day	2.3E-05	mg/kg-day	9.2E-03
				PCB-126	1E-04	mg/kg	7.2E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-04	--	2.5E-08	mg/kg-day	7.0E-09	mg/kg-day	3.6E+00
				PCB-156/157	4E-03	mg/kg	2.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-06	--	9.7E-07	mg/kg-day	2.3E-05	mg/kg-day	4.2E-02
				PCB-167	2E-03	mg/kg	1.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-07	--	4.0E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02
				PCB-169	1E-05	mg/kg	8.1E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.7E-06	--	2.8E-09	mg/kg-day	2.3E-08	mg/kg-day	1.2E-01
				PCB-189	3E-04	mg/kg	2.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-08	--	7.0E-08	mg/kg-day	2.3E-05	mg/kg-day	3.0E-03
				KM TEQ PCB	1E-05	mg/kg	8.6E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-04	--	3.0E-09	mg/kg-day	7.0E-10	mg/kg-day	4.3E+00
				Non-DL PCBs													
				Total Non-DL PCBs	3E-01	mg/kg	2.4E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.8E-05	--	8.4E-05	mg/kg-day	2.0E-05	mg/kg-day	4.2E+00
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	2.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M	7.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	2.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-07	M	7.0E-07	mg/kg-day	3.0E-04	mg/kg-day	2.3E-03
				Benzo(b)fluoranthene	3E-03	mg/kg	2.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-08	M	6.8E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	2.7E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.7E-10	M	9.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	2.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-07	M	6.9E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	1.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	5.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-04	mg/kg	1.6E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.9E-09	--	5.7E-08	mg/kg-day	3.0E-05	mg/kg-day	1.9E-03
				2,4'-DDE	4E-04	mg/kg	3.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-08	--	1.2E-07	mg/kg-day	3.0E-04	mg/kg-day	3.9E-04
				2,4'-DDT	2E-04	mg/kg	1.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.0E-09	--	5.1E-08	mg/kg-day	5.0E-04	mg/kg-day	1.0E-04
				4,4'-DDD	3E-02	mg/kg	2.6E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.3E-07	--	9.1E-06	mg/kg-day	3.0E-05	mg/kg-day	3.0E-01
				4,4'-DDE	9E-02	mg/kg	7.0E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-06	--	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	8.2E-02
				4,4'-DDT	1E-03	mg/kg	8.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-08	--	2.8E-07	mg/kg-day	5.0E-04	mg/kg-day	5.6E-04
				Benzaldehyde	1E+00	mg/kg	8.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.6E-07	--	3.1E-04	mg/kg-day	1.0E-01	mg/kg-day	3.1E-03
				Chlordane, alpha (cis)	2E-03	mg/kg	1.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.3E-08	--	5.3E-07	mg/kg-day	5.0E-04	mg/kg-day	1.1E-03
				Chlordane, gamma (trans)	3E-04	mg/kg	1.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.6E-09	--	6.6E-08	mg/kg-day	5.0E-04	mg/kg-day	1.3E-04
				Dieldrin	6E-03	mg/kg	4.6E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.3E-06	--	1.6E-06	mg/kg-day	5.0E-05	mg/kg-day	3.2E-02
				Heptachlor epoxide, cis-	4E-03	mg/kg	2.7E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.4E-06	--	9.4E-07	mg/kg-day	1.3E-05	mg/kg-day	7.2E-02
				Heptachlor epoxide, trans-	1E-03	mg/kg	8.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.8E-07	--	3.0E-07	mg/kg-day	1.3E-05	mg/kg-day	2.3E-02
				Hexachlorobenzene	1E-03	mg/kg	8.2E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.3E-07	--	2.9E-07	mg/kg-day	8.0E-04	mg/kg-day	3.6E-04
				Mirex	2E-04	mg/kg	1.5E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.7E-07	--	5.3E-08	mg/kg-day	2.0E-04	mg/kg-day	2.6E-04
				Nonachlor, cis-	5E-03	mg/kg	3.9E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-07	--	1.4E-06	mg/kg-day	1.0E-04	mg/kg-day	1.4E-02
				Nonachlor, trans-	1E-02	mg/kg	7.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.7E-07	--	2.7E-06	mg/kg-day	1.6E-05	mg/kg-day	1.8E-01
				Oxychlordane	2E-02	mg/kg	1.2E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.1E-07	--	4.1E-06	mg/kg-day	8.9E-05	mg/kg-day	4.6E-02
				Pyridine	5E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	1.0E-03	mg/kg-day	1.3E-01
				Inorganics													
				Aluminum	9E+00	mg/kg	6.8E-04	mg/kg-day	--	--	--	--	2.4E-03	mg/kg-day	1.0E+00	mg/kg-day	2.4E-03
				Arsenic, organic	3E+00	mg/kg	1.9E-04	mg/kg-day	--	--	--	--	6.6E-04	mg/kg-day	2.0E-02	mg/kg-day	3.3E-02
				Arsenic, inorganic	3E-01	mg/kg	2.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.1E-05	--	7.3E-05	mg/kg-day	3.0E-04	mg/kg-day	2.4E-01
				Cadmium	4E-01	mg/kg	3.0E-05	mg/kg-day	--	--	--	--	1.0E-04	mg/kg-day	1.0E-03	mg/kg-day	1.0E-01
				Chromium [as Cr(III)]	2E-01	mg/kg	1.2E-05	mg/kg-day	--	--	--	--	4.3E-05	mg/kg-day	1.5E+00	mg/kg-day	2.9E-05
				Cobalt	9E-02	mg/kg	6.6E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	3.0E-04	mg/kg-day	7.8E-02
				Copper	3E+01	mg/kg	2.1E-03	mg/kg-day	--	--	--	--	7.5E-03	mg/kg-day	1.0E-03	mg/kg-day	7.5E+00
				Iron	4E+01	mg/kg	2.9E-03	mg/kg-day	--	--	--	--	1.0E-02	mg/kg-day	7.0E-01	mg/kg-day	1.4E-02
				Lead	3E-01	mg/kg	2.1E-05	mg/kg-day	--	--	--	--	7.3E-05	mg/kg-day	--	--	--
				Manganese	1E+01	mg/kg	7.4E-04	mg/kg-day	--	--	--	--	2.6E-03	mg/kg-day	1.4E-01	mg/kg-day	1.8E-02
				Mercury	2E-01	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	4.0E-05	mg/kg-day	3.0E-04	mg/kg-day	1.3E-01
				Methyl Mercury	2E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	4.5E-05	mg/kg-day	1.0E-04	mg/kg-day	4.5E-01
				Selenium	1E+00	mg/kg	8.5E-05	mg/kg-day	--	--	--	--	3.0E-04	mg/kg-day	5.0E-03	mg/kg-day	5.9E-02

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Silver	8E-01	mg/kg	5.8E-05	mg/kg-day	--	--	--	--	2.0E-04	mg/kg-day	5.0E-03	mg/kg-day	4.1E-02
				Vanadium	7E-02	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	5.0E-03	mg/kg-day	3.8E-03
				Zinc	5E+01	mg/kg	3.5E-03	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	3.0E-01	mg/kg-day	4.1E-02
				Total DLCs (excluding KM TEQs)							4.7E-04						1.6E+01
				Total DLCs (based on KM TEQs)							4.7E-04						1.6E+01
				Total PCDD/Fs (excluding KM TEQ)							3.4E-04						1.1E+01
				Total PCDD/Fs (based on KM TEQ)							3.4E-04						1.1E+01
				Total DL-PCBs (excluding KM TEQ)							1.4E-04						4.5E+00
				Total DL-PCBs (based on KM TEQ)							1.3E-04						4.3E+00
				Total Non-DL PCBs							4.8E-05						4.2E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.8E-04						8.7E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-04						8.5E+00
				Total PAHs							6.0E-07						2.3E-03
				Total Organics							1.5E-05						8.9E-01
				Total Inorganics							3.1E-05						8.7E+00
		Crab (H+M) Total (excluding KM TEQs)									5.7E-04						3.0E+01
		Crab (H+M) Total (based on KM TEQs)									5.6E-04						2.9E+01
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	4E-06	mg/kg	2.9E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-05	--	1.0E-09	mg/kg-day	7.0E-10	mg/kg-day	1.4E+00
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-06	--	6.5E-11	mg/kg-day	7.0E-10	mg/kg-day	9.3E-02
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	2.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-08	--	7.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	5.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-08	--	1.8E-11	mg/kg-day	7.0E-09	mg/kg-day	2.6E-03
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	2.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-08	--	9.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.3E-03
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	1.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-08	--	3.5E-11	mg/kg-day	7.0E-08	mg/kg-day	5.0E-04
				OCDD	5E-07	mg/kg	3.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-09	--	1.2E-10	mg/kg-day	2.3E-06	mg/kg-day	5.2E-05
				2,3,7,8-TCDF	1E-06	mg/kg	8.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-06	--	3.0E-10	mg/kg-day	7.0E-09	mg/kg-day	4.3E-02
				1,2,3,7,8-PeCDF	3E-07	mg/kg	2.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.1E-08	--	7.0E-11	mg/kg-day	2.3E-08	mg/kg-day	3.0E-03
				2,3,4,7,8-PeCDF	5E-07	mg/kg	3.6E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-06	--	1.3E-10	mg/kg-day	2.3E-09	mg/kg-day	5.4E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	5.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-07	--	4.7E-11	mg/kg-day	7.0E-09	mg/kg-day	6.7E-03
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	5.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.6E-03
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	3.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-08	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.7E-03
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	2.9E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-08	--	1.0E-10	mg/kg-day	7.0E-08	mg/kg-day	1.5E-03
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	2.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-09	--	8.8E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				OCDF	9E-08	mg/kg	7.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-10	--	2.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	4E-06	mg/kg	3.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.9E-05	--	1.1E-09	mg/kg-day	7.0E-10	mg/kg-day	1.6E+00
				PCB-77	2E-04	mg/kg	1.5E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.2E-07	--	5.2E-08	mg/kg-day	7.0E-06	mg/kg-day	7.4E-03
				PCB-81	9E-06	mg/kg	6.7E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-08	--	2.4E-09	mg/kg-day	2.3E-06	mg/kg-day	1.0E-03
				PCB-105	1E-03	mg/kg	7.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-07	--	2.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.2E-02
				PCB-114	9E-05	mg/kg	6.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-08	--	2.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.0E-03
				PCB-118	4E-03	mg/kg	3.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-06	--	1.0E-06	mg/kg-day	2.3E-05	mg/kg-day	4.4E-02
				PCB-123	8E-05	mg/kg	5.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-08	--	2.1E-08	mg/kg-day	2.3E-05	mg/kg-day	8.8E-04
				PCB-126	8E-06	mg/kg	6.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-06	--	2.2E-09	mg/kg-day	7.0E-09	mg/kg-day	3.2E-01
				PCB-156/157	3E-04	mg/kg	2.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-07	--	8.4E-08	mg/kg-day	2.3E-05	mg/kg-day	3.6E-03
				PCB-167	1E-04	mg/kg	9.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-08	--	3.2E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-169	1E-05	mg/kg	8.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.8E-06	--	3.0E-09	mg/kg-day	2.3E-08	mg/kg-day	1.3E-01
				PCB-189	2E-05	mg/kg	1.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.3E-09	--	4.1E-09	mg/kg-day	2.3E-05	mg/kg-day	1.8E-04
				KM TEQ PCB	1E-06	mg/kg	7.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-05	--	2.7E-10	mg/kg-day	7.0E-10	mg/kg-day	3.8E-01
				Non-DL PCBs													
				Total Non-DL PCBs	3E-02	mg/kg	2.1E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.1E-06	--	7.2E-06	mg/kg-day	2.0E-05	mg/kg-day	3.6E-01
				PAHs													

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	1E-02	mg/kg	9.7E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.7E-08	M	3.4E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	9.7E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.7E-07	M	3.4E-06	mg/kg-day	3.0E-04	mg/kg-day	1.1E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	9.7E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.7E-08	M	3.4E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	9.7E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	9.7E-10	M	3.4E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	9.7E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.7E-07	M	3.4E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	9.7E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.7E-08	M	3.4E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-05	mg/kg	1.8E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.3E-10	--	6.3E-09	mg/kg-day	3.0E-05	mg/kg-day	2.1E-04
				2,4'-DDE	5E-05	mg/kg	3.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-09	--	1.3E-08	mg/kg-day	3.0E-04	mg/kg-day	4.2E-05
				2,4'-DDT	4E-05	mg/kg	2.8E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.4E-10	--	9.7E-09	mg/kg-day	5.0E-04	mg/kg-day	1.9E-05
				4,4'-DDD	5E-03	mg/kg	3.9E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.3E-08	--	1.4E-06	mg/kg-day	3.0E-05	mg/kg-day	4.5E-02
				4,4'-DDE	1E-02	mg/kg	1.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.7E-07	--	3.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				4,4'-DDT	2E-04	mg/kg	1.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.8E-09	--	4.0E-08	mg/kg-day	5.0E-04	mg/kg-day	7.9E-05
				Benzaldehyde	1E+00	mg/kg	9.7E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.9E-07	--	3.4E-04	mg/kg-day	1.0E-01	mg/kg-day	3.4E-03
				Chlordane, alpha (cis)	6E-04	mg/kg	4.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-08	--	1.5E-07	mg/kg-day	5.0E-04	mg/kg-day	3.0E-04
				Chlordane, gamma (trans)	3E-05	mg/kg	2.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.9E-10	--	6.9E-09	mg/kg-day	5.0E-04	mg/kg-day	1.4E-05
				Dieldrin	1E-03	mg/kg	1.0E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.6E-06	--	3.5E-07	mg/kg-day	5.0E-05	mg/kg-day	7.1E-03
				Heptachlor epoxide, cis-	3E-04	mg/kg	2.4E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.2E-07	--	8.5E-08	mg/kg-day	1.3E-05	mg/kg-day	6.6E-03
				Heptachlor epoxide, trans-	2E-04	mg/kg	1.7E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.5E-07	--	5.9E-08	mg/kg-day	1.3E-05	mg/kg-day	4.5E-03
				Hexachlorobenzene	2E-04	mg/kg	1.7E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.6E-08	--	5.8E-08	mg/kg-day	8.0E-04	mg/kg-day	7.2E-05
				Mirex	5E-05	mg/kg	3.8E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	6.8E-08	--	1.3E-08	mg/kg-day	2.0E-04	mg/kg-day	6.6E-05
				Nonachlor, cis-	7E-04	mg/kg	4.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-08	--	1.7E-07	mg/kg-day	1.0E-04	mg/kg-day	1.7E-03
				Nonachlor, trans-	1E-03	mg/kg	9.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.1E-08	--	3.1E-07	mg/kg-day	1.6E-05	mg/kg-day	2.0E-02
				Oxychlordane	2E-03	mg/kg	1.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.4E-08	--	4.4E-07	mg/kg-day	8.9E-05	mg/kg-day	5.0E-03
				Pyridine	4E-01	mg/kg	3.1E-05	mg/kg-day	--	--	--	--	1.1E-04	mg/kg-day	1.0E-03	mg/kg-day	1.1E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	4.2E-04	mg/kg-day	--	--	--	--	1.5E-03	mg/kg-day	1.0E+00	mg/kg-day	1.5E-03
				Arsenic, organic	2E+00	mg/kg	1.8E-04	mg/kg-day	--	--	--	--	6.2E-04	mg/kg-day	2.0E-02	mg/kg-day	3.1E-02
				Arsenic, inorganic	3E-01	mg/kg	2.0E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.9E-05	--	6.8E-05	mg/kg-day	3.0E-04	mg/kg-day	2.3E-01
				Cadmium	2E-01	mg/kg	1.2E-05	mg/kg-day	--	--	--	--	4.3E-05	mg/kg-day	1.0E-03	mg/kg-day	4.3E-02
				Chromium [as Cr(III)]	2E-01	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	4.0E-05	mg/kg-day	1.5E+00	mg/kg-day	2.6E-05
				Cobalt	7E-02	mg/kg	5.3E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	3.0E-04	mg/kg-day	6.1E-02
				Copper	2E+01	mg/kg	1.4E-03	mg/kg-day	--	--	--	--	4.8E-03	mg/kg-day	1.0E-03	mg/kg-day	4.8E+00
				Iron	2E+01	mg/kg	1.4E-03	mg/kg-day	--	--	--	--	4.9E-03	mg/kg-day	7.0E-01	mg/kg-day	7.0E-03
				Lead	1E-01	mg/kg	7.2E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	--	--	--
				Manganese	6E+00	mg/kg	4.6E-04	mg/kg-day	--	--	--	--	1.6E-03	mg/kg-day	1.4E-01	mg/kg-day	1.1E-02
				Mercury	2E-01	mg/kg	1.4E-05	mg/kg-day	--	--	--	--	4.7E-05	mg/kg-day	3.0E-04	mg/kg-day	1.6E-01
				Methyl Mercury	2E-01	mg/kg	1.6E-05	mg/kg-day	--	--	--	--	5.6E-05	mg/kg-day	1.0E-04	mg/kg-day	5.6E-01
				Selenium	9E-01	mg/kg	6.9E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	5.0E-03	mg/kg-day	4.9E-02
				Silver	5E-01	mg/kg	3.6E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	5.0E-03	mg/kg-day	2.5E-02
				Vanadium	4E-02	mg/kg	3.2E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	5.0E-03	mg/kg-day	2.2E-03
				Zinc	5E+01	mg/kg	3.5E-03	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	3.0E-01	mg/kg-day	4.1E-02
Total DLCs (excluding KM TEQs)											6.6E-05						2.2E+00
Total DLCs (based on KM TEQs)											6.1E-05						2.0E+00
Total PCDD/Fs (excluding KM TEQ)											5.0E-05						1.7E+00
Total PCDD/Fs (based on KM TEQ)											4.9E-05						1.6E+00
Total DL-PCBs (excluding KM TEQ)											1.5E-05						5.2E-01
Total DL-PCBs (based on KM TEQ)											1.1E-05						3.8E-01
Total Non-DL PCBs											4.1E-06						3.6E-01
Total PCBs (DL & NDL; excluding KM TEQ)											2.0E-05						8.8E-01
Total PCBs (DL & NDL; based on KM TEQ)											1.6E-05						7.4E-01

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PAHs							2.2E-06						1.1E-02
				Total Organics							3.0E-06						2.2E-01
				Total Inorganics							2.9E-05						6.0E+00
		Crab (Muscle) Total (excluding KM TEQs)									1.0E-04						8.8E+00
		Crab (Muscle) Total (based on KM TEQs)									9.9E-05						8.6E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-05	mg/kg	6.8E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-03	--	2.4E-08	mg/kg-day	7.0E-10	mg/kg-day	3.4E+01
				1,2,3,7,8-PeCDD	2E-06	mg/kg	1.6E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.4E-05	--	5.7E-10	mg/kg-day	7.0E-10	mg/kg-day	8.1E-01
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	5.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	1.6E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-06	--	5.5E-10	mg/kg-day	7.0E-09	mg/kg-day	7.8E-02
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	5.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	1.7E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.5E-07	--	5.9E-10	mg/kg-day	7.0E-08	mg/kg-day	8.4E-03
				OCDD	6E-06	mg/kg	4.8E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-08	--	1.7E-09	mg/kg-day	2.3E-06	mg/kg-day	7.2E-04
				2,3,7,8-TCDF	3E-05	mg/kg	2.6E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-05	--	9.0E-09	mg/kg-day	7.0E-09	mg/kg-day	1.3E+00
				1,2,3,7,8-PeCDF	7E-06	mg/kg	5.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-06	--	1.9E-09	mg/kg-day	2.3E-08	mg/kg-day	8.3E-02
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.3E-09	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.9E-05	--	4.6E-09	mg/kg-day	2.3E-09	mg/kg-day	2.0E+00
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	1.2E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-05	--	4.3E-09	mg/kg-day	7.0E-09	mg/kg-day	6.2E-01
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	3.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.9E-01
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--	3.6E-11	mg/kg-day	7.0E-09	mg/kg-day	5.1E-03
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	9.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-06	--	3.4E-10	mg/kg-day	7.0E-09	mg/kg-day	4.8E-02
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	1.3E-09	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-06	--	4.4E-09	mg/kg-day	7.0E-08	mg/kg-day	6.3E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	1.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-08	--	3.6E-11	mg/kg-day	7.0E-08	mg/kg-day	5.1E-04
				OCDF	8E-07	mg/kg	6.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-09	--	2.2E-10	mg/kg-day	2.3E-06	mg/kg-day	9.4E-05
				KM TEQ DF	1E-04	mg/kg	7.8E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-03	--	2.7E-08	mg/kg-day	7.0E-10	mg/kg-day	3.9E+01
				PCB-77	7E-03	mg/kg	5.1E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.7E-06	--	1.8E-06	mg/kg-day	7.0E-06	mg/kg-day	2.6E-01
				PCB-81	3E-04	mg/kg	2.3E-08	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-06	--	8.0E-08	mg/kg-day	2.3E-06	mg/kg-day	3.4E-02
				PCB-105	4E-02	mg/kg	2.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-05	--	9.7E-06	mg/kg-day	2.3E-05	mg/kg-day	4.2E-01
				PCB-114	3E-03	mg/kg	2.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-06	--	8.3E-07	mg/kg-day	2.3E-05	mg/kg-day	3.5E-02
				PCB-118	2E-01	mg/kg	1.3E-05	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.7E-05	--	4.4E-05	mg/kg-day	2.3E-05	mg/kg-day	1.9E+00
				PCB-123	3E-03	mg/kg	2.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.9E-07	--	7.7E-07	mg/kg-day	2.3E-05	mg/kg-day	3.3E-02
				PCB-126	4E-04	mg/kg	2.6E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-04	--	9.2E-08	mg/kg-day	7.0E-09	mg/kg-day	1.3E+01
				PCB-156/157	1E-02	mg/kg	1.0E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-06	--	3.5E-06	mg/kg-day	2.3E-05	mg/kg-day	1.5E-01
				PCB-167	6E-03	mg/kg	4.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-06	--	1.5E-06	mg/kg-day	2.3E-05	mg/kg-day	6.4E-02
				PCB-169	4E-05	mg/kg	2.7E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-05	--	9.5E-09	mg/kg-day	2.3E-08	mg/kg-day	4.1E-01
				PCB-189	1E-03	mg/kg	7.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-07	--	2.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				KM TEQ PCB	4E-05	mg/kg	3.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.7E-04	--	1.1E-08	mg/kg-day	7.0E-10	mg/kg-day	1.6E+01
				Non-DL PCBs													
				Total Non-DL PCBs	1E+00	mg/kg	8.7E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-04	--	3.1E-04	mg/kg-day	2.0E-05	mg/kg-day	1.5E+01
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	2.4E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.4E-08	M	8.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	2.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M	7.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Benzo(b)fluoranthene	3E-03	mg/kg	2.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-08	M	7.0E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	3.3E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-10	M	1.2E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	2.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M	7.2E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	5.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-07	M	2.0E-05	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	8E-04	mg/kg	5.7E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-08	--	2.0E-07	mg/kg-day	3.0E-05	mg/kg-day	6.6E-03
				2,4'-DDE	2E-03	mg/kg	1.2E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-08	--	4.2E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				2,4'-DDT	7E-04	mg/kg	4.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-08	--	1.7E-07	mg/kg-day	5.0E-04	mg/kg-day	3.4E-04
				4,4'-DDD	1E-01	mg/kg	9.0E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.2E-06	--	3.2E-05	mg/kg-day	3.0E-05	mg/kg-day	1.1E+00
				4,4'-DDE	3E-01	mg/kg	2.4E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.2E-06	--	8.4E-05	mg/kg-day	3.0E-04	mg/kg-day	2.8E-01

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				4,4'-DDT	4E-03	mg/kg	2.8E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.4E-08	--	9.7E-07	mg/kg-day	5.0E-04	mg/kg-day	1.9E-03
				Benzaldehyde	3E+00	mg/kg	1.9E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	7.6E-07	--	6.6E-04	mg/kg-day	1.0E-01	mg/kg-day	6.6E-03
				Chlordane, alpha (cis)	7E-03	mg/kg	4.9E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-07	--	1.7E-06	mg/kg-day	5.0E-04	mg/kg-day	3.5E-03
				Chlordane, gamma (trans)	9E-04	mg/kg	6.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.4E-08	--	2.4E-07	mg/kg-day	5.0E-04	mg/kg-day	4.7E-04
				Dieldrin	2E-02	mg/kg	1.5E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.4E-05	--	5.3E-06	mg/kg-day	5.0E-05	mg/kg-day	1.1E-01
				Heptachlor epoxide, cis-	1E-02	mg/kg	9.8E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.9E-06	--	3.4E-06	mg/kg-day	1.3E-05	mg/kg-day	2.6E-01
				Heptachlor epoxide, trans-	4E-03	mg/kg	2.9E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.6E-06	--	1.0E-06	mg/kg-day	1.3E-05	mg/kg-day	7.7E-02
				Hexachlorobenzene	4E-03	mg/kg	2.7E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.3E-07	--	9.5E-07	mg/kg-day	8.0E-04	mg/kg-day	1.2E-03
				Mirex	7E-04	mg/kg	5.0E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.0E-07	--	1.7E-07	mg/kg-day	2.0E-04	mg/kg-day	8.7E-04
				Nonachlor, cis-	2E-02	mg/kg	1.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-07	--	4.8E-06	mg/kg-day	1.0E-04	mg/kg-day	4.8E-02
				Nonachlor, trans-	4E-02	mg/kg	2.8E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.7E-07	--	9.7E-06	mg/kg-day	1.6E-05	mg/kg-day	6.3E-01
				Oxychlordane	6E-02	mg/kg	4.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-06	--	1.4E-05	mg/kg-day	8.9E-05	mg/kg-day	1.6E-01
				Pyridine	8E-01	mg/kg	5.9E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	1.0E-03	mg/kg-day	2.1E-01
				Inorganics													
				Aluminum	3E+01	mg/kg	2.1E-03	mg/kg-day	--	--	--	--	7.4E-03	mg/kg-day	1.0E+00	mg/kg-day	7.4E-03
				Arsenic, organic	3E+00	mg/kg	2.3E-04	mg/kg-day	--	--	--	--	8.1E-04	mg/kg-day	2.0E-02	mg/kg-day	4.1E-02
				Arsenic, inorganic	3E-01	mg/kg	2.6E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.9E-05	--	9.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.0E-01
				Cadmium	1E+00	mg/kg	9.5E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	1.0E-03	mg/kg-day	3.3E-01
				Chromium [as Cr(III)]	3E-01	mg/kg	2.1E-05	mg/kg-day	--	--	--	--	7.4E-05	mg/kg-day	1.5E+00	mg/kg-day	4.9E-05
				Cobalt	2E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	5.9E-05	mg/kg-day	3.0E-04	mg/kg-day	2.0E-01
				Copper	7E+01	mg/kg	5.6E-03	mg/kg-day	--	--	--	--	2.0E-02	mg/kg-day	1.0E-03	mg/kg-day	2.0E+01
				Iron	1E+02	mg/kg	7.5E-03	mg/kg-day	--	--	--	--	2.6E-02	mg/kg-day	7.0E-01	mg/kg-day	3.8E-02
				Lead	8E-01	mg/kg	6.1E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	--	--	--
				Manganese	2E+01	mg/kg	1.4E-03	mg/kg-day	--	--	--	--	4.8E-03	mg/kg-day	1.4E-01	mg/kg-day	3.5E-02
				Mercury	7E-02	mg/kg	5.6E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	3.0E-04	mg/kg-day	6.5E-02
				Methyl Mercury	6E-02	mg/kg	4.4E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	1.0E-04	mg/kg-day	1.5E-01
				Selenium	2E+00	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	4.8E-04	mg/kg-day	5.0E-03	mg/kg-day	9.5E-02
				Silver	2E+00	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	5.0E-04	mg/kg-day	5.0E-03	mg/kg-day	1.0E-01
				Vanadium	2E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	4.5E-05	mg/kg-day	5.0E-03	mg/kg-day	8.9E-03
				Zinc	5E+01	mg/kg	3.6E-03	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	3.0E-01	mg/kg-day	4.1E-02
				Total DLCs (excluding KM TEQs)							1.7E-03						5.6E+01
				Total DLCs (based on KM TEQs)							1.6E-03						5.5E+01
				Total PCDD/Fs (excluding KM TEQ)							1.2E-03						3.9E+01
				Total PCDD/Fs (based on KM TEQ)							1.2E-03						3.9E+01
				Total DL-PCBs (excluding KM TEQ)							4.9E-04						1.6E+01
				Total DL-PCBs (based on KM TEQ)							4.7E-04						1.6E+01
				Total Non-DL PCBs							1.7E-04						1.5E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							6.7E-04						3.2E+01
				Total PCBs (DL & NDL; based on KM TEQ)							6.4E-04						3.1E+01
				Total PAHs							1.0E-06						2.5E-03
				Total Organics							5.1E-05						2.9E+00
				Total Inorganics							3.9E-05						2.1E+01
		Crab (Hepatopancreas)		Total (excluding KM TEQs)							1.9E-03						9.5E+01
		Crab (Hepatopancreas)		Total (based on KM TEQs)							1.9E-03						9.4E+01
Sediment	Sediment	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-07	--	6.3E-12	mg/kg-day	7.0E-10	mg/kg-day	9.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-08	--	3.3E-13	mg/kg-day	7.0E-10	mg/kg-day	4.7E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	3.0E-13	mg/kg-day	7.0E-09	mg/kg-day	4.2E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--	1.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.7E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--	7.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.0E-09	--	2.1E-11	mg/kg-day	7.0E-08	mg/kg-day	3.0E-04

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				OCDD	3E-03	mg/kg	6.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-09	--	2.1E-10	mg/kg-day	2.3E-06	mg/kg-day	9.2E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.6E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-09	--	7.8E-13	mg/kg-day	2.3E-08	mg/kg-day	3.3E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.7E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-08	--	1.3E-12	mg/kg-day	2.3E-09	mg/kg-day	5.6E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--	5.9E-12	mg/kg-day	7.0E-09	mg/kg-day	8.5E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.2E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-09	--	8.6E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--	2.6E-11	mg/kg-day	7.0E-08	mg/kg-day	3.8E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-10	--	8.9E-13	mg/kg-day	7.0E-08	mg/kg-day	1.3E-05
				OCDF	4E-04	mg/kg	1.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-10	--	3.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.6E-05
				KM TEQ DF	1E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-07	--	8.6E-12	mg/kg-day	7.0E-10	mg/kg-day	1.2E-02
				PCB-77	8E-03	mg/kg	1.8E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-09	--	6.3E-10	mg/kg-day	7.0E-06	mg/kg-day	9.1E-05
				PCB-81	3E-04	mg/kg	7.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-10	--	2.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				PCB-105	1E-02	mg/kg	2.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-09	--	1.0E-09	mg/kg-day	2.3E-05	mg/kg-day	4.4E-05
				PCB-114	9E-04	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-11	--	7.0E-11	mg/kg-day	2.3E-05	mg/kg-day	3.0E-06
				PCB-118	4E-02	mg/kg	8.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-09	--	3.0E-09	mg/kg-day	2.3E-05	mg/kg-day	1.3E-04
				PCB-123	1E-03	mg/kg	2.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--	8.6E-11	mg/kg-day	2.3E-05	mg/kg-day	3.7E-06
				PCB-126	2E-04	mg/kg	5.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-08	--	2.0E-11	mg/kg-day	7.0E-09	mg/kg-day	2.9E-03
				PCB-156/157	3E-03	mg/kg	7.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-10	--	2.7E-10	mg/kg-day	2.3E-05	mg/kg-day	1.1E-05
				PCB-167	1E-03	mg/kg	2.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	9.5E-11	mg/kg-day	2.3E-05	mg/kg-day	4.1E-06
				PCB-169	3E-04	mg/kg	5.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-08	--	2.1E-11	mg/kg-day	2.3E-08	mg/kg-day	8.9E-04
				PCB-189	2E-04	mg/kg	5.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-11	--	2.0E-11	mg/kg-day	2.3E-05	mg/kg-day	8.6E-07
				KM TEQ PCB	3E-05	mg/kg	7.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--	2.5E-12	mg/kg-day	7.0E-10	mg/kg-day	3.6E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.1E-08	--	5.4E-08	mg/kg-day	2.0E-05	mg/kg-day	2.7E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.9E-09	M	1.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.8E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-08	M	1.7E-07	mg/kg-day	3.0E-04	mg/kg-day	5.6E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.3E-09	M	1.5E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.8E-10	M	9.8E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.7E-11	M	1.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.9E-09	M	3.5E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-09	M	6.2E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.3E-07	mg/kg-day	--	--	--	--	4.7E-07	mg/kg-day	4.0E-03	mg/kg-day	1.2E-04
				TPH (C9-C40)	4E+02	mg/kg	9.7E-06	mg/kg-day	--	--	--	--	3.4E-05	mg/kg-day	4.0E-03	mg/kg-day	8.5E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.9E-04	mg/kg-day	--	--	--	--	1.0E-03	mg/kg-day	1.0E+00	mg/kg-day	1.0E-03
				Antimony	2E+00	mg/kg	5.5E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	4.0E-04	mg/kg-day	4.8E-04
				Arsenic, inorganic	3E+01	mg/kg	4.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.5E-07	--	1.5E-06	mg/kg-day	3.0E-04	mg/kg-day	5.1E-03
				Cadmium	3E+00	mg/kg	7.2E-08	mg/kg-day	--	--	--	--	2.5E-07	mg/kg-day	1.0E-03	mg/kg-day	2.5E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.8E-06	mg/kg-day	1.5E+00	mg/kg-day	5.9E-06
				Cobalt	1E+01	mg/kg	3.3E-07	mg/kg-day	--	--	--	--	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	3.9E-03
				Copper	2E+02	mg/kg	3.9E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	1.0E-03	mg/kg-day	1.4E-02
				Chromium (VI)	1E+00	mg/kg	3.3E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.6E-08	M	1.1E-07	mg/kg-day	3.0E-03	mg/kg-day	3.8E-05
				Iron	4E+04	mg/kg	1.0E-03	mg/kg-day	--	--	--	--	3.6E-03	mg/kg-day	7.0E-01	mg/kg-day	5.1E-03
				Lead	5E+02	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	3.9E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--	2.9E-05	mg/kg-day	2.4E-02	mg/kg-day	1.2E-03
				Mercury	2E+00	mg/kg	4.7E-08	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.4E-04
				Nickel	7E+01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	5.5E-06	mg/kg-day	2.0E-02	mg/kg-day	2.8E-04

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Thallium	2E-01	mg/kg	5.8E-09	mg/kg-day	--	--	--	--	2.0E-08	mg/kg-day	1.0E-05	mg/kg-day	2.0E-03
				Vanadium	5E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	4.1E-06	mg/kg-day	5.0E-03	mg/kg-day	8.2E-04
				Zinc	1E+03	mg/kg	2.9E-05	mg/kg-day	--	--	--	--	1.0E-04	mg/kg-day	3.0E-01	mg/kg-day	3.4E-04
				Total DLCs (excluding KM TEQs)							5.0E-07						1.7E-02
				Total DLCs (based on KM TEQs)							4.7E-07						1.6E-02
				Total PCDD/Fs (excluding KM TEQ)							3.8E-07						1.3E-02
				Total PCDD/Fs (based on KM TEQ)							3.7E-07						1.2E-02
				Total DL-PCBs (excluding KM TEQ)							1.2E-07						4.1E-03
				Total DL-PCBs (based on KM TEQ)							1.1E-07						3.6E-03
				Total Non-DL PCBs							3.1E-08						2.7E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-07						6.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-07						6.3E-03
				Total PAHs							6.9E-08						5.6E-04
				Total Organics							0.0E+00						8.6E-03
				Total Inorganics							6.7E-07						3.5E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.3E-06						6.3E-02
		Sediment Ingestion Total (based on KM TEQs)									1.2E-06						6.2E-02
Sediment	Sediment	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	2.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-07	--	7.3E-12	mg/kg-day	7.0E-10	mg/kg-day	1.0E-02
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-08	--	3.9E-13	mg/kg-day	7.0E-10	mg/kg-day	5.5E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	9.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	3.5E-13	mg/kg-day	7.0E-09	mg/kg-day	4.9E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	2.0E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--	8.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--	2.5E-11	mg/kg-day	7.0E-08	mg/kg-day	3.5E-04
				OCDD	3E-03	mg/kg	7.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-09	--	2.5E-10	mg/kg-day	2.3E-06	mg/kg-day	1.1E-04
				2,3,7,8-TCDF	1E-05	mg/kg	3.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-09	--	1.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.9E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.6E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-09	--	9.1E-13	mg/kg-day	2.3E-08	mg/kg-day	3.9E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.3E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-08	--	1.5E-12	mg/kg-day	2.3E-09	mg/kg-day	6.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-08	--	6.9E-12	mg/kg-day	7.0E-09	mg/kg-day	9.9E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.6E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-09	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.4E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	8.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-08	--	3.1E-11	mg/kg-day	7.0E-08	mg/kg-day	4.4E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-10	--	1.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.5E-05
				OCDF	4E-04	mg/kg	1.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-10	--	4.3E-11	mg/kg-day	2.3E-06	mg/kg-day	1.8E-05
				KM TEQ DF	1E-04	mg/kg	2.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-07	--	1.0E-11	mg/kg-day	7.0E-10	mg/kg-day	1.4E-02
				PCB-77	8E-03	mg/kg	2.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.2E-09	--	7.4E-10	mg/kg-day	7.0E-06	mg/kg-day	1.1E-04
				PCB-81	3E-04	mg/kg	8.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.7E-10	--	2.9E-11	mg/kg-day	2.3E-06	mg/kg-day	1.2E-05
				PCB-105	1E-02	mg/kg	3.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--	1.2E-09	mg/kg-day	2.3E-05	mg/kg-day	5.1E-05
				PCB-114	9E-04	mg/kg	2.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--	8.2E-11	mg/kg-day	2.3E-05	mg/kg-day	3.5E-06
				PCB-118	4E-02	mg/kg	9.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-09	--	3.5E-09	mg/kg-day	2.3E-05	mg/kg-day	1.5E-04
				PCB-123	1E-03	mg/kg	2.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--	1.0E-10	mg/kg-day	2.3E-05	mg/kg-day	4.3E-06
				PCB-126	2E-04	mg/kg	6.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--	2.4E-11	mg/kg-day	7.0E-09	mg/kg-day	3.4E-03
				PCB-156/157	3E-03	mg/kg	8.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-10	--	3.1E-10	mg/kg-day	2.3E-05	mg/kg-day	1.3E-05
				PCB-167	1E-03	mg/kg	3.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	1.1E-10	mg/kg-day	2.3E-05	mg/kg-day	4.8E-06
				PCB-169	3E-04	mg/kg	6.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-08	--	2.4E-11	mg/kg-day	2.3E-08	mg/kg-day	1.0E-03
				PCB-189	2E-04	mg/kg	6.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-11	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				KM TEQ PCB	3E-05	mg/kg	8.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-07	--	2.9E-12	mg/kg-day	7.0E-10	mg/kg-day	4.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	8.5E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-07	--	3.0E-07	mg/kg-day	2.0E-05	mg/kg-day	1.5E-02
				PAHs													

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	2E+00	mg/kg	2.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-08	M	8.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.4E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.4E-07	M	8.5E-07	mg/kg-day	3.0E-04	mg/kg-day	2.8E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	2.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-08	M	7.6E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.4E-07	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.4E-09	M	4.9E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.4E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.4E-10	M	8.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.0E-08	M	1.7E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	9.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.0E-09	M	3.1E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	8.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-06	--	3.0E-06	mg/kg-day	3.0E-04	mg/kg-day	9.8E-03
				Cadmium	3E+00	mg/kg	2.8E-09	mg/kg-day	--	--	--	--	9.9E-09	mg/kg-day	2.5E-05	mg/kg-day	3.9E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.8E-07						1.9E-02
				Total DLCs (based on KM TEQs)							5.5E-07						1.8E-02
				Total PCDD/Fs (excluding KM TEQ)							4.4E-07						1.5E-02
				Total PCDD/Fs (based on KM TEQ)							4.3E-07						1.4E-02
				Total DL-PCBs (excluding KM TEQ)							1.4E-07						4.7E-03
				Total DL-PCBs (based on KM TEQ)							1.3E-07						4.2E-03
				Total Non-DL PCBs							1.7E-07						1.5E-02
				Total PCBs (DL & NDL; excluding KM TEQ)							3.1E-07						2.0E-02
				Total PCBs (DL & NDL; based on KM TEQ)							2.9E-07						1.9E-02
				Total PAHs							3.5E-07						2.8E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.3E-06						1.0E-02
		Sediment Dermal Total (excluding KM TEQs)									2.4E-06						4.7E-02
		Sediment Dermal Total (based on KM TEQs)									2.3E-06						4.6E-02
Fishing - Sediment Total (excluding KM TEQs)											3.6E-06						1.1E-01
Fishing - Sediment Total (based on KM TEQs)											3.6E-06						1.1E-01
Surface Water	Surface Water	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	6.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-10	--	2.2E-14	mg/kg-day	7.0E-10	mg/kg-day	3.2E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-10	--	7.6E-15	mg/kg-day	7.0E-10	mg/kg-day	1.1E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--	5.6E-14	mg/kg-day	7.0E-09	mg/kg-day	7.9E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-11	--	8.9E-15	mg/kg-day	7.0E-09	mg/kg-day	1.3E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-11	--	1.6E-14	mg/kg-day	7.0E-09	mg/kg-day	2.2E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.8E-11	--	1.1E-13	mg/kg-day	7.0E-08	mg/kg-day	1.6E-06
				OCDD	6E-05	µg/L	3.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-11	--	1.2E-12	mg/kg-day	2.3E-06	mg/kg-day	5.0E-07

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Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,7,8-TCDF	5E-07	µg/L	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-11	--	8.6E-15	mg/kg-day	7.0E-09	mg/kg-day	1.2E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.0E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.8E-12	--	6.9E-15	mg/kg-day	2.3E-08	mg/kg-day	2.9E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.4E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.5E-10	--	1.2E-14	mg/kg-day	2.3E-09	mg/kg-day	5.1E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	9.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-10	--	3.3E-14	mg/kg-day	7.0E-09	mg/kg-day	4.7E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-11	--	8.0E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--	4.8E-14	mg/kg-day	7.0E-09	mg/kg-day	6.8E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-11	--	5.1E-15	mg/kg-day	7.0E-09	mg/kg-day	7.3E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.0E-11	--	1.4E-13	mg/kg-day	7.0E-08	mg/kg-day	2.0E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-12	--	8.8E-15	mg/kg-day	7.0E-08	mg/kg-day	1.3E-07
				OCDF	1E-05	µg/L	7.5E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-12	--	2.6E-13	mg/kg-day	2.3E-06	mg/kg-day	1.1E-07
				KM TEQ DF	2E-06	µg/L	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-09	--	4.4E-14	mg/kg-day	7.0E-10	mg/kg-day	6.3E-05
				PCB-77	2E-05	µg/L	1.1E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.6E-12	--	3.7E-13	mg/kg-day	7.0E-06	mg/kg-day	5.3E-08
				PCB-81	7E-07	µg/L	3.5E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-13	--	1.2E-14	mg/kg-day	2.3E-06	mg/kg-day	5.3E-09
				PCB-105	7E-05	µg/L	3.8E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-12	--	1.3E-12	mg/kg-day	2.3E-05	mg/kg-day	5.7E-08
				PCB-114	4E-06	µg/L	2.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-14	--	6.9E-14	mg/kg-day	2.3E-05	mg/kg-day	3.0E-09
				PCB-118	2E-04	µg/L	8.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-12	--	3.0E-12	mg/kg-day	2.3E-05	mg/kg-day	1.3E-07
				PCB-123	3E-06	µg/L	1.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.4E-14	--	5.7E-14	mg/kg-day	2.3E-05	mg/kg-day	2.5E-09
				PCB-126	7E-07	µg/L	3.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-11	--	1.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.7E-06
				PCB-156/157	2E-05	µg/L	1.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-13	--	3.5E-13	mg/kg-day	2.3E-05	mg/kg-day	1.5E-08
				PCB-167	7E-06	µg/L	3.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-13	--	1.2E-13	mg/kg-day	2.3E-05	mg/kg-day	5.1E-09
				PCB-169	4E-07	µg/L	2.1E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.4E-12	--	7.3E-15	mg/kg-day	2.3E-08	mg/kg-day	3.1E-07
				PCB-189	9E-07	µg/L	4.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-14	--	1.5E-14	mg/kg-day	2.3E-05	mg/kg-day	6.6E-10
				KM TEQ PCB	1E-07	µg/L	5.6E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.4E-11	--	2.0E-15	mg/kg-day	7.0E-10	mg/kg-day	2.8E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	6.1E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.1E-12	M	2.1E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	7.8E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.8E-11	M	2.7E-10	mg/kg-day	3.0E-04	mg/kg-day	9.1E-07
				Benzo(b)fluoranthene	2E-02	µg/L	1.1E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-11	M	3.7E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	4.8E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	4.8E-13	M	1.7E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.0E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.0E-13	M	3.6E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.0E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-11	M	7.1E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.5E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-12	M	1.6E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	1.8E-10	mg/kg-day	--	--	--	--	6.4E-10	mg/kg-day	2.0E-02	mg/kg-day	3.2E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	6.2E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.9E-11	--	2.2E-09	mg/kg-day	1.0E-02	mg/kg-day	2.2E-07
				Trichloroethylene	1E-01	µg/L	6.8E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.1E-11	M	2.4E-09	mg/kg-day	5.0E-04	mg/kg-day	4.7E-06
				Inorganics													
				Antimony	7E-01	µg/L	3.6E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	4.0E-04	mg/kg-day	3.2E-05
				Arsenic, inorganic	1E+00	µg/L	6.6E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.9E-09	--	2.3E-08	mg/kg-day	3.0E-04	mg/kg-day	7.7E-05
				Chromium [as Cr(III)]	1E+00	µg/L	6.7E-09	mg/kg-day	--	--	--	--	2.3E-08	mg/kg-day	1.5E+00	mg/kg-day	1.6E-08
				Chromium (VI)	2E-01	µg/L	1.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.7E-10	M	4.0E-09	mg/kg-day	3.0E-03	mg/kg-day	1.3E-06
				Iron	5E+02	µg/L	2.8E-06	mg/kg-day	--	--	--	--	9.6E-06	mg/kg-day	7.0E-01	mg/kg-day	1.4E-05
				Manganese	7E+01	µg/L	3.6E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	2.4E-02	mg/kg-day	5.2E-05
				Mercury	3E-02	µg/L	1.4E-10	mg/kg-day	--	--	--	--	4.8E-10	mg/kg-day	3.0E-04	mg/kg-day	1.6E-06
				Thallium	1E-02	µg/L	6.4E-11	mg/kg-day	--	--	--	--	2.2E-10	mg/kg-day	1.0E-05	mg/kg-day	2.2E-05
				Titanium	8E+00	µg/L	4.1E-08	mg/kg-day	--	--	--	--	1.4E-07	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											2.4E-09						8.1E-05
Total DLCs (based on KM TEQs)											2.0E-09						6.6E-05
Total PCDD/Fs (excluding KM TEQ)											2.4E-09						7.8E-05

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PCDD/Fs (based on KM TEQ)							1.9E-09						6.3E-05
				Total DL-PCBs (excluding KM TEQ)							7.0E-11						2.3E-06
				Total DL-PCBs (based on KM TEQ)							8.4E-11						2.8E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.0E-11						2.3E-06
				Total PCBs (DL & NDL; based on KM TEQ)							8.4E-11						2.8E-06
				Total PAHs							1.2E-10						9.5E-07
				Total Organics							5.0E-11						5.0E-06
				Total Inorganics							1.0E-08						2.0E-04
		Surface Water Ingestion Total (excluding KM TEQs)									1.3E-08						2.9E-04
		Surface Water Ingestion Total (based on KM TEQs)									1.3E-08						2.7E-04
Surface Water	Surface Water	Angler - Fishing	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.0E-08	mg/kg-day	--	--	--	--	3.6E-08	mg/kg-day	2.0E-02	mg/kg-day	1.8E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	4.8E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.5E-10	--	1.7E-08	mg/kg-day	1.0E-02	mg/kg-day	1.7E-06
				Trichloroethylene	1E-01	µg/L	9.7E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.5E-10	M	3.4E-08	mg/kg-day	5.0E-04	mg/kg-day	6.8E-05
				Inorganics													
				Antimony	7E-01	µg/L	2.1E-09	mg/kg-day	--	--	--	--	7.5E-09	mg/kg-day	6.0E-05	mg/kg-day	1.2E-04
				Arsenic, inorganic	1E+00	µg/L	3.9E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-09	--	1.4E-08	mg/kg-day	3.0E-04	mg/kg-day	4.5E-05
				Chromium [as Cr(III)]	1E+00	µg/L	3.9E-09	mg/kg-day	--	--	--	--	1.4E-08	mg/kg-day	2.0E-02	mg/kg-day	7.1E-07
				Chromium (VI)	2E-01	µg/L	1.4E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	2.7E-08	M	4.8E-09	mg/kg-day	7.5E-05	mg/kg-day	6.3E-05
				Iron	5E+02	µg/L	1.6E-06	mg/kg-day	--	--	--	--	5.7E-06	mg/kg-day	7.0E-01	mg/kg-day	8.1E-06
				Manganese	7E+01	µg/L	2.1E-07	mg/kg-day	--	--	--	--	7.4E-07	mg/kg-day	9.6E-04	mg/kg-day	7.7E-04
				Mercury	3E-02	µg/L	8.0E-11	mg/kg-day	--	--	--	--	2.8E-10	mg/kg-day	2.1E-05	mg/kg-day	1.3E-05
				Thallium	1E-02	µg/L	3.8E-11	mg/kg-day	--	--	--	--	1.3E-10	mg/kg-day	1.0E-05	mg/kg-day	1.3E-05
				Titanium	8E+00	µg/L	2.4E-08	mg/kg-day	--	--	--	--	8.5E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.8E-06
				Total Organics							6.0E-10						7.0E-05
				Total Inorganics							3.3E-08						1.0E-03
		Surface Water Dermal Total (excluding KM TEQs)									3.4E-08						1.1E-03
		Surface Water Dermal Total (based on KM TEQs)									3.4E-08						1.1E-03
Fishing - Surface Water Total (excluding KM TEQs)											4.7E-08						1.4E-03
Fishing - Surface Water Total (based on KM TEQs)											4.6E-08						1.4E-03
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)											5.4E-04						2.7E+01
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)											5.5E-04						2.8E+01
Sediment	Sediment	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-07	--	3.9E-12	mg/kg-day	7.0E-10	mg/kg-day	5.6E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	5.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.8E-09	--	2.1E-13	mg/kg-day	7.0E-10	mg/kg-day	2.9E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	5.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-09	--	7.5E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-09	--	4.4E-13	mg/kg-day	7.0E-09	mg/kg-day	6.3E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	3.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.6E-09	--	1.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.9E-04
				OCDD	3E-03	mg/kg	3.8E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-09	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.7E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--	7.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.4E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.2E-10	--	4.8E-13	mg/kg-day	2.3E-08	mg/kg-day	2.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.3E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.0E-08	--	8.1E-13	mg/kg-day	2.3E-09	mg/kg-day	3.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--	3.7E-12	mg/kg-day	7.0E-09	mg/kg-day	5.3E-04

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-09	--	9.7E-13	mg/kg-day	7.0E-09	mg/kg-day	1.4E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-10	--	7.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.0E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	5.4E-13	mg/kg-day	7.0E-09	mg/kg-day	7.7E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	4.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.0E-09	--	1.6E-11	mg/kg-day	7.0E-08	mg/kg-day	2.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-10	--	5.6E-13	mg/kg-day	7.0E-08	mg/kg-day	8.0E-06
				OCDF	4E-04	mg/kg	6.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-10	--	2.3E-11	mg/kg-day	2.3E-06	mg/kg-day	9.8E-06
				KM TEQ DF	1E-04	mg/kg	1.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-07	--	5.4E-12	mg/kg-day	7.0E-10	mg/kg-day	7.7E-03
				PCB-77	8E-03	mg/kg	1.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-09	--	4.0E-10	mg/kg-day	7.0E-06	mg/kg-day	5.7E-05
				PCB-81	3E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--	1.5E-11	mg/kg-day	2.3E-06	mg/kg-day	6.5E-06
				PCB-105	1E-02	mg/kg	1.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-10	--	6.4E-10	mg/kg-day	2.3E-05	mg/kg-day	2.7E-05
				PCB-114	9E-04	mg/kg	1.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-11	--	4.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.9E-06
				PCB-118	4E-02	mg/kg	5.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-09	--	1.9E-09	mg/kg-day	2.3E-05	mg/kg-day	8.0E-05
				PCB-123	1E-03	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-11	--	5.4E-11	mg/kg-day	2.3E-05	mg/kg-day	2.3E-06
				PCB-126	2E-04	mg/kg	3.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				PCB-156/157	3E-03	mg/kg	4.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-10	--	1.7E-10	mg/kg-day	2.3E-05	mg/kg-day	7.1E-06
				PCB-167	1E-03	mg/kg	1.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-11	--	6.0E-11	mg/kg-day	2.3E-05	mg/kg-day	2.6E-06
				PCB-169	3E-04	mg/kg	3.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-08	--	1.3E-11	mg/kg-day	2.3E-08	mg/kg-day	5.5E-04
				PCB-189	2E-04	mg/kg	3.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-11	--	1.2E-11	mg/kg-day	2.3E-05	mg/kg-day	5.4E-07
				KM TEQ PCB	3E-05	mg/kg	4.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	9.7E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.9E-08	--	3.4E-08	mg/kg-day	2.0E-05	mg/kg-day	1.7E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-08	M	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.5E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	2.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.7E-09	M	9.4E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.7E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.7E-10	M	6.1E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.9E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.9E-11	M	1.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	6.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.2E-09	M	2.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-09	M	3.9E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	8.3E-08	mg/kg-day	--	--	--	--	2.9E-07	mg/kg-day	4.0E-03	mg/kg-day	7.3E-05
				TPH (C9-C40)	4E+02	mg/kg	6.0E-06	mg/kg-day	--	--	--	--	2.1E-05	mg/kg-day	4.0E-03	mg/kg-day	5.3E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	1.8E-04	mg/kg-day	--	--	--	--	6.3E-04	mg/kg-day	1.0E+00	mg/kg-day	6.3E-04
				Antimony	2E+00	mg/kg	3.4E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	4.0E-04	mg/kg-day	3.0E-04
				Arsenic, inorganic	3E+01	mg/kg	2.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.1E-07	--	9.5E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
				Cadmium	3E+00	mg/kg	4.5E-08	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	1.0E-03	mg/kg-day	1.6E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	5.5E-06	mg/kg-day	1.5E+00	mg/kg-day	3.7E-06
				Cobalt	1E+01	mg/kg	2.1E-07	mg/kg-day	--	--	--	--	7.2E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Copper	2E+02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	8.6E-06	mg/kg-day	1.0E-03	mg/kg-day	8.6E-03
				Chromium (VI)	1E+00	mg/kg	2.0E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.0E-08	M	7.1E-08	mg/kg-day	3.0E-03	mg/kg-day	2.4E-05
				Iron	4E+04	mg/kg	6.4E-04	mg/kg-day	--	--	--	--	2.2E-03	mg/kg-day	7.0E-01	mg/kg-day	3.2E-03
				Lead	5E+02	mg/kg	6.9E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	5.2E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	2.4E-02	mg/kg-day	7.6E-04
				Mercury	2E+00	mg/kg	2.9E-08	mg/kg-day	--	--	--	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Nickel	7E+01	mg/kg	9.9E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	2.0E-02	mg/kg-day	1.7E-04
				Thallium	2E-01	mg/kg	3.6E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	1.0E-05	mg/kg-day	1.3E-03
				Vanadium	5E+01	mg/kg	7.3E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	5.0E-03	mg/kg-day	5.1E-04
				Zinc	1E+03	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	3.0E-01	mg/kg-day	2.1E-04
				Total DLCs (excluding KM TEQs)							3.1E-07						1.0E-02
				Total DLCs (based on KM TEQs)							3.0E-07						9.9E-03

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total PCDD/Fs (excluding KM TEQ)							2.3E-07						7.8E-03
				Total PCDD/Fs (based on KM TEQ)							2.3E-07						7.7E-03
				Total DL-PCBs (excluding KM TEQ)							7.6E-08						2.5E-03
				Total DL-PCBs (based on KM TEQ)							6.7E-08						2.2E-03
				Total Non-DL PCBs							1.9E-08						1.7E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							9.5E-08						4.2E-03
				Total PCBs (DL & NDL; based on KM TEQ)							8.7E-08						3.9E-03
				Total PAHs							4.3E-08						3.5E-04
				Total Organics							0.0E+00						5.4E-03
				Total Inorganics							4.2E-07						2.2E-02
		Sediment Ingestion Total (excluding KM TEQs)									7.9E-07						3.9E-02
		Sediment Ingestion Total (based on KM TEQs)									7.8E-07						3.9E-02
Sediment	Sediment	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-07	--	4.6E-12	mg/kg-day	7.0E-10	mg/kg-day	6.6E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	2.4E-13	mg/kg-day	7.0E-10	mg/kg-day	3.4E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-09	--	8.7E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--	5.2E-13	mg/kg-day	7.0E-09	mg/kg-day	7.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-09	--	1.5E-11	mg/kg-day	7.0E-08	mg/kg-day	2.2E-04
				OCDD	3E-03	mg/kg	4.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--	1.6E-10	mg/kg-day	2.3E-06	mg/kg-day	6.7E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--	8.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.3E-10	--	5.7E-13	mg/kg-day	2.3E-08	mg/kg-day	2.4E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.7E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-08	--	9.5E-13	mg/kg-day	2.3E-09	mg/kg-day	4.1E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	4.3E-12	mg/kg-day	7.0E-09	mg/kg-day	6.2E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.6E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-10	--	8.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.2E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--	6.3E-13	mg/kg-day	7.0E-09	mg/kg-day	9.0E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.2E-09	--	1.9E-11	mg/kg-day	7.0E-08	mg/kg-day	2.7E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-10	--	6.5E-13	mg/kg-day	7.0E-08	mg/kg-day	9.3E-06
				OCDF	4E-04	mg/kg	7.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--	2.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.2E-05
				KM TEQ DF	1E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-07	--	6.3E-12	mg/kg-day	7.0E-10	mg/kg-day	8.9E-03
				PCB-77	8E-03	mg/kg	1.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-09	--	4.6E-10	mg/kg-day	7.0E-06	mg/kg-day	6.6E-05
				PCB-81	3E-04	mg/kg	5.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-10	--	1.8E-11	mg/kg-day	2.3E-06	mg/kg-day	7.6E-06
				PCB-105	1E-02	mg/kg	2.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-10	--	7.4E-10	mg/kg-day	2.3E-05	mg/kg-day	3.2E-05
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.6E-11	--	5.1E-11	mg/kg-day	2.3E-05	mg/kg-day	2.2E-06
				PCB-118	4E-02	mg/kg	6.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-09	--	2.2E-09	mg/kg-day	2.3E-05	mg/kg-day	9.3E-05
				PCB-123	1E-03	mg/kg	1.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-11	--	6.3E-11	mg/kg-day	2.3E-05	mg/kg-day	2.7E-06
				PCB-126	2E-04	mg/kg	4.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-08	--	1.5E-11	mg/kg-day	7.0E-09	mg/kg-day	2.1E-03
				PCB-156/157	3E-03	mg/kg	5.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-10	--	1.9E-10	mg/kg-day	2.3E-05	mg/kg-day	8.3E-06
				PCB-167	1E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-11	--	7.0E-11	mg/kg-day	2.3E-05	mg/kg-day	3.0E-06
				PCB-169	3E-04	mg/kg	4.3E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-08	--	1.5E-11	mg/kg-day	2.3E-08	mg/kg-day	6.5E-04
				PCB-189	2E-04	mg/kg	4.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-11	--	1.5E-11	mg/kg-day	2.3E-05	mg/kg-day	6.3E-07
				KM TEQ PCB	3E-05	mg/kg	5.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.9E-08	--	1.8E-12	mg/kg-day	7.0E-10	mg/kg-day	2.6E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	5.3E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-07	--	1.8E-07	mg/kg-day	2.0E-05	mg/kg-day	9.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M	5.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-07	M	5.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.8E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	1.4E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M	4.8E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	8.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.8E-10	M	3.1E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.5E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-10	M	5.2E-07	mg/kg-day	--	--	--

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-08	M	1.1E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-09	M	2.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	5.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.9E-07	--	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	6.2E-03
				Cadmium	3E+00	mg/kg	1.8E-09	mg/kg-day	--	--	--	--	6.2E-09	mg/kg-day	2.5E-05	mg/kg-day	2.5E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							3.6E-07						1.2E-02
				Total DLCs (based on KM TEQs)							3.5E-07						1.2E-02
				Total PCDD/Fs (excluding KM TEQ)							2.7E-07						9.1E-03
				Total PCDD/Fs (based on KM TEQ)							2.7E-07						8.9E-03
				Total DL-PCBs (excluding KM TEQ)							8.9E-08						3.0E-03
				Total DL-PCBs (based on KM TEQ)							7.9E-08						2.6E-03
				Total Non-DL PCBs							1.1E-07						9.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-07						1.2E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-07						1.2E-02
				Total PAHs							2.2E-07						1.8E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							7.9E-07						6.4E-03
		Sediment Dermal Total (excluding KM TEQs)									1.5E-06						3.0E-02
		Sediment Dermal Total (based on KM TEQs)									1.5E-06						2.9E-02
Crabbing - Sediment Total (excluding KM TEQs)											2.3E-06						6.9E-02
Crabbing - Sediment Total (based on KM TEQs)											2.2E-06						6.8E-02
Surface Water	Surface Water	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	4.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.9E-10	--	1.4E-14	mg/kg-day	7.0E-10	mg/kg-day	2.0E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-10	--	4.8E-15	mg/kg-day	7.0E-10	mg/kg-day	6.8E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	9.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	3.5E-14	mg/kg-day	7.0E-09	mg/kg-day	5.0E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	1.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-11	--	5.6E-15	mg/kg-day	7.0E-09	mg/kg-day	7.9E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	2.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-11	--	9.8E-15	mg/kg-day	7.0E-09	mg/kg-day	1.4E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-11	--	7.0E-14	mg/kg-day	7.0E-08	mg/kg-day	1.0E-06
				OCDD	6E-05	µg/L	2.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.4E-12	--	7.3E-13	mg/kg-day	2.3E-06	mg/kg-day	3.1E-07
				2,3,7,8-TCDF	5E-07	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--	5.4E-15	mg/kg-day	7.0E-09	mg/kg-day	7.7E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.5E-12	--	4.3E-15	mg/kg-day	2.3E-08	mg/kg-day	1.8E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	2.1E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.6E-11	--	7.4E-15	mg/kg-day	2.3E-09	mg/kg-day	3.2E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	5.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-11	--	2.1E-14	mg/kg-day	7.0E-09	mg/kg-day	3.0E-06

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Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	1.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-11	--	5.0E-15	mg/kg-day	7.0E-09	mg/kg-day	7.2E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	8.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	3.0E-14	mg/kg-day	7.0E-09	mg/kg-day	4.3E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	9.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--	3.2E-15	mg/kg-day	7.0E-09	mg/kg-day	4.5E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-11	--	8.8E-14	mg/kg-day	7.0E-08	mg/kg-day	1.3E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	1.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-12	--	5.5E-15	mg/kg-day	7.0E-08	mg/kg-day	7.9E-08
				OCDF	1E-05	µg/L	4.7E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-12	--	1.6E-13	mg/kg-day	2.3E-06	mg/kg-day	7.0E-08
				KM TEQ DF	2E-06	µg/L	7.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-09	--	2.8E-14	mg/kg-day	7.0E-10	mg/kg-day	3.9E-05
				PCB-77	2E-05	µg/L	6.6E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.0E-12	--	2.3E-13	mg/kg-day	7.0E-06	mg/kg-day	3.3E-08
				PCB-81	7E-07	µg/L	2.2E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.9E-14	--	7.7E-15	mg/kg-day	2.3E-06	mg/kg-day	3.3E-09
				PCB-105	7E-05	µg/L	2.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-12	--	8.3E-13	mg/kg-day	2.3E-05	mg/kg-day	3.5E-08
				PCB-114	4E-06	µg/L	1.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-14	--	4.3E-14	mg/kg-day	2.3E-05	mg/kg-day	1.8E-09
				PCB-118	2E-04	µg/L	5.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-12	--	1.9E-12	mg/kg-day	2.3E-05	mg/kg-day	7.9E-08
				PCB-123	3E-06	µg/L	1.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-14	--	3.6E-14	mg/kg-day	2.3E-05	mg/kg-day	1.5E-09
				PCB-126	7E-07	µg/L	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-11	--	7.6E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				PCB-156/157	2E-05	µg/L	6.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-13	--	2.2E-13	mg/kg-day	2.3E-05	mg/kg-day	9.4E-09
				PCB-167	7E-06	µg/L	2.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.5E-14	--	7.4E-14	mg/kg-day	2.3E-05	mg/kg-day	3.2E-09
				PCB-169	4E-07	µg/L	1.3E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.9E-12	--	4.6E-15	mg/kg-day	2.3E-08	mg/kg-day	2.0E-07
				PCB-189	9E-07	µg/L	2.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-14	--	9.7E-15	mg/kg-day	2.3E-05	mg/kg-day	4.2E-10
				KM TEQ PCB	1E-07	µg/L	3.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.3E-11	--	1.2E-15	mg/kg-day	7.0E-10	mg/kg-day	1.8E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	3.8E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.8E-12	M	1.3E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	4.9E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.9E-11	M	1.7E-10	mg/kg-day	3.0E-04	mg/kg-day	5.7E-07
				Benzo(b)fluoranthene	2E-02	µg/L	6.7E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.7E-12	M	2.3E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	3.0E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.0E-13	M	1.0E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	6.5E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.5E-14	M	2.3E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	1.3E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-11	M	4.4E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	2.8E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.8E-12	M	9.8E-11	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	1.1E-10	mg/kg-day	--	--	--	--	4.0E-10	mg/kg-day	2.0E-02	mg/kg-day	2.0E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	3.9E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.2E-11	--	1.4E-09	mg/kg-day	1.0E-02	mg/kg-day	1.4E-07
				Trichloroethylene	1E-01	µg/L	4.2E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.9E-11	M	1.5E-09	mg/kg-day	5.0E-04	mg/kg-day	3.0E-06
				Inorganics													
				Antimony	7E-01	µg/L	2.3E-09	mg/kg-day	--	--	--	--	7.9E-09	mg/kg-day	4.0E-04	mg/kg-day	2.0E-05
				Arsenic, inorganic	1E+00	µg/L	4.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-09	--	1.4E-08	mg/kg-day	3.0E-04	mg/kg-day	4.8E-05
				Chromium [as Cr(III)]	1E+00	µg/L	4.2E-09	mg/kg-day	--	--	--	--	1.5E-08	mg/kg-day	1.5E+00	mg/kg-day	9.7E-09
				Chromium (VI)	2E-01	µg/L	7.2E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.6E-10	M	2.5E-09	mg/kg-day	3.0E-03	mg/kg-day	8.4E-07
				Iron	5E+02	µg/L	1.7E-06	mg/kg-day	--	--	--	--	6.0E-06	mg/kg-day	7.0E-01	mg/kg-day	8.6E-06
				Manganese	7E+01	µg/L	2.2E-07	mg/kg-day	--	--	--	--	7.8E-07	mg/kg-day	2.4E-02	mg/kg-day	3.3E-05
				Mercury	3E-02	µg/L	8.5E-11	mg/kg-day	--	--	--	--	3.0E-10	mg/kg-day	3.0E-04	mg/kg-day	9.9E-07
				Thallium	1E-02	µg/L	4.0E-11	mg/kg-day	--	--	--	--	1.4E-10	mg/kg-day	1.0E-05	mg/kg-day	1.4E-05
				Titanium	8E+00	µg/L	2.6E-08	mg/kg-day	--	--	--	--	8.9E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							1.5E-09						5.0E-05
				Total DLCs (based on KM TEQs)							1.2E-09						4.1E-05
				Total PCDD/Fs (excluding KM TEQ)							1.5E-09						4.9E-05
				Total PCDD/Fs (based on KM TEQ)							1.2E-09						3.9E-05
				Total DL-PCBs (excluding KM TEQ)							4.4E-11						1.5E-06
				Total DL-PCBs (based on KM TEQ)							5.3E-11						1.8E-06

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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							4.4E-11						1.5E-06
				Total PCBs (DL & NDL; based on KM TEQ)							5.3E-11						1.8E-06
				Total PAHs							7.5E-11						5.9E-07
				Total Organics							3.1E-11						3.1E-06
				Total Inorganics							6.5E-09						1.2E-04
		Surface Water Ingestion Total (excluding KM TEQs)									8.2E-09						1.8E-04
		Surface Water Ingestion Total (based on KM TEQs)									7.9E-09						1.7E-04
Surface Water	Surface Water	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Naphthalene	4E-02	µg/L	6.5E-09	mg/kg-day	--	--	--	--	2.3E-08	mg/kg-day	2.0E-02	mg/kg-day	1.1E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	3.0E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	9.3E-11	--	1.1E-08	mg/kg-day	1.0E-02	mg/kg-day	1.1E-06
				Trichloroethylene	1E-01	µg/L	6.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.8E-10	M	2.1E-08	mg/kg-day	5.0E-04	mg/kg-day	4.2E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.3E-09	mg/kg-day	--	--	--	--	4.7E-09	mg/kg-day	6.0E-05	mg/kg-day	7.8E-05
				Arsenic, inorganic	1E+00	µg/L	2.4E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.6E-09	--	8.5E-09	mg/kg-day	3.0E-04	mg/kg-day	2.8E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.5E-09	mg/kg-day	--	--	--	--	8.6E-09	mg/kg-day	2.0E-02	mg/kg-day	4.4E-07
				Chromium (VI)	2E-01	µg/L	8.5E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.7E-08	M	3.0E-09	mg/kg-day	7.5E-05	mg/kg-day	4.0E-05
				Iron	5E+02	µg/L	1.0E-06	mg/kg-day	--	--	--	--	3.6E-06	mg/kg-day	7.0E-01	mg/kg-day	5.1E-06
				Manganese	7E+01	µg/L	1.3E-07	mg/kg-day	--	--	--	--	4.6E-07	mg/kg-day	9.6E-04	mg/kg-day	4.8E-04
				Mercury	3E-02	µg/L	5.0E-11	mg/kg-day	--	--	--	--	1.8E-10	mg/kg-day	2.1E-05	mg/kg-day	8.4E-06
				Thallium	1E-02	µg/L	2.4E-11	mg/kg-day	--	--	--	--	8.2E-11	mg/kg-day	1.0E-05	mg/kg-day	8.2E-06
				Titanium	8E+00	µg/L	1.5E-08	mg/kg-day	--	--	--	--	5.3E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.1E-06
				Total Organics							3.7E-10						4.3E-05
				Total Inorganics							2.1E-08						6.5E-04
		Surface Water Dermal Total (excluding KM TEQs)									2.1E-08						6.9E-04
		Surface Water Dermal Total (based on KM TEQs)									2.1E-08						6.9E-04
Crabbing - Surface Water Total (excluding KM TEQs)											2.9E-08						8.7E-04
Crabbing - Surface Water Total (based on KM TEQs)											2.9E-08						8.6E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											5.7E-04						3.0E+01
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											5.6E-04						2.9E+01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											1.1E-04						8.8E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											1.0E-04						8.7E+00

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-06	mg/kg	6.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.4E-05	--	3.7E-09	mg/kg-day	7.0E-10	mg/kg-day	5.2E+00
				1,2,3,7,8-PeCDD	4E-07	mg/kg	3.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-06	--	2.0E-10	mg/kg-day	7.0E-10	mg/kg-day	2.8E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	9.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	4.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-07	--	2.8E-10	mg/kg-day	7.0E-09	mg/kg-day	4.0E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-07	--	6.6E-11	mg/kg-day	7.0E-09	mg/kg-day	9.5E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	5.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.1E-08	--	3.1E-10	mg/kg-day	7.0E-08	mg/kg-day	4.5E-03
				OCDD	4E-06	mg/kg	3.2E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-08	--	1.8E-09	mg/kg-day	2.3E-06	mg/kg-day	7.9E-04
				2,3,7,8-TCDF	2E-06	mg/kg	1.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-06	--	7.5E-10	mg/kg-day	7.0E-09	mg/kg-day	1.1E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.2E-07	--	6.8E-10	mg/kg-day	2.3E-08	mg/kg-day	2.9E-02
				2,3,4,7,8-PeCDF	2E-06	mg/kg	1.8E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	8.3E-06	--	1.1E-09	mg/kg-day	2.3E-09	mg/kg-day	4.6E-01
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	8.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-06	--	4.9E-10	mg/kg-day	7.0E-09	mg/kg-day	6.9E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	7.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--	4.4E-10	mg/kg-day	7.0E-09	mg/kg-day	6.2E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	8.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-07	--	5.0E-11	mg/kg-day	7.0E-09	mg/kg-day	7.2E-03
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--	7.5E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.6E-07	--	1.0E-09	mg/kg-day	7.0E-08	mg/kg-day	1.5E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	8.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--	4.8E-11	mg/kg-day	7.0E-08	mg/kg-day	6.9E-04
				OCDF	2E-07	mg/kg	1.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.8E-10	--	1.0E-10	mg/kg-day	2.3E-06	mg/kg-day	4.3E-05
				KM TEQ DF	1E-05	mg/kg	7.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-04	--	4.4E-09	mg/kg-day	7.0E-10	mg/kg-day	6.2E+00
				PCB-77	5E-04	mg/kg	3.7E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.6E-07	--	2.2E-07	mg/kg-day	7.0E-06	mg/kg-day	3.1E-02
				PCB-81	2E-05	mg/kg	1.4E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.5E-08	--	8.4E-09	mg/kg-day	2.3E-06	mg/kg-day	3.6E-03
				PCB-105	8E-03	mg/kg	5.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-06	--	3.4E-06	mg/kg-day	2.3E-05	mg/kg-day	1.4E-01
				PCB-114	6E-04	mg/kg	4.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-07	--	2.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-118	3E-02	mg/kg	2.3E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-05	--	1.4E-05	mg/kg-day	2.3E-05	mg/kg-day	5.8E-01
				PCB-123	6E-04	mg/kg	4.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-126	9E-05	mg/kg	6.9E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-04	--	4.0E-08	mg/kg-day	7.0E-09	mg/kg-day	5.7E+00
				PCB-156/157	3E-03	mg/kg	2.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-07	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.3E-02
				PCB-167	1E-03	mg/kg	9.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-07	--	5.4E-07	mg/kg-day	2.3E-05	mg/kg-day	2.3E-02
				PCB-169	4E-06	mg/kg	2.9E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-06	--	1.7E-09	mg/kg-day	2.3E-08	mg/kg-day	7.2E-02
				PCB-189	2E-04	mg/kg	1.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-08	--	1.0E-07	mg/kg-day	2.3E-05	mg/kg-day	4.3E-03
				KM TEQ PCB	1E-05	mg/kg	8.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-04	--	5.1E-09	mg/kg-day	7.0E-10	mg/kg-day	7.3E+00
				Non-DL PCBs													
				Total Non-DL PCBs	4E-01	mg/kg	3.1E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.2E-05	--	1.8E-04	mg/kg-day	2.0E-05	mg/kg-day	9.1E+00
				PAHs													
				Benz(a)anthracene	8E-03	mg/kg	6.4E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	3.7E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	8E-03	mg/kg	6.4E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-06	M	3.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(b)fluoranthene	8E-03	mg/kg	6.4E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	3.7E-06	mg/kg-day	--	--	--
				Chrysene	8E-03	mg/kg	6.4E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-09	M	3.7E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	8E-03	mg/kg	6.4E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-06	M	3.7E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	6.4E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-07	M	3.7E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-02	mg/kg	1.4E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.3E-07	--	8.1E-06	mg/kg-day	3.0E-05	mg/kg-day	2.7E-01
				2,4'-DDE	6E-03	mg/kg	4.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-07	--	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
				2,4'-DDT	3E-03	mg/kg	2.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.0E-08	--	1.5E-06	mg/kg-day	5.0E-04	mg/kg-day	3.1E-03
				4,4'-DDD	9E-02	mg/kg	6.8E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.6E-06	--	4.0E-05	mg/kg-day	3.0E-05	mg/kg-day	1.3E+00
				4,4'-DDE	1E-01	mg/kg	9.5E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.2E-06	--	5.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				4,4'-DDT	1E-02	mg/kg	1.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.7E-07	--	6.3E-06	mg/kg-day	5.0E-04	mg/kg-day	1.3E-02
				Benzaldehyde	1E+00	mg/kg	9.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.0E-07	--	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Chlordane, alpha (cis)	2E-02	mg/kg	1.2E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.3E-07	--	7.2E-06	mg/kg-day	5.0E-04	mg/kg-day	1.4E-02
				Chlordane, gamma (trans)	4E-03	mg/kg	2.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.6E-08	--	1.6E-06	mg/kg-day	5.0E-04	mg/kg-day	3.2E-03
				Dieldrin	8E-03	mg/kg	5.8E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	9.3E-06	--	3.4E-06	mg/kg-day	5.0E-05	mg/kg-day	6.8E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.4E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.3E-06	--	8.2E-07	mg/kg-day	1.3E-05	mg/kg-day	6.3E-02

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
				Heptachlor epoxide, trans-	9E-05	mg/kg	6.8E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.2E-08	--	4.0E-08	mg/kg-day	1.3E-05	mg/kg-day	3.1E-03
				Hexachlorobenzene	1E-03	mg/kg	1.1E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.8E-07	--	6.6E-07	mg/kg-day	8.0E-04	mg/kg-day	8.2E-04
				Mirex	3E-04	mg/kg	1.9E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.5E-07	--	1.1E-07	mg/kg-day	2.0E-04	mg/kg-day	5.6E-04
				Nonachlor, cis-	6E-03	mg/kg	4.9E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-07	--	2.8E-06	mg/kg-day	1.0E-04	mg/kg-day	2.8E-02
				Nonachlor, trans-	2E-02	mg/kg	1.2E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.1E-07	--	6.9E-06	mg/kg-day	1.6E-05	mg/kg-day	4.4E-01
				Oxychlordane	5E-03	mg/kg	3.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-07	--	2.0E-06	mg/kg-day	8.9E-05	mg/kg-day	2.3E-02
				Pyridine	1E+00	mg/kg	9.9E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.0E-03	mg/kg-day	5.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	4.9E-04	mg/kg-day	--	--	--	--	2.9E-03	mg/kg-day	1.0E+00	mg/kg-day	2.9E-03
				Arsenic, organic	1E+00	mg/kg	7.9E-05	mg/kg-day	--	--	--	--	4.6E-04	mg/kg-day	2.0E-02	mg/kg-day	2.3E-02
				Arsenic, inorganic	1E-01	mg/kg	8.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-05	--	5.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.7E-01
				Cadmium	5E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	6E-01	mg/kg	4.9E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	1.5E+00	mg/kg-day	1.9E-04
				Cobalt	2E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	1.0E-04	mg/kg-day	3.0E-04	mg/kg-day	3.3E-01
				Copper	5E-01	mg/kg	3.7E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	1.0E-03	mg/kg-day	2.1E-01
				Iron	7E+00	mg/kg	5.4E-04	mg/kg-day	--	--	--	--	3.1E-03	mg/kg-day	7.0E-01	mg/kg-day	4.5E-03
				Lead	4E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	1.4E-01	mg/kg-day	9.1E-04
				Mercury	3E-01	mg/kg	2.3E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.5E-01
				Methyl Mercury	4E-01	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	1.0E-04	mg/kg-day	1.6E+00
				Selenium	5E-01	mg/kg	4.1E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	5.0E-03	mg/kg-day	4.8E-02
				Silver	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	5.0E-03	mg/kg-day	1.8E-03
				Vanadium	3E-02	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	1.2E-05	mg/kg-day	5.0E-03	mg/kg-day	2.5E-03
				Zinc	1E+01	mg/kg	1.1E-03	mg/kg-day	--	--	--	--	6.5E-03	mg/kg-day	3.0E-01	mg/kg-day	2.2E-02
				Total DLCs (excluding KM TEQs)							2.3E-04						1.3E+01
				Total DLCs (based on KM TEQs)							2.4E-04						1.3E+01
				Total PCDD/Fs (excluding KM TEQ)							1.1E-04						6.3E+00
				Total PCDD/Fs (based on KM TEQ)							1.1E-04						6.2E+00
				Total DL-PCBs (excluding KM TEQ)							1.2E-04						6.6E+00
				Total DL-PCBs (based on KM TEQ)							1.3E-04						7.3E+00
				Total Non-DL PCBs							6.2E-05						9.1E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.8E-04						1.6E+01
				Total PCBs (DL & NDL; based on KM TEQ)							1.9E-04						1.6E+01
				Total PAHs							3.7E-06						1.2E-02
				Total Organics							1.9E-05						3.0E+00
				Total Inorganics							1.3E-05						2.9E+00
		Mixed Fish/All Species Total (excluding KM TEQs)									3.3E-04						2.8E+01
		Mixed Fish/All Species Total (based on KM TEQs)									3.4E-04						2.8E+01
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	6.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-04	--	3.9E-09	mg/kg-day	7.0E-10	mg/kg-day	5.6E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	5.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.0E-06	--	3.1E-10	mg/kg-day	7.0E-10	mg/kg-day	4.4E-01
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	3.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	1.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-06	--	8.4E-10	mg/kg-day	7.0E-09	mg/kg-day	1.2E-01
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	2.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-07	--	1.5E-10	mg/kg-day	7.0E-09	mg/kg-day	2.2E-02
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	9.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-07	--	5.7E-10	mg/kg-day	7.0E-08	mg/kg-day	8.2E-03
				OCDD	3E-06	mg/kg	2.4E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-08	--	1.4E-09	mg/kg-day	2.3E-06	mg/kg-day	6.0E-04
				2,3,7,8-TCDF	1E-07	mg/kg	8.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	4.7E-11	mg/kg-day	7.0E-09	mg/kg-day	6.6E-03
				1,2,3,7,8-PeCDF	1E-06	mg/kg	1.1E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.8E-07	--	6.2E-10	mg/kg-day	2.3E-08	mg/kg-day	2.7E-02
				2,3,4,7,8-PeCDF	4E-06	mg/kg	2.9E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.3E-05	--	1.7E-09	mg/kg-day	2.3E-09	mg/kg-day	7.3E-01
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	2.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-06	--	1.2E-09	mg/kg-day	7.0E-09	mg/kg-day	1.7E-01
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	1.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-06	--	9.0E-10	mg/kg-day	7.0E-09	mg/kg-day	1.3E-01

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	8.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-07	--	5.1E-11	mg/kg-day	7.0E-09	mg/kg-day	7.2E-03
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	2.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-07	--	1.6E-10	mg/kg-day	7.0E-09	mg/kg-day	2.3E-02
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	3.6E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.4E-07	--	2.1E-09	mg/kg-day	7.0E-08	mg/kg-day	3.0E-02
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.8E-08	--	7.2E-11	mg/kg-day	7.0E-08	mg/kg-day	1.0E-03
				OCDF	4E-07	mg/kg	2.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--	1.6E-10	mg/kg-day	2.3E-06	mg/kg-day	6.9E-05
				KM TEQ DF	1E-05	mg/kg	8.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-04	--	5.0E-09	mg/kg-day	7.0E-10	mg/kg-day	7.1E+00
				PCB-77	7E-05	mg/kg	5.7E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.5E-08	--	3.3E-08	mg/kg-day	7.0E-06	mg/kg-day	4.7E-03
				PCB-81	1E-05	mg/kg	8.9E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.0E-08	--	5.2E-09	mg/kg-day	2.3E-06	mg/kg-day	2.2E-03
				PCB-105	2E-02	mg/kg	1.6E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.1E-06	--	9.2E-06	mg/kg-day	2.3E-05	mg/kg-day	3.9E-01
				PCB-114	1E-03	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-07	--	5.9E-07	mg/kg-day	2.3E-05	mg/kg-day	2.5E-02
				PCB-118	7E-02	mg/kg	5.4E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-05	--	3.2E-05	mg/kg-day	2.3E-05	mg/kg-day	1.4E+00
				PCB-123	1E-03	mg/kg	1.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-07	--	6.3E-07	mg/kg-day	2.3E-05	mg/kg-day	2.7E-02
				PCB-126	1E-04	mg/kg	9.1E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-04	--	5.3E-08	mg/kg-day	7.0E-09	mg/kg-day	7.6E+00
				PCB-156/157	6E-03	mg/kg	4.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-06	--	2.8E-06	mg/kg-day	2.3E-05	mg/kg-day	1.2E-01
				PCB-167	3E-03	mg/kg	2.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-07	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.1E-02
				PCB-169	4E-06	mg/kg	3.3E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-06	--	1.9E-09	mg/kg-day	2.3E-08	mg/kg-day	8.3E-02
				PCB-189	5E-04	mg/kg	3.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-07	--	2.1E-07	mg/kg-day	2.3E-05	mg/kg-day	9.2E-03
				KM TEQ PCB	2E-05	mg/kg	1.6E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-04	--	9.6E-09	mg/kg-day	7.0E-10	mg/kg-day	1.4E+01
				Non-DL PCBs													
				Total Non-DL PCBs	6E-01	mg/kg	4.5E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	9.0E-05	--	2.6E-04	mg/kg-day	2.0E-05	mg/kg-day	1.3E+01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.8E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.5E-06	M	5.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.8E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.5E-09	M	5.8E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.5E-06	M	5.8E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.8E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	2.3E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.6E-08	--	1.4E-06	mg/kg-day	3.0E-05	mg/kg-day	4.5E-02
				2,4'-DDE	2E-03	mg/kg	1.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.1E-08	--	8.7E-07	mg/kg-day	3.0E-04	mg/kg-day	2.9E-03
				2,4'-DDT	4E-04	mg/kg	2.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.2E-09	--	1.6E-07	mg/kg-day	5.0E-04	mg/kg-day	3.2E-04
				4,4'-DDD	1E-01	mg/kg	1.0E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.4E-06	--	5.8E-05	mg/kg-day	3.0E-05	mg/kg-day	1.9E+00
				4,4'-DDE	3E-01	mg/kg	2.1E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.2E-06	--	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	4.1E-01
				4,4'-DDT	8E-03	mg/kg	5.8E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.0E-07	--	3.4E-06	mg/kg-day	5.0E-04	mg/kg-day	6.8E-03
				Benzaldehyde	1E+00	mg/kg	9.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.0E-07	--	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Chlordane, alpha (cis)	1E-02	mg/kg	1.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.7E-07	--	6.2E-06	mg/kg-day	5.0E-04	mg/kg-day	1.2E-02
				Chlordane, gamma (trans)	4E-03	mg/kg	3.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-07	--	1.7E-06	mg/kg-day	5.0E-04	mg/kg-day	3.5E-03
				Dieldrin	1E-02	mg/kg	1.1E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.7E-05	--	6.3E-06	mg/kg-day	5.0E-05	mg/kg-day	1.3E-01
				Heptachlor epoxide, cis-	4E-03	mg/kg	2.9E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.6E-06	--	1.7E-06	mg/kg-day	1.3E-05	mg/kg-day	1.3E-01
				Heptachlor epoxide, trans-	4E-04	mg/kg	2.9E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.6E-07	--	1.7E-07	mg/kg-day	1.3E-05	mg/kg-day	1.3E-02
				Hexachlorobenzene	4E-03	mg/kg	3.1E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.0E-07	--	1.8E-06	mg/kg-day	8.0E-04	mg/kg-day	2.3E-03
				Mirex	4E-04	mg/kg	3.2E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	5.7E-07	--	1.9E-07	mg/kg-day	2.0E-04	mg/kg-day	9.3E-04
				Nonachlor, cis-	1E-02	mg/kg	8.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-07	--	4.8E-06	mg/kg-day	1.0E-04	mg/kg-day	4.8E-02
				Nonachlor, trans-	3E-02	mg/kg	2.0E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.0E-07	--	1.2E-05	mg/kg-day	1.6E-05	mg/kg-day	7.5E-01
				Oxychlordane	1E-02	mg/kg	1.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.8E-07	--	6.3E-06	mg/kg-day	8.9E-05	mg/kg-day	7.1E-02
				Pyridine	1E+00	mg/kg	9.9E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.0E-03	mg/kg-day	5.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	4.8E-04	mg/kg-day	--	--	--	--	2.8E-03	mg/kg-day	1.0E+00	mg/kg-day	2.8E-03
				Arsenic, organic	1E+00	mg/kg	8.2E-05	mg/kg-day	--	--	--	--	4.8E-04	mg/kg-day	2.0E-02	mg/kg-day	2.4E-02
				Arsenic, inorganic	1E-01	mg/kg	9.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-05	--	5.3E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				Cadmium	5E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium [as Cr(III)]	2E+00	mg/kg	1.8E-04	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.5E+00	mg/kg-day	7.2E-04
				Cobalt	7E-03	mg/kg	5.3E-07	mg/kg-day	--	--	--	--	3.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.0E-02
				Copper	2E-01	mg/kg	1.6E-05	mg/kg-day	--	--	--	--	9.3E-05	mg/kg-day	1.0E-03	mg/kg-day	9.3E-02
				Iron	8E+00	mg/kg	5.7E-04	mg/kg-day	--	--	--	--	3.3E-03	mg/kg-day	7.0E-01	mg/kg-day	4.8E-03
				Lead	2E-02	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	1.4E-01	mg/kg-day	1.1E-03
				Mercury	4E-01	mg/kg	3.2E-05	mg/kg-day	--	--	--	--	1.9E-04	mg/kg-day	3.0E-04	mg/kg-day	6.2E-01
				Methyl Mercury	5E-01	mg/kg	3.5E-05	mg/kg-day	--	--	--	--	2.0E-04	mg/kg-day	1.0E-04	mg/kg-day	2.0E+00
				Selenium	5E-01	mg/kg	3.9E-05	mg/kg-day	--	--	--	--	2.3E-04	mg/kg-day	5.0E-03	mg/kg-day	4.6E-02
				Silver	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.8E-06	mg/kg-day	5.0E-03	mg/kg-day	1.8E-03
				Vanadium	2E-02	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	5.0E-03	mg/kg-day	2.0E-03
				Zinc	3E+01	mg/kg	2.2E-03	mg/kg-day	--	--	--	--	1.3E-02	mg/kg-day	3.0E-01	mg/kg-day	4.3E-02
				Total DLCs (excluding KM TEQs)							3.0E-04						1.7E+01
				Total DLCs (based on KM TEQs)							3.7E-04						2.1E+01
				Total PCDD/Fs (excluding KM TEQ)							1.3E-04						7.3E+00
				Total PCDD/Fs (based on KM TEQ)							1.3E-04						7.1E+00
				Total DL-PCBs (excluding KM TEQ)							1.7E-04						9.6E+00
				Total DL-PCBs (based on KM TEQ)							2.5E-04						1.4E+01
				Total Non-DL PCBs							9.0E-05						1.3E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-04						2.3E+01
				Total PCBs (DL & NDL; based on KM TEQ)							3.4E-04						2.7E+01
				Total PAHs							5.7E-06						1.9E-02
				Total Organics							3.3E-05						4.1E+00
				Total Inorganics							1.4E-05						3.1E+00
		American Eel Total (excluding KM TEQs)									4.5E-04						3.7E+01
		American Eel Total (based on KM TEQs)									5.2E-04						4.1E+01
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	mg/kg	1.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-05	--	6.6E-10	mg/kg-day	7.0E-10	mg/kg-day	9.4E-01
				1,2,3,7,8-PeCDD	3E-07	mg/kg	2.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-06	--	1.3E-10	mg/kg-day	7.0E-10	mg/kg-day	1.9E-01
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	5.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.3E-08	--	3.2E-11	mg/kg-day	7.0E-09	mg/kg-day	4.6E-03
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	8.9E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	5.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-08	--	3.1E-11	mg/kg-day	7.0E-09	mg/kg-day	4.4E-03
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	1.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-08	--	6.3E-11	mg/kg-day	7.0E-08	mg/kg-day	9.0E-04
				OCDD	3E-07	mg/kg	2.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.8E-10	--	1.1E-10	mg/kg-day	2.3E-06	mg/kg-day	4.9E-05
				2,3,7,8-TCDF	4E-07	mg/kg	2.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-07	--	1.7E-10	mg/kg-day	7.0E-09	mg/kg-day	2.4E-02
				1,2,3,7,8-PeCDF	7E-07	mg/kg	5.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.3E-07	--	2.9E-10	mg/kg-day	2.3E-08	mg/kg-day	1.3E-02
				2,3,4,7,8-PeCDF	8E-07	mg/kg	5.7E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.6E-06	--	3.3E-10	mg/kg-day	2.3E-09	mg/kg-day	1.4E-01
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	7.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	4.2E-11	mg/kg-day	7.0E-09	mg/kg-day	6.0E-03
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	1.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-07	--	1.0E-10	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	6.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-08	--	3.8E-11	mg/kg-day	7.0E-09	mg/kg-day	5.4E-03
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-08	--	2.5E-11	mg/kg-day	7.0E-09	mg/kg-day	3.5E-03
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	5.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.5E-08	--	2.9E-10	mg/kg-day	7.0E-08	mg/kg-day	4.2E-03
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	5.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-09	--	3.4E-11	mg/kg-day	7.0E-08	mg/kg-day	4.8E-04
				OCDF	2E-07	mg/kg	1.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.8E-10	--	7.6E-11	mg/kg-day	2.3E-06	mg/kg-day	3.2E-05
				KM TEQ DF	2E-06	mg/kg	1.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-05	--	8.9E-10	mg/kg-day	7.0E-10	mg/kg-day	1.3E+00
				PCB-77	1E-04	mg/kg	7.4E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-07	--	4.3E-08	mg/kg-day	7.0E-06	mg/kg-day	6.2E-03
				PCB-81	4E-06	mg/kg	2.7E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-08	--	1.6E-09	mg/kg-day	2.3E-06	mg/kg-day	6.8E-04
				PCB-105	1E-03	mg/kg	9.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-07	--	5.5E-07	mg/kg-day	2.3E-05	mg/kg-day	2.4E-02
				PCB-114	8E-05	mg/kg	5.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-08	--	3.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-118	5E-03	mg/kg	4.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-06	--	2.3E-06	mg/kg-day	2.3E-05	mg/kg-day	1.0E-01
				PCB-123	7E-05	mg/kg	5.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-08	--	3.3E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-126	4E-05	mg/kg	2.9E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-05	--	1.7E-08	mg/kg-day	7.0E-09	mg/kg-day	2.4E+00
				PCB-156/157	6E-04	mg/kg	4.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-167	3E-04	mg/kg	2.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.9E-08	--	1.3E-07	mg/kg-day	2.3E-05	mg/kg-day	5.5E-03
				PCB-169	2E-06	mg/kg	1.4E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.1E-07	--	7.9E-10	mg/kg-day	2.3E-08	mg/kg-day	3.4E-02
				PCB-189	6E-05	mg/kg	4.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-08	--	2.5E-08	mg/kg-day	2.3E-05	mg/kg-day	1.1E-03
				KM TEQ PCB	4E-06	mg/kg	3.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.6E-05	--	1.8E-09	mg/kg-day	7.0E-10	mg/kg-day	2.6E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	9.0E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.8E-05	--	5.3E-05	mg/kg-day	2.0E-05	mg/kg-day	2.6E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg-day	7.8E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.0E-09	M	2.4E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	2.4E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	6E-04	mg/kg	4.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.0E-08	--	2.5E-07	mg/kg-day	3.0E-05	mg/kg-day	8.4E-03
				2,4'-DDE	1E-03	mg/kg	7.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-08	--	4.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03
				2,4'-DDT	2E-04	mg/kg	1.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.7E-09	--	9.7E-08	mg/kg-day	5.0E-04	mg/kg-day	1.9E-04
				4,4'-DDD	6E-03	mg/kg	4.9E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.2E-07	--	2.9E-06	mg/kg-day	3.0E-05	mg/kg-day	9.6E-02
				4,4'-DDE	3E-02	mg/kg	2.3E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.8E-07	--	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	4.5E-02
				4,4'-DDT	2E-02	mg/kg	1.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.4E-07	--	9.2E-06	mg/kg-day	5.0E-04	mg/kg-day	1.8E-02
				Benzaldehyde	1E+00	mg/kg	9.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.0E-07	--	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Chlordane, alpha (cis)	6E-03	mg/kg	4.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-07	--	2.6E-06	mg/kg-day	5.0E-04	mg/kg-day	5.2E-03
				Chlordane, gamma (trans)	2E-03	mg/kg	1.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.0E-08	--	1.0E-06	mg/kg-day	5.0E-04	mg/kg-day	2.0E-03
				Dieldrin	5E-03	mg/kg	3.4E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.5E-06	--	2.0E-06	mg/kg-day	5.0E-05	mg/kg-day	4.0E-02
				Heptachlor epoxide, cis-	1E-03	mg/kg	9.2E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.4E-07	--	5.4E-07	mg/kg-day	1.3E-05	mg/kg-day	4.1E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-08	--	7.5E-09	mg/kg-day	1.3E-05	mg/kg-day	5.8E-04
				Hexachlorobenzene	5E-04	mg/kg	4.1E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	6.5E-08	--	2.4E-07	mg/kg-day	8.0E-04	mg/kg-day	3.0E-04
				Mirex	1E-04	mg/kg	1.0E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.8E-07	--	5.9E-08	mg/kg-day	2.0E-04	mg/kg-day	3.0E-04
				Nonachlor, cis-	2E-03	mg/kg	1.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.4E-08	--	7.4E-07	mg/kg-day	1.0E-04	mg/kg-day	7.4E-03
				Nonachlor, trans-	3E-03	mg/kg	2.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.1E-08	--	1.4E-06	mg/kg-day	1.6E-05	mg/kg-day	8.8E-02
				Oxychlordane	3E-04	mg/kg	2.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.3E-09	--	1.5E-07	mg/kg-day	8.9E-05	mg/kg-day	1.7E-03
				Pyridine	1E+00	mg/kg	9.9E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.0E-03	mg/kg-day	5.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	4.5E-04	mg/kg-day	--	--	--	--	2.6E-03	mg/kg-day	1.0E+00	mg/kg-day	2.6E-03
				Arsenic, organic	6E-01	mg/kg	4.9E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	2.0E-02	mg/kg-day	1.4E-02
				Arsenic, inorganic	7E-02	mg/kg	5.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.2E-06	--	3.2E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Cadmium	5E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	9E-02	mg/kg	6.7E-06	mg/kg-day	--	--	--	--	3.9E-05	mg/kg-day	1.5E+00	mg/kg-day	2.6E-05
				Cobalt	2E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	9.9E-05	mg/kg-day	3.0E-04	mg/kg-day	3.3E-01
				Copper	8E-01	mg/kg	6.0E-05	mg/kg-day	--	--	--	--	3.5E-04	mg/kg-day	1.0E-03	mg/kg-day	3.5E-01
				Iron	1E+01	mg/kg	7.5E-04	mg/kg-day	--	--	--	--	4.4E-03	mg/kg-day	7.0E-01	mg/kg-day	6.3E-03
				Lead	4E-02	mg/kg	3.2E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	1.4E-05	mg/kg-day	--	--	--	--	8.1E-05	mg/kg-day	1.4E-01	mg/kg-day	5.8E-04
				Mercury	3E-01	mg/kg	2.5E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	3.0E-04	mg/kg-day	4.8E-01
				Methyl Mercury	4E-01	mg/kg	3.0E-05	mg/kg-day	--	--	--	--	1.7E-04	mg/kg-day	1.0E-04	mg/kg-day	1.7E+00
				Selenium	5E-01	mg/kg	4.1E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	5.0E-03	mg/kg-day	4.8E-02
				Silver	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	5.0E-03	mg/kg-day	1.8E-03
				Vanadium	2E-02	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	5.0E-03	mg/kg-day	2.0E-03
				Zinc	2E+01	mg/kg	1.3E-03	mg/kg-day	--	--	--	--	7.7E-03	mg/kg-day	3.0E-01	mg/kg-day	2.6E-02

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total DLCs (excluding KM TEQs)							7.2E-05						4.0E+00
				Total DLCs (based on KM TEQs)							6.9E-05						3.8E+00
				Total PCDD/Fs (excluding KM TEQ)							2.5E-05						1.4E+00
				Total PCDD/Fs (based on KM TEQ)							2.3E-05						1.3E+00
				Total DL-PCBs (excluding KM TEQ)							4.7E-05						2.6E+00
				Total DL-PCBs (based on KM TEQ)							4.6E-05						2.6E+00
				Total Non-DL PCBs							1.8E-05						2.6E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							6.5E-05						5.3E+00
				Total PCBs (DL & NDL; based on KM TEQ)							6.4E-05						5.2E+00
				Total PAHs							2.3E-06						7.8E-03
				Total Organics							8.8E-06						9.4E-01
				Total Inorganics							8.2E-06						3.1E+00
		Bluefish Total (excluding KM TEQs)									1.1E-04						1.1E+01
		Bluefish Total (based on KM TEQs)									1.1E-04						1.1E+01
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	7.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-04	--	4.2E-09	mg/kg-day	7.0E-10	mg/kg-day	5.9E+00
				1,2,3,7,8-PeCDD	5E-07	mg/kg	4.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.2E-06	--	2.4E-10	mg/kg-day	7.0E-10	mg/kg-day	3.5E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	9.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	1.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-07	--	9.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	6.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.8E-08	--	3.8E-11	mg/kg-day	7.0E-09	mg/kg-day	5.4E-03
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	1.1E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-07	--	6.4E-10	mg/kg-day	7.0E-08	mg/kg-day	9.1E-03
				OCDD	2E-05	mg/kg	1.2E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-08	--	7.1E-09	mg/kg-day	2.3E-06	mg/kg-day	3.0E-03
				2,3,7,8-TCDF	4E-06	mg/kg	2.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-06	--	1.7E-09	mg/kg-day	7.0E-09	mg/kg-day	2.4E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.5E-07	--	9.8E-10	mg/kg-day	2.3E-08	mg/kg-day	4.2E-02
				2,3,4,7,8-PeCDF	3E-06	mg/kg	2.5E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.1E-05	--	1.4E-09	mg/kg-day	2.3E-09	mg/kg-day	6.2E-01
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	3.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	9.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-06	--	5.4E-10	mg/kg-day	7.0E-09	mg/kg-day	7.7E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	9.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-07	--	5.4E-11	mg/kg-day	7.0E-09	mg/kg-day	7.7E-03
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	7.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	4.4E-11	mg/kg-day	7.0E-09	mg/kg-day	6.2E-03
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	2.5E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-07	--	1.5E-09	mg/kg-day	7.0E-08	mg/kg-day	2.1E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	8.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--	4.8E-11	mg/kg-day	7.0E-08	mg/kg-day	6.9E-04
				OCDF	2E-07	mg/kg	1.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.5E-10	--	8.4E-11	mg/kg-day	2.3E-06	mg/kg-day	3.6E-05
				KM TEQ DF	1E-05	mg/kg	8.9E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-04	--	5.2E-09	mg/kg-day	7.0E-10	mg/kg-day	7.4E+00
				PCB-77	1E-03	mg/kg	8.7E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.3E-06	--	5.1E-07	mg/kg-day	7.0E-06	mg/kg-day	7.2E-02
				PCB-81	3E-05	mg/kg	2.2E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.7E-08	--	1.3E-08	mg/kg-day	2.3E-06	mg/kg-day	5.4E-03
				PCB-105	6E-03	mg/kg	4.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-06	--	2.6E-06	mg/kg-day	2.3E-05	mg/kg-day	1.1E-01
				PCB-114	7E-04	mg/kg	5.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-07	--	3.2E-07	mg/kg-day	2.3E-05	mg/kg-day	1.4E-02
				PCB-118	4E-02	mg/kg	2.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-05	--	1.7E-05	mg/kg-day	2.3E-05	mg/kg-day	7.1E-01
				PCB-123	6E-04	mg/kg	4.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-126	2E-04	mg/kg	1.4E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-04	--	8.4E-08	mg/kg-day	7.0E-09	mg/kg-day	1.2E+01
				PCB-156/157	3E-03	mg/kg	2.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-06	--	1.5E-06	mg/kg-day	2.3E-05	mg/kg-day	6.2E-02
				PCB-167	1E-03	mg/kg	1.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.0E-07	--	6.5E-07	mg/kg-day	2.3E-05	mg/kg-day	2.8E-02
				PCB-169	3E-06	mg/kg	2.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-06	--	1.5E-09	mg/kg-day	2.3E-08	mg/kg-day	6.3E-02
				PCB-189	3E-04	mg/kg	2.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.7E-08	--	1.3E-07	mg/kg-day	2.3E-05	mg/kg-day	5.4E-03
				KM TEQ PCB	2E-05	mg/kg	1.5E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-04	--	8.6E-09	mg/kg-day	7.0E-10	mg/kg-day	1.2E+01
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	5.4E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-04	--	3.1E-04	mg/kg-day	2.0E-05	mg/kg-day	1.6E+01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg-day	7.8E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.0E-09	M	2.4E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	2.4E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-02	mg/kg	2.5E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.0E-07	--	1.5E-05	mg/kg-day	3.0E-05	mg/kg-day	4.8E-01
				2,4'-DDE	1E-02	mg/kg	9.8E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.3E-07	--	5.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				2,4'-DDT	3E-03	mg/kg	2.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.9E-08	--	1.2E-06	mg/kg-day	5.0E-04	mg/kg-day	2.4E-03
				4,4'-DDD	1E-01	mg/kg	1.0E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.5E-06	--	6.0E-05	mg/kg-day	3.0E-05	mg/kg-day	2.0E+00
				4,4'-DDE	2E-01	mg/kg	1.2E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-06	--	6.9E-05	mg/kg-day	3.0E-04	mg/kg-day	2.3E-01
				4,4'-DDT	1E-02	mg/kg	1.0E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.4E-07	--	5.9E-06	mg/kg-day	5.0E-04	mg/kg-day	1.2E-02
				Benzaldehyde	1E+00	mg/kg	9.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.0E-07	--	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Chlordane, alpha (cis)	4E-02	mg/kg	2.7E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.4E-07	--	1.6E-05	mg/kg-day	5.0E-04	mg/kg-day	3.1E-02
				Chlordane, gamma (trans)	6E-03	mg/kg	4.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-07	--	2.8E-06	mg/kg-day	5.0E-04	mg/kg-day	5.6E-03
				Dieldrin	1E-02	mg/kg	8.2E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.3E-05	--	4.8E-06	mg/kg-day	5.0E-05	mg/kg-day	9.6E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.4E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.3E-06	--	8.2E-07	mg/kg-day	1.3E-05	mg/kg-day	6.3E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-08	--	7.5E-09	mg/kg-day	1.3E-05	mg/kg-day	5.8E-04
				Hexachlorobenzene	1E-03	mg/kg	7.9E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.3E-07	--	4.6E-07	mg/kg-day	8.0E-04	mg/kg-day	5.8E-04
				Mirex	3E-04	mg/kg	2.3E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.1E-07	--	1.3E-07	mg/kg-day	2.0E-04	mg/kg-day	6.6E-04
				Nonachlor, cis-	1E-02	mg/kg	8.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-07	--	4.9E-06	mg/kg-day	1.0E-04	mg/kg-day	4.9E-02
				Nonachlor, trans-	3E-02	mg/kg	2.0E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.0E-07	--	1.2E-05	mg/kg-day	1.6E-05	mg/kg-day	7.6E-01
				Oxychlordane	4E-03	mg/kg	3.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-07	--	1.7E-06	mg/kg-day	8.9E-05	mg/kg-day	1.9E-02
				Pyridine	1E+00	mg/kg	9.9E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.0E-03	mg/kg-day	5.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	4.3E-04	mg/kg-day	--	--	--	--	2.5E-03	mg/kg-day	1.0E+00	mg/kg-day	2.5E-03
				Arsenic, organic	1E+00	mg/kg	8.7E-05	mg/kg-day	--	--	--	--	5.1E-04	mg/kg-day	2.0E-02	mg/kg-day	2.5E-02
				Arsenic, inorganic	1E-01	mg/kg	9.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-05	--	5.6E-05	mg/kg-day	3.0E-04	mg/kg-day	1.9E-01
				Cadmium	5E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	1E-01	mg/kg	9.4E-06	mg/kg-day	--	--	--	--	5.5E-05	mg/kg-day	1.5E+00	mg/kg-day	3.6E-05
				Cobalt	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Copper	6E-01	mg/kg	4.3E-05	mg/kg-day	--	--	--	--	2.5E-04	mg/kg-day	1.0E-03	mg/kg-day	2.5E-01
				Iron	7E+00	mg/kg	5.1E-04	mg/kg-day	--	--	--	--	3.0E-03	mg/kg-day	7.0E-01	mg/kg-day	4.2E-03
				Lead	4E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	1.6E-05	mg/kg-day	--	--	--	--	9.6E-05	mg/kg-day	1.4E-01	mg/kg-day	6.8E-04
				Mercury	3E-01	mg/kg	2.1E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.2E-01
				Methyl Mercury	3E-01	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	1.0E-04	mg/kg-day	1.5E+00
				Selenium	4E-01	mg/kg	2.9E-05	mg/kg-day	--	--	--	--	1.7E-04	mg/kg-day	5.0E-03	mg/kg-day	3.4E-02
				Silver	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	5.0E-03	mg/kg-day	1.8E-03
				Vanadium	3E-02	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Zinc	7E+00	mg/kg	5.6E-04	mg/kg-day	--	--	--	--	3.3E-03	mg/kg-day	3.0E-01	mg/kg-day	1.1E-02
				Total DLCs (excluding KM TEQs)							3.7E-04						2.0E+01
				Total DLCs (based on KM TEQs)							3.5E-04						2.0E+01
				Total PCDD/Fs (excluding KM TEQ)							1.3E-04						7.4E+00
				Total PCDD/Fs (based on KM TEQ)							1.3E-04						7.4E+00
				Total DL-PCBs (excluding KM TEQ)							2.3E-04						1.3E+01
				Total DL-PCBs (based on KM TEQ)							2.2E-04						1.2E+01
				Total Non-DL PCBs							1.1E-04						1.6E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							3.4E-04						2.9E+01
				Total PCBs (DL & NDL; based on KM TEQ)							3.3E-04						2.8E+01
				Total PAHs							2.3E-06						7.8E-03
				Total Organics							2.5E-05						4.4E+00
				Total Inorganics							1.4E-05						2.5E+00

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
		Striped Bass Total (excluding KM TEQs)									5.2E-04						4.3E+01
		Striped Bass Total (based on KM TEQs)									5.0E-04						4.2E+01
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	5E-06	mg/kg	4.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.2E-05	--	2.4E-09	mg/kg-day	7.0E-10	mg/kg-day	3.5E+00
				1,2,3,7,8-PeCDD	2E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-06	--	1.1E-10	mg/kg-day	7.0E-10	mg/kg-day	1.5E-01
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	6.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.2E-08	--	3.6E-11	mg/kg-day	7.0E-09	mg/kg-day	5.1E-03
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	1.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-07	--	1.1E-10	mg/kg-day	7.0E-09	mg/kg-day	1.6E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	8.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	4.8E-11	mg/kg-day	7.0E-09	mg/kg-day	6.8E-03
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	2.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-08	--	1.4E-10	mg/kg-day	7.0E-08	mg/kg-day	2.0E-03
				OCDD	5E-07	mg/kg	3.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-09	--	2.0E-10	mg/kg-day	2.3E-06	mg/kg-day	8.6E-05
				2,3,7,8-TCDF	3E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.7E-02
				1,2,3,7,8-PeCDF	3E-07	mg/kg	2.7E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-07	--	1.5E-10	mg/kg-day	2.3E-08	mg/kg-day	6.6E-03
				2,3,4,7,8-PeCDF	9E-07	mg/kg	6.8E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.1E-06	--	4.0E-10	mg/kg-day	2.3E-09	mg/kg-day	1.7E-01
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	4.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.4E-07	--	2.9E-10	mg/kg-day	7.0E-09	mg/kg-day	4.1E-02
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.7E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	6.3E-11	mg/kg-day	7.0E-09	mg/kg-day	9.0E-03
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	8.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	4.8E-11	mg/kg-day	7.0E-09	mg/kg-day	6.9E-03
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	3.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.6E-08	--	2.2E-10	mg/kg-day	7.0E-08	mg/kg-day	3.1E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	8.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--	4.8E-11	mg/kg-day	7.0E-08	mg/kg-day	6.8E-04
				OCDF	2E-07	mg/kg	1.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.8E-10	--	8.8E-11	mg/kg-day	2.3E-06	mg/kg-day	3.8E-05
				KM TEQ DF	6E-06	mg/kg	4.6E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-05	--	2.7E-09	mg/kg-day	7.0E-10	mg/kg-day	3.8E+00
				PCB-77	1E-04	mg/kg	1.1E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.6E-07	--	6.3E-08	mg/kg-day	7.0E-06	mg/kg-day	9.0E-03
				PCB-81	1E-05	mg/kg	1.1E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.1E-08	--	6.6E-09	mg/kg-day	2.3E-06	mg/kg-day	2.8E-03
				PCB-105	3E-03	mg/kg	2.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-07	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.2E-02
				PCB-114	2E-04	mg/kg	1.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-08	--	1.0E-07	mg/kg-day	2.3E-05	mg/kg-day	4.5E-03
				PCB-118	1E-02	mg/kg	8.9E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-06	--	5.2E-06	mg/kg-day	2.3E-05	mg/kg-day	2.2E-01
				PCB-123	2E-04	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-08	--	7.9E-08	mg/kg-day	2.3E-05	mg/kg-day	3.4E-03
				PCB-126	4E-05	mg/kg	3.3E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-05	--	1.9E-08	mg/kg-day	7.0E-09	mg/kg-day	2.8E+00
				PCB-156/157	1E-03	mg/kg	8.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-07	--	5.1E-07	mg/kg-day	2.3E-05	mg/kg-day	2.2E-02
				PCB-167	5E-04	mg/kg	4.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-07	--	2.3E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-169	2E-06	mg/kg	1.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.9E-07	--	9.0E-10	mg/kg-day	2.3E-08	mg/kg-day	3.9E-02
				PCB-189	8E-05	mg/kg	6.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-08	--	3.5E-08	mg/kg-day	2.3E-05	mg/kg-day	1.5E-03
				KM TEQ PCB	5E-06	mg/kg	3.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.5E-05	--	2.1E-09	mg/kg-day	7.0E-10	mg/kg-day	3.0E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	1.1E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.3E-05	--	6.6E-05	mg/kg-day	2.0E-05	mg/kg-day	3.3E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg-day	7.8E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.0E-09	M	2.4E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	M	2.4E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-07	M	2.4E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	2.5E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.1E-08	--	1.5E-06	mg/kg-day	3.0E-05	mg/kg-day	4.9E-02
				2,4'-DDE	3E-03	mg/kg	2.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.2E-08	--	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.1E-03
				2,4'-DDT	2E-04	mg/kg	1.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.6E-09	--	9.6E-08	mg/kg-day	5.0E-04	mg/kg-day	1.9E-04
				4,4'-DDD	2E-02	mg/kg	1.4E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.4E-07	--	8.4E-06	mg/kg-day	3.0E-05	mg/kg-day	2.8E-01
				4,4'-DDE	4E-02	mg/kg	3.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.0E-06	--	1.8E-05	mg/kg-day	3.0E-04	mg/kg-day	6.0E-02
				4,4'-DDT	1E-03	mg/kg	1.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.7E-08	--	6.4E-07	mg/kg-day	5.0E-04	mg/kg-day	1.3E-03
				Benzaldehyde	1E+00	mg/kg	9.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.0E-07	--	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Chlordane, alpha (cis)	2E-03	mg/kg	1.6E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.6E-08	--	9.3E-07	mg/kg-day	5.0E-04	mg/kg-day	1.9E-03

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chlordane, gamma (trans)	7E-04	mg/kg	5.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.8E-08	--	3.1E-07	mg/kg-day	5.0E-04	mg/kg-day	6.1E-04
				Dieldrin	1E-03	mg/kg	1.1E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.7E-06	--	6.3E-07	mg/kg-day	5.0E-05	mg/kg-day	1.3E-02
				Heptachlor epoxide, cis-	3E-04	mg/kg	2.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.4E-07	--	1.5E-07	mg/kg-day	1.3E-05	mg/kg-day	1.2E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-08	--	7.5E-09	mg/kg-day	1.3E-05	mg/kg-day	5.8E-04
				Hexachlorobenzene	5E-04	mg/kg	3.7E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.9E-08	--	2.2E-07	mg/kg-day	8.0E-04	mg/kg-day	2.7E-04
				Mirex	6E-05	mg/kg	4.8E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	8.6E-08	--	2.8E-08	mg/kg-day	2.0E-04	mg/kg-day	1.4E-04
				Nonachlor, cis-	1E-03	mg/kg	8.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-08	--	5.0E-07	mg/kg-day	1.0E-04	mg/kg-day	5.0E-03
				Nonachlor, trans-	3E-03	mg/kg	2.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.5E-08	--	1.2E-06	mg/kg-day	1.6E-05	mg/kg-day	8.0E-02
				Oxychlordane	1E-03	mg/kg	9.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.4E-08	--	5.6E-07	mg/kg-day	8.9E-05	mg/kg-day	6.3E-03
				Pyridine	1E+00	mg/kg	9.9E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.0E-03	mg/kg-day	5.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	4.3E-04	mg/kg-day	--	--	--	--	2.5E-03	mg/kg-day	1.0E+00	mg/kg-day	2.5E-03
				Arsenic, organic	2E+00	mg/kg	1.3E-04	mg/kg-day	--	--	--	--	7.3E-04	mg/kg-day	2.0E-02	mg/kg-day	3.6E-02
				Arsenic, inorganic	2E-01	mg/kg	1.4E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-05	--	8.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.7E-01
				Cadmium	5E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	5E-01	mg/kg	3.5E-05	mg/kg-day	--	--	--	--	2.0E-04	mg/kg-day	1.5E+00	mg/kg-day	1.4E-04
				Cobalt	9E-01	mg/kg	6.5E-05	mg/kg-day	--	--	--	--	3.8E-04	mg/kg-day	3.0E-04	mg/kg-day	1.3E+00
				Copper	2E-01	mg/kg	1.6E-05	mg/kg-day	--	--	--	--	9.3E-05	mg/kg-day	1.0E-03	mg/kg-day	9.3E-02
				Iron	5E+00	mg/kg	3.9E-04	mg/kg-day	--	--	--	--	2.3E-03	mg/kg-day	7.0E-01	mg/kg-day	3.3E-03
				Lead	3E-02	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	1.2E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	1.4E-01	mg/kg-day	1.0E-03
				Mercury	2E-01	mg/kg	1.4E-05	mg/kg-day	--	--	--	--	8.0E-05	mg/kg-day	3.0E-04	mg/kg-day	2.7E-01
				Methyl Mercury	2E-01	mg/kg	1.6E-05	mg/kg-day	--	--	--	--	9.4E-05	mg/kg-day	1.0E-04	mg/kg-day	9.4E-01
				Selenium	6E-01	mg/kg	4.9E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	5.0E-03	mg/kg-day	5.7E-02
				Silver	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	5.0E-03	mg/kg-day	1.8E-03
				Vanadium	3E-02	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Zinc	7E+00	mg/kg	5.2E-04	mg/kg-day	--	--	--	--	3.0E-03	mg/kg-day	3.0E-01	mg/kg-day	1.0E-02
				Total DLCs (excluding KM TEQs)							1.3E-04						7.0E+00
				Total DLCs (based on KM TEQs)							1.2E-04						6.9E+00
				Total PCDD/Fs (excluding KM TEQ)							7.0E-05						3.9E+00
				Total PCDD/Fs (based on KM TEQ)							6.9E-05						3.8E+00
				Total DL-PCBs (excluding KM TEQ)							5.6E-05						3.1E+00
				Total DL-PCBs (based on KM TEQ)							5.5E-05						3.0E+00
				Total Non-DL PCBs							2.3E-05						3.3E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.9E-05						6.4E+00
				Total PCBs (DL & NDL; based on KM TEQ)							7.7E-05						6.3E+00
				Total PAHs							2.3E-06						7.8E-03
				Total Organics							4.3E-06						1.1E+00
				Total Inorganics							2.1E-05						3.0E+00
		Summer Flounder Total (excluding KM TEQs)									1.8E-04						1.4E+01
		Summer Flounder Total (based on KM TEQs)									1.7E-04						1.4E+01
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	2E-05	mg/kg	1.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-04	--	7.1E-09	mg/kg-day	7.0E-10	mg/kg-day	1.0E+01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	3.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-06	--	1.9E-10	mg/kg-day	7.0E-10	mg/kg-day	2.7E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-07	--	1.1E-10	mg/kg-day	7.0E-09	mg/kg-day	1.5E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	4.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-07	--	2.7E-10	mg/kg-day	7.0E-09	mg/kg-day	3.8E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	6.2E-11	mg/kg-day	7.0E-09	mg/kg-day	8.9E-03
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	2.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.2E-08	--	1.6E-10	mg/kg-day	7.0E-08	mg/kg-day	2.3E-03
				OCDD	8E-07	mg/kg	6.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-09	--	3.7E-10	mg/kg-day	2.3E-06	mg/kg-day	1.6E-04
				2,3,7,8-TCDF	4E-06	mg/kg	2.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-06	--	1.7E-09	mg/kg-day	7.0E-09	mg/kg-day	2.4E-01
				1,2,3,7,8-PeCDF	3E-06	mg/kg	2.3E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-06	--	1.3E-09	mg/kg-day	2.3E-08	mg/kg-day	5.8E-02

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,7,8-PeCDF	3E-06	mg/kg	2.6E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-05	--	1.5E-09	mg/kg-day	2.3E-09	mg/kg-day	6.5E-01
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	1.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-06	--	7.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.0E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	9.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-06	--	5.3E-10	mg/kg-day	7.0E-09	mg/kg-day	7.5E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	8.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	4.6E-11	mg/kg-day	7.0E-09	mg/kg-day	6.6E-03
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	1.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-07	--	9.5E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-07	--	1.1E-09	mg/kg-day	7.0E-08	mg/kg-day	1.5E-02
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	6.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-08	--	3.9E-11	mg/kg-day	7.0E-08	mg/kg-day	5.6E-04
				OCDF	2E-07	mg/kg	1.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.5E-10	--	9.7E-11	mg/kg-day	2.3E-06	mg/kg-day	4.1E-05
				KM TEQ DF	2E-05	mg/kg	1.4E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-04	--	8.1E-09	mg/kg-day	7.0E-10	mg/kg-day	1.2E+01
				PCB-77	1E-03	mg/kg	7.4E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-06	--	4.3E-07	mg/kg-day	7.0E-06	mg/kg-day	6.2E-02
				PCB-81	4E-05	mg/kg	2.8E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-07	--	1.6E-08	mg/kg-day	2.3E-06	mg/kg-day	7.0E-03
				PCB-105	7E-03	mg/kg	5.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-06	--	3.3E-06	mg/kg-day	2.3E-05	mg/kg-day	1.4E-01
				PCB-114	6E-04	mg/kg	4.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-118	3E-02	mg/kg	2.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-06	--	1.2E-05	mg/kg-day	2.3E-05	mg/kg-day	5.3E-01
				PCB-123	6E-04	mg/kg	4.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--	2.5E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-126	6E-05	mg/kg	4.6E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-05	--	2.7E-08	mg/kg-day	7.0E-09	mg/kg-day	3.8E+00
				PCB-156/157	3E-03	mg/kg	2.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.8E-07	--	1.3E-06	mg/kg-day	2.3E-05	mg/kg-day	5.4E-02
				PCB-167	1E-03	mg/kg	8.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-07	--	5.1E-07	mg/kg-day	2.3E-05	mg/kg-day	2.2E-02
				PCB-169	7E-06	mg/kg	5.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-06	--	3.3E-09	mg/kg-day	2.3E-08	mg/kg-day	1.4E-01
				PCB-189	2E-04	mg/kg	1.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-08	--	9.9E-08	mg/kg-day	2.3E-05	mg/kg-day	4.3E-03
				KM TEQ PCB	7E-06	mg/kg	5.6E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.5E-05	--	3.3E-09	mg/kg-day	7.0E-10	mg/kg-day	4.7E+00
				Non-DL PCBs													
				Total Non-DL PCBs	5E-01	mg/kg	3.6E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	7.2E-05	--	2.1E-04	mg/kg-day	2.0E-05	mg/kg-day	1.0E+01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.8E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.5E-06	M	5.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.8E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.5E-09	M	5.8E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.5E-06	M	5.8E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	9.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.8E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	5E-02	mg/kg	3.9E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.3E-07	--	2.3E-05	mg/kg-day	3.0E-05	mg/kg-day	7.6E-01
				2,4'-DDE	1E-02	mg/kg	7.8E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-07	--	4.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
				2,4'-DDT	1E-02	mg/kg	1.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.6E-07	--	6.2E-06	mg/kg-day	5.0E-04	mg/kg-day	1.2E-02
				4,4'-DDD	2E-01	mg/kg	1.2E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.8E-06	--	6.9E-05	mg/kg-day	3.0E-05	mg/kg-day	2.3E+00
				4,4'-DDE	1E-01	mg/kg	9.0E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.1E-06	--	5.3E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				4,4'-DDT	3E-02	mg/kg	2.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.2E-07	--	1.2E-05	mg/kg-day	5.0E-04	mg/kg-day	2.5E-02
				Benzaldehyde	1E+00	mg/kg	9.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.0E-07	--	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Chlordane, alpha (cis)	2E-02	mg/kg	1.8E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.3E-07	--	1.1E-05	mg/kg-day	5.0E-04	mg/kg-day	2.1E-02
				Chlordane, gamma (trans)	5E-03	mg/kg	3.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--	2.1E-06	mg/kg-day	5.0E-04	mg/kg-day	4.3E-03
				Dieldrin	7E-03	mg/kg	5.5E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	8.9E-06	--	3.2E-06	mg/kg-day	5.0E-05	mg/kg-day	6.5E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.6E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.5E-06	--	9.4E-07	mg/kg-day	1.3E-05	mg/kg-day	7.2E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-08	--	7.5E-09	mg/kg-day	1.3E-05	mg/kg-day	5.8E-04
				Hexachlorobenzene	1E-03	mg/kg	9.6E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.5E-07	--	5.6E-07	mg/kg-day	8.0E-04	mg/kg-day	7.0E-04
				Mirex	4E-04	mg/kg	2.7E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.9E-07	--	1.6E-07	mg/kg-day	2.0E-04	mg/kg-day	7.9E-04
				Nonachlor, cis-	8E-03	mg/kg	5.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-07	--	3.3E-06	mg/kg-day	1.0E-04	mg/kg-day	3.3E-02
				Nonachlor, trans-	2E-02	mg/kg	1.5E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.1E-07	--	8.5E-06	mg/kg-day	1.6E-05	mg/kg-day	5.5E-01
				Oxychlordane	3E-03	mg/kg	2.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.3E-08	--	1.4E-06	mg/kg-day	8.9E-05	mg/kg-day	1.5E-02
				Pyridine	1E+00	mg/kg	9.9E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.0E-03	mg/kg-day	5.8E-01
				Inorganics													
				Aluminum	9E+00	mg/kg	6.6E-04	mg/kg-day	--	--	--	--	3.9E-03	mg/kg-day	1.0E+00	mg/kg-day	3.9E-03

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, organic	7E-01	mg/kg	5.3E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	2.0E-02	mg/kg-day	1.5E-02
				Arsenic, inorganic	8E-02	mg/kg	5.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.7E-06	--	3.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Cadmium	5E-02	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-03	mg/kg-day	2.0E-02
				Chromium [as Cr(III)]	1E-01	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.5E+00	mg/kg-day	4.3E-05
				Cobalt	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Copper	6E-01	mg/kg	4.8E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	1.0E-03	mg/kg-day	2.8E-01
				Iron	6E+00	mg/kg	4.7E-04	mg/kg-day	--	--	--	--	2.7E-03	mg/kg-day	7.0E-01	mg/kg-day	3.9E-03
				Lead	5E-02	mg/kg	3.8E-06	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	--	--	--
				Manganese	4E-01	mg/kg	2.9E-05	mg/kg-day	--	--	--	--	1.7E-04	mg/kg-day	1.4E-01	mg/kg-day	1.2E-03
				Mercury	3E-01	mg/kg	2.3E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.5E-01
				Methyl Mercury	4E-01	mg/kg	3.1E-05	mg/kg-day	--	--	--	--	1.8E-04	mg/kg-day	1.0E-04	mg/kg-day	1.8E+00
				Selenium	7E-01	mg/kg	4.9E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	5.0E-03	mg/kg-day	5.8E-02
				Silver	2E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	5.0E-03	mg/kg-day	1.8E-03
				Vanadium	3E-02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	5.0E-03	mg/kg-day	3.0E-03
				Zinc	1E+01	mg/kg	9.5E-04	mg/kg-day	--	--	--	--	5.5E-03	mg/kg-day	3.0E-01	mg/kg-day	1.8E-02
				Total DLCs (excluding KM TEQs)							3.0E-04						1.7E+01
				Total DLCs (based on KM TEQs)							2.9E-04						1.6E+01
				Total PCDD/Fs (excluding KM TEQ)							2.1E-04						1.2E+01
				Total PCDD/Fs (based on KM TEQ)							2.1E-04						1.2E+01
				Total DL-PCBs (excluding KM TEQ)							8.7E-05						4.8E+00
				Total DL-PCBs (based on KM TEQ)							8.5E-05						4.7E+00
				Total Non-DL PCBs							7.2E-05						1.0E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-04						1.5E+01
				Total PCBs (DL & NDL; based on KM TEQ)							1.6E-04						1.5E+01
				Total PAHs							5.7E-06						1.9E-02
				Total Organics							2.1E-05						4.6E+00
				Total Inorganics							8.7E-06						2.8E+00
		White Perch Total (excluding KM TEQs)									4.0E-04						3.4E+01
		White Perch Total (based on KM TEQs)									4.0E-04						3.4E+01
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	3E-05	mg/kg	1.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-04	--	7.0E-09	mg/kg-day	7.0E-10	mg/kg-day	1.0E+01
				1,2,3,7,8-PeCDD	7E-07	mg/kg	3.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-06	--	1.9E-10	mg/kg-day	7.0E-10	mg/kg-day	2.6E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	9.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-07	--	5.4E-11	mg/kg-day	7.0E-09	mg/kg-day	7.7E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	2.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-07	--	1.6E-10	mg/kg-day	7.0E-09	mg/kg-day	2.3E-02
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	9.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-07	--	5.6E-11	mg/kg-day	7.0E-09	mg/kg-day	8.0E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	3.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.7E-08	--	1.8E-10	mg/kg-day	7.0E-08	mg/kg-day	2.6E-03
				OCDD	2E-06	mg/kg	9.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.1E-09	--	5.4E-10	mg/kg-day	2.3E-06	mg/kg-day	2.3E-04
				2,3,7,8-TCDF	1E-05	mg/kg	4.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-06	--	2.6E-09	mg/kg-day	7.0E-09	mg/kg-day	3.7E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	9.6E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.3E-07	--	5.6E-10	mg/kg-day	2.3E-08	mg/kg-day	2.4E-02
				2,3,4,7,8-PeCDF	5E-06	mg/kg	2.2E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.0E-05	--	1.3E-09	mg/kg-day	2.3E-09	mg/kg-day	5.6E-01
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	2.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.8E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	6.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-07	--	3.7E-10	mg/kg-day	7.0E-09	mg/kg-day	5.4E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	3.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-08	--	2.3E-11	mg/kg-day	7.0E-09	mg/kg-day	3.3E-03
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	1.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-07	--	9.9E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	2.1E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.2E-07	--	1.3E-09	mg/kg-day	7.0E-08	mg/kg-day	1.8E-02
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	3.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.6E-09	--	1.8E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				OCDF	2E-07	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.0E-10	--	6.5E-11	mg/kg-day	2.3E-06	mg/kg-day	2.8E-05
				KM TEQ DF	3E-05	mg/kg	1.4E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-04	--	8.1E-09	mg/kg-day	7.0E-10	mg/kg-day	1.2E+01
				PCB-77	2E-03	mg/kg	9.0E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.3E-06	--	5.2E-07	mg/kg-day	7.0E-06	mg/kg-day	7.5E-02
				PCB-81	9E-05	mg/kg	3.9E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-07	--	2.3E-08	mg/kg-day	2.3E-06	mg/kg-day	9.8E-03
				PCB-105	1E-02	mg/kg	4.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-06	--	2.8E-06	mg/kg-day	2.3E-05	mg/kg-day	1.2E-01

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-114	9E-04	mg/kg	4.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-07	--	2.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-118	5E-02	mg/kg	2.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-06	--	1.2E-05	mg/kg-day	2.3E-05	mg/kg-day	5.4E-01
				PCB-123	8E-04	mg/kg	3.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-07	--	2.2E-07	mg/kg-day	2.3E-05	mg/kg-day	9.4E-03
				PCB-126	1E-04	mg/kg	4.4E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-05	--	2.6E-08	mg/kg-day	7.0E-09	mg/kg-day	3.7E+00
				PCB-156/157	4E-03	mg/kg	1.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-07	--	1.0E-06	mg/kg-day	2.3E-05	mg/kg-day	4.3E-02
				PCB-167	2E-03	mg/kg	7.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-07	--	4.2E-07	mg/kg-day	2.3E-05	mg/kg-day	1.8E-02
				PCB-169	1E-05	mg/kg	5.0E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.3E-06	--	2.9E-09	mg/kg-day	2.3E-08	mg/kg-day	1.3E-01
				PCB-189	3E-04	mg/kg	1.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-08	--	7.2E-08	mg/kg-day	2.3E-05	mg/kg-day	3.1E-03
				KM TEQ PCB	1E-05	mg/kg	5.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.0E-05	--	3.1E-09	mg/kg-day	7.0E-10	mg/kg-day	4.4E+00
				Non-DL PCBs													
				Total Non-DL PCBs	3E-01	mg/kg	1.5E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.9E-05	--	8.6E-05	mg/kg-day	2.0E-05	mg/kg-day	4.3E+00
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	1.3E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.2E-08	M	7.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	1.2E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-07	M	7.2E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Benzo(b)fluoranthene	3E-03	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.0E-08	M	7.0E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.7E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.2E-10	M	9.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	1.2E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-07	M	7.1E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	9.8E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-07	M	5.7E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-04	mg/kg	1.0E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.4E-09	--	5.8E-08	mg/kg-day	3.0E-05	mg/kg-day	1.9E-03
				2,4'-DDE	4E-04	mg/kg	2.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.0E-09	--	1.2E-07	mg/kg-day	3.0E-04	mg/kg-day	4.0E-04
				2,4'-DDT	2E-04	mg/kg	9.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.1E-09	--	5.3E-08	mg/kg-day	5.0E-04	mg/kg-day	1.1E-04
				4,4'-DDD	3E-02	mg/kg	1.6E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.8E-07	--	9.4E-06	mg/kg-day	3.0E-05	mg/kg-day	3.1E-01
				4,4'-DDE	9E-02	mg/kg	4.3E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-06	--	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	8.4E-02
				4,4'-DDT	1E-03	mg/kg	5.0E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-08	--	2.9E-07	mg/kg-day	5.0E-04	mg/kg-day	5.8E-04
				Benzaldehyde	1E+00	mg/kg	5.5E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-07	--	3.2E-04	mg/kg-day	1.0E-01	mg/kg-day	3.2E-03
				Chlordane, alpha (cis)	2E-03	mg/kg	9.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.3E-08	--	5.4E-07	mg/kg-day	5.0E-04	mg/kg-day	1.1E-03
				Chlordane, gamma (trans)	3E-04	mg/kg	1.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.1E-09	--	6.8E-08	mg/kg-day	5.0E-04	mg/kg-day	1.4E-04
				Dieldrin	6E-03	mg/kg	2.8E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.5E-06	--	1.6E-06	mg/kg-day	5.0E-05	mg/kg-day	3.3E-02
				Heptachlor epoxide, cis-	4E-03	mg/kg	1.6E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.5E-06	--	9.6E-07	mg/kg-day	1.3E-05	mg/kg-day	7.4E-02
				Heptachlor epoxide, trans-	1E-03	mg/kg	5.3E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.8E-07	--	3.1E-07	mg/kg-day	1.3E-05	mg/kg-day	2.4E-02
				Hexachlorobenzene	1E-03	mg/kg	5.1E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	8.1E-08	--	2.9E-07	mg/kg-day	8.0E-04	mg/kg-day	3.7E-04
				Mirex	2E-04	mg/kg	9.2E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.7E-07	--	5.4E-08	mg/kg-day	2.0E-04	mg/kg-day	2.7E-04
				Nonachlor, cis-	5E-03	mg/kg	2.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.5E-08	--	1.4E-06	mg/kg-day	1.0E-04	mg/kg-day	1.4E-02
				Nonachlor, trans-	1E-02	mg/kg	4.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-07	--	2.8E-06	mg/kg-day	1.6E-05	mg/kg-day	1.8E-01
				Oxychlordane	2E-02	mg/kg	7.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-07	--	4.2E-06	mg/kg-day	8.9E-05	mg/kg-day	4.7E-02
				Pyridine	5E-01	mg/kg	2.3E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	1.0E-03	mg/kg-day	1.4E-01
				Inorganics													
				Aluminum	9E+00	mg/kg	4.2E-04	mg/kg-day	--	--	--	--	2.5E-03	mg/kg-day	1.0E+00	mg/kg-day	2.5E-03
				Arsenic, organic	3E+00	mg/kg	1.2E-04	mg/kg-day	--	--	--	--	6.8E-04	mg/kg-day	2.0E-02	mg/kg-day	3.4E-02
				Arsenic, inorganic	3E-01	mg/kg	1.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.9E-05	--	7.5E-05	mg/kg-day	3.0E-04	mg/kg-day	2.5E-01
				Cadmium	4E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	1.1E-04	mg/kg-day	1.0E-03	mg/kg-day	1.1E-01
				Chromium [as Cr(III)]	2E-01	mg/kg	7.6E-06	mg/kg-day	--	--	--	--	4.4E-05	mg/kg-day	1.5E+00	mg/kg-day	3.0E-05
				Cobalt	9E-02	mg/kg	4.1E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	7.9E-02
				Copper	3E+01	mg/kg	1.3E-03	mg/kg-day	--	--	--	--	7.7E-03	mg/kg-day	1.0E-03	mg/kg-day	7.7E+00
				Iron	4E+01	mg/kg	1.8E-03	mg/kg-day	--	--	--	--	1.0E-02	mg/kg-day	7.0E-01	mg/kg-day	1.5E-02
				Lead	3E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	7.5E-05	mg/kg-day	--	--	--
				Manganese	1E+01	mg/kg	4.5E-04	mg/kg-day	--	--	--	--	2.7E-03	mg/kg-day	1.4E-01	mg/kg-day	1.9E-02
				Mercury	2E-01	mg/kg	7.0E-06	mg/kg-day	--	--	--	--	4.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.4E-01
				Methyl Mercury	2E-01	mg/kg	7.9E-06	mg/kg-day	--	--	--	--	4.6E-05	mg/kg-day	1.0E-04	mg/kg-day	4.6E-01
				Selenium	1E+00	mg/kg	5.2E-05	mg/kg-day	--	--	--	--	3.0E-04	mg/kg-day	5.0E-03	mg/kg-day	6.1E-02

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Silver	8E-01	mg/kg	3.6E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	5.0E-03	mg/kg-day	4.2E-02
				Vanadium	7E-02	mg/kg	3.4E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	5.0E-03	mg/kg-day	3.9E-03
				Zinc	5E+01	mg/kg	2.1E-03	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	3.0E-01	mg/kg-day	4.2E-02
				Total DLCs (excluding KM TEQs)							2.9E-04						1.6E+01
				Total DLCs (based on KM TEQs)							2.9E-04						1.6E+01
				Total PCDD/Fs (excluding KM TEQ)							2.1E-04						1.2E+01
				Total PCDD/Fs (based on KM TEQ)							2.1E-04						1.2E+01
				Total DL-PCBs (excluding KM TEQ)							8.4E-05						4.6E+00
				Total DL-PCBs (based on KM TEQ)							8.0E-05						4.4E+00
				Total Non-DL PCBs							2.9E-05						4.3E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-04						8.9E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-04						8.7E+00
				Total PAHs							9.2E-07						2.4E-03
				Total Organics							9.4E-06						9.1E-01
				Total Inorganics							1.9E-05						8.9E+00
		Crab (H+M) Total (excluding KM TEQs)									3.5E-04						3.0E+01
		Crab (H+M) Total (based on KM TEQs)									3.5E-04						3.0E+01
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	4E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-05	--	1.0E-09	mg/kg-day	7.0E-10	mg/kg-day	1.5E+00
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-06	--	6.7E-11	mg/kg-day	7.0E-10	mg/kg-day	9.6E-02
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	7.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	3.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.7E-03
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-08	--	9.5E-12	mg/kg-day	7.0E-09	mg/kg-day	1.4E-03
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	6.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.2E-09	--	3.6E-11	mg/kg-day	7.0E-08	mg/kg-day	5.1E-04
				OCDD	5E-07	mg/kg	2.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.5E-10	--	1.2E-10	mg/kg-day	2.3E-06	mg/kg-day	5.3E-05
				2,3,7,8-TCDF	1E-06	mg/kg	5.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-07	--	3.1E-10	mg/kg-day	7.0E-09	mg/kg-day	4.4E-02
				1,2,3,7,8-PeCDF	3E-07	mg/kg	1.2E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.6E-08	--	7.2E-11	mg/kg-day	2.3E-08	mg/kg-day	3.1E-03
				2,3,4,7,8-PeCDF	5E-07	mg/kg	2.2E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.0E-06	--	1.3E-10	mg/kg-day	2.3E-09	mg/kg-day	5.5E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	3.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	8.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	4.8E-11	mg/kg-day	7.0E-09	mg/kg-day	6.9E-03
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	3.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.7E-03
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	2.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-08	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-08	--	1.1E-10	mg/kg-day	7.0E-08	mg/kg-day	1.5E-03
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	1.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.3E-09	--	9.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				OCDF	9E-08	mg/kg	4.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-10	--	2.5E-11	mg/kg-day	2.3E-06	mg/kg-day	1.1E-05
				KM TEQ DF	4E-06	mg/kg	2.0E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-05	--	1.2E-09	mg/kg-day	7.0E-10	mg/kg-day	1.7E+00
				PCB-77	2E-04	mg/kg	9.2E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-07	--	5.3E-08	mg/kg-day	7.0E-06	mg/kg-day	7.6E-03
				PCB-81	9E-06	mg/kg	4.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-08	--	2.4E-09	mg/kg-day	2.3E-06	mg/kg-day	1.0E-03
				PCB-105	1E-03	mg/kg	4.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-07	--	2.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.2E-02
				PCB-114	9E-05	mg/kg	4.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-08	--	2.5E-08	mg/kg-day	2.3E-05	mg/kg-day	1.1E-03
				PCB-118	4E-03	mg/kg	1.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-07	--	1.1E-06	mg/kg-day	2.3E-05	mg/kg-day	4.5E-02
				PCB-123	8E-05	mg/kg	3.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-08	--	2.1E-08	mg/kg-day	2.3E-05	mg/kg-day	9.0E-04
				PCB-126	8E-06	mg/kg	3.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-06	--	2.3E-09	mg/kg-day	7.0E-09	mg/kg-day	3.2E-01
				PCB-156/157	3E-04	mg/kg	1.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.6E-08	--	8.6E-08	mg/kg-day	2.3E-05	mg/kg-day	3.7E-03
				PCB-167	1E-04	mg/kg	5.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-08	--	3.3E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-169	1E-05	mg/kg	5.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-06	--	3.1E-09	mg/kg-day	2.3E-08	mg/kg-day	1.3E-01
				PCB-189	2E-05	mg/kg	7.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-09	--	4.2E-09	mg/kg-day	2.3E-05	mg/kg-day	1.8E-04
				KM TEQ PCB	1E-06	mg/kg	4.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.0E-06	--	2.7E-10	mg/kg-day	7.0E-10	mg/kg-day	3.9E-01
				Non-DL PCBs													
				Total Non-DL PCBs	3E-02	mg/kg	1.3E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.5E-06	--	7.4E-06	mg/kg-day	2.0E-05	mg/kg-day	3.7E-01
				PAHs													

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	1E-02	mg/kg	6.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-07	M	3.5E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	6.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-06	M	3.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	6.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-07	M	3.5E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	6.0E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-09	M	3.5E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	6.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-06	M	3.5E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	6.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-07	M	3.5E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-05	mg/kg	1.1E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.6E-10	--	6.4E-09	mg/kg-day	3.0E-05	mg/kg-day	2.1E-04
				2,4'-DDE	5E-05	mg/kg	2.2E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.6E-10	--	1.3E-08	mg/kg-day	3.0E-04	mg/kg-day	4.3E-05
				2,4'-DDT	4E-05	mg/kg	1.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.8E-10	--	1.0E-08	mg/kg-day	5.0E-04	mg/kg-day	2.0E-05
				4,4'-DDD	5E-03	mg/kg	2.4E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.7E-08	--	1.4E-06	mg/kg-day	3.0E-05	mg/kg-day	4.6E-02
				4,4'-DDE	1E-02	mg/kg	6.7E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-07	--	3.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				4,4'-DDT	2E-04	mg/kg	7.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-09	--	4.1E-08	mg/kg-day	5.0E-04	mg/kg-day	8.1E-05
				Benzaldehyde	1E+00	mg/kg	6.0E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.4E-07	--	3.5E-04	mg/kg-day	1.0E-01	mg/kg-day	3.5E-03
				Chlordane, alpha (cis)	6E-04	mg/kg	2.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.4E-09	--	1.6E-07	mg/kg-day	5.0E-04	mg/kg-day	3.1E-04
				Chlordane, gamma (trans)	3E-05	mg/kg	1.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.2E-10	--	7.1E-09	mg/kg-day	5.0E-04	mg/kg-day	1.4E-05
				Dieldrin	1E-03	mg/kg	6.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	9.9E-07	--	3.6E-07	mg/kg-day	5.0E-05	mg/kg-day	7.2E-03
				Heptachlor epoxide, cis-	3E-04	mg/kg	1.5E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-07	--	8.8E-08	mg/kg-day	1.3E-05	mg/kg-day	6.7E-03
				Heptachlor epoxide, trans-	2E-04	mg/kg	1.0E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.5E-08	--	6.1E-08	mg/kg-day	1.3E-05	mg/kg-day	4.7E-03
				Hexachlorobenzene	2E-04	mg/kg	1.0E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.6E-08	--	5.9E-08	mg/kg-day	8.0E-04	mg/kg-day	7.4E-05
				Mirex	5E-05	mg/kg	2.3E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.2E-08	--	1.4E-08	mg/kg-day	2.0E-04	mg/kg-day	6.8E-05
				Nonachlor, cis-	7E-04	mg/kg	3.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	1.8E-07	mg/kg-day	1.0E-04	mg/kg-day	1.8E-03
				Nonachlor, trans-	1E-03	mg/kg	5.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.9E-08	--	3.2E-07	mg/kg-day	1.6E-05	mg/kg-day	2.1E-02
				Oxychlordane	2E-03	mg/kg	7.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.7E-08	--	4.6E-07	mg/kg-day	8.9E-05	mg/kg-day	5.1E-03
				Pyridine	4E-01	mg/kg	1.9E-05	mg/kg-day	--	--	--	--	1.1E-04	mg/kg-day	1.0E-03	mg/kg-day	1.1E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	2.6E-04	mg/kg-day	--	--	--	--	1.5E-03	mg/kg-day	1.0E+00	mg/kg-day	1.5E-03
				Arsenic, organic	2E+00	mg/kg	1.1E-04	mg/kg-day	--	--	--	--	6.3E-04	mg/kg-day	2.0E-02	mg/kg-day	3.2E-02
				Arsenic, inorganic	3E-01	mg/kg	1.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-05	--	7.0E-05	mg/kg-day	3.0E-04	mg/kg-day	2.3E-01
				Cadmium	2E-01	mg/kg	7.5E-06	mg/kg-day	--	--	--	--	4.4E-05	mg/kg-day	1.0E-03	mg/kg-day	4.4E-02
				Chromium [as Cr(III)]	2E-01	mg/kg	7.0E-06	mg/kg-day	--	--	--	--	4.1E-05	mg/kg-day	1.5E+00	mg/kg-day	2.7E-05
				Cobalt	7E-02	mg/kg	3.2E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	3.0E-04	mg/kg-day	6.3E-02
				Copper	2E+01	mg/kg	8.4E-04	mg/kg-day	--	--	--	--	4.9E-03	mg/kg-day	1.0E-03	mg/kg-day	4.9E+00
				Iron	2E+01	mg/kg	8.6E-04	mg/kg-day	--	--	--	--	5.0E-03	mg/kg-day	7.0E-01	mg/kg-day	7.2E-03
				Lead	1E-01	mg/kg	4.4E-06	mg/kg-day	--	--	--	--	2.6E-05	mg/kg-day	--	--	--
				Manganese	6E+00	mg/kg	2.8E-04	mg/kg-day	--	--	--	--	1.6E-03	mg/kg-day	1.4E-01	mg/kg-day	1.2E-02
				Mercury	2E-01	mg/kg	8.3E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	3.0E-04	mg/kg-day	1.6E-01
				Methyl Mercury	2E-01	mg/kg	9.8E-06	mg/kg-day	--	--	--	--	5.7E-05	mg/kg-day	1.0E-04	mg/kg-day	5.7E-01
				Selenium	9E-01	mg/kg	4.3E-05	mg/kg-day	--	--	--	--	2.5E-04	mg/kg-day	5.0E-03	mg/kg-day	5.0E-02
				Silver	5E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	5.0E-03	mg/kg-day	2.6E-02
				Vanadium	4E-02	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	5.0E-03	mg/kg-day	2.3E-03
				Zinc	5E+01	mg/kg	2.2E-03	mg/kg-day	--	--	--	--	1.3E-02	mg/kg-day	3.0E-01	mg/kg-day	4.2E-02
Total DLCs (excluding KM TEQs)											4.1E-05						2.3E+00
Total DLCs (based on KM TEQs)											3.7E-05						2.1E+00
Total PCDD/Fs (excluding KM TEQ)											3.1E-05						1.7E+00
Total PCDD/Fs (based on KM TEQ)											3.0E-05						1.7E+00
Total DL-PCBs (excluding KM TEQ)											9.5E-06						5.3E-01
Total DL-PCBs (based on KM TEQ)											7.0E-06						3.9E-01
Total Non-DL PCBs											2.5E-06						3.7E-01
Total PCBs (DL & NDL; excluding KM TEQ)											1.2E-05						9.0E-01
Total PCBs (DL & NDL; based on KM TEQ)											9.5E-06						7.6E-01

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total PAHs							3.4E-06						1.2E-02
				Total Organics							1.9E-06						2.2E-01
				Total Inorganics							1.8E-05						6.1E+00
		Crab (Muscle) Total (excluding KM TEQs)									6.6E-05						9.0E+00
		Crab (Muscle) Total (based on KM TEQs)									6.3E-05						8.8E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-05	mg/kg	4.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.3E-04	--	2.4E-08	mg/kg-day	7.0E-10	mg/kg-day	3.5E+01
				1,2,3,7,8-PeCDD	2E-06	mg/kg	1.0E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-05	--	5.8E-10	mg/kg-day	7.0E-10	mg/kg-day	8.3E-01
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	3.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	9.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-06	--	5.6E-10	mg/kg-day	7.0E-09	mg/kg-day	8.0E-02
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	3.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	1.0E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-07	--	6.1E-10	mg/kg-day	7.0E-08	mg/kg-day	8.7E-03
				OCDD	6E-06	mg/kg	3.0E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-08	--	1.7E-09	mg/kg-day	2.3E-06	mg/kg-day	7.4E-04
				2,3,7,8-TCDF	3E-05	mg/kg	1.6E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-05	--	9.2E-09	mg/kg-day	7.0E-09	mg/kg-day	1.3E+00
				1,2,3,7,8-PeCDF	7E-06	mg/kg	3.4E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-06	--	2.0E-09	mg/kg-day	2.3E-08	mg/kg-day	8.5E-02
				2,3,4,7,8-PeCDF	2E-05	mg/kg	8.0E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.6E-05	--	4.7E-09	mg/kg-day	2.3E-09	mg/kg-day	2.0E+00
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	7.6E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-05	--	4.4E-09	mg/kg-day	7.0E-09	mg/kg-day	6.3E-01
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	2.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.9E-01
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	6.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.4E-08	--	3.6E-11	mg/kg-day	7.0E-09	mg/kg-day	5.2E-03
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	6.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-07	--	3.5E-10	mg/kg-day	7.0E-09	mg/kg-day	5.0E-02
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	7.8E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-06	--	4.5E-09	mg/kg-day	7.0E-08	mg/kg-day	6.5E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.5E-09	--	3.7E-11	mg/kg-day	7.0E-08	mg/kg-day	5.3E-04
				OCDF	8E-07	mg/kg	3.8E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-09	--	2.2E-10	mg/kg-day	2.3E-06	mg/kg-day	9.6E-05
				KM TEQ DF	1E-04	mg/kg	4.8E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.2E-04	--	2.8E-08	mg/kg-day	7.0E-10	mg/kg-day	4.0E+01
				PCB-77	7E-03	mg/kg	3.2E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.7E-06	--	1.8E-06	mg/kg-day	7.0E-06	mg/kg-day	2.6E-01
				PCB-81	3E-04	mg/kg	1.4E-08	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.3E-07	--	8.2E-08	mg/kg-day	2.3E-06	mg/kg-day	3.5E-02
				PCB-105	4E-02	mg/kg	1.7E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-06	--	1.0E-05	mg/kg-day	2.3E-05	mg/kg-day	4.3E-01
				PCB-114	3E-03	mg/kg	1.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-07	--	8.5E-07	mg/kg-day	2.3E-05	mg/kg-day	3.6E-02
				PCB-118	2E-01	mg/kg	7.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-05	--	4.5E-05	mg/kg-day	2.3E-05	mg/kg-day	1.9E+00
				PCB-123	3E-03	mg/kg	1.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-07	--	7.9E-07	mg/kg-day	2.3E-05	mg/kg-day	3.4E-02
				PCB-126	4E-04	mg/kg	1.6E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-04	--	9.4E-08	mg/kg-day	7.0E-09	mg/kg-day	1.3E+01
				PCB-156/157	1E-02	mg/kg	6.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-06	--	3.6E-06	mg/kg-day	2.3E-05	mg/kg-day	1.6E-01
				PCB-167	6E-03	mg/kg	2.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-06	--	1.5E-06	mg/kg-day	2.3E-05	mg/kg-day	6.5E-02
				PCB-169	4E-05	mg/kg	1.7E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.5E-06	--	9.7E-09	mg/kg-day	2.3E-08	mg/kg-day	4.2E-01
				PCB-189	1E-03	mg/kg	4.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-07	--	2.7E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				KM TEQ PCB	4E-05	mg/kg	1.9E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-04	--	1.1E-08	mg/kg-day	7.0E-10	mg/kg-day	1.6E+01
				Non-DL PCBs													
				Total Non-DL PCBs	1E+00	mg/kg	5.4E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-04	--	3.1E-04	mg/kg-day	2.0E-05	mg/kg-day	1.6E+01
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	1.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.7E-08	M	8.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	1.3E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-07	M	7.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Benzo(b)fluoranthene	3E-03	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-08	M	7.2E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	2.1E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.1E-10	M	1.2E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	1.3E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.2E-07	M	7.4E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	3.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.6E-07	M	2.0E-05	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	8E-04	mg/kg	3.5E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.4E-09	--	2.0E-07	mg/kg-day	3.0E-05	mg/kg-day	6.8E-03
				2,4'-DDE	2E-03	mg/kg	7.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.5E-08	--	4.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				2,4'-DDT	7E-04	mg/kg	3.0E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.0E-08	--	1.7E-07	mg/kg-day	5.0E-04	mg/kg-day	3.5E-04
				4,4'-DDD	1E-01	mg/kg	5.6E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-06	--	3.2E-05	mg/kg-day	3.0E-05	mg/kg-day	1.1E+00
				4,4'-DDE	3E-01	mg/kg	1.5E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.0E-06	--	8.7E-05	mg/kg-day	3.0E-04	mg/kg-day	2.9E-01

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				4,4'-DDT	4E-03	mg/kg	1.7E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.8E-08	--	1.0E-06	mg/kg-day	5.0E-04	mg/kg-day	2.0E-03
				Benzaldehyde	3E+00	mg/kg	1.2E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.7E-07	--	6.8E-04	mg/kg-day	1.0E-01	mg/kg-day	6.8E-03
				Chlordane, alpha (cis)	7E-03	mg/kg	3.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-07	--	1.8E-06	mg/kg-day	5.0E-04	mg/kg-day	3.5E-03
				Chlordane, gamma (trans)	9E-04	mg/kg	4.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-08	--	2.4E-07	mg/kg-day	5.0E-04	mg/kg-day	4.8E-04
				Dieldrin	2E-02	mg/kg	9.3E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.5E-05	--	5.4E-06	mg/kg-day	5.0E-05	mg/kg-day	1.1E-01
				Heptachlor epoxide, cis-	1E-02	mg/kg	6.0E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.5E-06	--	3.5E-06	mg/kg-day	1.3E-05	mg/kg-day	2.7E-01
				Heptachlor epoxide, trans-	4E-03	mg/kg	1.8E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.6E-06	--	1.0E-06	mg/kg-day	1.3E-05	mg/kg-day	7.9E-02
				Hexachlorobenzene	4E-03	mg/kg	1.7E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.7E-07	--	9.7E-07	mg/kg-day	8.0E-04	mg/kg-day	1.2E-03
				Mirex	7E-04	mg/kg	3.1E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	5.5E-07	--	1.8E-07	mg/kg-day	2.0E-04	mg/kg-day	8.9E-04
				Nonachlor, cis-	2E-02	mg/kg	8.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-07	--	5.0E-06	mg/kg-day	1.0E-04	mg/kg-day	5.0E-02
				Nonachlor, trans-	4E-02	mg/kg	1.7E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.0E-07	--	1.0E-05	mg/kg-day	1.6E-05	mg/kg-day	6.4E-01
				Oxychlordane	6E-02	mg/kg	2.5E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.9E-07	--	1.5E-05	mg/kg-day	8.9E-05	mg/kg-day	1.7E-01
				Pyridine	8E-01	mg/kg	3.6E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	1.0E-03	mg/kg-day	2.1E-01
				Inorganics													
				Aluminum	3E+01	mg/kg	1.3E-03	mg/kg-day	--	--	--	--	7.6E-03	mg/kg-day	1.0E+00	mg/kg-day	7.6E-03
				Arsenic, organic	3E+00	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	8.3E-04	mg/kg-day	2.0E-02	mg/kg-day	4.2E-02
				Arsenic, inorganic	3E-01	mg/kg	1.6E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.4E-05	--	9.3E-05	mg/kg-day	3.0E-04	mg/kg-day	3.1E-01
				Cadmium	1E+00	mg/kg	5.8E-05	mg/kg-day	--	--	--	--	3.4E-04	mg/kg-day	1.0E-03	mg/kg-day	3.4E-01
				Chromium [as Cr(III)]	3E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	7.6E-05	mg/kg-day	1.5E+00	mg/kg-day	5.1E-05
				Cobalt	2E-01	mg/kg	1.0E-05	mg/kg-day	--	--	--	--	6.0E-05	mg/kg-day	3.0E-04	mg/kg-day	2.0E-01
				Copper	7E+01	mg/kg	3.4E-03	mg/kg-day	--	--	--	--	2.0E-02	mg/kg-day	1.0E-03	mg/kg-day	2.0E+01
				Iron	1E+02	mg/kg	4.6E-03	mg/kg-day	--	--	--	--	2.7E-02	mg/kg-day	7.0E-01	mg/kg-day	3.9E-02
				Lead	8E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	2.2E-04	mg/kg-day	--	--	--
				Manganese	2E+01	mg/kg	8.5E-04	mg/kg-day	--	--	--	--	5.0E-03	mg/kg-day	1.4E-01	mg/kg-day	3.5E-02
				Mercury	7E-02	mg/kg	3.4E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	3.0E-04	mg/kg-day	6.7E-02
				Methyl Mercury	6E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-04	mg/kg-day	1.6E-01
				Selenium	2E+00	mg/kg	8.4E-05	mg/kg-day	--	--	--	--	4.9E-04	mg/kg-day	5.0E-03	mg/kg-day	9.8E-02
				Silver	2E+00	mg/kg	8.8E-05	mg/kg-day	--	--	--	--	5.1E-04	mg/kg-day	5.0E-03	mg/kg-day	1.0E-01
				Vanadium	2E-01	mg/kg	7.9E-06	mg/kg-day	--	--	--	--	4.6E-05	mg/kg-day	5.0E-03	mg/kg-day	9.2E-03
				Zinc	5E+01	mg/kg	2.2E-03	mg/kg-day	--	--	--	--	1.3E-02	mg/kg-day	3.0E-01	mg/kg-day	4.2E-02
				Total DLCs (excluding KM TEQs)							1.0E-03						5.7E+01
				Total DLCs (based on KM TEQs)							1.0E-03						5.6E+01
				Total PCDD/Fs (excluding KM TEQ)							7.2E-04						4.0E+01
				Total PCDD/Fs (based on KM TEQ)							7.2E-04						4.0E+01
				Total DL-PCBs (excluding KM TEQ)							3.0E-04						1.7E+01
				Total DL-PCBs (based on KM TEQ)							2.9E-04						1.6E+01
				Total Non-DL PCBs							1.1E-04						1.6E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							4.1E-04						3.2E+01
				Total PCBs (DL & NDL; based on KM TEQ)							4.0E-04						3.2E+01
				Total PAHs							1.6E-06						2.5E-03
				Total Organics							3.2E-05						2.9E+00
				Total Inorganics							2.4E-05						2.2E+01
		Crab (Hepatopancreas) Total (excluding KM TEQs)									1.2E-03						9.7E+01
		Crab (Hepatopancreas) Total (based on KM TEQs)									1.2E-03						9.6E+01
Sediment	Sediment	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-07	--	9.7E-12	mg/kg-day	7.0E-10	mg/kg-day	1.4E-02
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-08	--	5.1E-13	mg/kg-day	7.0E-10	mg/kg-day	7.3E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	4.6E-13	mg/kg-day	7.0E-09	mg/kg-day	6.5E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.6E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.6E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.3E-09	--	3.2E-11	mg/kg-day	7.0E-08	mg/kg-day	4.6E-04

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				OCDD	3E-03	mg/kg	5.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-09	--	3.3E-10	mg/kg-day	2.3E-06	mg/kg-day	1.4E-04
				2,3,7,8-TCDF	1E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-09	--	1.7E-12	mg/kg-day	7.0E-09	mg/kg-day	2.5E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.0E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.2E-10	--	1.2E-12	mg/kg-day	2.3E-08	mg/kg-day	5.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.4E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.5E-08	--	2.0E-12	mg/kg-day	2.3E-09	mg/kg-day	8.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--	9.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.3E-03
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-09	--	2.4E-12	mg/kg-day	7.0E-09	mg/kg-day	3.4E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.5E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-09	--	1.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.9E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	6.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-08	--	4.0E-11	mg/kg-day	7.0E-08	mg/kg-day	5.8E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-10	--	1.4E-12	mg/kg-day	7.0E-08	mg/kg-day	2.0E-05
				OCDF	4E-04	mg/kg	9.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.4E-10	--	5.7E-11	mg/kg-day	2.3E-06	mg/kg-day	2.4E-05
				KM TEQ DF	1E-04	mg/kg	2.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-07	--	1.3E-11	mg/kg-day	7.0E-10	mg/kg-day	1.9E-02
				PCB-77	8E-03	mg/kg	1.7E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-09	--	9.8E-10	mg/kg-day	7.0E-06	mg/kg-day	1.4E-04
				PCB-81	3E-04	mg/kg	6.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-10	--	3.8E-11	mg/kg-day	2.3E-06	mg/kg-day	1.6E-05
				PCB-105	1E-02	mg/kg	2.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-09	--	1.6E-09	mg/kg-day	2.3E-05	mg/kg-day	6.7E-05
				PCB-114	9E-04	mg/kg	1.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-11	--	1.1E-10	mg/kg-day	2.3E-05	mg/kg-day	4.6E-06
				PCB-118	4E-02	mg/kg	7.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-09	--	4.6E-09	mg/kg-day	2.3E-05	mg/kg-day	2.0E-04
				PCB-123	1E-03	mg/kg	2.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-10	--	1.3E-10	mg/kg-day	2.3E-05	mg/kg-day	5.7E-06
				PCB-126	2E-04	mg/kg	5.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-08	--	3.1E-11	mg/kg-day	7.0E-09	mg/kg-day	4.4E-03
				PCB-156/157	3E-03	mg/kg	7.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-10	--	4.1E-10	mg/kg-day	2.3E-05	mg/kg-day	1.8E-05
				PCB-167	1E-03	mg/kg	2.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--	1.5E-10	mg/kg-day	2.3E-05	mg/kg-day	6.3E-06
				PCB-169	3E-04	mg/kg	5.5E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-08	--	3.2E-11	mg/kg-day	2.3E-08	mg/kg-day	1.4E-03
				PCB-189	2E-04	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	3.1E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				KM TEQ PCB	3E-05	mg/kg	6.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.9E-08	--	3.9E-12	mg/kg-day	7.0E-10	mg/kg-day	5.5E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.4E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.9E-08	--	8.3E-08	mg/kg-day	2.0E-05	mg/kg-day	4.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-07	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.6E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.9E-09	M	2.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.6E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	6.4E-10	M	1.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.1E-10	M	2.5E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.3E-08	M	5.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.1E-09	M	9.6E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	7.2E-07	mg/kg-day	4.0E-03	mg/kg-day	1.8E-04
				TPH (C9-C40)	4E+02	mg/kg	8.9E-06	mg/kg-day	--	--	--	--	5.2E-05	mg/kg-day	4.0E-03	mg/kg-day	1.3E-02
				Inorganics													
				Aluminum	1E+04	mg/kg	2.6E-04	mg/kg-day	--	--	--	--	1.5E-03	mg/kg-day	1.0E+00	mg/kg-day	1.5E-03
				Antimony	2E+00	mg/kg	5.1E-08	mg/kg-day	--	--	--	--	3.0E-07	mg/kg-day	4.0E-04	mg/kg-day	7.4E-04
				Arsenic, inorganic	3E+01	mg/kg	4.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.0E-07	--	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.8E-03
				Cadmium	3E+00	mg/kg	6.7E-08	mg/kg-day	--	--	--	--	3.9E-07	mg/kg-day	1.0E-03	mg/kg-day	3.9E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	1.5E+00	mg/kg-day	9.1E-06
				Cobalt	1E+01	mg/kg	3.1E-07	mg/kg-day	--	--	--	--	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	5.9E-03
				Copper	2E+02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--	2.1E-05	mg/kg-day	1.0E-03	mg/kg-day	2.1E-02
				Chromium (VI)	1E+00	mg/kg	3.0E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.8E-08	M	1.8E-07	mg/kg-day	3.0E-03	mg/kg-day	5.9E-05
				Iron	4E+04	mg/kg	9.4E-04	mg/kg-day	--	--	--	--	5.5E-03	mg/kg-day	7.0E-01	mg/kg-day	7.8E-03
				Lead	5E+02	mg/kg	1.0E-05	mg/kg-day	--	--	--	--	5.9E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	7.7E-06	mg/kg-day	--	--	--	--	4.5E-05	mg/kg-day	2.4E-02	mg/kg-day	1.9E-03
				Mercury	2E+00	mg/kg	4.3E-08	mg/kg-day	--	--	--	--	2.5E-07	mg/kg-day	3.0E-04	mg/kg-day	8.4E-04
				Nickel	7E+01	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.5E-06	mg/kg-day	2.0E-02	mg/kg-day	4.2E-04

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Thallium	2E-01	mg/kg	5.3E-09	mg/kg-day	--	--	--	--	3.1E-08	mg/kg-day	1.0E-05	mg/kg-day	3.1E-03
				Vanadium	5E+01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	6.3E-06	mg/kg-day	5.0E-03	mg/kg-day	1.3E-03
				Zinc	1E+03	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	3.0E-01	mg/kg-day	5.2E-04
				Total DLCs (excluding KM TEQs)							4.6E-07						2.6E-02
				Total DLCs (based on KM TEQs)							4.4E-07						2.4E-02
				Total PCDD/Fs (excluding KM TEQ)							3.5E-07						1.9E-02
				Total PCDD/Fs (based on KM TEQ)							3.4E-07						1.9E-02
				Total DL-PCBs (excluding KM TEQ)							1.1E-07						6.2E-03
				Total DL-PCBs (based on KM TEQ)							9.9E-08						5.5E-03
				Total Non-DL PCBs							2.9E-08						4.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.4E-07						1.0E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-07						9.7E-03
				Total PAHs							1.6E-07						8.6E-04
				Total Organics							0.0E+00						1.3E-02
				Total Inorganics							6.4E-07						5.3E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.3E-06						9.7E-02
		Sediment Ingestion Total (based on KM TEQs)									1.3E-06						9.6E-02
Sediment	Sediment	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	8.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-07	--	5.1E-12	mg/kg-day	7.0E-10	mg/kg-day	7.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	4.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.0E-09	--	2.7E-13	mg/kg-day	7.0E-10	mg/kg-day	3.9E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	4.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--	9.8E-13	mg/kg-day	7.0E-09	mg/kg-day	1.4E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	9.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	5.8E-13	mg/kg-day	7.0E-09	mg/kg-day	8.3E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	3.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-09	--	1.7E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				OCDD	3E-03	mg/kg	3.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-09	--	1.8E-10	mg/kg-day	2.3E-06	mg/kg-day	7.5E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-09	--	9.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.1E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.9E-10	--	6.4E-13	mg/kg-day	2.3E-08	mg/kg-day	2.7E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	8.2E-09	--	1.1E-12	mg/kg-day	2.3E-09	mg/kg-day	4.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	8.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--	4.9E-12	mg/kg-day	7.0E-09	mg/kg-day	6.9E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	2.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-09	--	1.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.8E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--	9.5E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	7.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	3.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.5E-09	--	2.2E-11	mg/kg-day	7.0E-08	mg/kg-day	3.1E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-10	--	7.3E-13	mg/kg-day	7.0E-08	mg/kg-day	1.0E-05
				OCDF	4E-04	mg/kg	5.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-10	--	3.0E-11	mg/kg-day	2.3E-06	mg/kg-day	1.3E-05
				KM TEQ DF	1E-04	mg/kg	1.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-07	--	7.0E-12	mg/kg-day	7.0E-10	mg/kg-day	1.0E-02
				PCB-77	8E-03	mg/kg	8.9E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.3E-09	--	5.2E-10	mg/kg-day	7.0E-06	mg/kg-day	7.4E-05
				PCB-81	3E-04	mg/kg	3.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--	2.0E-11	mg/kg-day	2.3E-06	mg/kg-day	8.6E-06
				PCB-105	1E-02	mg/kg	1.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-10	--	8.3E-10	mg/kg-day	2.3E-05	mg/kg-day	3.6E-05
				PCB-114	9E-04	mg/kg	9.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-11	--	5.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.5E-06
				PCB-118	4E-02	mg/kg	4.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-09	--	2.4E-09	mg/kg-day	2.3E-05	mg/kg-day	1.0E-04
				PCB-123	1E-03	mg/kg	1.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-11	--	7.1E-11	mg/kg-day	2.3E-05	mg/kg-day	3.0E-06
				PCB-126	2E-04	mg/kg	2.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-08	--	1.6E-11	mg/kg-day	7.0E-09	mg/kg-day	2.4E-03
				PCB-156/157	3E-03	mg/kg	3.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-10	--	2.2E-10	mg/kg-day	2.3E-05	mg/kg-day	9.3E-06
				PCB-167	1E-03	mg/kg	1.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.0E-11	--	7.8E-11	mg/kg-day	2.3E-05	mg/kg-day	3.3E-06
				PCB-169	3E-04	mg/kg	2.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-08	--	1.7E-11	mg/kg-day	2.3E-08	mg/kg-day	7.3E-04
				PCB-189	2E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-11	--	1.6E-11	mg/kg-day	2.3E-05	mg/kg-day	7.0E-07
				KM TEQ PCB	3E-05	mg/kg	3.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.3E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	2.9E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	3.6E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	7.1E-08	--	2.1E-07	mg/kg-day	2.0E-05	mg/kg-day	1.0E-02
				PAHs													

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	2E+00	mg/kg	1.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.6E-08	M	6.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.6E-07	M	6.0E-07	mg/kg-day	3.0E-04	mg/kg-day	2.0E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	9.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.3E-08	M	5.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	5.9E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.5E-09	M	3.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.0E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.5E-10	M	5.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	2.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.3E-08	M	1.2E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.5E-09	M	2.2E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	3.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.3E-07	--	2.1E-06	mg/kg-day	3.0E-04	mg/kg-day	6.9E-03
				Cadmium	3E+00	mg/kg	1.2E-09	mg/kg-day	--	--	--	--	6.9E-09	mg/kg-day	2.5E-05	mg/kg-day	2.8E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							2.4E-07						1.4E-02
				Total DLCs (based on KM TEQs)							2.3E-07						1.3E-02
				Total PCDD/Fs (excluding KM TEQ)							1.8E-07						1.0E-02
				Total PCDD/Fs (based on KM TEQ)							1.8E-07						1.0E-02
				Total DL-PCBs (excluding KM TEQ)							6.0E-08						3.3E-03
				Total DL-PCBs (based on KM TEQ)							5.3E-08						2.9E-03
				Total Non-DL PCBs							7.1E-08						1.0E-02
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-07						1.4E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-07						1.3E-02
				Total PAHs							3.7E-07						2.0E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							5.3E-07						7.2E-03
		Sediment Dermal Total (excluding KM TEQs)									1.2E-06						3.3E-02
		Sediment Dermal Total (based on KM TEQs)									1.2E-06						3.2E-02
Fishing - Sediment Total (excluding KM TEQs)											2.5E-06						1.3E-01
Fishing - Sediment Total (based on KM TEQs)											2.5E-06						1.3E-01
Surface Water	Surface Water	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-09	--	7.7E-14	mg/kg-day	7.0E-10	mg/kg-day	1.1E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	4.6E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-10	--	2.7E-14	mg/kg-day	7.0E-10	mg/kg-day	3.8E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	5.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-11	--	3.1E-14	mg/kg-day	7.0E-09	mg/kg-day	4.4E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	9.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-10	--	5.5E-14	mg/kg-day	7.0E-09	mg/kg-day	7.8E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	6.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-10	--	3.9E-13	mg/kg-day	7.0E-08	mg/kg-day	5.6E-06
				OCDD	6E-05	µg/L	7.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-11	--	4.1E-12	mg/kg-day	2.3E-06	mg/kg-day	1.8E-06

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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,7,8-TCDF	5E-07	µg/L	5.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-11	--	3.0E-14	mg/kg-day	7.0E-09	mg/kg-day	4.3E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	4.1E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-11	--	2.4E-14	mg/kg-day	2.3E-08	mg/kg-day	1.0E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	7.1E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.2E-10	--	4.2E-14	mg/kg-day	2.3E-09	mg/kg-day	1.8E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	4.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-11	--	2.8E-14	mg/kg-day	7.0E-09	mg/kg-day	4.0E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-10	--	1.7E-13	mg/kg-day	7.0E-09	mg/kg-day	2.4E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	3.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	2.5E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	8.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-10	--	4.9E-13	mg/kg-day	7.0E-08	mg/kg-day	7.0E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	5.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.9E-12	--	3.1E-14	mg/kg-day	7.0E-08	mg/kg-day	4.4E-07
				OCDF	1E-05	µg/L	1.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.1E-12	--	9.2E-13	mg/kg-day	2.3E-06	mg/kg-day	3.9E-07
				KM TEQ DF	2E-06	µg/L	2.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.0E-09	--	1.5E-13	mg/kg-day	7.0E-10	mg/kg-day	2.2E-04
				PCB-77	2E-05	µg/L	2.2E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.3E-12	--	1.3E-12	mg/kg-day	7.0E-06	mg/kg-day	1.9E-07
				PCB-81	7E-07	µg/L	7.4E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-13	--	4.3E-14	mg/kg-day	2.3E-06	mg/kg-day	1.9E-08
				PCB-105	7E-05	µg/L	7.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-12	--	4.6E-12	mg/kg-day	2.3E-05	mg/kg-day	2.0E-07
				PCB-114	4E-06	µg/L	4.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-13	--	2.4E-13	mg/kg-day	2.3E-05	mg/kg-day	1.0E-08
				PCB-118	2E-04	µg/L	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-12	--	1.0E-11	mg/kg-day	2.3E-05	mg/kg-day	4.4E-07
				PCB-123	3E-06	µg/L	3.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-13	--	2.0E-13	mg/kg-day	2.3E-05	mg/kg-day	8.6E-09
				PCB-126	7E-07	µg/L	7.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-10	--	4.3E-14	mg/kg-day	7.0E-09	mg/kg-day	6.1E-06
				PCB-156/157	2E-05	µg/L	2.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.5E-13	--	1.2E-12	mg/kg-day	2.3E-05	mg/kg-day	5.3E-08
				PCB-167	7E-06	µg/L	7.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-13	--	4.1E-13	mg/kg-day	2.3E-05	mg/kg-day	1.8E-08
				PCB-169	4E-07	µg/L	4.4E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-11	--	2.5E-14	mg/kg-day	2.3E-08	mg/kg-day	1.1E-06
				PCB-189	9E-07	µg/L	9.3E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-14	--	5.4E-14	mg/kg-day	2.3E-05	mg/kg-day	2.3E-09
				KM TEQ PCB	1E-07	µg/L	1.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-10	--	6.9E-15	mg/kg-day	7.0E-10	mg/kg-day	9.8E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.3E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.2E-11	M	7.5E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.6E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.1E-10	M	9.6E-10	mg/kg-day	3.0E-04	mg/kg-day	3.2E-06
				Benzo(b)fluoranthene	2E-02	µg/L	2.2E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-11	M	1.3E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.0E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.5E-12	M	5.8E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	2.2E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.5E-13	M	1.3E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	4.2E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-10	M	2.5E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	9.4E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.3E-11	M	5.5E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	3.8E-10	mg/kg-day	--	--	--	--	2.2E-09	mg/kg-day	2.0E-02	mg/kg-day	1.1E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.3E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	4.0E-11	--	7.6E-09	mg/kg-day	1.0E-02	mg/kg-day	7.6E-07
				Trichloroethylene	1E-01	µg/L	1.4E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.6E-10	M	8.3E-09	mg/kg-day	5.0E-04	mg/kg-day	1.7E-05
				Inorganics													
				Antimony	7E-01	µg/L	7.6E-09	mg/kg-day	--	--	--	--	4.4E-08	mg/kg-day	4.0E-04	mg/kg-day	1.1E-04
				Arsenic, inorganic	1E+00	µg/L	1.4E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-08	--	8.1E-08	mg/kg-day	3.0E-04	mg/kg-day	2.7E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.4E-08	mg/kg-day	--	--	--	--	8.2E-08	mg/kg-day	1.5E+00	mg/kg-day	5.4E-08
				Chromium (VI)	2E-01	µg/L	2.4E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.0E-09	M	1.4E-08	mg/kg-day	3.0E-03	mg/kg-day	4.7E-06
				Iron	5E+02	µg/L	5.8E-06	mg/kg-day	--	--	--	--	3.4E-05	mg/kg-day	7.0E-01	mg/kg-day	4.8E-05
				Manganese	7E+01	µg/L	7.5E-07	mg/kg-day	--	--	--	--	4.4E-06	mg/kg-day	2.4E-02	mg/kg-day	1.8E-04
				Mercury	3E-02	µg/L	2.9E-10	mg/kg-day	--	--	--	--	1.7E-09	mg/kg-day	3.0E-04	mg/kg-day	5.6E-06
				Thallium	1E-02	µg/L	1.3E-10	mg/kg-day	--	--	--	--	7.8E-10	mg/kg-day	1.0E-05	mg/kg-day	7.8E-05
				Titanium	8E+00	µg/L	8.6E-08	mg/kg-day	--	--	--	--	5.0E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							5.1E-09						2.8E-04
				Total DLCs (based on KM TEQs)							4.1E-09						2.3E-04
				Total PCDD/Fs (excluding KM TEQ)							4.9E-09						2.7E-04

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total PCDD/Fs (based on KM TEQ)							4.0E-09						2.2E-04
				Total DL-PCBs (excluding KM TEQ)							1.5E-10						8.1E-06
				Total DL-PCBs (based on KM TEQ)							1.8E-10						9.8E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-10						8.1E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-10						9.8E-06
				Total PAHs							6.3E-10						3.3E-06
				Total Organics							2.0E-10						1.7E-05
				Total Inorganics							2.4E-08						7.0E-04
		Surface Water Ingestion Total (excluding KM TEQs)									3.0E-08						1.0E-03
		Surface Water Ingestion Total (based on KM TEQs)									2.9E-08						9.5E-04
Surface Water	Surface Water	Angler - Fishing	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	6.5E-09	mg/kg-day	--	--	--	--	3.8E-08	mg/kg-day	2.0E-02	mg/kg-day	1.9E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	3.0E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	9.4E-11	--	1.8E-08	mg/kg-day	1.0E-02	mg/kg-day	1.8E-06
				Trichloroethylene	1E-01	µg/L	6.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	7.0E-10	M	3.6E-08	mg/kg-day	5.0E-04	mg/kg-day	7.1E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.3E-09	mg/kg-day	--	--	--	--	7.8E-09	mg/kg-day	6.0E-05	mg/kg-day	1.3E-04
				Arsenic, inorganic	1E+00	µg/L	2.5E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.7E-09	--	1.4E-08	mg/kg-day	3.0E-04	mg/kg-day	4.8E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.5E-09	mg/kg-day	--	--	--	--	1.4E-08	mg/kg-day	2.0E-02	mg/kg-day	7.4E-07
				Chromium (VI)	2E-01	µg/L	8.6E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	4.3E-08	M	5.0E-09	mg/kg-day	7.5E-05	mg/kg-day	6.7E-05
				Iron	5E+02	µg/L	1.0E-06	mg/kg-day	--	--	--	--	6.0E-06	mg/kg-day	7.0E-01	mg/kg-day	8.5E-06
				Manganese	7E+01	µg/L	1.3E-07	mg/kg-day	--	--	--	--	7.8E-07	mg/kg-day	9.6E-04	mg/kg-day	8.1E-04
				Mercury	3E-02	µg/L	5.1E-11	mg/kg-day	--	--	--	--	3.0E-10	mg/kg-day	2.1E-05	mg/kg-day	1.4E-05
				Thallium	1E-02	µg/L	2.4E-11	mg/kg-day	--	--	--	--	1.4E-10	mg/kg-day	1.0E-05	mg/kg-day	1.4E-05
				Titanium	8E+00	µg/L	1.5E-08	mg/kg-day	--	--	--	--	8.9E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.9E-06
				Total Organics							8.0E-10						7.3E-05
				Total Inorganics							4.6E-08						1.1E-03
		Surface Water Dermal Total (excluding KM TEQs)									4.7E-08						1.2E-03
		Surface Water Dermal Total (based on KM TEQs)									4.7E-08						1.2E-03
Fishing - Surface Water Total (excluding KM TEQs)											7.7E-08						2.2E-03
Fishing - Surface Water Total (based on KM TEQs)											7.6E-08						2.1E-03
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)											3.3E-04						2.8E+01
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)											3.4E-04						2.9E+01
Sediment	Sediment	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.0E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-07	--	6.0E-12	mg/kg-day	7.0E-10	mg/kg-day	8.6E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	5.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-09	--	3.2E-13	mg/kg-day	7.0E-10	mg/kg-day	4.5E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	4.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-10	--	2.8E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--	1.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.6E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-09	--	6.8E-13	mg/kg-day	7.0E-09	mg/kg-day	9.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	3.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-09	--	2.0E-11	mg/kg-day	7.0E-08	mg/kg-day	2.9E-04
				OCDD	3E-03	mg/kg	3.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-09	--	2.1E-10	mg/kg-day	2.3E-06	mg/kg-day	8.8E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.6E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.3E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.8E-10	--	7.5E-13	mg/kg-day	2.3E-08	mg/kg-day	3.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.1E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.6E-09	--	1.2E-12	mg/kg-day	2.3E-09	mg/kg-day	5.3E-04

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	9.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-08	--	5.7E-12	mg/kg-day	7.0E-09	mg/kg-day	8.2E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.1E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-09	--	8.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	4.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-09	--	2.5E-11	mg/kg-day	7.0E-08	mg/kg-day	3.6E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.2E-10	--	8.6E-13	mg/kg-day	7.0E-08	mg/kg-day	1.2E-05
				OCDF	4E-04	mg/kg	6.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.7E-10	--	3.5E-11	mg/kg-day	2.3E-06	mg/kg-day	1.5E-05
				KM TEQ DF	1E-04	mg/kg	1.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-07	--	8.2E-12	mg/kg-day	7.0E-10	mg/kg-day	1.2E-02
				PCB-77	8E-03	mg/kg	1.0E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.6E-09	--	6.1E-10	mg/kg-day	7.0E-06	mg/kg-day	8.7E-05
				PCB-81	3E-04	mg/kg	4.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-10	--	2.3E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				PCB-105	1E-02	mg/kg	1.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.6E-10	--	9.8E-10	mg/kg-day	2.3E-05	mg/kg-day	4.2E-05
				PCB-114	9E-04	mg/kg	1.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-11	--	6.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.9E-06
				PCB-118	4E-02	mg/kg	4.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-09	--	2.9E-09	mg/kg-day	2.3E-05	mg/kg-day	1.2E-04
				PCB-123	1E-03	mg/kg	1.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-11	--	8.3E-11	mg/kg-day	2.3E-05	mg/kg-day	3.6E-06
				PCB-126	2E-04	mg/kg	3.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.8E-03
				PCB-156/157	3E-03	mg/kg	4.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-10	--	2.6E-10	mg/kg-day	2.3E-05	mg/kg-day	1.1E-05
				PCB-167	1E-03	mg/kg	1.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.1E-11	--	9.2E-11	mg/kg-day	2.3E-05	mg/kg-day	3.9E-06
				PCB-169	3E-04	mg/kg	3.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-08	--	2.0E-11	mg/kg-day	2.3E-08	mg/kg-day	8.5E-04
				PCB-189	2E-04	mg/kg	3.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--	1.9E-11	mg/kg-day	2.3E-05	mg/kg-day	8.2E-07
				KM TEQ PCB	3E-05	mg/kg	4.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.2E-08	--	2.4E-12	mg/kg-day	7.0E-10	mg/kg-day	3.4E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	8.9E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.8E-08	--	5.2E-08	mg/kg-day	2.0E-05	mg/kg-day	2.6E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.1E-09	M	1.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.8E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.9E-08	M	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.4E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	2.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.2E-09	M	1.4E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.6E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	4.0E-10	M	9.4E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.8E-11	M	1.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	5.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-08	M	3.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.6E-09	M	6.0E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	7.7E-08	mg/kg-day	--	--	--	--	4.5E-07	mg/kg-day	4.0E-03	mg/kg-day	1.1E-04
				TPH (C9-C40)	4E+02	mg/kg	5.6E-06	mg/kg-day	--	--	--	--	3.3E-05	mg/kg-day	4.0E-03	mg/kg-day	8.1E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	9.6E-04	mg/kg-day	1.0E+00	mg/kg-day	9.6E-04
				Antimony	2E+00	mg/kg	3.2E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	4.0E-04	mg/kg-day	4.6E-04
				Arsenic, inorganic	3E+01	mg/kg	2.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.7E-07	--	1.5E-06	mg/kg-day	3.0E-04	mg/kg-day	4.9E-03
				Cadmium	3E+00	mg/kg	4.2E-08	mg/kg-day	--	--	--	--	2.4E-07	mg/kg-day	1.0E-03	mg/kg-day	2.4E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	8.5E-06	mg/kg-day	1.5E+00	mg/kg-day	5.7E-06
				Cobalt	1E+01	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.7E-03
				Copper	2E+02	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	1.0E-03	mg/kg-day	1.3E-02
				Chromium (VI)	1E+00	mg/kg	1.9E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.4E-08	M	1.1E-07	mg/kg-day	3.0E-03	mg/kg-day	3.7E-05
				Iron	4E+04	mg/kg	5.9E-04	mg/kg-day	--	--	--	--	3.4E-03	mg/kg-day	7.0E-01	mg/kg-day	4.9E-03
				Lead	5E+02	mg/kg	6.3E-06	mg/kg-day	--	--	--	--	3.7E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	4.8E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	2.4E-02	mg/kg-day	1.2E-03
				Mercury	2E+00	mg/kg	2.7E-08	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.2E-04
				Nickel	7E+01	mg/kg	9.1E-07	mg/kg-day	--	--	--	--	5.3E-06	mg/kg-day	2.0E-02	mg/kg-day	2.7E-04
				Thallium	2E-01	mg/kg	3.3E-09	mg/kg-day	--	--	--	--	1.9E-08	mg/kg-day	1.0E-05	mg/kg-day	1.9E-03

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Vanadium	5E+01	mg/kg	6.8E-07	mg/kg-day	--	--	--	--	4.0E-06	mg/kg-day	5.0E-03	mg/kg-day	7.9E-04
				Zinc	1E+03	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	3.0E-01	mg/kg-day	3.3E-04
				Total DLCs (excluding KM TEQs)							2.9E-07						1.6E-02
				Total DLCs (based on KM TEQs)							2.7E-07						1.5E-02
				Total PCDD/Fs (excluding KM TEQ)							2.2E-07						1.2E-02
				Total PCDD/Fs (based on KM TEQ)							2.1E-07						1.2E-02
				Total DL-PCBs (excluding KM TEQ)							7.0E-08						3.9E-03
				Total DL-PCBs (based on KM TEQ)							6.2E-08						3.4E-03
				Total Non-DL PCBs							1.8E-08						2.6E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							8.8E-08						6.5E-03
				Total PCBs (DL & NDL; based on KM TEQ)							8.0E-08						6.1E-03
				Total PAHs							1.0E-07						5.4E-04
				Total Organics							0.0E+00						8.2E-03
				Total Inorganics							4.0E-07						3.3E-02
		Sediment Ingestion Total (excluding KM TEQs)									8.0E-07						6.1E-02
		Sediment Ingestion Total (based on KM TEQs)									7.9E-07						6.0E-02
Sediment	Sediment	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	5.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.3E-08	--	3.2E-12	mg/kg-day	7.0E-10	mg/kg-day	4.6E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-09	--	1.7E-13	mg/kg-day	7.0E-10	mg/kg-day	2.4E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-10	--	1.5E-13	mg/kg-day	7.0E-09	mg/kg-day	2.2E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--	6.1E-13	mg/kg-day	7.0E-09	mg/kg-day	8.8E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	6.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-10	--	3.6E-13	mg/kg-day	7.0E-09	mg/kg-day	5.2E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-09	--	1.1E-11	mg/kg-day	7.0E-08	mg/kg-day	1.5E-04
				OCDD	3E-03	mg/kg	1.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.5E-10	--	1.1E-10	mg/kg-day	2.3E-06	mg/kg-day	4.7E-05
				2,3,7,8-TCDF	1E-05	mg/kg	9.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	5.8E-13	mg/kg-day	7.0E-09	mg/kg-day	8.3E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	6.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-10	--	4.0E-13	mg/kg-day	2.3E-08	mg/kg-day	1.7E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.1E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.1E-09	--	6.6E-13	mg/kg-day	2.3E-09	mg/kg-day	2.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-09	--	3.0E-12	mg/kg-day	7.0E-09	mg/kg-day	4.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	7.9E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	5.9E-14	mg/kg-day	7.0E-09	mg/kg-day	8.4E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	7.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-09	--	4.4E-13	mg/kg-day	7.0E-09	mg/kg-day	6.3E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-09	--	1.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.9E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	7.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-10	--	4.6E-13	mg/kg-day	7.0E-08	mg/kg-day	6.5E-06
				OCDF	4E-04	mg/kg	3.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--	1.9E-11	mg/kg-day	2.3E-06	mg/kg-day	8.1E-06
				KM TEQ DF	1E-04	mg/kg	7.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--	4.4E-12	mg/kg-day	7.0E-10	mg/kg-day	6.3E-03
				PCB-77	8E-03	mg/kg	5.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.4E-10	--	3.2E-10	mg/kg-day	7.0E-06	mg/kg-day	4.6E-05
				PCB-81	3E-04	mg/kg	2.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.6E-11	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.4E-06
				PCB-105	1E-02	mg/kg	8.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-10	--	5.2E-10	mg/kg-day	2.3E-05	mg/kg-day	2.2E-05
				PCB-114	9E-04	mg/kg	6.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-11	--	3.6E-11	mg/kg-day	2.3E-05	mg/kg-day	1.5E-06
				PCB-118	4E-02	mg/kg	2.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-09	--	1.5E-09	mg/kg-day	2.3E-05	mg/kg-day	6.5E-05
				PCB-123	1E-03	mg/kg	7.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	4.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.9E-06
				PCB-126	2E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-08	--	1.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.5E-03
				PCB-156/157	3E-03	mg/kg	2.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--	1.4E-10	mg/kg-day	2.3E-05	mg/kg-day	5.8E-06
				PCB-167	1E-03	mg/kg	8.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-11	--	4.9E-11	mg/kg-day	2.3E-05	mg/kg-day	2.1E-06
				PCB-169	3E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.2E-09	--	1.1E-11	mg/kg-day	2.3E-08	mg/kg-day	4.5E-04
				PCB-189	2E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.9E-12	--	1.0E-11	mg/kg-day	2.3E-05	mg/kg-day	4.4E-07

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ PCB	3E-05	mg/kg	2.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-08	--	1.3E-12	mg/kg-day	7.0E-10	mg/kg-day	1.8E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.2E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.4E-08	--	1.3E-07	mg/kg-day	2.0E-05	mg/kg-day	6.5E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	6.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M	3.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	6.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-07	M	3.7E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	5.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M	3.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.7E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.3E-10	M	2.2E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	6.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-10	M	3.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	7.7E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.9E-09	M	1.4E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	2.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.3E-07	--	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.3E-03
				Cadmium	3E+00	mg/kg	7.4E-10	mg/kg-day	--	--	--	--	4.3E-09	mg/kg-day	2.5E-05	mg/kg-day	1.7E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							1.5E-07						8.5E-03
				Total DLCs (based on KM TEQs)							1.5E-07						8.1E-03
				Total PCDD/Fs (excluding KM TEQ)							1.2E-07						6.4E-03
				Total PCDD/Fs (based on KM TEQ)							1.1E-07						6.3E-03
				Total DL-PCBs (excluding KM TEQ)							3.7E-08						2.1E-03
				Total DL-PCBs (based on KM TEQ)							3.3E-08						1.8E-03
				Total Non-DL PCBs							4.4E-08						6.5E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							8.2E-08						8.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							7.7E-08						8.3E-03
				Total PAHs							2.3E-07						1.2E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							3.3E-07						4.5E-03
		Sediment Dermal Total (excluding KM TEQs)									7.6E-07						2.1E-02
		Sediment Dermal Total (based on KM TEQs)									7.5E-07						2.0E-02
Crabbing - Sediment Total (excluding KM TEQs)											1.6E-06						8.1E-02

TABLE 7.2 RME
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Crabbing - Sediment Total (based on KM TEQs)											1.5E-06						8.0E-02
Surface Water	Surface Water	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	8.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-09	--	4.8E-14	mg/kg-day	7.0E-10	mg/kg-day	6.9E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-10	--	1.7E-14	mg/kg-day	7.0E-10	mg/kg-day	2.4E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-11	--	1.9E-14	mg/kg-day	7.0E-09	mg/kg-day	2.8E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	5.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.8E-11	--	3.4E-14	mg/kg-day	7.0E-09	mg/kg-day	4.9E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	4.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.3E-11	--	2.4E-13	mg/kg-day	7.0E-08	mg/kg-day	3.5E-06
				OCDD	6E-05	µg/L	4.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-11	--	2.6E-12	mg/kg-day	2.3E-06	mg/kg-day	1.1E-06
				2,3,7,8-TCDF	5E-07	µg/L	3.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-11	--	1.9E-14	mg/kg-day	7.0E-09	mg/kg-day	2.7E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.6E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-11	--	1.5E-14	mg/kg-day	2.3E-08	mg/kg-day	6.4E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	4.5E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.0E-10	--	2.6E-14	mg/kg-day	2.3E-09	mg/kg-day	1.1E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-10	--	7.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.0E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	2.5E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-10	--	1.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-11	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.6E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	5.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.9E-11	--	3.1E-13	mg/kg-day	7.0E-08	mg/kg-day	4.4E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	3.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.0E-12	--	1.9E-14	mg/kg-day	7.0E-08	mg/kg-day	2.8E-07
				OCDF	1E-05	µg/L	9.8E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.4E-12	--	5.7E-13	mg/kg-day	2.3E-06	mg/kg-day	2.5E-07
				KM TEQ DF	2E-06	µg/L	1.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-09	--	9.6E-14	mg/kg-day	7.0E-10	mg/kg-day	1.4E-04
				PCB-77	2E-05	µg/L	1.4E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-12	--	8.1E-13	mg/kg-day	7.0E-06	mg/kg-day	1.2E-07
				PCB-81	7E-07	µg/L	4.6E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-13	--	2.7E-14	mg/kg-day	2.3E-06	mg/kg-day	1.2E-08
				PCB-105	7E-05	µg/L	5.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-12	--	2.9E-12	mg/kg-day	2.3E-05	mg/kg-day	1.2E-07
				PCB-114	4E-06	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	1.5E-13	mg/kg-day	2.3E-05	mg/kg-day	6.5E-09
				PCB-118	2E-04	µg/L	1.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.0E-12	--	6.5E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07
				PCB-123	3E-06	µg/L	2.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.7E-14	--	1.3E-13	mg/kg-day	2.3E-05	mg/kg-day	5.4E-09
				PCB-126	7E-07	µg/L	4.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.8E-11	--	2.7E-14	mg/kg-day	7.0E-09	mg/kg-day	3.8E-06
				PCB-156/157	2E-05	µg/L	1.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-13	--	7.7E-13	mg/kg-day	2.3E-05	mg/kg-day	3.3E-08
				PCB-167	7E-06	µg/L	4.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-13	--	2.6E-13	mg/kg-day	2.3E-05	mg/kg-day	1.1E-08
				PCB-169	4E-07	µg/L	2.7E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-11	--	1.6E-14	mg/kg-day	2.3E-08	mg/kg-day	6.8E-07
				PCB-189	9E-07	µg/L	5.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-14	--	3.4E-14	mg/kg-day	2.3E-05	mg/kg-day	1.5E-09
				KM TEQ PCB	1E-07	µg/L	7.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-10	--	4.3E-15	mg/kg-day	7.0E-10	mg/kg-day	6.2E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	8.0E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-11	M	4.7E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.0E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.6E-10	M	6.0E-10	mg/kg-day	3.0E-04	mg/kg-day	2.0E-06
				Benzo(b)fluoranthene	2E-02	µg/L	1.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-11	M	8.2E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	6.2E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.6E-12	M	3.6E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.4E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.4E-13	M	8.0E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.6E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-11	M	1.5E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	5.9E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-11	M	3.4E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.4E-10	mg/kg-day	--	--	--	--	1.4E-09	mg/kg-day	2.0E-02	mg/kg-day	7.0E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	8.1E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.5E-11	--	4.7E-09	mg/kg-day	1.0E-02	mg/kg-day	4.7E-07
				Trichloroethylene	1E-01	µg/L	8.9E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.0E-10	M	5.2E-09	mg/kg-day	5.0E-04	mg/kg-day	1.0E-05
				Inorganics													
				Antimony	7E-01	µg/L	4.7E-09	mg/kg-day	--	--	--	--	2.8E-08	mg/kg-day	4.0E-04	mg/kg-day	6.9E-05
				Arsenic, inorganic	1E+00	µg/L	8.6E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-08	--	5.0E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Chromium [as Cr(III)]	1E+00	µg/L	8.8E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	1.5E+00	mg/kg-day	3.4E-08

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Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium (VI)	2E-01	µg/L	1.5E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.9E-09	M	8.8E-09	mg/kg-day	3.0E-03	mg/kg-day	2.9E-06
				Iron	5E+02	µg/L	3.6E-06	mg/kg-day	--	--	--	--	2.1E-05	mg/kg-day	7.0E-01	mg/kg-day	3.0E-05
				Manganese	7E+01	µg/L	4.7E-07	mg/kg-day	--	--	--	--	2.7E-06	mg/kg-day	2.4E-02	mg/kg-day	1.1E-04
				Mercury	3E-02	µg/L	1.8E-10	mg/kg-day	--	--	--	--	1.0E-09	mg/kg-day	3.0E-04	mg/kg-day	3.5E-06
				Thallium	1E-02	µg/L	8.4E-11	mg/kg-day	--	--	--	--	4.9E-10	mg/kg-day	1.0E-05	mg/kg-day	4.9E-05
				Titanium	8E+00	µg/L	5.4E-08	mg/kg-day	--	--	--	--	3.1E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							3.2E-09						1.8E-04
				Total DLCs (based on KM TEQs)							2.6E-09						1.4E-04
				Total PCDD/Fs (excluding KM TEQ)							3.1E-09						1.7E-04
				Total PCDD/Fs (based on KM TEQ)							2.5E-09						1.4E-04
				Total DL-PCBs (excluding KM TEQ)							9.1E-11						5.1E-06
				Total DL-PCBs (based on KM TEQ)							1.1E-10						6.2E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							9.1E-11						5.1E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-10						6.2E-06
				Total PAHs							3.9E-10						2.1E-06
				Total Organics							1.3E-10						1.1E-05
				Total Inorganics							1.5E-08						4.4E-04
		Surface Water Ingestion Total (excluding KM TEQs)									1.9E-08						6.3E-04
		Surface Water Ingestion Total (based on KM TEQs)									1.8E-08						5.9E-04
Surface Water	Surface Water	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	4.1E-09	mg/kg-day	--	--	--	--	2.4E-08	mg/kg-day	2.0E-02	mg/kg-day	1.2E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.9E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.9E-11	--	1.1E-08	mg/kg-day	1.0E-02	mg/kg-day	1.1E-06
				Trichloroethylene	1E-01	µg/L	3.8E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.4E-10	M	2.2E-08	mg/kg-day	5.0E-04	mg/kg-day	4.5E-05
				Inorganics													
				Antimony	7E-01	µg/L	8.4E-10	mg/kg-day	--	--	--	--	4.9E-09	mg/kg-day	6.0E-05	mg/kg-day	8.2E-05
				Arsenic, inorganic	1E+00	µg/L	1.5E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.3E-09	--	8.9E-09	mg/kg-day	3.0E-04	mg/kg-day	3.0E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.6E-09	mg/kg-day	--	--	--	--	9.1E-09	mg/kg-day	2.0E-02	mg/kg-day	4.6E-07
				Chromium (VI)	2E-01	µg/L	5.4E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	2.7E-08	M	3.1E-09	mg/kg-day	7.5E-05	mg/kg-day	4.2E-05
				Iron	5E+02	µg/L	6.4E-07	mg/kg-day	--	--	--	--	3.7E-06	mg/kg-day	7.0E-01	mg/kg-day	5.3E-06
				Manganese	7E+01	µg/L	8.3E-08	mg/kg-day	--	--	--	--	4.8E-07	mg/kg-day	9.6E-04	mg/kg-day	5.0E-04
				Mercury	3E-02	µg/L	3.2E-11	mg/kg-day	--	--	--	--	1.8E-10	mg/kg-day	2.1E-05	mg/kg-day	8.8E-06
				Thallium	1E-02	µg/L	1.5E-11	mg/kg-day	--	--	--	--	8.7E-11	mg/kg-day	1.0E-05	mg/kg-day	8.7E-06
				Titanium	8E+00	µg/L	9.5E-09	mg/kg-day	--	--	--	--	5.6E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.2E-06
				Total Organics							5.0E-10						4.6E-05
				Total Inorganics							2.9E-08						6.8E-04
		Surface Water Dermal Total (excluding KM TEQs)									3.0E-08						7.3E-04
		Surface Water Dermal Total (based on KM TEQs)									3.0E-08						7.3E-04
Crabbing - Surface Water Total (excluding KM TEQs)											4.8E-08						1.4E-03
Crabbing - Surface Water Total (based on KM TEQs)											4.7E-08						1.3E-03
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											3.5E-04						3.0E+01
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											3.5E-04						3.0E+01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											6.8E-05						9.1E+00

TABLE 7.2 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											6.5E-05					8.9E+00

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-06	mg/kg	4.8E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.2E-05	--	5.6E-09	mg/kg-day	7.0E-10	mg/kg-day	8.0E+00
				1,2,3,7,8-PeCDD	4E-07	mg/kg	2.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.9E-06	--	3.0E-10	mg/kg-day	7.0E-10	mg/kg-day	4.3E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-07	--	1.4E-10	mg/kg-day	7.0E-09	mg/kg-day	2.0E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	3.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-07	--	4.3E-10	mg/kg-day	7.0E-09	mg/kg-day	6.1E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	8.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-07	--	1.0E-10	mg/kg-day	7.0E-09	mg/kg-day	1.5E-02
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	4.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.2E-08	--	4.8E-10	mg/kg-day	7.0E-08	mg/kg-day	6.9E-03
				OCDD	4E-06	mg/kg	2.4E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-08	--	2.8E-09	mg/kg-day	2.3E-06	mg/kg-day	1.2E-03
				2,3,7,8-TCDF	2E-06	mg/kg	9.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-06	--	1.1E-09	mg/kg-day	7.0E-09	mg/kg-day	1.6E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	8.9E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-07	--	1.0E-09	mg/kg-day	2.3E-08	mg/kg-day	4.4E-02
				2,3,4,7,8-PeCDF	2E-06	mg/kg	1.4E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.4E-06	--	1.7E-09	mg/kg-day	2.3E-09	mg/kg-day	7.1E-01
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	6.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-07	--	7.4E-10	mg/kg-day	7.0E-09	mg/kg-day	1.1E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	5.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-07	--	6.7E-10	mg/kg-day	7.0E-09	mg/kg-day	9.5E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	6.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.9E-08	--	7.7E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	9.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--	1.1E-10	mg/kg-day	7.0E-09	mg/kg-day	1.6E-02
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	1.4E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-07	--	1.6E-09	mg/kg-day	7.0E-08	mg/kg-day	2.3E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-09	--	7.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.0E-03
				OCDF	2E-07	mg/kg	1.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.9E-10	--	1.5E-10	mg/kg-day	2.3E-06	mg/kg-day	6.6E-05
				KM TEQ DF	1E-05	mg/kg	5.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.6E-05	--	6.7E-09	mg/kg-day	7.0E-10	mg/kg-day	9.5E+00
				PCB-77	5E-04	mg/kg	2.8E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.2E-07	--	3.3E-07	mg/kg-day	7.0E-06	mg/kg-day	4.7E-02
				PCB-81	2E-05	mg/kg	1.1E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.0E-08	--	1.3E-08	mg/kg-day	2.3E-06	mg/kg-day	5.5E-03
				PCB-105	8E-03	mg/kg	4.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-06	--	5.2E-06	mg/kg-day	2.3E-05	mg/kg-day	2.2E-01
				PCB-114	6E-04	mg/kg	3.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	4.0E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02
				PCB-118	3E-02	mg/kg	1.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-06	--	2.1E-05	mg/kg-day	2.3E-05	mg/kg-day	8.9E-01
				PCB-123	6E-04	mg/kg	3.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	3.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.6E-02
				PCB-126	9E-05	mg/kg	5.2E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-05	--	6.1E-08	mg/kg-day	7.0E-09	mg/kg-day	8.7E+00
				PCB-156/157	3E-03	mg/kg	1.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.3E-07	--	1.9E-06	mg/kg-day	2.3E-05	mg/kg-day	8.2E-02
				PCB-167	1E-03	mg/kg	7.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-07	--	8.3E-07	mg/kg-day	2.3E-05	mg/kg-day	3.6E-02
				PCB-169	4E-06	mg/kg	2.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.9E-07	--	2.6E-09	mg/kg-day	2.3E-08	mg/kg-day	1.1E-01
				PCB-189	2E-04	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.6E-03
				KM TEQ PCB	1E-05	mg/kg	6.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-04	--	7.8E-09	mg/kg-day	7.0E-10	mg/kg-day	1.1E+01
				Non-DL PCBs													
				Total Non-DL PCBs	4E-01	mg/kg	2.4E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.7E-05	--	2.8E-04	mg/kg-day	2.0E-05	mg/kg-day	1.4E+01
				PAHs													
				Benz(a)anthracene	8E-03	mg/kg	4.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-07	M	5.7E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	8E-03	mg/kg	4.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-06	M	5.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Benzo(b)fluoranthene	8E-03	mg/kg	4.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-07	M	5.7E-06	mg/kg-day	--	--	--
				Chrysene	8E-03	mg/kg	4.9E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-09	M	5.7E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	8E-03	mg/kg	4.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-06	M	5.7E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	4.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-07	M	5.7E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-02	mg/kg	1.1E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.5E-07	--	1.2E-05	mg/kg-day	3.0E-05	mg/kg-day	4.1E-01
				2,4'-DDE	6E-03	mg/kg	3.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-07	--	3.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				2,4'-DDT	3E-03	mg/kg	2.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.9E-08	--	2.4E-06	mg/kg-day	5.0E-04	mg/kg-day	4.7E-03
				4,4'-DDD	9E-02	mg/kg	5.2E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.2E-06	--	6.1E-05	mg/kg-day	3.0E-05	mg/kg-day	2.0E+00
				4,4'-DDE	1E-01	mg/kg	7.3E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.5E-06	--	8.5E-05	mg/kg-day	3.0E-04	mg/kg-day	2.8E-01
				4,4'-DDT	1E-02	mg/kg	8.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.8E-07	--	9.6E-06	mg/kg-day	5.0E-04	mg/kg-day	1.9E-02
				Benzaldehyde	1E+00	mg/kg	7.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.0E-07	--	8.8E-04	mg/kg-day	1.0E-01	mg/kg-day	8.8E-03
				Chlordane, alpha (cis)	2E-02	mg/kg	9.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.3E-07	--	1.1E-05	mg/kg-day	5.0E-04	mg/kg-day	2.2E-02
				Chlordane, gamma (trans)	4E-03	mg/kg	2.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.3E-08	--	2.4E-06	mg/kg-day	5.0E-04	mg/kg-day	4.9E-03
				Dieldrin	8E-03	mg/kg	4.5E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.1E-06	--	5.2E-06	mg/kg-day	5.0E-05	mg/kg-day	1.0E-01
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.1E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.8E-07	--	1.3E-06	mg/kg-day	1.3E-05	mg/kg-day	9.7E-02

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Heptachlor epoxide, trans-	9E-05	mg/kg	5.2E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.7E-08	--	6.1E-08	mg/kg-day	1.3E-05	mg/kg-day	4.7E-03
				Hexachlorobenzene	1E-03	mg/kg	8.6E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.4E-07	--	1.0E-06	mg/kg-day	8.0E-04	mg/kg-day	1.3E-03
				Mirex	3E-04	mg/kg	1.5E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.7E-07	--	1.7E-07	mg/kg-day	2.0E-04	mg/kg-day	8.6E-04
				Nonachlor, cis-	6E-03	mg/kg	3.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--	4.4E-06	mg/kg-day	1.0E-04	mg/kg-day	4.4E-02
				Nonachlor, trans-	2E-02	mg/kg	9.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.2E-07	--	1.1E-05	mg/kg-day	1.6E-05	mg/kg-day	6.8E-01
				Oxychlordane	5E-03	mg/kg	2.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.3E-08	--	3.1E-06	mg/kg-day	8.9E-05	mg/kg-day	3.5E-02
				Pyridine	1E+00	mg/kg	7.6E-05	mg/kg-day	--	--	--	--	8.8E-04	mg/kg-day	1.0E-03	mg/kg-day	8.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	3.7E-04	mg/kg-day	--	--	--	--	4.4E-03	mg/kg-day	1.0E+00	mg/kg-day	4.4E-03
				Arsenic, organic	1E+00	mg/kg	6.0E-05	mg/kg-day	--	--	--	--	7.1E-04	mg/kg-day	2.0E-02	mg/kg-day	3.5E-02
				Arsenic, inorganic	1E-01	mg/kg	6.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-05	--	7.8E-05	mg/kg-day	3.0E-04	mg/kg-day	2.6E-01
				Cadmium	5E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Chromium [as Cr(III)]	6E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	4.4E-04	mg/kg-day	1.5E+00	mg/kg-day	2.9E-04
				Cobalt	2E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.1E-01
				Copper	5E-01	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	1.0E-03	mg/kg-day	3.3E-01
				Iron	7E+00	mg/kg	4.1E-04	mg/kg-day	--	--	--	--	4.8E-03	mg/kg-day	7.0E-01	mg/kg-day	6.9E-03
				Lead	4E-02	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	1.9E-04	mg/kg-day	1.4E-01	mg/kg-day	1.4E-03
				Mercury	3E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	3.0E-04	mg/kg-day	6.8E-01
				Methyl Mercury	4E-01	mg/kg	2.1E-05	mg/kg-day	--	--	--	--	2.5E-04	mg/kg-day	1.0E-04	mg/kg-day	2.5E+00
				Selenium	5E-01	mg/kg	3.2E-05	mg/kg-day	--	--	--	--	3.7E-04	mg/kg-day	5.0E-03	mg/kg-day	7.4E-02
				Silver	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Vanadium	3E-02	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	5.0E-03	mg/kg-day	3.8E-03
				Zinc	1E+01	mg/kg	8.5E-04	mg/kg-day	--	--	--	--	1.0E-02	mg/kg-day	3.0E-01	mg/kg-day	3.3E-02
				Total DLCs (excluding KM TEQs)							1.8E-04						2.0E+01
				Total DLCs (based on KM TEQs)							1.9E-04						2.1E+01
				Total PCDD/Fs (excluding KM TEQ)							8.7E-05						9.7E+00
				Total PCDD/Fs (based on KM TEQ)							8.6E-05						9.5E+00
				Total DL-PCBs (excluding KM TEQ)							9.1E-05						1.0E+01
				Total DL-PCBs (based on KM TEQ)							1.0E-04						1.1E+01
				Total Non-DL PCBs							4.7E-05						1.4E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							1.4E-04						2.4E+01
				Total PCBs (DL & NDL; based on KM TEQ)							1.5E-04						2.5E+01
				Total PAHs							4.7E-06						1.9E-02
				Total Organics							1.4E-05						4.6E+00
				Total Inorganics							1.0E-05						4.4E+00
		Mixed Fish/All Species Total (excluding KM TEQs)									2.6E-04						4.3E+01
		Mixed Fish/All Species Total (based on KM TEQs)									2.6E-04						4.4E+01
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	5.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.7E-05	--	6.0E-09	mg/kg-day	7.0E-10	mg/kg-day	8.5E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	4.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.1E-06	--	4.8E-10	mg/kg-day	7.0E-10	mg/kg-day	6.8E-01
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	2.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-07	--	2.8E-10	mg/kg-day	7.0E-09	mg/kg-day	4.1E-02
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	1.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.8E-01
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-07	--	2.3E-10	mg/kg-day	7.0E-09	mg/kg-day	3.4E-02
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	7.5E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-07	--	8.8E-10	mg/kg-day	7.0E-08	mg/kg-day	1.3E-02
				OCDD	3E-06	mg/kg	1.8E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.3E-09	--	2.1E-09	mg/kg-day	2.3E-06	mg/kg-day	9.2E-04
				2,3,7,8-TCDF	1E-07	mg/kg	6.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-08	--	7.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.0E-02
				1,2,3,7,8-PeCDF	1E-06	mg/kg	8.1E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.7E-07	--	9.5E-10	mg/kg-day	2.3E-08	mg/kg-day	4.1E-02
				2,3,4,7,8-PeCDF	4E-06	mg/kg	2.2E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.0E-05	--	2.6E-09	mg/kg-day	2.3E-09	mg/kg-day	1.1E+00
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	1.6E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-06	--	1.8E-09	mg/kg-day	7.0E-09	mg/kg-day	2.6E-01
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	1.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-06	--	1.4E-09	mg/kg-day	7.0E-09	mg/kg-day	2.0E-01

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	6.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.9E-08	--	7.7E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	2.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-07	--	2.5E-10	mg/kg-day	7.0E-09	mg/kg-day	3.5E-02
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	2.8E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-07	--	3.2E-09	mg/kg-day	7.0E-08	mg/kg-day	4.6E-02
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	9.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-08	--	1.1E-10	mg/kg-day	7.0E-08	mg/kg-day	1.6E-03
				OCDF	4E-07	mg/kg	2.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.4E-10	--	2.4E-10	mg/kg-day	2.3E-06	mg/kg-day	1.0E-04
				KM TEQ DF	1E-05	mg/kg	6.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.8E-05	--	7.6E-09	mg/kg-day	7.0E-10	mg/kg-day	1.1E+01
				PCB-77	7E-05	mg/kg	4.4E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.5E-08	--	5.1E-08	mg/kg-day	7.0E-06	mg/kg-day	7.3E-03
				PCB-81	1E-05	mg/kg	6.8E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-08	--	7.9E-09	mg/kg-day	2.3E-06	mg/kg-day	3.4E-03
				PCB-105	2E-02	mg/kg	1.2E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.4E-06	--	1.4E-05	mg/kg-day	2.3E-05	mg/kg-day	6.0E-01
				PCB-114	1E-03	mg/kg	7.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-07	--	9.0E-07	mg/kg-day	2.3E-05	mg/kg-day	3.8E-02
				PCB-118	7E-02	mg/kg	4.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-05	--	4.8E-05	mg/kg-day	2.3E-05	mg/kg-day	2.1E+00
				PCB-123	1E-03	mg/kg	8.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-07	--	9.6E-07	mg/kg-day	2.3E-05	mg/kg-day	4.1E-02
				PCB-126	1E-04	mg/kg	6.9E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-04	--	8.1E-08	mg/kg-day	7.0E-09	mg/kg-day	1.2E+01
				PCB-156/157	6E-03	mg/kg	3.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-06	--	4.2E-06	mg/kg-day	2.3E-05	mg/kg-day	1.8E-01
				PCB-167	3E-03	mg/kg	1.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.1E-07	--	1.8E-06	mg/kg-day	2.3E-05	mg/kg-day	7.9E-02
				PCB-169	4E-06	mg/kg	2.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-06	--	3.0E-09	mg/kg-day	2.3E-08	mg/kg-day	1.3E-01
				PCB-189	5E-04	mg/kg	2.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-07	--	3.3E-07	mg/kg-day	2.3E-05	mg/kg-day	1.4E-02
				KM TEQ PCB	2E-05	mg/kg	1.3E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-04	--	1.5E-08	mg/kg-day	7.0E-10	mg/kg-day	2.1E+01
				Non-DL PCBs													
				Total Non-DL PCBs	6E-01	mg/kg	3.4E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.9E-05	--	4.0E-04	mg/kg-day	2.0E-05	mg/kg-day	2.0E+01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-06	M	8.8E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.1E-09	M	8.8E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-06	M	8.8E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	1.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.3E-08	--	2.1E-06	mg/kg-day	3.0E-05	mg/kg-day	6.9E-02
				2,4'-DDE	2E-03	mg/kg	1.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.9E-08	--	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.5E-03
				2,4'-DDT	4E-04	mg/kg	2.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.1E-09	--	2.4E-07	mg/kg-day	5.0E-04	mg/kg-day	4.9E-04
				4,4'-DDD	1E-01	mg/kg	7.6E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.8E-06	--	8.9E-05	mg/kg-day	3.0E-05	mg/kg-day	3.0E+00
				4,4'-DDE	3E-01	mg/kg	1.6E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.5E-06	--	1.9E-04	mg/kg-day	3.0E-04	mg/kg-day	6.3E-01
				4,4'-DDT	8E-03	mg/kg	4.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-07	--	5.2E-06	mg/kg-day	5.0E-04	mg/kg-day	1.0E-02
				Benzaldehyde	1E+00	mg/kg	7.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.0E-07	--	8.8E-04	mg/kg-day	1.0E-01	mg/kg-day	8.8E-03
				Chlordane, alpha (cis)	1E-02	mg/kg	8.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.8E-07	--	9.5E-06	mg/kg-day	5.0E-04	mg/kg-day	1.9E-02
				Chlordane, gamma (trans)	4E-03	mg/kg	2.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.9E-08	--	2.6E-06	mg/kg-day	5.0E-04	mg/kg-day	5.3E-03
				Dieldrin	1E-02	mg/kg	8.3E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.3E-05	--	9.7E-06	mg/kg-day	5.0E-05	mg/kg-day	1.9E-01
				Heptachlor epoxide, cis-	4E-03	mg/kg	2.2E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.0E-06	--	2.5E-06	mg/kg-day	1.3E-05	mg/kg-day	2.0E-01
				Heptachlor epoxide, trans-	4E-04	mg/kg	2.2E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.0E-07	--	2.6E-07	mg/kg-day	1.3E-05	mg/kg-day	2.0E-02
				Hexachlorobenzene	4E-03	mg/kg	2.4E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.8E-07	--	2.8E-06	mg/kg-day	8.0E-04	mg/kg-day	3.5E-03
				Mirex	4E-04	mg/kg	2.4E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.4E-07	--	2.8E-07	mg/kg-day	2.0E-04	mg/kg-day	1.4E-03
				Nonachlor, cis-	1E-02	mg/kg	6.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-07	--	7.3E-06	mg/kg-day	1.0E-04	mg/kg-day	7.3E-02
				Nonachlor, trans-	3E-02	mg/kg	1.5E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.3E-07	--	1.8E-05	mg/kg-day	1.6E-05	mg/kg-day	1.1E+00
				Oxychlordane	1E-02	mg/kg	8.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-07	--	9.7E-06	mg/kg-day	8.9E-05	mg/kg-day	1.1E-01
				Pyridine	1E+00	mg/kg	7.6E-05	mg/kg-day	--	--	--	--	8.8E-04	mg/kg-day	1.0E-03	mg/kg-day	8.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	3.6E-04	mg/kg-day	--	--	--	--	4.3E-03	mg/kg-day	1.0E+00	mg/kg-day	4.3E-03
				Arsenic, organic	1E+00	mg/kg	6.2E-05	mg/kg-day	--	--	--	--	7.3E-04	mg/kg-day	2.0E-02	mg/kg-day	3.6E-02
				Arsenic, inorganic	1E-01	mg/kg	6.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-05	--	8.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.7E-01
				Cadmium	5E-02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium [as Cr(III)]	2E+00	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	1.6E-03	mg/kg-day	1.5E+00	mg/kg-day	1.1E-03
				Cobalt	7E-03	mg/kg	4.1E-07	mg/kg-day	--	--	--	--	4.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.6E-02
				Copper	2E-01	mg/kg	1.2E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	1.0E-03	mg/kg-day	1.4E-01
				Iron	8E+00	mg/kg	4.4E-04	mg/kg-day	--	--	--	--	5.1E-03	mg/kg-day	7.0E-01	mg/kg-day	7.3E-03
				Lead	2E-02	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	2.0E-05	mg/kg-day	--	--	--	--	2.3E-04	mg/kg-day	1.4E-01	mg/kg-day	1.6E-03
				Mercury	4E-01	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	3.0E-04	mg/kg-day	9.5E-01
				Methyl Mercury	5E-01	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.0E-04	mg/kg-day	3.1E+00
				Selenium	5E-01	mg/kg	3.0E-05	mg/kg-day	--	--	--	--	3.5E-04	mg/kg-day	5.0E-03	mg/kg-day	7.0E-02
				Silver	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Vanadium	2E-02	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	5.0E-03	mg/kg-day	3.1E-03
				Zinc	3E+01	mg/kg	1.7E-03	mg/kg-day	--	--	--	--	2.0E-02	mg/kg-day	3.0E-01	mg/kg-day	6.6E-02
				Total DLCs (excluding KM TEQs)							2.3E-04						2.6E+01
				Total DLCs (based on KM TEQs)							2.9E-04						3.2E+01
				Total PCDD/Fs (excluding KM TEQ)							1.0E-04						1.1E+01
				Total PCDD/Fs (based on KM TEQ)							9.8E-05						1.1E+01
				Total DL-PCBs (excluding KM TEQ)							1.3E-04						1.5E+01
				Total DL-PCBs (based on KM TEQ)							1.9E-04						2.1E+01
				Total Non-DL PCBs							6.9E-05						2.0E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.0E-04						3.5E+01
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-04						4.1E+01
				Total PAHs							7.2E-06						2.9E-02
				Total Organics							2.6E-05						6.3E+00
				Total Inorganics							1.0E-05						4.7E+00
		American Eel Total (excluding KM TEQs)									3.5E-04						5.7E+01
		American Eel Total (based on KM TEQs)									4.0E-04						6.3E+01
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	mg/kg	8.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-05	--	1.0E-09	mg/kg-day	7.0E-10	mg/kg-day	1.4E+00
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-06	--	2.0E-10	mg/kg-day	7.0E-10	mg/kg-day	2.9E-01
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	4.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-08	--	4.9E-11	mg/kg-day	7.0E-09	mg/kg-day	7.0E-03
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-07	--	1.4E-10	mg/kg-day	7.0E-09	mg/kg-day	1.9E-02
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	4.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-08	--	4.7E-11	mg/kg-day	7.0E-09	mg/kg-day	6.7E-03
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	8.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--	9.6E-11	mg/kg-day	7.0E-08	mg/kg-day	1.4E-03
				OCDD	3E-07	mg/kg	1.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.7E-10	--	1.7E-10	mg/kg-day	2.3E-06	mg/kg-day	7.5E-05
				2,3,7,8-TCDF	4E-07	mg/kg	2.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-07	--	2.6E-10	mg/kg-day	7.0E-09	mg/kg-day	3.7E-02
				1,2,3,7,8-PeCDF	7E-07	mg/kg	3.9E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-07	--	4.5E-10	mg/kg-day	2.3E-08	mg/kg-day	1.9E-02
				2,3,4,7,8-PeCDF	8E-07	mg/kg	4.4E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.0E-06	--	5.1E-10	mg/kg-day	2.3E-09	mg/kg-day	2.2E-01
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	5.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-08	--	6.4E-11	mg/kg-day	7.0E-09	mg/kg-day	9.1E-03
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-07	--	1.6E-10	mg/kg-day	7.0E-09	mg/kg-day	2.2E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	5.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.4E-08	--	5.8E-11	mg/kg-day	7.0E-09	mg/kg-day	8.3E-03
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	3.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-08	--	3.8E-11	mg/kg-day	7.0E-09	mg/kg-day	5.4E-03
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	3.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.7E-08	--	4.5E-10	mg/kg-day	7.0E-08	mg/kg-day	6.4E-03
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	4.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-09	--	5.1E-11	mg/kg-day	7.0E-08	mg/kg-day	7.3E-04
				OCDF	2E-07	mg/kg	9.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-10	--	1.2E-10	mg/kg-day	2.3E-06	mg/kg-day	5.0E-05
				KM TEQ DF	2E-06	mg/kg	1.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-05	--	1.4E-09	mg/kg-day	7.0E-10	mg/kg-day	1.9E+00
				PCB-77	1E-04	mg/kg	5.7E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.5E-08	--	6.6E-08	mg/kg-day	7.0E-06	mg/kg-day	9.5E-03
				PCB-81	4E-06	mg/kg	2.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.4E-09	--	2.4E-09	mg/kg-day	2.3E-06	mg/kg-day	1.0E-03
				PCB-105	1E-03	mg/kg	7.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-07	--	8.5E-07	mg/kg-day	2.3E-05	mg/kg-day	3.6E-02
				PCB-114	8E-05	mg/kg	4.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-08	--	5.2E-08	mg/kg-day	2.3E-05	mg/kg-day	2.2E-03
				PCB-118	5E-03	mg/kg	3.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-06	--	3.6E-06	mg/kg-day	2.3E-05	mg/kg-day	1.5E-01
				PCB-123	7E-05	mg/kg	4.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-08	--	5.0E-08	mg/kg-day	2.3E-05	mg/kg-day	2.2E-03

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-126	4E-05	mg/kg	2.2E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-05	--	2.6E-08	mg/kg-day	7.0E-09	mg/kg-day	3.7E+00
				PCB-156/157	6E-04	mg/kg	3.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	3.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.6E-02
				PCB-167	3E-04	mg/kg	1.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.6E-08	--	2.0E-07	mg/kg-day	2.3E-05	mg/kg-day	8.4E-03
				PCB-169	2E-06	mg/kg	1.0E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.7E-07	--	1.2E-09	mg/kg-day	2.3E-08	mg/kg-day	5.2E-02
				PCB-189	6E-05	mg/kg	3.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-08	--	3.8E-08	mg/kg-day	2.3E-05	mg/kg-day	1.6E-03
				KM TEQ PCB	4E-06	mg/kg	2.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.5E-05	--	2.7E-09	mg/kg-day	7.0E-10	mg/kg-day	3.9E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	6.9E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.4E-05	--	8.1E-05	mg/kg-day	2.0E-05	mg/kg-day	4.0E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-06	M	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(b)fluoranthene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-09	M	3.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-06	M	3.6E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	6E-04	mg/kg	3.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.9E-09	--	3.8E-07	mg/kg-day	3.0E-05	mg/kg-day	1.3E-02
				2,4'-DDE	1E-03	mg/kg	6.0E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.0E-08	--	7.0E-07	mg/kg-day	3.0E-04	mg/kg-day	2.3E-03
				2,4'-DDT	2E-04	mg/kg	1.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-09	--	1.5E-07	mg/kg-day	5.0E-04	mg/kg-day	3.0E-04
				4,4'-DDD	6E-03	mg/kg	3.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.1E-08	--	4.4E-06	mg/kg-day	3.0E-05	mg/kg-day	1.5E-01
				4,4'-DDE	3E-02	mg/kg	1.8E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.0E-07	--	2.0E-05	mg/kg-day	3.0E-04	mg/kg-day	6.8E-02
				4,4'-DDT	2E-02	mg/kg	1.2E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.1E-07	--	1.4E-05	mg/kg-day	5.0E-04	mg/kg-day	2.8E-02
				Benzaldehyde	1E+00	mg/kg	7.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.0E-07	--	8.8E-04	mg/kg-day	1.0E-01	mg/kg-day	8.8E-03
				Chlordane, alpha (cis)	6E-03	mg/kg	3.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-07	--	4.0E-06	mg/kg-day	5.0E-04	mg/kg-day	8.0E-03
				Chlordane, gamma (trans)	2E-03	mg/kg	1.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.6E-08	--	1.5E-06	mg/kg-day	5.0E-04	mg/kg-day	3.1E-03
				Dieldrin	5E-03	mg/kg	2.6E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.2E-06	--	3.1E-06	mg/kg-day	5.0E-05	mg/kg-day	6.1E-02
				Heptachlor epoxide, cis-	1E-03	mg/kg	7.0E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.4E-07	--	8.2E-07	mg/kg-day	1.3E-05	mg/kg-day	6.3E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	9.9E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.0E-09	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	8.9E-04
				Hexachlorobenzene	5E-04	mg/kg	3.1E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.0E-08	--	3.6E-07	mg/kg-day	8.0E-04	mg/kg-day	4.6E-04
				Mirex	1E-04	mg/kg	7.7E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.4E-07	--	9.0E-08	mg/kg-day	2.0E-04	mg/kg-day	4.5E-04
				Nonachlor, cis-	2E-03	mg/kg	9.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.4E-08	--	1.1E-06	mg/kg-day	1.0E-04	mg/kg-day	1.1E-02
				Nonachlor, trans-	3E-03	mg/kg	1.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.2E-08	--	2.1E-06	mg/kg-day	1.6E-05	mg/kg-day	1.3E-01
				Oxychlordane	3E-04	mg/kg	2.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.1E-09	--	2.4E-07	mg/kg-day	8.9E-05	mg/kg-day	2.7E-03
				Pyridine	1E+00	mg/kg	7.6E-05	mg/kg-day	--	--	--	--	8.8E-04	mg/kg-day	1.0E-03	mg/kg-day	8.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	3.5E-04	mg/kg-day	--	--	--	--	4.0E-03	mg/kg-day	1.0E+00	mg/kg-day	4.0E-03
				Arsenic, organic	6E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	4.4E-04	mg/kg-day	2.0E-02	mg/kg-day	2.2E-02
				Arsenic, inorganic	7E-02	mg/kg	4.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.3E-06	--	4.9E-05	mg/kg-day	3.0E-04	mg/kg-day	1.6E-01
				Cadmium	5E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Chromium [as Cr(III)]	9E-02	mg/kg	5.2E-06	mg/kg-day	--	--	--	--	6.0E-05	mg/kg-day	1.5E+00	mg/kg-day	4.0E-05
				Cobalt	2E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.0E-01
				Copper	8E-01	mg/kg	4.6E-05	mg/kg-day	--	--	--	--	5.4E-04	mg/kg-day	1.0E-03	mg/kg-day	5.4E-01
				Iron	1E+01	mg/kg	5.8E-04	mg/kg-day	--	--	--	--	6.7E-03	mg/kg-day	7.0E-01	mg/kg-day	9.6E-03
				Lead	4E-02	mg/kg	2.4E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	1.4E-01	mg/kg-day	8.8E-04
				Mercury	3E-01	mg/kg	1.9E-05	mg/kg-day	--	--	--	--	2.2E-04	mg/kg-day	3.0E-04	mg/kg-day	7.4E-01
				Methyl Mercury	4E-01	mg/kg	2.3E-05	mg/kg-day	--	--	--	--	2.6E-04	mg/kg-day	1.0E-04	mg/kg-day	2.6E+00
				Selenium	5E-01	mg/kg	3.1E-05	mg/kg-day	--	--	--	--	3.7E-04	mg/kg-day	5.0E-03	mg/kg-day	7.3E-02
				Silver	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Vanadium	2E-02	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	5.0E-03	mg/kg-day	3.1E-03
				Zinc	2E+01	mg/kg	1.0E-03	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	3.0E-01	mg/kg-day	3.9E-02

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total DLCs (excluding KM TEQs)							5.5E-05						6.1E+00
				Total DLCs (based on KM TEQs)							5.3E-05						5.9E+00
				Total PCDD/Fs (excluding KM TEQ)							1.9E-05						2.1E+00
				Total PCDD/Fs (based on KM TEQ)							1.8E-05						1.9E+00
				Total DL-PCBs (excluding KM TEQ)							3.6E-05						4.0E+00
				Total DL-PCBs (based on KM TEQ)							3.5E-05						3.9E+00
				Total Non-DL PCBs							1.4E-05						4.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							5.0E-05						8.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							4.9E-05						7.9E+00
				Total PAHs							3.0E-06						1.2E-02
				Total Organics							6.7E-06						1.4E+00
				Total Inorganics							6.3E-06						4.8E+00
		Bluefish Total (excluding KM TEQs)									8.5E-05						1.6E+01
		Bluefish Total (based on KM TEQs)									8.3E-05						1.6E+01
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	5.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-05	--	6.4E-09	mg/kg-day	7.0E-10	mg/kg-day	9.1E+00
				1,2,3,7,8-PeCDD	5E-07	mg/kg	3.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-06	--	3.7E-10	mg/kg-day	7.0E-10	mg/kg-day	5.3E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-07	--	1.4E-10	mg/kg-day	7.0E-09	mg/kg-day	2.0E-02
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-07	--	1.4E-10	mg/kg-day	7.0E-09	mg/kg-day	2.0E-02
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	5.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.5E-08	--	5.8E-11	mg/kg-day	7.0E-09	mg/kg-day	8.3E-03
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	8.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-07	--	9.7E-10	mg/kg-day	7.0E-08	mg/kg-day	1.4E-02
				OCDD	2E-05	mg/kg	9.3E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.2E-08	--	1.1E-08	mg/kg-day	2.3E-06	mg/kg-day	4.7E-03
				2,3,7,8-TCDF	4E-06	mg/kg	2.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-06	--	2.6E-09	mg/kg-day	7.0E-09	mg/kg-day	3.7E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.3E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.8E-07	--	1.5E-09	mg/kg-day	2.3E-08	mg/kg-day	6.4E-02
				2,3,4,7,8-PeCDF	3E-06	mg/kg	1.9E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	8.5E-06	--	2.2E-09	mg/kg-day	2.3E-09	mg/kg-day	9.5E-01
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	2.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-07	--	2.8E-10	mg/kg-day	7.0E-09	mg/kg-day	4.0E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	7.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--	8.3E-10	mg/kg-day	7.0E-09	mg/kg-day	1.2E-01
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	7.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	8.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	5.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-08	--	6.7E-11	mg/kg-day	7.0E-09	mg/kg-day	9.5E-03
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	1.9E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-07	--	2.2E-09	mg/kg-day	7.0E-08	mg/kg-day	3.2E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.5E-09	--	7.4E-11	mg/kg-day	7.0E-08	mg/kg-day	1.1E-03
				OCDF	2E-07	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.9E-10	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.5E-05
				KM TEQ DF	1E-05	mg/kg	6.8E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-04	--	7.9E-09	mg/kg-day	7.0E-10	mg/kg-day	1.1E+01
				PCB-77	1E-03	mg/kg	6.6E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.9E-07	--	7.7E-07	mg/kg-day	7.0E-06	mg/kg-day	1.1E-01
				PCB-81	3E-05	mg/kg	1.6E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.4E-08	--	1.9E-08	mg/kg-day	2.3E-06	mg/kg-day	8.2E-03
				PCB-105	6E-03	mg/kg	3.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-06	--	4.0E-06	mg/kg-day	2.3E-05	mg/kg-day	1.7E-01
				PCB-114	7E-04	mg/kg	4.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--	4.9E-07	mg/kg-day	2.3E-05	mg/kg-day	2.1E-02
				PCB-118	4E-02	mg/kg	2.2E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.8E-06	--	2.5E-05	mg/kg-day	2.3E-05	mg/kg-day	1.1E+00
				PCB-123	6E-04	mg/kg	3.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	3.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.6E-02
				PCB-126	2E-04	mg/kg	1.1E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-04	--	1.3E-07	mg/kg-day	7.0E-09	mg/kg-day	1.8E+01
				PCB-156/157	3E-03	mg/kg	1.9E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-07	--	2.2E-06	mg/kg-day	2.3E-05	mg/kg-day	9.5E-02
				PCB-167	1E-03	mg/kg	8.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-07	--	9.9E-07	mg/kg-day	2.3E-05	mg/kg-day	4.2E-02
				PCB-169	3E-06	mg/kg	1.9E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.7E-07	--	2.3E-09	mg/kg-day	2.3E-08	mg/kg-day	9.7E-02
				PCB-189	3E-04	mg/kg	1.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.4E-08	--	1.9E-07	mg/kg-day	2.3E-05	mg/kg-day	8.3E-03
				KM TEQ PCB	2E-05	mg/kg	1.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-04	--	1.3E-08	mg/kg-day	7.0E-10	mg/kg-day	1.9E+01
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	4.1E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	8.3E-05	--	4.8E-04	mg/kg-day	2.0E-05	mg/kg-day	2.4E+01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-06	M	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(b)fluoranthene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-09	M	3.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-06	M	3.6E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-02	mg/kg	1.9E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.6E-07	--	2.2E-05	mg/kg-day	3.0E-05	mg/kg-day	7.4E-01
				2,4'-DDE	1E-02	mg/kg	7.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.6E-07	--	8.8E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				2,4'-DDT	3E-03	mg/kg	1.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.3E-08	--	1.8E-06	mg/kg-day	5.0E-04	mg/kg-day	3.6E-03
				4,4'-DDD	1E-01	mg/kg	7.9E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.9E-06	--	9.2E-05	mg/kg-day	3.0E-05	mg/kg-day	3.1E+00
				4,4'-DDE	2E-01	mg/kg	9.0E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.1E-06	--	1.1E-04	mg/kg-day	3.0E-04	mg/kg-day	3.5E-01
				4,4'-DDT	1E-02	mg/kg	7.7E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.6E-07	--	9.0E-06	mg/kg-day	5.0E-04	mg/kg-day	1.8E-02
				Benzaldehyde	1E+00	mg/kg	7.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.0E-07	--	8.8E-04	mg/kg-day	1.0E-01	mg/kg-day	8.8E-03
				Chlordane, alpha (cis)	4E-02	mg/kg	2.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.2E-07	--	2.4E-05	mg/kg-day	5.0E-04	mg/kg-day	4.8E-02
				Chlordane, gamma (trans)	6E-03	mg/kg	3.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--	4.3E-06	mg/kg-day	5.0E-04	mg/kg-day	8.5E-03
				Dieldrin	1E-02	mg/kg	6.3E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.0E-05	--	7.3E-06	mg/kg-day	5.0E-05	mg/kg-day	1.5E-01
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.1E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.7E-07	--	1.2E-06	mg/kg-day	1.3E-05	mg/kg-day	9.6E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	9.9E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.0E-09	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	8.9E-04
				Hexachlorobenzene	1E-03	mg/kg	6.0E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	9.7E-08	--	7.1E-07	mg/kg-day	8.0E-04	mg/kg-day	8.8E-04
				Mirex	3E-04	mg/kg	1.7E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.1E-07	--	2.0E-07	mg/kg-day	2.0E-04	mg/kg-day	1.0E-03
				Nonachlor, cis-	1E-02	mg/kg	6.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-07	--	7.5E-06	mg/kg-day	1.0E-04	mg/kg-day	7.5E-02
				Nonachlor, trans-	3E-02	mg/kg	1.5E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.4E-07	--	1.8E-05	mg/kg-day	1.6E-05	mg/kg-day	1.2E+00
				Oxychlordane	4E-03	mg/kg	2.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.9E-08	--	2.6E-06	mg/kg-day	8.9E-05	mg/kg-day	3.0E-02
				Pyridine	1E+00	mg/kg	7.6E-05	mg/kg-day	--	--	--	--	8.8E-04	mg/kg-day	1.0E-03	mg/kg-day	8.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	3.3E-04	mg/kg-day	--	--	--	--	3.8E-03	mg/kg-day	1.0E+00	mg/kg-day	3.8E-03
				Arsenic, organic	1E+00	mg/kg	6.7E-05	mg/kg-day	--	--	--	--	7.8E-04	mg/kg-day	2.0E-02	mg/kg-day	3.9E-02
				Arsenic, inorganic	1E-01	mg/kg	7.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-05	--	8.6E-05	mg/kg-day	3.0E-04	mg/kg-day	2.9E-01
				Cadmium	5E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Chromium [as Cr(III)]	1E-01	mg/kg	7.2E-06	mg/kg-day	--	--	--	--	8.3E-05	mg/kg-day	1.5E+00	mg/kg-day	5.6E-05
				Cobalt	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.5E-02
				Copper	6E-01	mg/kg	3.3E-05	mg/kg-day	--	--	--	--	3.8E-04	mg/kg-day	1.0E-03	mg/kg-day	3.8E-01
				Iron	7E+00	mg/kg	3.9E-04	mg/kg-day	--	--	--	--	4.5E-03	mg/kg-day	7.0E-01	mg/kg-day	6.5E-03
				Lead	4E-02	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	1.4E-01	mg/kg-day	1.0E-03
				Mercury	3E-01	mg/kg	1.6E-05	mg/kg-day	--	--	--	--	1.9E-04	mg/kg-day	3.0E-04	mg/kg-day	6.4E-01
				Methyl Mercury	3E-01	mg/kg	2.0E-05	mg/kg-day	--	--	--	--	2.3E-04	mg/kg-day	1.0E-04	mg/kg-day	2.3E+00
				Selenium	4E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	2.6E-04	mg/kg-day	5.0E-03	mg/kg-day	5.1E-02
				Silver	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Vanadium	3E-02	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	5.0E-03	mg/kg-day	4.1E-03
				Zinc	7E+00	mg/kg	4.3E-04	mg/kg-day	--	--	--	--	5.0E-03	mg/kg-day	3.0E-01	mg/kg-day	1.7E-02
				Total DLCs (excluding KM TEQs)							2.8E-04						3.1E+01
				Total DLCs (based on KM TEQs)							2.7E-04						3.0E+01
				Total PCDD/Fs (excluding KM TEQ)							1.0E-04						1.1E+01
				Total PCDD/Fs (based on KM TEQ)							1.0E-04						1.1E+01
				Total DL-PCBs (excluding KM TEQ)							1.8E-04						2.0E+01
				Total DL-PCBs (based on KM TEQ)							1.7E-04						1.9E+01
				Total Non-DL PCBs							8.3E-05						2.4E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-04						4.4E+01
				Total PCBs (DL & NDL; based on KM TEQ)							2.5E-04						4.3E+01
				Total PAHs							3.0E-06						1.2E-02
				Total Organics							1.9E-05						6.7E+00
				Total Inorganics							1.1E-05						3.8E+00

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
		Striped Bass Total (excluding KM TEQs)									4.0E-04						6.6E+01
		Striped Bass Total (based on KM TEQs)									3.9E-04						6.5E+01
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	5E-06	mg/kg	3.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-05	--	3.7E-09	mg/kg-day	7.0E-10	mg/kg-day	5.3E+00
				1,2,3,7,8-PeCDD	2E-07	mg/kg	1.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-06	--	1.6E-10	mg/kg-day	7.0E-10	mg/kg-day	2.4E-01
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	4.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.1E-08	--	5.5E-11	mg/kg-day	7.0E-09	mg/kg-day	7.8E-03
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-07	--	1.7E-10	mg/kg-day	7.0E-09	mg/kg-day	2.5E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.4E-08	--	7.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.0E-02
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-08	--	2.1E-10	mg/kg-day	7.0E-08	mg/kg-day	3.0E-03
				OCDD	5E-07	mg/kg	2.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--	3.1E-10	mg/kg-day	2.3E-06	mg/kg-day	1.3E-04
				2,3,7,8-TCDF	3E-07	mg/kg	1.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,7,8-PeCDF	3E-07	mg/kg	2.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.1E-08	--	2.4E-10	mg/kg-day	2.3E-08	mg/kg-day	1.0E-02
				2,3,4,7,8-PeCDF	9E-07	mg/kg	5.2E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.3E-06	--	6.1E-10	mg/kg-day	2.3E-09	mg/kg-day	2.6E-01
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	3.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-07	--	4.4E-10	mg/kg-day	7.0E-09	mg/kg-day	6.3E-02
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	8.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	9.7E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-08	--	7.4E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	2.9E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-08	--	3.4E-10	mg/kg-day	7.0E-08	mg/kg-day	4.8E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-09	--	7.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.0E-03
				OCDF	2E-07	mg/kg	1.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-10	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.8E-05
				KM TEQ DF	6E-06	mg/kg	3.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.3E-05	--	4.1E-09	mg/kg-day	7.0E-10	mg/kg-day	5.9E+00
				PCB-77	1E-04	mg/kg	8.3E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.2E-07	--	9.7E-08	mg/kg-day	7.0E-06	mg/kg-day	1.4E-02
				PCB-81	1E-05	mg/kg	8.6E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-08	--	1.0E-08	mg/kg-day	2.3E-06	mg/kg-day	4.3E-03
				PCB-105	3E-03	mg/kg	1.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-07	--	1.9E-06	mg/kg-day	2.3E-05	mg/kg-day	8.0E-02
				PCB-114	2E-04	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-08	--	1.6E-07	mg/kg-day	2.3E-05	mg/kg-day	6.8E-03
				PCB-118	1E-02	mg/kg	6.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-06	--	7.9E-06	mg/kg-day	2.3E-05	mg/kg-day	3.4E-01
				PCB-123	2E-04	mg/kg	1.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-08	--	1.2E-07	mg/kg-day	2.3E-05	mg/kg-day	5.2E-03
				PCB-126	4E-05	mg/kg	2.5E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-05	--	3.0E-08	mg/kg-day	7.0E-09	mg/kg-day	4.2E+00
				PCB-156/157	1E-03	mg/kg	6.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-07	--	7.8E-07	mg/kg-day	2.3E-05	mg/kg-day	3.3E-02
				PCB-167	5E-04	mg/kg	3.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-07	--	3.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.5E-02
				PCB-169	2E-06	mg/kg	1.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.3E-07	--	1.4E-09	mg/kg-day	2.3E-08	mg/kg-day	5.9E-02
				PCB-189	8E-05	mg/kg	4.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-08	--	5.3E-08	mg/kg-day	2.3E-05	mg/kg-day	2.3E-03
				KM TEQ PCB	5E-06	mg/kg	2.8E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.2E-05	--	3.3E-09	mg/kg-day	7.0E-10	mg/kg-day	4.7E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	8.6E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-05	--	1.0E-04	mg/kg-day	2.0E-05	mg/kg-day	5.0E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-06	M	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(b)fluoranthene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-09	M	3.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-06	M	3.6E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-07	M	3.6E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	1.9E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.6E-08	--	2.3E-06	mg/kg-day	3.0E-05	mg/kg-day	7.5E-02
				2,4'-DDE	3E-03	mg/kg	1.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.5E-08	--	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.3E-03
				2,4'-DDT	2E-04	mg/kg	1.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-09	--	1.5E-07	mg/kg-day	5.0E-04	mg/kg-day	2.9E-04
				4,4'-DDD	2E-02	mg/kg	1.1E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.6E-07	--	1.3E-05	mg/kg-day	3.0E-05	mg/kg-day	4.3E-01
				4,4'-DDE	4E-02	mg/kg	2.4E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.0E-07	--	2.7E-05	mg/kg-day	3.0E-04	mg/kg-day	9.2E-02
				4,4'-DDT	1E-03	mg/kg	8.4E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.9E-08	--	9.8E-07	mg/kg-day	5.0E-04	mg/kg-day	2.0E-03
				Benzaldehyde	1E+00	mg/kg	7.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.0E-07	--	8.8E-04	mg/kg-day	1.0E-01	mg/kg-day	8.8E-03
				Chlordane, alpha (cis)	2E-03	mg/kg	1.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.3E-08	--	1.4E-06	mg/kg-day	5.0E-04	mg/kg-day	2.8E-03

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chlordane, gamma (trans)	7E-04	mg/kg	4.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-08	--	4.7E-07	mg/kg-day	5.0E-04	mg/kg-day	9.3E-04
				Dieldrin	1E-03	mg/kg	8.3E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.3E-06	--	9.6E-07	mg/kg-day	5.0E-05	mg/kg-day	1.9E-02
				Heptachlor epoxide, cis-	3E-04	mg/kg	2.0E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.8E-07	--	2.3E-07	mg/kg-day	1.3E-05	mg/kg-day	1.8E-02
				Heptachlor epoxide, trans-	2E-05	mg/kg	9.9E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.0E-09	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	8.9E-04
				Hexachlorobenzene	5E-04	mg/kg	2.8E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.5E-08	--	3.3E-07	mg/kg-day	8.0E-04	mg/kg-day	4.1E-04
				Mirex	6E-05	mg/kg	3.6E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	6.6E-08	--	4.3E-08	mg/kg-day	2.0E-04	mg/kg-day	2.1E-04
				Nonachlor, cis-	1E-03	mg/kg	6.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-08	--	7.6E-07	mg/kg-day	1.0E-04	mg/kg-day	7.6E-03
				Nonachlor, trans-	3E-03	mg/kg	1.6E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.7E-08	--	1.9E-06	mg/kg-day	1.6E-05	mg/kg-day	1.2E-01
				Oxychlordane	1E-03	mg/kg	7.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.6E-08	--	8.6E-07	mg/kg-day	8.9E-05	mg/kg-day	9.7E-03
				Pyridine	1E+00	mg/kg	7.6E-05	mg/kg-day	--	--	--	--	8.8E-04	mg/kg-day	1.0E-03	mg/kg-day	8.8E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	3.3E-04	mg/kg-day	--	--	--	--	3.8E-03	mg/kg-day	1.0E+00	mg/kg-day	3.8E-03
				Arsenic, organic	2E+00	mg/kg	9.6E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	2.0E-02	mg/kg-day	5.6E-02
				Arsenic, inorganic	2E-01	mg/kg	1.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-05	--	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	4.1E-01
				Cadmium	5E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Chromium [as Cr(III)]	5E-01	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.5E+00	mg/kg-day	2.1E-04
				Cobalt	9E-01	mg/kg	5.0E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	3.0E-04	mg/kg-day	1.9E+00
				Copper	2E-01	mg/kg	1.2E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	1.0E-03	mg/kg-day	1.4E-01
				Iron	5E+00	mg/kg	3.0E-04	mg/kg-day	--	--	--	--	3.5E-03	mg/kg-day	7.0E-01	mg/kg-day	5.0E-03
				Lead	3E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	2.2E-04	mg/kg-day	1.4E-01	mg/kg-day	1.5E-03
				Mercury	2E-01	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	4.1E-01
				Methyl Mercury	2E-01	mg/kg	1.2E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	1.0E-04	mg/kg-day	1.4E+00
				Selenium	6E-01	mg/kg	3.7E-05	mg/kg-day	--	--	--	--	4.4E-04	mg/kg-day	5.0E-03	mg/kg-day	8.7E-02
				Silver	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Vanadium	3E-02	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	5.0E-03	mg/kg-day	4.1E-03
				Zinc	7E+00	mg/kg	4.0E-04	mg/kg-day	--	--	--	--	4.6E-03	mg/kg-day	3.0E-01	mg/kg-day	1.5E-02
				Total DLCs (excluding KM TEQs)							9.7E-05						1.1E+01
				Total DLCs (based on KM TEQs)							9.5E-05						1.1E+01
				Total PCDD/Fs (excluding KM TEQ)							5.4E-05						6.0E+00
				Total PCDD/Fs (based on KM TEQ)							5.3E-05						5.9E+00
				Total DL-PCBs (excluding KM TEQ)							4.3E-05						4.8E+00
				Total DL-PCBs (based on KM TEQ)							4.2E-05						4.7E+00
				Total Non-DL PCBs							1.7E-05						5.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							6.0E-05						9.8E+00
				Total PCBs (DL & NDL; based on KM TEQ)							5.9E-05						9.7E+00
				Total PAHs							3.0E-06						1.2E-02
				Total Organics							3.3E-06						1.7E+00
				Total Inorganics							1.6E-05						4.6E+00
		Summer Flounder Total (excluding KM TEQs)									1.4E-04						2.2E+01
		Summer Flounder Total (based on KM TEQs)									1.3E-04						2.2E+01
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	2E-05	mg/kg	9.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-04	--	1.1E-08	mg/kg-day	7.0E-10	mg/kg-day	1.6E+01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-06	--	2.9E-10	mg/kg-day	7.0E-10	mg/kg-day	4.1E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-07	--	1.6E-10	mg/kg-day	7.0E-09	mg/kg-day	2.3E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	3.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-07	--	4.1E-10	mg/kg-day	7.0E-09	mg/kg-day	5.8E-02
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	8.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	9.5E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	2.2E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.2E-08	--	2.5E-10	mg/kg-day	7.0E-08	mg/kg-day	3.6E-03
				OCDD	8E-07	mg/kg	4.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-09	--	5.7E-10	mg/kg-day	2.3E-06	mg/kg-day	2.5E-04
				2,3,7,8-TCDF	4E-06	mg/kg	2.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-06	--	2.6E-09	mg/kg-day	7.0E-09	mg/kg-day	3.7E-01
				1,2,3,7,8-PeCDF	3E-06	mg/kg	1.8E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.9E-07	--	2.1E-09	mg/kg-day	2.3E-08	mg/kg-day	8.8E-02

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,7,8-PeCDF	3E-06	mg/kg	2.0E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	8.9E-06	--	2.3E-09	mg/kg-day	2.3E-09	mg/kg-day	9.9E-01
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	9.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-06	--	1.1E-09	mg/kg-day	7.0E-09	mg/kg-day	1.6E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	6.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-06	--	8.1E-10	mg/kg-day	7.0E-09	mg/kg-day	1.2E-01
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	6.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-08	--	7.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.0E-02
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--	1.4E-10	mg/kg-day	7.0E-09	mg/kg-day	2.1E-02
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	1.4E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-07	--	1.6E-09	mg/kg-day	7.0E-08	mg/kg-day	2.3E-02
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	5.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.6E-09	--	5.9E-11	mg/kg-day	7.0E-08	mg/kg-day	8.5E-04
				OCDF	2E-07	mg/kg	1.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.7E-10	--	1.5E-10	mg/kg-day	2.3E-06	mg/kg-day	6.3E-05
				KM TEQ DF	2E-05	mg/kg	1.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-04	--	1.2E-08	mg/kg-day	7.0E-10	mg/kg-day	1.8E+01
				PCB-77	1E-03	mg/kg	5.7E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.5E-07	--	6.6E-07	mg/kg-day	7.0E-06	mg/kg-day	9.5E-02
				PCB-81	4E-05	mg/kg	2.1E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.6E-08	--	2.5E-08	mg/kg-day	2.3E-06	mg/kg-day	1.1E-02
				PCB-105	7E-03	mg/kg	4.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-06	--	5.0E-06	mg/kg-day	2.3E-05	mg/kg-day	2.2E-01
				PCB-114	6E-04	mg/kg	3.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	3.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.6E-02
				PCB-118	3E-02	mg/kg	1.6E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.3E-06	--	1.9E-05	mg/kg-day	2.3E-05	mg/kg-day	8.1E-01
				PCB-123	6E-04	mg/kg	3.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	3.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.6E-02
				PCB-126	6E-05	mg/kg	3.5E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-05	--	4.1E-08	mg/kg-day	7.0E-09	mg/kg-day	5.9E+00
				PCB-156/157	3E-03	mg/kg	1.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.5E-07	--	1.9E-06	mg/kg-day	2.3E-05	mg/kg-day	8.3E-02
				PCB-167	1E-03	mg/kg	6.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-07	--	7.9E-07	mg/kg-day	2.3E-05	mg/kg-day	3.4E-02
				PCB-169	7E-06	mg/kg	4.3E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-06	--	5.1E-09	mg/kg-day	2.3E-08	mg/kg-day	2.2E-01
				PCB-189	2E-04	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.5E-03
				KM TEQ PCB	7E-06	mg/kg	4.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.5E-05	--	5.0E-09	mg/kg-day	7.0E-10	mg/kg-day	7.2E+00
				Non-DL PCBs													
				Total Non-DL PCBs	5E-01	mg/kg	2.8E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.5E-05	--	3.2E-04	mg/kg-day	2.0E-05	mg/kg-day	1.6E+01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-06	M	8.8E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.1E-09	M	8.8E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-06	M	8.8E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	7.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	5E-02	mg/kg	3.0E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.1E-07	--	3.5E-05	mg/kg-day	3.0E-05	mg/kg-day	1.2E+00
				2,4'-DDE	1E-02	mg/kg	6.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.0E-07	--	7.0E-06	mg/kg-day	3.0E-04	mg/kg-day	2.3E-02
				2,4'-DDT	1E-02	mg/kg	8.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-07	--	9.4E-06	mg/kg-day	5.0E-04	mg/kg-day	1.9E-02
				4,4'-DDD	2E-01	mg/kg	9.0E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.2E-06	--	1.1E-04	mg/kg-day	3.0E-05	mg/kg-day	3.5E+00
				4,4'-DDE	1E-01	mg/kg	6.9E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-06	--	8.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.7E-01
				4,4'-DDT	3E-02	mg/kg	1.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.5E-07	--	1.9E-05	mg/kg-day	5.0E-04	mg/kg-day	3.8E-02
				Benzaldehyde	1E+00	mg/kg	7.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.0E-07	--	8.8E-04	mg/kg-day	1.0E-01	mg/kg-day	8.8E-03
				Chlordane, alpha (cis)	2E-02	mg/kg	1.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-07	--	1.6E-05	mg/kg-day	5.0E-04	mg/kg-day	3.2E-02
				Chlordane, gamma (trans)	5E-03	mg/kg	2.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.8E-08	--	3.3E-06	mg/kg-day	5.0E-04	mg/kg-day	6.6E-03
				Dieldrin	7E-03	mg/kg	4.2E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.8E-06	--	4.9E-06	mg/kg-day	5.0E-05	mg/kg-day	9.9E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.2E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.1E-06	--	1.4E-06	mg/kg-day	1.3E-05	mg/kg-day	1.1E-01
				Heptachlor epoxide, trans-	2E-05	mg/kg	9.9E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.0E-09	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	8.9E-04
				Hexachlorobenzene	1E-03	mg/kg	7.3E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.2E-07	--	8.5E-07	mg/kg-day	8.0E-04	mg/kg-day	1.1E-03
				Mirex	4E-04	mg/kg	2.1E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.7E-07	--	2.4E-07	mg/kg-day	2.0E-04	mg/kg-day	1.2E-03
				Nonachlor, cis-	8E-03	mg/kg	4.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-07	--	5.1E-06	mg/kg-day	1.0E-04	mg/kg-day	5.1E-02
				Nonachlor, trans-	2E-02	mg/kg	1.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.9E-07	--	1.3E-05	mg/kg-day	1.6E-05	mg/kg-day	8.4E-01
				Oxychlordane	3E-03	mg/kg	1.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.3E-08	--	2.1E-06	mg/kg-day	8.9E-05	mg/kg-day	2.4E-02
				Pyridine	1E+00	mg/kg	7.6E-05	mg/kg-day	--	--	--	--	8.8E-04	mg/kg-day	1.0E-03	mg/kg-day	8.8E-01
				Inorganics													
				Aluminum	9E+00	mg/kg	5.1E-04	mg/kg-day	--	--	--	--	5.9E-03	mg/kg-day	1.0E+00	mg/kg-day	5.9E-03

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, organic	7E-01	mg/kg	4.0E-05	mg/kg-day	--	--	--	--	4.7E-04	mg/kg-day	2.0E-02	mg/kg-day	2.3E-02
				Arsenic, inorganic	8E-02	mg/kg	4.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.7E-06	--	5.2E-05	mg/kg-day	3.0E-04	mg/kg-day	1.7E-01
				Cadmium	5E-02	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Chromium [as Cr(III)]	1E-01	mg/kg	8.4E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.5E+00	mg/kg-day	6.5E-05
				Cobalt	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.5E-02
				Copper	6E-01	mg/kg	3.7E-05	mg/kg-day	--	--	--	--	4.3E-04	mg/kg-day	1.0E-03	mg/kg-day	4.3E-01
				Iron	6E+00	mg/kg	3.6E-04	mg/kg-day	--	--	--	--	4.1E-03	mg/kg-day	7.0E-01	mg/kg-day	5.9E-03
				Lead	5E-02	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	3.4E-05	mg/kg-day	--	--	--
				Manganese	4E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	2.6E-04	mg/kg-day	1.4E-01	mg/kg-day	1.8E-03
				Mercury	3E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	3.0E-04	mg/kg-day	6.9E-01
				Methyl Mercury	4E-01	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	1.0E-04	mg/kg-day	2.8E+00
				Selenium	7E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	4.4E-04	mg/kg-day	5.0E-03	mg/kg-day	8.8E-02
				Silver	2E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	5.0E-03	mg/kg-day	2.7E-03
				Vanadium	3E-02	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	5.0E-03	mg/kg-day	4.7E-03
				Zinc	1E+01	mg/kg	7.3E-04	mg/kg-day	--	--	--	--	8.5E-03	mg/kg-day	3.0E-01	mg/kg-day	2.8E-02
				Total DLCs (excluding KM TEQs)							2.3E-04						2.5E+01
				Total DLCs (based on KM TEQs)							2.2E-04						2.5E+01
				Total PCDD/Fs (excluding KM TEQ)							1.6E-04						1.8E+01
				Total PCDD/Fs (based on KM TEQ)							1.6E-04						1.8E+01
				Total DL-PCBs (excluding KM TEQ)							6.6E-05						7.4E+00
				Total DL-PCBs (based on KM TEQ)							6.5E-05						7.2E+00
				Total Non-DL PCBs							5.5E-05						1.6E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							1.2E-04						2.3E+01
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-04						2.3E+01
				Total PAHs							7.2E-06						2.9E-02
				Total Organics							1.6E-05						7.1E+00
				Total Inorganics							6.7E-06						4.3E+00
		White Perch Total (excluding KM TEQs)									3.1E-04						5.3E+01
		White Perch Total (based on KM TEQs)									3.1E-04						5.2E+01
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	3E-05	mg/kg	9.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-04	--	1.1E-08	mg/kg-day	7.0E-10	mg/kg-day	1.5E+01
				1,2,3,7,8-PeCDD	7E-07	mg/kg	2.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-06	--	2.8E-10	mg/kg-day	7.0E-10	mg/kg-day	4.0E-01
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	7.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	8.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	2.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-07	--	2.4E-10	mg/kg-day	7.0E-09	mg/kg-day	3.5E-02
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	7.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	8.6E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	2.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-08	--	2.8E-10	mg/kg-day	7.0E-08	mg/kg-day	4.0E-03
				OCDD	2E-06	mg/kg	7.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-09	--	8.2E-10	mg/kg-day	2.3E-06	mg/kg-day	3.5E-04
				2,3,7,8-TCDF	1E-05	mg/kg	3.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-06	--	4.0E-09	mg/kg-day	7.0E-09	mg/kg-day	5.7E-01
				1,2,3,7,8-PeCDF	2E-06	mg/kg	7.4E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.3E-07	--	8.6E-10	mg/kg-day	2.3E-08	mg/kg-day	3.7E-02
				2,3,4,7,8-PeCDF	5E-06	mg/kg	1.7E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.7E-06	--	2.0E-09	mg/kg-day	2.3E-09	mg/kg-day	8.6E-01
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	1.6E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-06	--	1.9E-09	mg/kg-day	7.0E-09	mg/kg-day	2.7E-01
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	4.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.4E-07	--	5.7E-10	mg/kg-day	7.0E-09	mg/kg-day	8.2E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	3.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-08	--	3.5E-11	mg/kg-day	7.0E-09	mg/kg-day	5.0E-03
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--	1.5E-10	mg/kg-day	7.0E-09	mg/kg-day	2.2E-02
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	1.6E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.5E-07	--	1.9E-09	mg/kg-day	7.0E-08	mg/kg-day	2.7E-02
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	2.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-09	--	2.7E-11	mg/kg-day	7.0E-08	mg/kg-day	3.9E-04
				OCDF	2E-07	mg/kg	8.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-10	--	1.0E-10	mg/kg-day	2.3E-06	mg/kg-day	4.3E-05
				KM TEQ DF	3E-05	mg/kg	1.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-04	--	1.2E-08	mg/kg-day	7.0E-10	mg/kg-day	1.8E+01
				PCB-77	2E-03	mg/kg	6.8E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.0E-06	--	8.0E-07	mg/kg-day	7.0E-06	mg/kg-day	1.1E-01
				PCB-81	9E-05	mg/kg	3.0E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-07	--	3.5E-08	mg/kg-day	2.3E-06	mg/kg-day	1.5E-02
				PCB-105	1E-02	mg/kg	3.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-06	--	4.3E-06	mg/kg-day	2.3E-05	mg/kg-day	1.8E-01

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-114	9E-04	mg/kg	3.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-07	--	3.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.5E-02
				PCB-118	5E-02	mg/kg	1.6E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.4E-06	--	1.9E-05	mg/kg-day	2.3E-05	mg/kg-day	8.2E-01
				PCB-123	8E-04	mg/kg	2.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-07	--	3.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.4E-02
				PCB-126	1E-04	mg/kg	3.4E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-05	--	4.0E-08	mg/kg-day	7.0E-09	mg/kg-day	5.7E+00
				PCB-156/157	4E-03	mg/kg	1.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-07	--	1.5E-06	mg/kg-day	2.3E-05	mg/kg-day	6.6E-02
				PCB-167	2E-03	mg/kg	5.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-07	--	6.4E-07	mg/kg-day	2.3E-05	mg/kg-day	2.7E-02
				PCB-169	1E-05	mg/kg	3.8E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-06	--	4.5E-09	mg/kg-day	2.3E-08	mg/kg-day	1.9E-01
				PCB-189	3E-04	mg/kg	9.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-08	--	1.1E-07	mg/kg-day	2.3E-05	mg/kg-day	4.7E-03
				KM TEQ PCB	1E-05	mg/kg	4.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.1E-05	--	4.7E-09	mg/kg-day	7.0E-10	mg/kg-day	6.8E+00
				Non-DL PCBs													
				Total Non-DL PCBs	3E-01	mg/kg	1.1E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.2E-05	--	1.3E-04	mg/kg-day	2.0E-05	mg/kg-day	6.6E+00
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	9.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.1E-08	M	1.2E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	9.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.9E-07	M	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.7E-03
				Benzo(b)fluoranthene	3E-03	mg/kg	9.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.8E-08	M	1.1E-06	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.3E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.4E-10	M	1.5E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	9.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.9E-07	M	1.1E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	7.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M	8.8E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-04	mg/kg	7.7E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.8E-09	--	8.9E-08	mg/kg-day	3.0E-05	mg/kg-day	3.0E-03
				2,4'-DDE	4E-04	mg/kg	1.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.3E-09	--	1.8E-07	mg/kg-day	3.0E-04	mg/kg-day	6.1E-04
				2,4'-DDT	2E-04	mg/kg	6.9E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-09	--	8.1E-08	mg/kg-day	5.0E-04	mg/kg-day	1.6E-04
				4,4'-DDD	3E-02	mg/kg	1.2E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.9E-07	--	1.4E-05	mg/kg-day	3.0E-05	mg/kg-day	4.8E-01
				4,4'-DDE	9E-02	mg/kg	3.3E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-06	--	3.9E-05	mg/kg-day	3.0E-04	mg/kg-day	1.3E-01
				4,4'-DDT	1E-03	mg/kg	3.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-08	--	4.4E-07	mg/kg-day	5.0E-04	mg/kg-day	8.9E-04
				Benzaldehyde	1E+00	mg/kg	4.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-07	--	4.9E-04	mg/kg-day	1.0E-01	mg/kg-day	4.9E-03
				Chlordane, alpha (cis)	2E-03	mg/kg	7.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-08	--	8.3E-07	mg/kg-day	5.0E-04	mg/kg-day	1.7E-03
				Chlordane, gamma (trans)	3E-04	mg/kg	8.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.1E-09	--	1.0E-07	mg/kg-day	5.0E-04	mg/kg-day	2.1E-04
				Dieldrin	6E-03	mg/kg	2.2E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.4E-06	--	2.5E-06	mg/kg-day	5.0E-05	mg/kg-day	5.0E-02
				Heptachlor epoxide, cis-	4E-03	mg/kg	1.3E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.1E-06	--	1.5E-06	mg/kg-day	1.3E-05	mg/kg-day	1.1E-01
				Heptachlor epoxide, trans-	1E-03	mg/kg	4.0E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.7E-07	--	4.7E-07	mg/kg-day	1.3E-05	mg/kg-day	3.6E-02
				Hexachlorobenzene	1E-03	mg/kg	3.9E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	6.2E-08	--	4.5E-07	mg/kg-day	8.0E-04	mg/kg-day	5.6E-04
				Mirex	2E-04	mg/kg	7.1E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.3E-07	--	8.3E-08	mg/kg-day	2.0E-04	mg/kg-day	4.1E-04
				Nonachlor, cis-	5E-03	mg/kg	1.9E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.5E-08	--	2.2E-06	mg/kg-day	1.0E-04	mg/kg-day	2.2E-02
				Nonachlor, trans-	1E-02	mg/kg	3.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--	4.3E-06	mg/kg-day	1.6E-05	mg/kg-day	2.7E-01
				Oxychlordane	2E-02	mg/kg	5.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.9E-07	--	6.4E-06	mg/kg-day	8.9E-05	mg/kg-day	7.2E-02
				Pyridine	5E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	1.0E-03	mg/kg-day	2.1E-01
				Inorganics													
				Aluminum	9E+00	mg/kg	3.2E-04	mg/kg-day	--	--	--	--	3.8E-03	mg/kg-day	1.0E+00	mg/kg-day	3.8E-03
				Arsenic, organic	3E+00	mg/kg	8.9E-05	mg/kg-day	--	--	--	--	1.0E-03	mg/kg-day	2.0E-02	mg/kg-day	5.2E-02
				Arsenic, inorganic	3E-01	mg/kg	9.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.5E-05	--	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	3.8E-01
				Cadmium	4E-01	mg/kg	1.4E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	1.0E-03	mg/kg-day	1.6E-01
				Chromium [as Cr(III)]	2E-01	mg/kg	5.8E-06	mg/kg-day	--	--	--	--	6.8E-05	mg/kg-day	1.5E+00	mg/kg-day	4.5E-05
				Cobalt	9E-02	mg/kg	3.1E-06	mg/kg-day	--	--	--	--	3.6E-05	mg/kg-day	3.0E-04	mg/kg-day	1.2E-01
				Copper	3E+01	mg/kg	1.0E-03	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	1.0E-03	mg/kg-day	1.2E+01
				Iron	4E+01	mg/kg	1.4E-03	mg/kg-day	--	--	--	--	1.6E-02	mg/kg-day	7.0E-01	mg/kg-day	2.3E-02
				Lead	3E-01	mg/kg	9.9E-06	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	--	--	--
				Manganese	1E+01	mg/kg	3.5E-04	mg/kg-day	--	--	--	--	4.1E-03	mg/kg-day	1.4E-01	mg/kg-day	2.9E-02
				Mercury	2E-01	mg/kg	5.3E-06	mg/kg-day	--	--	--	--	6.2E-05	mg/kg-day	3.0E-04	mg/kg-day	2.1E-01
				Methyl Mercury	2E-01	mg/kg	6.0E-06	mg/kg-day	--	--	--	--	7.0E-05	mg/kg-day	1.0E-04	mg/kg-day	7.0E-01
				Selenium	1E+00	mg/kg	4.0E-05	mg/kg-day	--	--	--	--	4.6E-04	mg/kg-day	5.0E-03	mg/kg-day	9.3E-02

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Silver	8E-01	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.2E-04	mg/kg-day	5.0E-03	mg/kg-day	6.4E-02
				Vanadium	7E-02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	3.0E-05	mg/kg-day	5.0E-03	mg/kg-day	6.0E-03
				Zinc	5E+01	mg/kg	1.6E-03	mg/kg-day	--	--	--	--	1.9E-02	mg/kg-day	3.0E-01	mg/kg-day	6.4E-02
				Total DLCs (excluding KM TEQs)							2.2E-04						2.5E+01
				Total DLCs (based on KM TEQs)							2.2E-04						2.4E+01
				Total PCDD/Fs (excluding KM TEQ)							1.6E-04						1.8E+01
				Total PCDD/Fs (based on KM TEQ)							1.6E-04						1.8E+01
				Total DL-PCBs (excluding KM TEQ)							6.4E-05						7.1E+00
				Total DL-PCBs (based on KM TEQ)							6.1E-05						6.8E+00
				Total Non-DL PCBs							2.2E-05						6.6E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							8.6E-05						1.4E+01
				Total PCBs (DL & NDL; based on KM TEQ)							8.3E-05						1.3E+01
				Total PAHs							1.2E-06						3.7E-03
				Total Organics							7.2E-06						1.4E+00
				Total Inorganics							1.5E-05						1.4E+01
		Crab (H+M) Total (excluding KM TEQs)									2.7E-04						4.6E+01
		Crab (H+M) Total (based on KM TEQs)									2.7E-04						4.6E+01
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	4E-06	mg/kg	1.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-05	--	1.6E-09	mg/kg-day	7.0E-10	mg/kg-day	2.3E+00
				1,2,3,7,8-PeCDD	3E-07	mg/kg	8.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-06	--	1.0E-10	mg/kg-day	7.0E-10	mg/kg-day	1.5E-01
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	9.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.6E-03
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	2.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-08	--	2.8E-11	mg/kg-day	7.0E-09	mg/kg-day	4.1E-03
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	1.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	1.5E-11	mg/kg-day	7.0E-09	mg/kg-day	2.1E-03
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	4.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.1E-09	--	5.5E-11	mg/kg-day	7.0E-08	mg/kg-day	7.8E-04
				OCDD	5E-07	mg/kg	1.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.3E-10	--	1.9E-10	mg/kg-day	2.3E-06	mg/kg-day	8.1E-05
				2,3,7,8-TCDF	1E-06	mg/kg	4.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-07	--	4.7E-10	mg/kg-day	7.0E-09	mg/kg-day	6.8E-02
				1,2,3,7,8-PeCDF	3E-07	mg/kg	9.5E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.3E-08	--	1.1E-10	mg/kg-day	2.3E-08	mg/kg-day	4.7E-03
				2,3,4,7,8-PeCDF	5E-07	mg/kg	1.7E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.6E-07	--	2.0E-10	mg/kg-day	2.3E-09	mg/kg-day	8.5E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-07	--	2.9E-10	mg/kg-day	7.0E-09	mg/kg-day	4.2E-02
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	6.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-08	--	7.4E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	2.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-08	--	2.9E-11	mg/kg-day	7.0E-09	mg/kg-day	4.2E-03
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.7E-03
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	1.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-08	--	1.6E-10	mg/kg-day	7.0E-08	mg/kg-day	2.3E-03
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	1.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.8E-09	--	1.4E-11	mg/kg-day	7.0E-08	mg/kg-day	2.0E-04
				OCDF	9E-08	mg/kg	3.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--	3.8E-11	mg/kg-day	2.3E-06	mg/kg-day	1.6E-05
				KM TEQ DF	4E-06	mg/kg	1.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-05	--	1.8E-09	mg/kg-day	7.0E-10	mg/kg-day	2.6E+00
				PCB-77	2E-04	mg/kg	7.0E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.0E-07	--	8.2E-08	mg/kg-day	7.0E-06	mg/kg-day	1.2E-02
				PCB-81	9E-06	mg/kg	3.2E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-08	--	3.7E-09	mg/kg-day	2.3E-06	mg/kg-day	1.6E-03
				PCB-105	1E-03	mg/kg	3.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-07	--	4.3E-07	mg/kg-day	2.3E-05	mg/kg-day	1.9E-02
				PCB-114	9E-05	mg/kg	3.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-08	--	3.8E-08	mg/kg-day	2.3E-05	mg/kg-day	1.6E-03
				PCB-118	4E-03	mg/kg	1.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-07	--	1.6E-06	mg/kg-day	2.3E-05	mg/kg-day	7.0E-02
				PCB-123	8E-05	mg/kg	2.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-08	--	3.2E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-126	8E-06	mg/kg	3.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-06	--	3.5E-09	mg/kg-day	7.0E-09	mg/kg-day	5.0E-01
				PCB-156/157	3E-04	mg/kg	1.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-08	--	1.3E-07	mg/kg-day	2.3E-05	mg/kg-day	5.6E-03
				PCB-167	1E-04	mg/kg	4.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-08	--	5.0E-08	mg/kg-day	2.3E-05	mg/kg-day	2.2E-03
				PCB-169	1E-05	mg/kg	4.0E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.8E-06	--	4.7E-09	mg/kg-day	2.3E-08	mg/kg-day	2.0E-01
				PCB-189	2E-05	mg/kg	5.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-09	--	6.4E-09	mg/kg-day	2.3E-05	mg/kg-day	2.8E-04
				KM TEQ PCB	1E-06	mg/kg	3.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.4E-06	--	4.2E-10	mg/kg-day	7.0E-10	mg/kg-day	6.0E-01
				Non-DL PCBs													
				Total Non-DL PCBs	3E-02	mg/kg	9.7E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.9E-06	--	1.1E-05	mg/kg-day	2.0E-05	mg/kg-day	5.7E-01
				PAHs													

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	1E-02	mg/kg	4.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M	5.3E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	4.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M	5.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				Benzo(b)fluoranthene	1E-02	mg/kg	4.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M	5.3E-06	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	4.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.9E-09	M	5.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	4.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M	5.3E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	4.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M	5.3E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-05	mg/kg	8.4E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.0E-10	--	9.8E-09	mg/kg-day	3.0E-05	mg/kg-day	3.3E-04
				2,4'-DDE	5E-05	mg/kg	1.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.8E-10	--	2.0E-08	mg/kg-day	3.0E-04	mg/kg-day	6.6E-05
				2,4'-DDT	4E-05	mg/kg	1.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.4E-10	--	1.5E-08	mg/kg-day	5.0E-04	mg/kg-day	3.1E-05
				4,4'-DDD	5E-03	mg/kg	1.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.4E-08	--	2.1E-06	mg/kg-day	3.0E-05	mg/kg-day	7.1E-02
				4,4'-DDE	1E-02	mg/kg	5.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-07	--	6.0E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				4,4'-DDT	2E-04	mg/kg	5.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-09	--	6.2E-08	mg/kg-day	5.0E-04	mg/kg-day	1.2E-04
				Benzaldehyde	1E+00	mg/kg	4.6E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.8E-07	--	5.3E-04	mg/kg-day	1.0E-01	mg/kg-day	5.3E-03
				Chlordane, alpha (cis)	6E-04	mg/kg	2.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.2E-09	--	2.4E-07	mg/kg-day	5.0E-04	mg/kg-day	4.8E-04
				Chlordane, gamma (trans)	3E-05	mg/kg	9.3E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.2E-10	--	1.1E-08	mg/kg-day	5.0E-04	mg/kg-day	2.2E-05
				Dieldrin	1E-03	mg/kg	4.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.6E-07	--	5.5E-07	mg/kg-day	5.0E-05	mg/kg-day	1.1E-02
				Heptachlor epoxide, cis-	3E-04	mg/kg	1.1E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.0E-07	--	1.3E-07	mg/kg-day	1.3E-05	mg/kg-day	1.0E-02
				Heptachlor epoxide, trans-	2E-04	mg/kg	7.9E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.2E-08	--	9.3E-08	mg/kg-day	1.3E-05	mg/kg-day	7.1E-03
				Hexachlorobenzene	2E-04	mg/kg	7.8E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.2E-08	--	9.1E-08	mg/kg-day	8.0E-04	mg/kg-day	1.1E-04
				Mirex	5E-05	mg/kg	1.8E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.2E-08	--	2.1E-08	mg/kg-day	2.0E-04	mg/kg-day	1.0E-04
				Nonachlor, cis-	7E-04	mg/kg	2.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.1E-09	--	2.7E-07	mg/kg-day	1.0E-04	mg/kg-day	2.7E-03
				Nonachlor, trans-	1E-03	mg/kg	4.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-08	--	4.9E-07	mg/kg-day	1.6E-05	mg/kg-day	3.2E-02
				Oxychlordane	2E-03	mg/kg	6.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.1E-08	--	7.0E-07	mg/kg-day	8.9E-05	mg/kg-day	7.8E-03
				Pyridine	4E-01	mg/kg	1.5E-05	mg/kg-day	--	--	--	--	1.7E-04	mg/kg-day	1.0E-03	mg/kg-day	1.7E-01
				Inorganics													
				Aluminum	6E+00	mg/kg	2.0E-04	mg/kg-day	--	--	--	--	2.3E-03	mg/kg-day	1.0E+00	mg/kg-day	2.3E-03
				Arsenic, organic	2E+00	mg/kg	8.3E-05	mg/kg-day	--	--	--	--	9.7E-04	mg/kg-day	2.0E-02	mg/kg-day	4.8E-02
				Arsenic, inorganic	3E-01	mg/kg	9.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-05	--	1.1E-04	mg/kg-day	3.0E-04	mg/kg-day	3.6E-01
				Cadmium	2E-01	mg/kg	5.8E-06	mg/kg-day	--	--	--	--	6.7E-05	mg/kg-day	1.0E-03	mg/kg-day	6.7E-02
				Chromium [as Cr(III)]	2E-01	mg/kg	5.3E-06	mg/kg-day	--	--	--	--	6.2E-05	mg/kg-day	1.5E+00	mg/kg-day	4.2E-05
				Cobalt	7E-02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--	2.9E-05	mg/kg-day	3.0E-04	mg/kg-day	9.6E-02
				Copper	2E+01	mg/kg	6.4E-04	mg/kg-day	--	--	--	--	7.5E-03	mg/kg-day	1.0E-03	mg/kg-day	7.5E+00
				Iron	2E+01	mg/kg	6.6E-04	mg/kg-day	--	--	--	--	7.7E-03	mg/kg-day	7.0E-01	mg/kg-day	1.1E-02
				Lead	1E-01	mg/kg	3.4E-06	mg/kg-day	--	--	--	--	4.0E-05	mg/kg-day	--	--	--
				Manganese	6E+00	mg/kg	2.2E-04	mg/kg-day	--	--	--	--	2.5E-03	mg/kg-day	1.4E-01	mg/kg-day	1.8E-02
				Mercury	2E-01	mg/kg	6.4E-06	mg/kg-day	--	--	--	--	7.4E-05	mg/kg-day	3.0E-04	mg/kg-day	2.5E-01
				Methyl Mercury	2E-01	mg/kg	7.5E-06	mg/kg-day	--	--	--	--	8.7E-05	mg/kg-day	1.0E-04	mg/kg-day	8.7E-01
				Selenium	9E-01	mg/kg	3.3E-05	mg/kg-day	--	--	--	--	3.8E-04	mg/kg-day	5.0E-03	mg/kg-day	7.6E-02
				Silver	5E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	2.0E-04	mg/kg-day	5.0E-03	mg/kg-day	3.9E-02
				Vanadium	4E-02	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	5.0E-03	mg/kg-day	3.5E-03
				Zinc	5E+01	mg/kg	1.7E-03	mg/kg-day	--	--	--	--	1.9E-02	mg/kg-day	3.0E-01	mg/kg-day	6.5E-02
				Total DLCs (excluding KM TEQs)							3.1E-05						3.4E+00
				Total DLCs (based on KM TEQs)							2.9E-05						3.2E+00
				Total PCDD/Fs (excluding KM TEQ)							2.4E-05						2.6E+00
				Total PCDD/Fs (based on KM TEQ)							2.3E-05						2.6E+00
				Total DL-PCBs (excluding KM TEQ)							7.3E-06						8.1E-01
				Total DL-PCBs (based on KM TEQ)							5.4E-06						6.0E-01
				Total Non-DL PCBs							1.9E-06						5.7E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							9.2E-06						1.4E+00
				Total PCBs (DL & NDL; based on KM TEQ)							7.3E-06						1.2E+00

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PAHs							4.4E-06						1.8E-02
				Total Organics							1.4E-06						3.4E-01
				Total Inorganics							1.4E-05						9.4E+00
		Crab (Muscle) Total (excluding KM TEQs)									5.3E-05						1.4E+01
		Crab (Muscle) Total (based on KM TEQs)									5.0E-05						1.3E+01
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-05	mg/kg	3.2E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-04	--	3.7E-08	mg/kg-day	7.0E-10	mg/kg-day	5.3E+01
				1,2,3,7,8-PeCDD	2E-06	mg/kg	7.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-05	--	8.9E-10	mg/kg-day	7.0E-10	mg/kg-day	1.3E+00
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	2.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-07	--	2.8E-10	mg/kg-day	7.0E-09	mg/kg-day	4.1E-02
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	7.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--	8.6E-10	mg/kg-day	7.0E-09	mg/kg-day	1.2E-01
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-07	--	2.9E-10	mg/kg-day	7.0E-09	mg/kg-day	4.2E-02
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	7.9E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-07	--	9.3E-10	mg/kg-day	7.0E-08	mg/kg-day	1.3E-02
				OCDD	6E-06	mg/kg	2.3E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-08	--	2.6E-09	mg/kg-day	2.3E-06	mg/kg-day	1.1E-03
				2,3,7,8-TCDF	3E-05	mg/kg	1.2E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-05	--	1.4E-08	mg/kg-day	7.0E-09	mg/kg-day	2.0E+00
				1,2,3,7,8-PeCDF	7E-06	mg/kg	2.6E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-06	--	3.0E-09	mg/kg-day	2.3E-08	mg/kg-day	1.3E-01
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.2E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.8E-05	--	7.2E-09	mg/kg-day	2.3E-09	mg/kg-day	3.1E+00
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	5.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.7E-06	--	6.8E-09	mg/kg-day	7.0E-09	mg/kg-day	9.7E-01
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-06	--	2.1E-09	mg/kg-day	7.0E-09	mg/kg-day	2.9E-01
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-08	--	5.6E-11	mg/kg-day	7.0E-09	mg/kg-day	8.0E-03
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	4.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.8E-07	--	5.3E-10	mg/kg-day	7.0E-09	mg/kg-day	7.6E-02
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	6.0E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.9E-07	--	6.9E-09	mg/kg-day	7.0E-08	mg/kg-day	9.9E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	4.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.2E-09	--	5.6E-11	mg/kg-day	7.0E-08	mg/kg-day	8.0E-04
				OCDF	8E-07	mg/kg	2.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-09	--	3.4E-10	mg/kg-day	2.3E-06	mg/kg-day	1.5E-04
				KM TEQ DF	1E-04	mg/kg	3.7E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.5E-04	--	4.3E-08	mg/kg-day	7.0E-10	mg/kg-day	6.1E+01
				PCB-77	7E-03	mg/kg	2.4E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.6E-06	--	2.8E-06	mg/kg-day	7.0E-06	mg/kg-day	4.0E-01
				PCB-81	3E-04	mg/kg	1.1E-08	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.8E-07	--	1.2E-07	mg/kg-day	2.3E-06	mg/kg-day	5.4E-02
				PCB-105	4E-02	mg/kg	1.3E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-06	--	1.5E-05	mg/kg-day	2.3E-05	mg/kg-day	6.5E-01
				PCB-114	3E-03	mg/kg	1.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.0E-07	--	1.3E-06	mg/kg-day	2.3E-05	mg/kg-day	5.5E-02
				PCB-118	2E-01	mg/kg	5.9E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-05	--	6.9E-05	mg/kg-day	2.3E-05	mg/kg-day	3.0E+00
				PCB-123	3E-03	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-07	--	1.2E-06	mg/kg-day	2.3E-05	mg/kg-day	5.2E-02
				PCB-126	4E-04	mg/kg	1.2E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-04	--	1.4E-07	mg/kg-day	7.0E-09	mg/kg-day	2.1E+01
				PCB-156/157	1E-02	mg/kg	4.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-06	--	5.5E-06	mg/kg-day	2.3E-05	mg/kg-day	2.4E-01
				PCB-167	6E-03	mg/kg	2.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-07	--	2.3E-06	mg/kg-day	2.3E-05	mg/kg-day	1.0E-01
				PCB-169	4E-05	mg/kg	1.3E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.7E-06	--	1.5E-08	mg/kg-day	2.3E-08	mg/kg-day	6.4E-01
				PCB-189	1E-03	mg/kg	3.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-07	--	4.1E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02
				KM TEQ PCB	4E-05	mg/kg	1.5E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-04	--	1.7E-08	mg/kg-day	7.0E-10	mg/kg-day	2.5E+01
				Non-DL PCBs													
				Total Non-DL PCBs	1E+00	mg/kg	4.1E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	8.2E-05	--	4.8E-04	mg/kg-day	2.0E-05	mg/kg-day	2.4E+01
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	1.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.7E-08	M	1.3E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	1.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.2E-07	M	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	3.9E-03
				Benzo(b)fluoranthene	3E-03	mg/kg	9.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.9E-08	M	1.1E-06	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.6E-10	M	1.8E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	9.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.0E-07	M	1.1E-06	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	2.6E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-06	M	3.1E-05	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	8E-04	mg/kg	2.7E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.4E-09	--	3.1E-07	mg/kg-day	3.0E-05	mg/kg-day	1.0E-02
				2,4'-DDE	2E-03	mg/kg	5.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-08	--	6.5E-07	mg/kg-day	3.0E-04	mg/kg-day	2.2E-03
				2,4'-DDT	7E-04	mg/kg	2.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.8E-09	--	2.7E-07	mg/kg-day	5.0E-04	mg/kg-day	5.3E-04
				4,4'-DDD	1E-01	mg/kg	4.3E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.0E-06	--	5.0E-05	mg/kg-day	3.0E-05	mg/kg-day	1.7E+00
				4,4'-DDE	3E-01	mg/kg	1.1E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.9E-06	--	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.4E-01

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				4,4'-DDT	4E-03	mg/kg	1.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.4E-08	--	1.5E-06	mg/kg-day	5.0E-04	mg/kg-day	3.0E-03
				Benzaldehyde	3E+00	mg/kg	8.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.6E-07	--	1.0E-03	mg/kg-day	1.0E-01	mg/kg-day	1.0E-02
				Chlordane, alpha (cis)	7E-03	mg/kg	2.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.1E-08	--	2.7E-06	mg/kg-day	5.0E-04	mg/kg-day	5.4E-03
				Chlordane, gamma (trans)	9E-04	mg/kg	3.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	3.7E-07	mg/kg-day	5.0E-04	mg/kg-day	7.4E-04
				Dieldrin	2E-02	mg/kg	7.1E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.1E-05	--	8.3E-06	mg/kg-day	5.0E-05	mg/kg-day	1.7E-01
				Heptachlor epoxide, cis-	1E-02	mg/kg	4.6E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.2E-06	--	5.4E-06	mg/kg-day	1.3E-05	mg/kg-day	4.1E-01
				Heptachlor epoxide, trans-	4E-03	mg/kg	1.3E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-06	--	1.6E-06	mg/kg-day	1.3E-05	mg/kg-day	1.2E-01
				Hexachlorobenzene	4E-03	mg/kg	1.3E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.0E-07	--	1.5E-06	mg/kg-day	8.0E-04	mg/kg-day	1.9E-03
				Mirex	7E-04	mg/kg	2.3E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.2E-07	--	2.7E-07	mg/kg-day	2.0E-04	mg/kg-day	1.4E-03
				Nonachlor, cis-	2E-02	mg/kg	6.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-07	--	7.6E-06	mg/kg-day	1.0E-04	mg/kg-day	7.6E-02
				Nonachlor, trans-	4E-02	mg/kg	1.3E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.6E-07	--	1.5E-05	mg/kg-day	1.6E-05	mg/kg-day	9.9E-01
				Oxychlordane	6E-02	mg/kg	1.9E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.8E-07	--	2.3E-05	mg/kg-day	8.9E-05	mg/kg-day	2.6E-01
				Pyridine	8E-01	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	1.0E-03	mg/kg-day	3.3E-01
				Inorganics													
				Aluminum	3E+01	mg/kg	9.9E-04	mg/kg-day	--	--	--	--	1.2E-02	mg/kg-day	1.0E+00	mg/kg-day	1.2E-02
				Arsenic, organic	3E+00	mg/kg	1.1E-04	mg/kg-day	--	--	--	--	1.3E-03	mg/kg-day	2.0E-02	mg/kg-day	6.4E-02
				Arsenic, inorganic	3E-01	mg/kg	1.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-05	--	1.4E-04	mg/kg-day	3.0E-04	mg/kg-day	4.7E-01
				Cadmium	1E+00	mg/kg	4.5E-05	mg/kg-day	--	--	--	--	5.2E-04	mg/kg-day	1.0E-03	mg/kg-day	5.2E-01
				Chromium [as Cr(III)]	3E-01	mg/kg	1.0E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	1.5E+00	mg/kg-day	7.8E-05
				Cobalt	2E-01	mg/kg	7.9E-06	mg/kg-day	--	--	--	--	9.2E-05	mg/kg-day	3.0E-04	mg/kg-day	3.1E-01
				Copper	7E+01	mg/kg	2.6E-03	mg/kg-day	--	--	--	--	3.1E-02	mg/kg-day	1.0E-03	mg/kg-day	3.1E+01
				Iron	1E+02	mg/kg	3.6E-03	mg/kg-day	--	--	--	--	4.1E-02	mg/kg-day	7.0E-01	mg/kg-day	5.9E-02
				Lead	8E-01	mg/kg	2.9E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	--	--	--
				Manganese	2E+01	mg/kg	6.5E-04	mg/kg-day	--	--	--	--	7.6E-03	mg/kg-day	1.4E-01	mg/kg-day	5.4E-02
				Mercury	7E-02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
				Methyl Mercury	6E-02	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	1.0E-04	mg/kg-day	2.4E-01
				Selenium	2E+00	mg/kg	6.4E-05	mg/kg-day	--	--	--	--	7.5E-04	mg/kg-day	5.0E-03	mg/kg-day	1.5E-01
				Silver	2E+00	mg/kg	6.7E-05	mg/kg-day	--	--	--	--	7.8E-04	mg/kg-day	5.0E-03	mg/kg-day	1.6E-01
				Vanadium	2E-01	mg/kg	6.0E-06	mg/kg-day	--	--	--	--	7.0E-05	mg/kg-day	5.0E-03	mg/kg-day	1.4E-02
				Zinc	5E+01	mg/kg	1.7E-03	mg/kg-day	--	--	--	--	1.9E-02	mg/kg-day	3.0E-01	mg/kg-day	6.5E-02
				Total DLCs (excluding KM TEQs)							7.8E-04						8.7E+01
				Total DLCs (based on KM TEQs)							7.7E-04						8.6E+01
				Total PCDD/Fs (excluding KM TEQ)							5.5E-04						6.2E+01
				Total PCDD/Fs (based on KM TEQ)							5.5E-04						6.1E+01
				Total DL-PCBs (excluding KM TEQ)							2.3E-04						2.6E+01
				Total DL-PCBs (based on KM TEQ)							2.2E-04						2.5E+01
				Total Non-DL PCBs							8.2E-05						2.4E+01
				Total PCBs (DL & NDL; excluding KM TEQ)							3.1E-04						5.0E+01
				Total PCBs (DL & NDL; based on KM TEQ)							3.0E-04						4.9E+01
				Total PAHs							2.0E-06						3.9E-03
				Total Organics							2.4E-05						4.5E+00
				Total Inorganics							1.8E-05						3.3E+01
		Crab (Hepatopancreas) Total (excluding KM TEQs)									9.1E-04						1.5E+02
		Crab (Hepatopancreas) Total (based on KM TEQs)									9.0E-04						1.5E+02

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

TABLE 7.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-06	mg/kg	1.5E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-04	--
				1,2,3,7,8-PeCDD	4E-07	mg/kg	8.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-05	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	3.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-07	--
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-06	--
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	2.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-07	--
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	1.3E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-07	--
				OCDD	4E-06	mg/kg	7.5E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-08	--
				2,3,7,8-TCDF	2E-06	mg/kg	3.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-06	--
				1,2,3,7,8-PeCDF	2E-06	mg/kg	2.8E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-06	--
				2,3,4,7,8-PeCDF	2E-06	mg/kg	4.4E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.0E-05	--
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	2.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-06	--
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-06	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-07	--
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	3.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-07	--
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	4.2E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.3E-07	--
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-08	--
				OCDF	2E-07	mg/kg	4.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-09	--
				KM TEQ DF	1E-05	mg/kg	1.8E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-04	--
				PCB-77	5E-04	mg/kg	8.8E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.3E-06	--
				PCB-81	2E-05	mg/kg	3.5E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-07	--
				PCB-105	8E-03	mg/kg	1.4E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-06	--
				PCB-114	6E-04	mg/kg	1.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-07	--
				PCB-118	3E-02	mg/kg	5.6E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-05	--
				PCB-123	6E-04	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-07	--
				PCB-126	9E-05	mg/kg	1.6E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-04	--
				PCB-156/157	3E-03	mg/kg	5.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-06	--
				PCB-167	1E-03	mg/kg	2.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-06	--
				PCB-169	4E-06	mg/kg	6.9E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-06	--
				PCB-189	2E-04	mg/kg	4.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-07	--
				KM TEQ PCB	1E-05	mg/kg	2.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	4E-01	mg/kg	7.4E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-04	--
				PAHs								
				Benz(a)anthracene	8E-03	mg/kg	1.5E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M
				Benzo(a)pyrene	8E-03	mg/kg	1.5E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-06	M
				Benzo(b)fluoranthene	8E-03	mg/kg	1.5E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M
				Chrysene	8E-03	mg/kg	1.5E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.1E-09	M
				Dibenz(a,h)anthracene	8E-03	mg/kg	1.5E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-06	M
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	1.5E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-07	M
				Pesticides & Organics								
				2,4'-DDD	2E-02	mg/kg	3.3E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.9E-07	--
				2,4'-DDE	6E-03	mg/kg	1.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.6E-07	--
				2,4'-DDT	3E-03	mg/kg	6.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.1E-07	--
				4,4'-DDD	9E-02	mg/kg	1.6E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.9E-06	--
				4,4'-DDE	1E-01	mg/kg	2.3E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.7E-06	--
				4,4'-DDT	1E-02	mg/kg	2.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.8E-07	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Benzaldehyde	1E+00	mg/kg	2.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	9.4E-07	--
				Chlordane, alpha (cis)	2E-02	mg/kg	2.9E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-06	--
				Chlordane, gamma (trans)	4E-03	mg/kg	6.5E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-07	--
				Dieldrin	8E-03	mg/kg	1.4E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.2E-05	--
				Heptachlor epoxide, cis-	2E-03	mg/kg	3.4E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.1E-06	--
				Heptachlor epoxide, trans-	9E-05	mg/kg	1.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.5E-07	--
				Hexachlorobenzene	1E-03	mg/kg	2.7E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.3E-07	--
				Mirex	3E-04	mg/kg	4.6E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	8.3E-07	--
				Nonachlor, cis-	6E-03	mg/kg	1.2E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.1E-07	--
				Nonachlor, trans-	2E-02	mg/kg	2.8E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.9E-07	--
				Oxychlordane	5E-03	mg/kg	8.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-07	--
				Pyridine	1E+00	mg/kg	2.4E-04	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	1.2E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	1E+00	mg/kg	1.9E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E-01	mg/kg	2.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.1E-05	--
				Cadmium	5E-02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	6E-01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Cobalt	2E-01	mg/kg	4.1E-05	mg/kg-day	--	--	--	--
				Copper	5E-01	mg/kg	8.7E-05	mg/kg-day	--	--	--	--
				Iron	7E+00	mg/kg	1.3E-03	mg/kg-day	--	--	--	--
				Lead	4E-02	mg/kg	6.4E-06	mg/kg-day	--	--	--	--
				Manganese	3E-01	mg/kg	5.2E-05	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	5.5E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	4E-01	mg/kg	6.6E-05	mg/kg-day	--	--	--	--
				Selenium	5E-01	mg/kg	9.9E-05	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	5.1E-06	mg/kg-day	--	--	--	--
				Zinc	1E+01	mg/kg	2.7E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							5.6E-04	
				Total DLCs (based on KM TEQs)							5.8E-04	
				Total PCDD/Fs (excluding KM TEQ)							2.7E-04	
				Total PCDD/Fs (based on KM TEQ)							2.7E-04	
				Total DL-PCBs (excluding KM TEQ)							2.9E-04	
				Total DL-PCBs (based on KM TEQ)							3.1E-04	
				Total Non-DL PCBs							1.5E-04	
				Total PCBs (DL & NDL; excluding KM TEQ)							4.3E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							4.6E-04	
				Total PAHs							7.1E-06	
				Total Organics							4.4E-05	
				Total Inorganics							3.1E-05	
		Mixed Fish/All Species Total (excluding KM TEQs)									7.9E-04	
		Mixed Fish/All Species Total (based on KM TEQs)									8.1E-04	
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	9E-06	mg/kg	1.6E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.4E-04	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,7,8-PeCDD	7E-07	mg/kg	1.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-05	--
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	7.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	3.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-06	--
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	6.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.4E-07	--
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	2.3E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-07	--
				OCDD	3E-06	mg/kg	5.8E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-08	--
				2,3,7,8-TCDF	1E-07	mg/kg	1.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-07	--
				1,2,3,7,8-PeCDF	1E-06	mg/kg	2.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-06	--
				2,3,4,7,8-PeCDF	4E-06	mg/kg	7.0E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.2E-05	--
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	4.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-06	--
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	3.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-06	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-07	--
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	6.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.9E-07	--
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	8.6E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-06	--
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	2.9E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-08	--
				OCDF	4E-07	mg/kg	6.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-09	--
				KM TEQ DF	1E-05	mg/kg	2.0E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-04	--
				PCB-77	7E-05	mg/kg	1.4E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-07	--
				PCB-81	1E-05	mg/kg	2.1E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.6E-08	--
				PCB-105	2E-02	mg/kg	3.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-05	--
				PCB-114	1E-03	mg/kg	2.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-06	--
				PCB-118	7E-02	mg/kg	1.3E-05	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.8E-05	--
				PCB-123	1E-03	mg/kg	2.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-06	--
				PCB-126	1E-04	mg/kg	2.2E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-04	--
				PCB-156/157	6E-03	mg/kg	1.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-06	--
				PCB-167	3E-03	mg/kg	4.9E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-06	--
				PCB-169	4E-06	mg/kg	7.9E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.6E-06	--
				PCB-189	5E-04	mg/kg	8.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-07	--
				KM TEQ PCB	2E-05	mg/kg	3.9E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.9E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	6E-01	mg/kg	1.1E-04	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.1E-04	--
				PAHs								
				Benz(a)anthracene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-07	M
				Benzo(a)pyrene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-06	M
				Benzo(b)fluoranthene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-07	M
				Chrysene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.8E-09	M
				Dibenz(a,h)anthracene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-06	M
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-07	M
				Pesticides & Organics								
				2,4'-DDD	3E-03	mg/kg	5.6E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-07	--
				2,4'-DDE	2E-03	mg/kg	3.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-07	--
				2,4'-DDT	4E-04	mg/kg	6.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.2E-08	--
				4,4'-DDD	1E-01	mg/kg	2.4E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.7E-06	--
				4,4'-DDE	3E-01	mg/kg	5.1E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-05	--
				4,4'-DDT	8E-03	mg/kg	1.4E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.8E-07	--
				Benzaldehyde	1E+00	mg/kg	2.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	9.4E-07	--
				Chlordane, alpha (cis)	1E-02	mg/kg	2.5E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.9E-07	--

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Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Chlordane, gamma (trans)	4E-03	mg/kg	7.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-07	--
				Dieldrin	1E-02	mg/kg	2.6E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.2E-05	--
				Heptachlor epoxide, cis-	4E-03	mg/kg	6.8E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.2E-06	--
				Heptachlor epoxide, trans-	4E-04	mg/kg	6.9E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.3E-07	--
				Hexachlorobenzene	4E-03	mg/kg	7.4E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.2E-06	--
				Mirex	4E-04	mg/kg	7.6E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.4E-06	--
				Nonachlor, cis-	1E-02	mg/kg	2.0E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.9E-07	--
				Nonachlor, trans-	3E-02	mg/kg	4.8E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-06	--
				Oxychlordane	1E-02	mg/kg	2.6E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.1E-07	--
				Pyridine	1E+00	mg/kg	2.4E-04	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	1.1E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	1E+00	mg/kg	1.9E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E-01	mg/kg	2.2E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.2E-05	--
				Cadmium	5E-02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	2E+00	mg/kg	4.4E-04	mg/kg-day	--	--	--	--
				Cobalt	7E-03	mg/kg	1.3E-06	mg/kg-day	--	--	--	--
				Copper	2E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--
				Iron	8E+00	mg/kg	1.4E-03	mg/kg-day	--	--	--	--
				Lead	2E-02	mg/kg	4.2E-06	mg/kg-day	--	--	--	--
				Manganese	3E-01	mg/kg	6.2E-05	mg/kg-day	--	--	--	--
				Mercury	4E-01	mg/kg	7.6E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	5E-01	mg/kg	8.3E-05	mg/kg-day	--	--	--	--
				Selenium	5E-01	mg/kg	9.3E-05	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Vanadium	2E-02	mg/kg	4.1E-06	mg/kg-day	--	--	--	--
				Zinc	3E+01	mg/kg	5.3E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							7.3E-04	
				Total DLCs (based on KM TEQs)							9.0E-04	
				Total PCDD/Fs (excluding KM TEQ)							3.1E-04	
				Total PCDD/Fs (based on KM TEQ)							3.1E-04	
				Total DL-PCBs (excluding KM TEQ)							4.1E-04	
				Total DL-PCBs (based on KM TEQ)							5.9E-04	
				Total Non-DL PCBs							2.1E-04	
				Total PCBs (DL & NDL; excluding KM TEQ)							6.3E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							8.0E-04	
				Total PAHs							1.1E-05	
				Total Organics							8.0E-05	
				Total Inorganics							3.2E-05	
		American Eel Total (excluding KM TEQs)									1.1E-03	
		American Eel Total (based on KM TEQs)									1.2E-03	
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	mg/kg	2.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.0E-05	--
				1,2,3,7,8-PeCDD	3E-07	mg/kg	5.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.1E-06	--
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-07	--

TABLE 7.A RME
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Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	3.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-07	--
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	2.6E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.9E-08	--
				OCDD	3E-07	mg/kg	4.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--
				2,3,7,8-TCDF	4E-07	mg/kg	7.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-06	--
				1,2,3,7,8-PeCDF	7E-07	mg/kg	1.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.4E-07	--
				2,3,4,7,8-PeCDF	8E-07	mg/kg	1.4E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.1E-06	--
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	1.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-07	--
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	4.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-07	--
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	1.2E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.8E-07	--
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	1.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-08	--
				OCDF	2E-07	mg/kg	3.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-09	--
				KM TEQ DF	2E-06	mg/kg	3.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.5E-05	--
				PCB-77	1E-04	mg/kg	1.8E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-07	--
				PCB-81	4E-06	mg/kg	6.5E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-08	--
				PCB-105	1E-03	mg/kg	2.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-06	--
				PCB-114	8E-05	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-08	--
				PCB-118	5E-03	mg/kg	9.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-06	--
				PCB-123	7E-05	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-08	--
				PCB-126	4E-05	mg/kg	7.0E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-04	--
				PCB-156/157	6E-04	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-07	--
				PCB-167	3E-04	mg/kg	5.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-07	--
				PCB-169	2E-06	mg/kg	3.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-06	--
				PCB-189	6E-05	mg/kg	1.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-08	--
				KM TEQ PCB	4E-06	mg/kg	7.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	1E-01	mg/kg	2.2E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.3E-05	--
				PAHs								
				Benz(a)anthracene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Benzo(a)pyrene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M
				Benzo(b)fluoranthene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Chrysene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.9E-09	M
				Dibenz(a,h)anthracene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Pesticides & Organics								
				2,4'-DDD	6E-04	mg/kg	1.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.5E-08	--
				2,4'-DDE	1E-03	mg/kg	1.9E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.4E-08	--
				2,4'-DDT	2E-04	mg/kg	4.0E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.4E-08	--
				4,4'-DDD	6E-03	mg/kg	1.2E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.8E-07	--
				4,4'-DDE	3E-02	mg/kg	5.5E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-06	--
				4,4'-DDT	2E-02	mg/kg	3.8E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-06	--
				Benzaldehyde	1E+00	mg/kg	2.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	9.4E-07	--
				Chlordane, alpha (cis)	6E-03	mg/kg	1.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.7E-07	--
				Chlordane, gamma (trans)	2E-03	mg/kg	4.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-07	--
				Dieldrin	5E-03	mg/kg	8.2E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.3E-05	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Heptachlor epoxide, cis-	1E-03	mg/kg	2.2E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.0E-06	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.8E-08	--
				Hexachlorobenzene	5E-04	mg/kg	9.8E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.6E-07	--
				Mirex	1E-04	mg/kg	2.4E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.4E-07	--
				Nonachlor, cis-	2E-03	mg/kg	3.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-07	--
				Nonachlor, trans-	3E-03	mg/kg	5.6E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.9E-07	--
				Oxychlordane	3E-04	mg/kg	6.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-08	--
				Pyridine	1E+00	mg/kg	2.4E-04	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	1.1E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	6E-01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	7E-02	mg/kg	1.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-05	--
				Cadmium	5E-02	mg/kg	8.4E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	9E-02	mg/kg	1.6E-05	mg/kg-day	--	--	--	--
				Cobalt	2E-01	mg/kg	4.1E-05	mg/kg-day	--	--	--	--
				Copper	8E-01	mg/kg	1.4E-04	mg/kg-day	--	--	--	--
				Iron	1E+01	mg/kg	1.8E-03	mg/kg-day	--	--	--	--
				Lead	4E-02	mg/kg	7.6E-06	mg/kg-day	--	--	--	--
				Manganese	2E-01	mg/kg	3.3E-05	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	5.9E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	4E-01	mg/kg	7.1E-05	mg/kg-day	--	--	--	--
				Selenium	5E-01	mg/kg	9.8E-05	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Vanadium	2E-02	mg/kg	4.2E-06	mg/kg-day	--	--	--	--
				Zinc	2E+01	mg/kg	3.2E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.7E-04	
				Total DLCs (based on KM TEQs)							1.6E-04	
				Total PCDD/Fs (excluding KM TEQ)							5.9E-05	
				Total PCDD/Fs (based on KM TEQ)							5.5E-05	
				Total DL-PCBs (excluding KM TEQ)							1.1E-04	
				Total DL-PCBs (based on KM TEQ)							1.1E-04	
				Total Non-DL PCBs							4.3E-05	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							1.5E-04	
				Total PAHs							4.5E-06	
				Total Organics							2.1E-05	
				Total Inorganics							2.0E-05	
		Bluefish Total (excluding KM TEQs)									2.6E-04	
		Bluefish Total (based on KM TEQs)									2.5E-04	
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	9E-06	mg/kg	1.7E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-04	--
				1,2,3,7,8-PeCDD	5E-07	mg/kg	9.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-05	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	3.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-07	--
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	3.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-07	--
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	1.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	2.6E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.9E-07	--
				OCDD	2E-05	mg/kg	2.9E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-07	--
				2,3,7,8-TCDF	4E-06	mg/kg	6.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-05	--
				1,2,3,7,8-PeCDF	2E-06	mg/kg	4.0E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.8E-06	--
				2,3,4,7,8-PeCDF	3E-06	mg/kg	5.9E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.7E-05	--
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	7.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	2.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-06	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-07	--
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	1.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-07	--
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	6.0E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.0E-07	--
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-08	--
				OCDF	2E-07	mg/kg	3.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-09	--
				KM TEQ DF	1E-05	mg/kg	2.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.2E-04	--
				PCB-77	1E-03	mg/kg	2.1E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.1E-06	--
				PCB-81	3E-05	mg/kg	5.1E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-07	--
				PCB-105	6E-03	mg/kg	1.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-06	--
				PCB-114	7E-04	mg/kg	1.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-07	--
				PCB-118	4E-02	mg/kg	6.8E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-05	--
				PCB-123	6E-04	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-07	--
				PCB-126	2E-04	mg/kg	3.4E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-04	--
				PCB-156/157	3E-03	mg/kg	5.9E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-06	--
				PCB-167	1E-03	mg/kg	2.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-06	--
				PCB-169	3E-06	mg/kg	6.1E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-06	--
				PCB-189	3E-04	mg/kg	5.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-07	--
				KM TEQ PCB	2E-05	mg/kg	3.5E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.3E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.3E-04	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.6E-04	--
				PAHs								
				Benz(a)anthracene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Benzo(a)pyrene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M
				Benzo(b)fluoranthene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Chrysene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.9E-09	M
				Dibenz(a,h)anthracene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Pesticides & Organics								
				2,4'-DDD	3E-02	mg/kg	5.9E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-06	--
				2,4'-DDE	1E-02	mg/kg	2.3E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.0E-07	--
				2,4'-DDT	3E-03	mg/kg	4.9E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-07	--
				4,4'-DDD	1E-01	mg/kg	2.5E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.9E-06	--
				4,4'-DDE	2E-01	mg/kg	2.8E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.6E-06	--
				4,4'-DDT	1E-02	mg/kg	2.4E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.2E-07	--
				Benzaldehyde	1E+00	mg/kg	2.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	9.4E-07	--
				Chlordane, alpha (cis)	4E-02	mg/kg	6.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-06	--
				Chlordane, gamma (trans)	6E-03	mg/kg	1.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.0E-07	--
				Dieldrin	1E-02	mg/kg	2.0E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.1E-05	--
				Heptachlor epoxide, cis-	2E-03	mg/kg	3.3E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.0E-06	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.8E-08	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Hexachlorobenzene	1E-03	mg/kg	1.9E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.0E-07	--
				Mirex	3E-04	mg/kg	5.4E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.7E-07	--
				Nonachlor, cis-	1E-02	mg/kg	2.0E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.0E-07	--
				Nonachlor, trans-	3E-02	mg/kg	4.8E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-06	--
				Oxychlordane	4E-03	mg/kg	7.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-07	--
				Pyridine	1E+00	mg/kg	2.4E-04	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	1.0E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	1E+00	mg/kg	2.1E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E-01	mg/kg	2.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.5E-05	--
				Cadmium	5E-02	mg/kg	8.4E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E-01	mg/kg	2.2E-05	mg/kg-day	--	--	--	--
				Cobalt	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Copper	6E-01	mg/kg	1.0E-04	mg/kg-day	--	--	--	--
				Iron	7E+00	mg/kg	1.2E-03	mg/kg-day	--	--	--	--
				Lead	4E-02	mg/kg	6.5E-06	mg/kg-day	--	--	--	--
				Manganese	2E-01	mg/kg	3.9E-05	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	5.1E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	3E-01	mg/kg	6.1E-05	mg/kg-day	--	--	--	--
				Selenium	4E-01	mg/kg	6.9E-05	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	5.5E-06	mg/kg-day	--	--	--	--
				Zinc	7E+00	mg/kg	1.3E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							8.8E-04	
				Total DLCs (based on KM TEQs)							8.5E-04	
				Total PCDD/Fs (excluding KM TEQ)							3.2E-04	
				Total PCDD/Fs (based on KM TEQ)							3.2E-04	
				Total DL-PCBs (excluding KM TEQ)							5.6E-04	
				Total DL-PCBs (based on KM TEQ)							5.3E-04	
				Total Non-DL PCBs							2.6E-04	
				Total PCBs (DL & NDL; excluding KM TEQ)							8.2E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							7.9E-04	
				Total PAHs							4.5E-06	
				Total Organics							6.1E-05	
				Total Inorganics							3.5E-05	
		Striped Bass Total (excluding KM TEQs)									1.2E-03	
		Striped Bass Total (based on KM TEQs)									1.2E-03	
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	5E-06	mg/kg	9.9E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-04	--
				1,2,3,7,8-PeCDD	2E-07	mg/kg	4.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.6E-06	--
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-07	--
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	4.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-07	--
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-07	--
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	5.6E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-08	--
				OCDD	5E-07	mg/kg	8.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.7E-09	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				2,3,7,8-TCDF	3E-07	mg/kg	4.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-07	--
				1,2,3,7,8-PeCDF	3E-07	mg/kg	6.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.9E-07	--
				2,3,4,7,8-PeCDF	9E-07	mg/kg	1.6E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.3E-06	--
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	1.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-06	--
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	4.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-07	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-07	--
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-07	--
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	9.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-07	--
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-08	--
				OCDF	2E-07	mg/kg	3.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-09	--
				KM TEQ DF	6E-06	mg/kg	1.1E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-04	--
				PCB-77	1E-04	mg/kg	2.6E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.9E-07	--
				PCB-81	1E-05	mg/kg	2.7E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-07	--
				PCB-105	3E-03	mg/kg	5.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-06	--
				PCB-114	2E-04	mg/kg	4.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--
				PCB-118	1E-02	mg/kg	2.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-06	--
				PCB-123	2E-04	mg/kg	3.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--
				PCB-126	4E-05	mg/kg	7.9E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-04	--
				PCB-156/157	1E-03	mg/kg	2.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-07	--
				PCB-167	5E-04	mg/kg	9.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-07	--
				PCB-169	2E-06	mg/kg	3.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-06	--
				PCB-189	8E-05	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-08	--
				KM TEQ PCB	5E-06	mg/kg	8.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	1E-01	mg/kg	2.7E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.4E-05	--
				PAHs								
				Benz(a)anthracene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Benzo(a)pyrene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M
				Benzo(b)fluoranthene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Chrysene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.9E-09	M
				Dibenz(a,h)anthracene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-06	M
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	9.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-07	M
				Pesticides & Organics								
				2,4'-DDD	3E-03	mg/kg	6.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-07	--
				2,4'-DDE	3E-03	mg/kg	5.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-07	--
				2,4'-DDT	2E-04	mg/kg	3.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-08	--
				4,4'-DDD	2E-02	mg/kg	3.4E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.2E-07	--
				4,4'-DDE	4E-02	mg/kg	7.4E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.5E-06	--
				4,4'-DDT	1E-03	mg/kg	2.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.0E-08	--
				Benzaldehyde	1E+00	mg/kg	2.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	9.4E-07	--
				Chlordane, alpha (cis)	2E-03	mg/kg	3.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-07	--
				Chlordane, gamma (trans)	7E-04	mg/kg	1.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.4E-08	--
				Dieldrin	1E-03	mg/kg	2.6E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.1E-06	--
				Heptachlor epoxide, cis-	3E-04	mg/kg	6.2E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.7E-07	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.8E-08	--
				Hexachlorobenzene	5E-04	mg/kg	8.9E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.4E-07	--
				Mirex	6E-05	mg/kg	1.1E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.1E-07	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Nonachlor, cis-	1E-03	mg/kg	2.0E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.1E-08	--
				Nonachlor, trans-	3E-03	mg/kg	5.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.8E-07	--
				Oxychlordane	1E-03	mg/kg	2.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.1E-08	--
				Pyridine	1E+00	mg/kg	2.4E-04	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	1.0E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	2E+00	mg/kg	3.0E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	2E-01	mg/kg	3.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.0E-05	--
				Cadmium	5E-02	mg/kg	8.4E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	5E-01	mg/kg	8.4E-05	mg/kg-day	--	--	--	--
				Cobalt	9E-01	mg/kg	1.6E-04	mg/kg-day	--	--	--	--
				Copper	2E-01	mg/kg	3.8E-05	mg/kg-day	--	--	--	--
				Iron	5E+00	mg/kg	9.3E-04	mg/kg-day	--	--	--	--
				Lead	3E-02	mg/kg	4.7E-06	mg/kg-day	--	--	--	--
				Manganese	3E-01	mg/kg	5.8E-05	mg/kg-day	--	--	--	--
				Mercury	2E-01	mg/kg	3.3E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	2E-01	mg/kg	3.9E-05	mg/kg-day	--	--	--	--
				Selenium	6E-01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	5.5E-06	mg/kg-day	--	--	--	--
				Zinc	7E+00	mg/kg	1.2E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							3.0E-04	
				Total DLCs (based on KM TEQs)							3.0E-04	
				Total PCDD/Fs (excluding KM TEQ)							1.7E-04	
				Total PCDD/Fs (based on KM TEQ)							1.6E-04	
				Total DL-PCBs (excluding KM TEQ)							1.3E-04	
				Total DL-PCBs (based on KM TEQ)							1.3E-04	
				Total Non-DL PCBs							5.4E-05	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-04	
				Total PAHs							4.5E-06	
				Total Organics							1.0E-05	
				Total Inorganics							5.0E-05	
		Summer Flounder Total (excluding KM TEQs)									4.2E-04	
		Summer Flounder Total (based on KM TEQs)									4.1E-04	
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	2E-05	mg/kg	2.9E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.4E-04	--
				1,2,3,7,8-PeCDD	4E-07	mg/kg	7.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-05	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	4.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-07	--
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-06	--
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	2.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-07	--
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	6.7E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-07	--
				OCDD	8E-07	mg/kg	1.5E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.9E-09	--
				2,3,7,8-TCDF	4E-06	mg/kg	7.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-05	--
				1,2,3,7,8-PeCDF	3E-06	mg/kg	5.5E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-06	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				2,3,4,7,8-PeCDF	3E-06	mg/kg	6.2E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.8E-05	--
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	2.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-06	--
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	2.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-06	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-07	--
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	3.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-07	--
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	4.3E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-07	--
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	1.6E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-08	--
				OCDF	2E-07	mg/kg	4.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-09	--
				KM TEQ DF	2E-05	mg/kg	3.3E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.9E-04	--
				PCB-77	1E-03	mg/kg	1.8E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-06	--
				PCB-81	4E-05	mg/kg	6.7E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-07	--
				PCB-105	7E-03	mg/kg	1.4E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-06	--
				PCB-114	6E-04	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-07	--
				PCB-118	3E-02	mg/kg	5.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-05	--
				PCB-123	6E-04	mg/kg	1.0E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-07	--
				PCB-126	6E-05	mg/kg	1.1E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-04	--
				PCB-156/157	3E-03	mg/kg	5.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-06	--
				PCB-167	1E-03	mg/kg	2.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.5E-07	--
				PCB-169	7E-06	mg/kg	1.4E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.1E-06	--
				PCB-189	2E-04	mg/kg	4.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-07	--
				KM TEQ PCB	7E-06	mg/kg	1.3E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	5E-01	mg/kg	8.6E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-04	--
				PAHs								
				Benz(a)anthracene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-07	M
				Benzo(a)pyrene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-06	M
				Benzo(b)fluoranthene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-07	M
				Chrysene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.8E-09	M
				Dibenz(a,h)anthracene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-06	M
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	2.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-07	M
				Pesticides & Organics								
				2,4'-DDD	5E-02	mg/kg	9.3E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.2E-06	--
				2,4'-DDE	1E-02	mg/kg	1.9E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.4E-07	--
				2,4'-DDT	1E-02	mg/kg	2.5E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.6E-07	--
				4,4'-DDD	2E-01	mg/kg	2.8E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.8E-06	--
				4,4'-DDE	1E-01	mg/kg	2.2E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.4E-06	--
				4,4'-DDT	3E-02	mg/kg	5.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-06	--
				Benzaldehyde	1E+00	mg/kg	2.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	9.4E-07	--
				Chlordane, alpha (cis)	2E-02	mg/kg	4.3E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-06	--
				Chlordane, gamma (trans)	5E-03	mg/kg	8.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.1E-07	--
				Dieldrin	7E-03	mg/kg	1.3E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.1E-05	--
				Heptachlor epoxide, cis-	2E-03	mg/kg	3.8E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.5E-06	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.8E-08	--
				Hexachlorobenzene	1E-03	mg/kg	2.3E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.7E-07	--
				Mirex	4E-04	mg/kg	6.5E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.2E-06	--
				Nonachlor, cis-	8E-03	mg/kg	1.4E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-07	--
				Nonachlor, trans-	2E-02	mg/kg	3.5E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-06	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Oxychlordane	3E-03	mg/kg	5.6E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-07	--
				Pyridine	1E+00	mg/kg	2.4E-04	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	9E+00	mg/kg	1.6E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	7E-01	mg/kg	1.3E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	8E-02	mg/kg	1.4E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-05	--
				Cadmium	5E-02	mg/kg	8.4E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E-01	mg/kg	2.6E-05	mg/kg-day	--	--	--	--
				Cobalt	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Copper	6E-01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Iron	6E+00	mg/kg	1.1E-03	mg/kg-day	--	--	--	--
				Lead	5E-02	mg/kg	9.2E-06	mg/kg-day	--	--	--	--
				Manganese	4E-01	mg/kg	6.9E-05	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	5.5E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	4E-01	mg/kg	7.5E-05	mg/kg-day	--	--	--	--
				Selenium	7E-01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	6.2E-06	mg/kg-day	--	--	--	--
				Zinc	1E+01	mg/kg	2.3E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							7.1E-04	
				Total DLCs (based on KM TEQs)							7.0E-04	
				Total PCDD/Fs (excluding KM TEQ)							5.0E-04	
				Total PCDD/Fs (based on KM TEQ)							4.9E-04	
				Total DL-PCBs (excluding KM TEQ)							2.1E-04	
				Total DL-PCBs (based on KM TEQ)							2.0E-04	
				Total Non-DL PCBs							1.7E-04	
				Total PCBs (DL & NDL; excluding KM TEQ)							3.8E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							3.7E-04	
				Total PAHs							1.1E-05	
				Total Organics							5.0E-05	
				Total Inorganics							2.1E-05	
		White Perch Total (excluding KM TEQs)									9.6E-04	
		White Perch Total (based on KM TEQs)									9.5E-04	
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	3E-05	mg/kg	2.9E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-04	--
				1,2,3,7,8-PeCDD	7E-07	mg/kg	7.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-05	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	2.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-07	--
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	6.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-07	--
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	2.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-07	--
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	7.5E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-07	--
				OCDD	2E-06	mg/kg	2.2E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.9E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	1.1E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-05	--
				1,2,3,7,8-PeCDF	2E-06	mg/kg	2.3E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-06	--
				2,3,4,7,8-PeCDF	5E-06	mg/kg	5.3E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.4E-05	--
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	5.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-06	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-06	--
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	9.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-07	--
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	4.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-07	--
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	5.1E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.7E-07	--
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	7.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--
				OCDF	2E-07	mg/kg	2.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--
				KM TEQ DF	3E-05	mg/kg	3.3E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-04	--
				PCB-77	2E-03	mg/kg	2.1E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.2E-06	--
				PCB-81	9E-05	mg/kg	9.4E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.2E-07	--
				PCB-105	1E-02	mg/kg	1.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-06	--
				PCB-114	9E-04	mg/kg	9.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-07	--
				PCB-118	5E-02	mg/kg	5.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-05	--
				PCB-123	8E-04	mg/kg	9.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-07	--
				PCB-126	1E-04	mg/kg	1.1E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-04	--
				PCB-156/157	4E-03	mg/kg	4.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-06	--
				PCB-167	2E-03	mg/kg	1.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-07	--
				PCB-169	1E-05	mg/kg	1.2E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.4E-06	--
				PCB-189	3E-04	mg/kg	2.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-07	--
				KM TEQ PCB	1E-05	mg/kg	1.3E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	3E-01	mg/kg	3.5E-05	mg/kg-day	2.0E+00	(mg/kg-day)-1	7.0E-05	--
				PAHs								
				Benz(a)anthracene	3E-03	mg/kg	3.1E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.2E-08	M
				Benzo(a)pyrene	3E-03	mg/kg	3.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.9E-07	M
				Benzo(b)fluoranthene	3E-03	mg/kg	2.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.8E-08	M
				Chrysene	4E-03	mg/kg	4.0E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.1E-10	M
				Dibenz(a,h)anthracene	3E-03	mg/kg	2.9E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.9E-07	M
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	2.3E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.7E-07	M
				Pesticides & Organics								
				2,4'-DDD	2E-04	mg/kg	2.4E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.8E-09	--
				2,4'-DDE	4E-04	mg/kg	4.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-08	--
				2,4'-DDT	2E-04	mg/kg	2.2E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.4E-09	--
				4,4'-DDD	3E-02	mg/kg	3.8E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.2E-07	--
				4,4'-DDE	9E-02	mg/kg	1.0E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.5E-06	--
				4,4'-DDT	1E-03	mg/kg	1.2E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-08	--
				Benzaldehyde	1E+00	mg/kg	1.3E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	5.2E-07	--
				Chlordane, alpha (cis)	2E-03	mg/kg	2.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.8E-08	--
				Chlordane, gamma (trans)	3E-04	mg/kg	2.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.7E-09	--
				Dieldrin	6E-03	mg/kg	6.7E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.1E-05	--
				Heptachlor epoxide, cis-	4E-03	mg/kg	3.9E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.6E-06	--
				Heptachlor epoxide, trans-	1E-03	mg/kg	1.3E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.1E-06	--
				Hexachlorobenzene	1E-03	mg/kg	1.2E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.9E-07	--
				Mirex	2E-04	mg/kg	2.2E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.0E-07	--
				Nonachlor, cis-	5E-03	mg/kg	5.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-07	--
				Nonachlor, trans-	1E-02	mg/kg	1.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.0E-07	--
				Oxychlordane	2E-02	mg/kg	1.7E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.0E-07	--
				Pyridine	5E-01	mg/kg	5.5E-05	mg/kg-day	--	--	--	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Inorganics								
				Aluminum	9E+00	mg/kg	1.0E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	3E+00	mg/kg	2.8E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E-01	mg/kg	3.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-05	--
				Cadmium	4E-01	mg/kg	4.4E-05	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	2E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--
				Cobalt	9E-02	mg/kg	9.8E-06	mg/kg-day	--	--	--	--
				Copper	3E+01	mg/kg	3.1E-03	mg/kg-day	--	--	--	--
				Iron	4E+01	mg/kg	4.3E-03	mg/kg-day	--	--	--	--
				Lead	3E-01	mg/kg	3.1E-05	mg/kg-day	--	--	--	--
				Manganese	1E+01	mg/kg	1.1E-03	mg/kg-day	--	--	--	--
				Mercury	2E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	2E-01	mg/kg	1.9E-05	mg/kg-day	--	--	--	--
				Selenium	1E+00	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Silver	8E-01	mg/kg	8.6E-05	mg/kg-day	--	--	--	--
				Vanadium	7E-02	mg/kg	8.0E-06	mg/kg-day	--	--	--	--
				Zinc	5E+01	mg/kg	5.1E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							7.0E-04	
				Total DLCs (based on KM TEQs)							6.9E-04	
				Total PCDD/Fs (excluding KM TEQ)							5.0E-04	
				Total PCDD/Fs (based on KM TEQ)							5.0E-04	
				Total DL-PCBs (excluding KM TEQ)							2.0E-04	
				Total DL-PCBs (based on KM TEQ)							1.9E-04	
				Total Non-DL PCBs							7.0E-05	
				Total PCBs (DL & NDL; excluding KM TEQ)							2.7E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-04	
				Total PAHs							1.8E-06	
				Total Organics							2.2E-05	
				Total Inorganics							4.6E-05	
		Crab (H+M) Total (excluding KM TEQs)									8.4E-04	
		Crab (H+M) Total (based on KM TEQs)									8.3E-04	
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	4E-06	mg/kg	4.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.4E-05	--
				1,2,3,7,8-PeCDD	3E-07	mg/kg	2.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.1E-06	--
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	3.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-08	--
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	7.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	3.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-08	--
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.2E-08	--
				OCDD	5E-07	mg/kg	5.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-09	--
				2,3,7,8-TCDF	1E-06	mg/kg	1.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-06	--
				1,2,3,7,8-PeCDF	3E-07	mg/kg	3.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-07	--
				2,3,4,7,8-PeCDF	5E-07	mg/kg	5.3E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.4E-06	--
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	7.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-06	--
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	2.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-07	--
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	7.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	5.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-08	--
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	4.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-08	--
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	3.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.5E-09	--
				OCDF	9E-08	mg/kg	1.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.6E-10	--
				KM TEQ DF	4E-06	mg/kg	4.8E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.2E-05	--
				PCB-77	2E-04	mg/kg	2.2E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.3E-07	--
				PCB-81	9E-06	mg/kg	9.9E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-08	--
				PCB-105	1E-03	mg/kg	1.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-07	--
				PCB-114	9E-05	mg/kg	1.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-08	--
				PCB-118	4E-03	mg/kg	4.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-06	--
				PCB-123	8E-05	mg/kg	8.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-08	--
				PCB-126	8E-06	mg/kg	9.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-05	--
				PCB-156/157	3E-04	mg/kg	3.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-07	--
				PCB-167	1E-04	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-08	--
				PCB-169	1E-05	mg/kg	1.3E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.6E-06	--
				PCB-189	2E-05	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-09	--
				KM TEQ PCB	1E-06	mg/kg	1.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-05	--
				Non-DL PCBs								
				Total Non-DL PCBs	3E-02	mg/kg	3.0E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.1E-06	--
				PAHs								
				Benz(a)anthracene	1E-02	mg/kg	1.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.9E-07	M
				Benzo(a)pyrene	1E-02	mg/kg	1.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.9E-06	M
				Benzo(b)fluoranthene	1E-02	mg/kg	1.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.9E-07	M
				Chrysene	1E-02	mg/kg	1.4E-06	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.9E-09	M
				Dibenz(a,h)anthracene	1E-02	mg/kg	1.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.9E-06	M
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	1.4E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.9E-07	M
				Pesticides & Organics								
				2,4'-DDD	2E-05	mg/kg	2.6E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.3E-10	--
				2,4'-DDE	5E-05	mg/kg	5.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-09	--
				2,4'-DDT	4E-05	mg/kg	4.1E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.4E-09	--
				4,4'-DDD	5E-03	mg/kg	5.7E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-07	--
				4,4'-DDE	1E-02	mg/kg	1.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.4E-07	--
				4,4'-DDT	2E-04	mg/kg	1.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.6E-09	--
				Benzaldehyde	1E+00	mg/kg	1.4E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	5.7E-07	--
				Chlordane, alpha (cis)	6E-04	mg/kg	6.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-08	--
				Chlordane, gamma (trans)	3E-05	mg/kg	2.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-09	--
				Dieldrin	1E-03	mg/kg	1.5E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.4E-06	--
				Heptachlor epoxide, cis-	3E-04	mg/kg	3.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.3E-07	--
				Heptachlor epoxide, trans-	2E-04	mg/kg	2.5E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.3E-07	--
				Hexachlorobenzene	2E-04	mg/kg	2.4E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.9E-08	--
				Mirex	5E-05	mg/kg	5.6E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.0E-07	--
				Nonachlor, cis-	7E-04	mg/kg	7.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-08	--
				Nonachlor, trans-	1E-03	mg/kg	1.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.6E-08	--
				Oxychlordane	2E-03	mg/kg	1.9E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.5E-08	--
				Pyridine	4E-01	mg/kg	4.5E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	6.1E-04	mg/kg-day	--	--	--	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Arsenic, organic	2E+00	mg/kg	2.6E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E-01	mg/kg	2.9E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-05	--
				Cadmium	2E-01	mg/kg	1.8E-05	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	2E-01	mg/kg	1.7E-05	mg/kg-day	--	--	--	--
				Cobalt	7E-02	mg/kg	7.7E-06	mg/kg-day	--	--	--	--
				Copper	2E+01	mg/kg	2.0E-03	mg/kg-day	--	--	--	--
				Iron	2E+01	mg/kg	2.1E-03	mg/kg-day	--	--	--	--
				Lead	1E-01	mg/kg	1.1E-05	mg/kg-day	--	--	--	--
				Manganese	6E+00	mg/kg	6.7E-04	mg/kg-day	--	--	--	--
				Mercury	2E-01	mg/kg	2.0E-05	mg/kg-day	--	--	--	--
				Methyl Mercury	2E-01	mg/kg	2.3E-05	mg/kg-day	--	--	--	--
				Selenium	9E-01	mg/kg	1.0E-04	mg/kg-day	--	--	--	--
				Silver	5E-01	mg/kg	5.2E-05	mg/kg-day	--	--	--	--
				Vanadium	4E-02	mg/kg	4.7E-06	mg/kg-day	--	--	--	--
				Zinc	5E+01	mg/kg	5.2E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							9.7E-05	
				Total DLCs (based on KM TEQs)							8.9E-05	
				Total PCDD/Fs (excluding KM TEQ)							7.4E-05	
				Total PCDD/Fs (based on KM TEQ)							7.2E-05	
				Total DL-PCBs (excluding KM TEQ)							2.3E-05	
				Total DL-PCBs (based on KM TEQ)							1.7E-05	
				Total Non-DL PCBs							6.1E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							2.9E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							2.3E-05	
				Total PAHs							6.6E-06	
				Total Organics							4.5E-06	
				Total Inorganics							4.3E-05	
		Crab (Muscle) Total (excluding KM TEQs)									1.6E-04	
		Crab (Muscle) Total (based on KM TEQs)									1.5E-04	
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	9E-05	mg/kg	1.0E-08	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-03	--
				1,2,3,7,8-PeCDD	2E-06	mg/kg	2.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-05	--
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	7.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	2.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-06	--
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	7.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-06	--
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	2.5E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.7E-07	--
				OCDD	6E-06	mg/kg	7.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-08	--
				2,3,7,8-TCDF	3E-05	mg/kg	3.8E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-05	--
				1,2,3,7,8-PeCDF	7E-06	mg/kg	8.1E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.6E-06	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.9E-09	mg/kg-day	4.5E+04	(mg/kg-day)-1	8.7E-05	--
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	1.8E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-05	--
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	5.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-06	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-07	--
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	1.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-06	--
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	1.9E-09	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-06	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	1.5E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.3E-08	--
				OCDF	8E-07	mg/kg	9.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.1E-09	--
				KM TEQ DF	1E-04	mg/kg	1.1E-08	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-03	--
				PCB-77	7E-03	mg/kg	7.6E-07	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-05	--
				PCB-81	3E-04	mg/kg	3.3E-08	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-06	--
				PCB-105	4E-02	mg/kg	4.1E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-05	--
				PCB-114	3E-03	mg/kg	3.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-06	--
				PCB-118	2E-01	mg/kg	1.9E-05	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-05	--
				PCB-123	3E-03	mg/kg	3.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-06	--
				PCB-126	4E-04	mg/kg	3.8E-08	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-04	--
				PCB-156/157	1E-02	mg/kg	1.5E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.7E-06	--
				PCB-167	6E-03	mg/kg	6.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-06	--
				PCB-169	4E-05	mg/kg	4.0E-09	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.8E-05	--
				PCB-189	1E-03	mg/kg	1.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-07	--
				KM TEQ PCB	4E-05	mg/kg	4.6E-09	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-04	--
				Non-DL PCBs								
				Total Non-DL PCBs	1E+00	mg/kg	1.3E-04	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.6E-04	--
				PAHs								
				Benz(a)anthracene	3E-03	mg/kg	3.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.1E-08	M
				Benzo(a)pyrene	3E-03	mg/kg	3.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.3E-07	M
				Benzo(b)fluoranthene	3E-03	mg/kg	2.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.9E-08	M
				Chrysene	4E-03	mg/kg	4.9E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	9.9E-10	M
				Dibenz(a,h)anthracene	3E-03	mg/kg	3.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.1E-07	M
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	8.2E-06	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-06	M
				Pesticides & Organics								
				2,4'-DDD	8E-04	mg/kg	8.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.0E-08	--
				2,4'-DDE	2E-03	mg/kg	1.7E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.9E-08	--
				2,4'-DDT	7E-04	mg/kg	7.2E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-08	--
				4,4'-DDD	1E-01	mg/kg	1.3E-05	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.2E-06	--
				4,4'-DDE	3E-01	mg/kg	3.5E-05	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-05	--
				4,4'-DDT	4E-03	mg/kg	4.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.4E-07	--
				Benzaldehyde	3E+00	mg/kg	2.8E-04	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.1E-06	--
				Chlordane, alpha (cis)	7E-03	mg/kg	7.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-07	--
				Chlordane, gamma (trans)	9E-04	mg/kg	9.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.5E-08	--
				Dieldrin	2E-02	mg/kg	2.2E-06	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.5E-05	--
				Heptachlor epoxide, cis-	1E-02	mg/kg	1.4E-06	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.3E-05	--
				Heptachlor epoxide, trans-	4E-03	mg/kg	4.2E-07	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.8E-06	--
				Hexachlorobenzene	4E-03	mg/kg	4.0E-07	mg/kg-day	1.6E+00	(mg/kg-day)-1	6.4E-07	--
				Mirex	7E-04	mg/kg	7.3E-08	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.3E-06	--
				Nonachlor, cis-	2E-02	mg/kg	2.0E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.1E-07	--
				Nonachlor, trans-	4E-02	mg/kg	4.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-06	--
				Oxychlordane	6E-02	mg/kg	6.1E-06	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.1E-06	--
				Pyridine	8E-01	mg/kg	8.7E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	3E+01	mg/kg	3.1E-03	mg/kg-day	--	--	--	--
				Arsenic, organic	3E+00	mg/kg	3.4E-04	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E-01	mg/kg	3.8E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.7E-05	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Cadmium	1E+00	mg/kg	1.4E-04	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	3E-01	mg/kg	3.1E-05	mg/kg-day	--	--	--	--
				Cobalt	2E-01	mg/kg	2.5E-05	mg/kg-day	--	--	--	--
				Copper	7E+01	mg/kg	8.2E-03	mg/kg-day	--	--	--	--
				Iron	1E+02	mg/kg	1.1E-02	mg/kg-day	--	--	--	--
				Lead	8E-01	mg/kg	9.0E-05	mg/kg-day	--	--	--	--
				Manganese	2E+01	mg/kg	2.0E-03	mg/kg-day	--	--	--	--
				Mercury	7E-02	mg/kg	8.2E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	6E-02	mg/kg	6.5E-06	mg/kg-day	--	--	--	--
				Selenium	2E+00	mg/kg	2.0E-04	mg/kg-day	--	--	--	--
				Silver	2E+00	mg/kg	2.1E-04	mg/kg-day	--	--	--	--
				Vanadium	2E-01	mg/kg	1.9E-05	mg/kg-day	--	--	--	--
				Zinc	5E+01	mg/kg	5.2E-03	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.5E-03	
				Total DLCs (based on KM TEQs)							2.4E-03	
				Total PCDD/Fs (excluding KM TEQ)							1.7E-03	
				Total PCDD/Fs (based on KM TEQ)							1.7E-03	
				Total DL-PCBs (excluding KM TEQ)							7.2E-04	
				Total DL-PCBs (based on KM TEQ)							6.9E-04	
				Total Non-DL PCBs							2.6E-04	
				Total PCBs (DL & NDL; excluding KM TEQ)							9.8E-04	
				Total PCBs (DL & NDL; based on KM TEQ)							9.5E-04	
				Total PAHs							3.0E-06	
				Total Organics							7.6E-05	
				Total Inorganics							5.7E-05	
		Crab (Hepatopancreas) Total (excluding KM TEQs)									2.8E-03	
		Crab (Hepatopancreas) Total (based on KM TEQs)									2.8E-03	
Sediment	Sediment	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-08	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.0E-09	--
				OCDD	3E-03	mg/kg	6.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-09	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.7E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-08	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-10	--
				OCDF	4E-04	mg/kg	1.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-10	--

TABLE 7.A RME
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				KM TEQ DF	1E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-07	--
				PCB-77	8E-03	mg/kg	1.8E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-09	--
				PCB-81	3E-04	mg/kg	7.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-10	--
				PCB-105	1E-02	mg/kg	2.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-09	--
				PCB-114	9E-04	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-11	--
				PCB-118	4E-02	mg/kg	8.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-09	--
				PCB-123	1E-03	mg/kg	2.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--
				PCB-126	2E-04	mg/kg	5.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-08	--
				PCB-156/157	3E-03	mg/kg	7.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-10	--
				PCB-167	1E-03	mg/kg	2.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--
				PCB-169	3E-04	mg/kg	5.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-08	--
				PCB-189	2E-04	mg/kg	5.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-11	--
				KM TEQ PCB	3E-05	mg/kg	7.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.1E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	4.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.9E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	4.8E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-08	M
				Benzo(b)fluoranthene	2E+00	mg/kg	4.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.3E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	2.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.8E-10	M
				Chrysene	2E+00	mg/kg	4.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.7E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.9E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	1.3E-07	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	9.7E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	2.9E-04	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	5.5E-08	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	4.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.5E-07	--
				Cadmium	3E+00	mg/kg	7.2E-08	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	3.3E-07	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	3.9E-06	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	3.3E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.6E-08	M
				Iron	4E+04	mg/kg	1.0E-03	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	1.1E-05	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	4.7E-08	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	5.8E-09	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	2.9E-05	mg/kg-day	--	--	--	--
Total DLCs (excluding KM TEQs)											5.0E-07	
Total DLCs (based on KM TEQs)											4.7E-07	
Total PCDD/Fs (excluding KM TEQ)											3.8E-07	

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total PCDD/Fs (based on KM TEQ)							3.7E-07	
				Total DL-PCBs (excluding KM TEQ)							1.2E-07	
				Total DL-PCBs (based on KM TEQ)							1.1E-07	
				Total Non-DL PCBs							3.1E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-07	
				Total PAHs							6.9E-08	
				Total Organics							0.0E+00	
				Total Inorganics							6.7E-07	
		Sediment Ingestion Total (excluding KM TEQs)									1.3E-06	
		Sediment Ingestion Total (based on KM TEQs)									1.2E-06	
Sediment	Sediment	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	2.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-08	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	9.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--
				OCDD	3E-03	mg/kg	7.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.6E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-09	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.3E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-08	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	8.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-08	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-10	--
				OCDF	4E-04	mg/kg	1.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-10	--
				KM TEQ DF	1E-04	mg/kg	2.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-07	--
				PCB-77	8E-03	mg/kg	2.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.2E-09	--
				PCB-81	3E-04	mg/kg	8.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.7E-10	--
				PCB-105	1E-02	mg/kg	3.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--
				PCB-114	9E-04	mg/kg	2.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--
				PCB-118	4E-02	mg/kg	9.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-09	--
				PCB-123	1E-03	mg/kg	2.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--
				PCB-126	2E-04	mg/kg	6.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--
				PCB-156/157	3E-03	mg/kg	8.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-10	--
				PCB-167	1E-03	mg/kg	3.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--
				PCB-169	3E-04	mg/kg	6.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-08	--
				PCB-189	2E-04	mg/kg	6.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-11	--
				KM TEQ PCB	3E-05	mg/kg	8.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-07	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	8.5E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-07	--
				PAHs								

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Benz(a)anthracene	2E+00	mg/kg	2.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-08	M
				Benzo(a)pyrene	2E+00	mg/kg	2.4E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.4E-07	M
				Benzo(b)fluoranthene	2E+00	mg/kg	2.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-08	M
				Benzo(k)fluoranthene	1E+00	mg/kg	1.4E-07	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.4E-09	M
				Chrysene	2E+00	mg/kg	2.4E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.4E-10	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.0E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	9.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.0E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	8.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-06	--
				Cadmium	3E+00	mg/kg	2.8E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							5.8E-07	
				Total DLCs (based on KM TEQs)							5.5E-07	
				Total PCDD/Fs (excluding KM TEQ)							4.4E-07	
				Total PCDD/Fs (based on KM TEQ)							4.3E-07	
				Total DL-PCBs (excluding KM TEQ)							1.4E-07	
				Total DL-PCBs (based on KM TEQ)							1.3E-07	
				Total Non-DL PCBs							1.7E-07	
				Total PCBs (DL & NDL; excluding KM TEQ)							3.1E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							2.9E-07	
				Total PAHs							3.5E-07	
				Total Organics							0.0E+00	
				Total Inorganics							1.3E-06	
		Sediment Dermal Total (excluding KM TEQs)									2.4E-06	
		Sediment Dermal Total (based on KM TEQs)									2.3E-06	
Fishing - Sediment Total (excluding KM TEQs)											3.6E-06	
Fishing - Sediment Total (based on KM TEQs)											3.6E-06	
Surface Water	Surface Water	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds** 2,3,7,8-TCDD	1E-06	µg/L	6.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-10	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-10	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-11	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-11	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.8E-11	--
				OCDD	6E-05	µg/L	3.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-11	--
				2,3,7,8-TCDF	5E-07	µg/L	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-11	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.0E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.8E-12	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.4E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.5E-10	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	9.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-10	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-11	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-11	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.0E-11	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-12	--
				OCDF	1E-05	µg/L	7.5E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-12	--
				KM TEQ DF	2E-06	µg/L	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-09	--
				PCB-77	2E-05	µg/L	1.1E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.6E-12	--
				PCB-81	7E-07	µg/L	3.5E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-13	--
				PCB-105	7E-05	µg/L	3.8E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-12	--
				PCB-114	4E-06	µg/L	2.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-14	--
				PCB-118	2E-04	µg/L	8.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-12	--
				PCB-123	3E-06	µg/L	1.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.4E-14	--
				PCB-126	7E-07	µg/L	3.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-11	--
				PCB-156/157	2E-05	µg/L	1.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-13	--
				PCB-167	7E-06	µg/L	3.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-13	--
				PCB-169	4E-07	µg/L	2.1E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.4E-12	--
				PCB-189	9E-07	µg/L	4.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-14	--
				KM TEQ PCB	1E-07	µg/L	5.6E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.4E-11	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	6.1E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.1E-12	M
				Benzo(a)pyrene	2E-02	µg/L	7.8E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.8E-11	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.1E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-11	M
				Benzo(k)fluoranthene	9E-03	µg/L	4.8E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	4.8E-13	M
				Chrysene	2E-02	µg/L	1.0E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.0E-13	M
				Dibenz(a,h)anthracene	4E-03	µg/L	2.0E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-11	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.5E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-12	M
				Naphthalene	4E-02	µg/L	1.8E-10	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	6.2E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.9E-11	--
				Trichloroethylene	1E-01	µg/L	6.8E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.1E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	3.6E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	6.6E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.9E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	6.7E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.7E-10	M
				Iron	5E+02	µg/L	2.8E-06	mg/kg-day	--	--	--	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Manganese	7E+01	µg/L	3.6E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	1.4E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	6.4E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	4.1E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.4E-09	
				Total DLCs (based on KM TEQs)							2.0E-09	
				Total PCDD/Fs (excluding KM TEQ)							2.4E-09	
				Total PCDD/Fs (based on KM TEQ)							1.9E-09	
				Total DL-PCBs (excluding KM TEQ)							7.0E-11	
				Total DL-PCBs (based on KM TEQ)							8.4E-11	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							7.0E-11	
				Total PCBs (DL & NDL; based on KM TEQ)							8.4E-11	
				Total PAHs							1.2E-10	
				Total Organics							5.0E-11	
				Total Inorganics							1.0E-08	
		Surface Water Ingestion Total (excluding KM TEQs)									1.3E-08	
		Surface Water Ingestion Total (based on KM TEQs)									1.3E-08	
Surface Water	Surface Water	Angler - Fishing	Dermal	**Dioxin-like Compounds**								
			Contact	2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	1.0E-08	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	4.8E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.5E-10	--
				Trichloroethylene	1E-01	µg/L	9.7E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.5E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	2.1E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	3.9E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	3.9E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.4E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	2.7E-08	M
				Iron	5E+02	µg/L	1.6E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	2.1E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	8.0E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	3.8E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	2.4E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							6.0E-10	
				Total Inorganics							3.3E-08	
		Surface Water Dermal Total (excluding KM TEQs)									3.4E-08	
		Surface Water Dermal Total (based on KM TEQs)									3.4E-08	
Fishing - Surface Water Total (excluding KM TEQs)											4.7E-08	
Fishing - Surface Water Total (based on KM TEQs)											4.6E-08	
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)											7.9E-04	
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)											8.1E-04	

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
Sediment	Sediment	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	5.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.8E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	5.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	3.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.6E-09	--
				OCDD	3E-03	mg/kg	3.8E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.4E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.2E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.3E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.0E-08	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	4.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.0E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-10	--
				OCDF	4E-04	mg/kg	6.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-10	--
				KM TEQ DF	1E-04	mg/kg	1.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-07	--
				PCB-77	8E-03	mg/kg	1.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-09	--
				PCB-81	3E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--
				PCB-105	1E-02	mg/kg	1.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-10	--
				PCB-114	9E-04	mg/kg	1.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-11	--
				PCB-118	4E-02	mg/kg	5.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-09	--
				PCB-123	1E-03	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-11	--
				PCB-126	2E-04	mg/kg	3.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-08	--
				PCB-156/157	3E-03	mg/kg	4.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-10	--
				PCB-167	1E-03	mg/kg	1.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-11	--
				PCB-169	3E-04	mg/kg	3.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-08	--
				PCB-189	2E-04	mg/kg	3.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-11	--
				KM TEQ PCB	3E-05	mg/kg	4.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	9.7E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.9E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	3.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-08	M
				Benzo(b)fluoranthene	2E+00	mg/kg	2.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.7E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	1.7E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.7E-10	M
				Chrysene	2E+00	mg/kg	2.9E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.9E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	6.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.2E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	8.3E-08	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	6.0E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	1.8E-04	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	3.4E-08	mg/kg-day	--	--	--	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Arsenic, inorganic	3E+01	mg/kg	2.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.1E-07	--
				Cadmium	3E+00	mg/kg	4.5E-08	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	2.1E-07	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	2.5E-06	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	2.0E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.0E-08	M
				Iron	4E+04	mg/kg	6.4E-04	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	6.9E-06	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	5.2E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	2.9E-08	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	9.9E-07	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	3.6E-09	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	7.3E-07	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	1.8E-05	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							3.1E-07	
				Total DLCs (based on KM TEQs)							3.0E-07	
				Total PCDD/Fs (excluding KM TEQ)							2.3E-07	
				Total PCDD/Fs (based on KM TEQ)							2.3E-07	
				Total DL-PCBs (excluding KM TEQ)							7.6E-08	
				Total DL-PCBs (based on KM TEQ)							6.7E-08	
				Total Non-DL PCBs							1.9E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							9.5E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							8.7E-08	
				Total PAHs							4.3E-08	
				Total Organics							0.0E+00	
				Total Inorganics							4.2E-07	
		Sediment Ingestion Total (excluding KM TEQs)									7.9E-07	
		Sediment Ingestion Total (based on KM TEQs)									7.8E-07	
Sediment	Sediment	Angler - Crabbing	Dermal	**Dioxin-like Compounds**								
			Contact	2,3,7,8-TCDD	8E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-09	--
				OCDD	3E-03	mg/kg	4.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.3E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.7E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-08	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.2E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-10	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				OCDF	4E-04	mg/kg	7.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--
				KM TEQ DF	1E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-07	--
				PCB-77	8E-03	mg/kg	1.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-09	--
				PCB-81	3E-04	mg/kg	5.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-10	--
				PCB-105	1E-02	mg/kg	2.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-10	--
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.6E-11	--
				PCB-118	4E-02	mg/kg	6.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-09	--
				PCB-123	1E-03	mg/kg	1.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-11	--
				PCB-126	2E-04	mg/kg	4.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-08	--
				PCB-156/157	3E-03	mg/kg	5.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-10	--
				PCB-167	1E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-11	--
				PCB-169	3E-04	mg/kg	4.3E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-08	--
				PCB-189	2E-04	mg/kg	4.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-11	--
				KM TEQ PCB	3E-05	mg/kg	5.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.9E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	5.3E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-07	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	1.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M
				Benzo(a)pyrene	2E+00	mg/kg	1.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-07	M
				Benzo(b)fluoranthene	2E+00	mg/kg	1.4E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M
				Benzo(k)fluoranthene	1E+00	mg/kg	8.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.8E-10	M
				Chrysene	2E+00	mg/kg	1.5E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-10	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	5.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.9E-07	--
				Cadmium	3E+00	mg/kg	1.8E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
Total DLCs (excluding KM TEQs)											3.6E-07	
Total DLCs (based on KM TEQs)											3.5E-07	

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total PCDD/Fs (excluding KM TEQ)							2.7E-07	
				Total PCDD/Fs (based on KM TEQ)							2.7E-07	
				Total DL-PCBs (excluding KM TEQ)							8.9E-08	
				Total DL-PCBs (based on KM TEQ)							7.9E-08	
				Total Non-DL PCBs							1.1E-07	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-07	
				Total PAHs							2.2E-07	
				Total Organics							0.0E+00	
				Total Inorganics							7.9E-07	
		Sediment Dermal Total (excluding KM TEQs)									1.5E-06	
		Sediment Dermal Total (based on KM TEQs)									1.5E-06	
Crabbing - Sediment Total (excluding KM TEQs)											2.3E-06	
Crabbing - Sediment Total (based on KM TEQs)											2.2E-06	
Surface Water	Surface Water	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	4.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.9E-10	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-10	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	9.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	1.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-11	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	2.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-11	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-11	--
				OCDD	6E-05	µg/L	2.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.4E-12	--
				2,3,7,8-TCDF	5E-07	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.5E-12	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	2.1E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.6E-11	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	5.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-11	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	1.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-11	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	8.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	9.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-11	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	1.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-12	--
				OCDF	1E-05	µg/L	4.7E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-12	--
				KM TEQ DF	2E-06	µg/L	7.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-09	--
				PCB-77	2E-05	µg/L	6.6E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.0E-12	--
				PCB-81	7E-07	µg/L	2.2E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.9E-14	--
				PCB-105	7E-05	µg/L	2.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-12	--
				PCB-114	4E-06	µg/L	1.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-14	--
				PCB-118	2E-04	µg/L	5.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-12	--
				PCB-123	3E-06	µg/L	1.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-14	--
				PCB-126	7E-07	µg/L	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-11	--
				PCB-156/157	2E-05	µg/L	6.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-13	--
				PCB-167	7E-06	µg/L	2.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.5E-14	--
				PCB-169	4E-07	µg/L	1.3E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.9E-12	--
				PCB-189	9E-07	µg/L	2.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-14	--
				KM TEQ PCB	1E-07	µg/L	3.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.3E-11	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	3.8E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.8E-12	M
				Benzo(a)pyrene	2E-02	µg/L	4.9E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.9E-11	M
				Benzo(b)fluoranthene	2E-02	µg/L	6.7E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.7E-12	M
				Benzo(k)fluoranthene	9E-03	µg/L	3.0E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.0E-13	M
				Chrysene	2E-02	µg/L	6.5E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.5E-14	M
				Dibenz(a,h)anthracene	4E-03	µg/L	1.3E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-11	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	2.8E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.8E-12	M
				Naphthalene	4E-02	µg/L	1.1E-10	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	3.9E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.2E-11	--
				Trichloroethylene	1E-01	µg/L	4.2E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.9E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	2.3E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	4.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	4.2E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	7.2E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.6E-10	M
				Iron	5E+02	µg/L	1.7E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	2.2E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	8.5E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	4.0E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	2.6E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.5E-09	
				Total DLCs (based on KM TEQs)							1.2E-09	
				Total PCDD/Fs (excluding KM TEQ)							1.5E-09	
				Total PCDD/Fs (based on KM TEQ)							1.2E-09	
				Total DL-PCBs (excluding KM TEQ)							4.4E-11	
				Total DL-PCBs (based on KM TEQ)							5.3E-11	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							4.4E-11	
				Total PCBs (DL & NDL; based on KM TEQ)							5.3E-11	
				Total PAHs							7.5E-11	
				Total Organics							3.1E-11	
				Total Inorganics							6.5E-09	
		Surface Water Ingestion Total (excluding KM TEQs)									8.2E-09	
		Surface Water Ingestion Total (based on KM TEQs)									7.9E-09	
Surface Water	Surface Water	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	6.5E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	3.0E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	9.3E-11	--
				Trichloroethylene	1E-01	µg/L	6.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.8E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	1.3E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	2.4E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.6E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	2.5E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	8.5E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.7E-08	M
				Iron	5E+02	µg/L	1.0E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	1.3E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	5.0E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	2.4E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	1.5E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	

TABLE 7.A RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							3.7E-10	
				Total Inorganics							2.1E-08	
		Surface Water Dermal Total (excluding KM TEQs)									2.1E-08	
		Surface Water Dermal Total (based on KM TEQs)									2.1E-08	
Crabbing - Surface Water Total (excluding KM TEQs)											2.9E-08	
Crabbing - Surface Water Total (based on KM TEQs)											2.9E-08	
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											8.4E-04	
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											8.3E-04	
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											1.6E-04	
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											1.5E-04	

Note: Sediment and surface water risks are for adult only, since the child is not assumed to accompany the adult angler on fishing or crabbing trips.

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.4 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Worker	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	2.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.5E-07	--	6.5E-12	mg/kg-day	7.0E-10	mg/kg-day	9.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-08	--	3.4E-13	mg/kg-day	7.0E-10	mg/kg-day	4.9E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-09	--	3.1E-13	mg/kg-day	7.0E-09	mg/kg-day	4.4E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-09	--	1.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.8E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	7.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--	2.2E-11	mg/kg-day	7.0E-08	mg/kg-day	3.1E-04
				OCDD	3E-03	mg/kg	8.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-09	--	2.2E-10	mg/kg-day	2.3E-06	mg/kg-day	9.6E-05
				2,3,7,8-TCDF	1E-05	mg/kg	4.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-09	--	1.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.7E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.9E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-09	--	8.1E-13	mg/kg-day	2.3E-08	mg/kg-day	3.5E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.2E-08	--	1.3E-12	mg/kg-day	2.3E-09	mg/kg-day	5.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-08	--	6.2E-12	mg/kg-day	7.0E-09	mg/kg-day	8.8E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-09	--	1.6E-12	mg/kg-day	7.0E-09	mg/kg-day	2.3E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	4.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--	9.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	9.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-08	--	2.7E-11	mg/kg-day	7.0E-08	mg/kg-day	3.9E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.0E-10	--	9.3E-13	mg/kg-day	7.0E-08	mg/kg-day	1.3E-05
				OCDF	4E-04	mg/kg	1.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.2E-10	--	3.8E-11	mg/kg-day	2.3E-06	mg/kg-day	1.6E-05
				KM TEQ DF	1E-04	mg/kg	3.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-07	--	8.9E-12	mg/kg-day	7.0E-10	mg/kg-day	1.3E-02
				PCB-77	8E-03	mg/kg	2.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.5E-09	--	6.6E-10	mg/kg-day	7.0E-06	mg/kg-day	9.4E-05
				PCB-81	3E-04	mg/kg	9.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.1E-10	--	2.5E-11	mg/kg-day	2.3E-06	mg/kg-day	1.1E-05
				PCB-105	1E-02	mg/kg	3.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-09	--	1.1E-09	mg/kg-day	2.3E-05	mg/kg-day	4.5E-05
				PCB-114	9E-04	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	7.3E-11	mg/kg-day	2.3E-05	mg/kg-day	3.1E-06
				PCB-118	4E-02	mg/kg	1.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.0E-09	--	3.1E-09	mg/kg-day	2.3E-05	mg/kg-day	1.3E-04
				PCB-123	1E-03	mg/kg	3.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	9.0E-11	mg/kg-day	2.3E-05	mg/kg-day	3.9E-06
				PCB-126	2E-04	mg/kg	7.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	2.1E-11	mg/kg-day	7.0E-09	mg/kg-day	3.0E-03
				PCB-156/157	3E-03	mg/kg	9.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-10	--	2.8E-10	mg/kg-day	2.3E-05	mg/kg-day	1.2E-05
				PCB-167	1E-03	mg/kg	3.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-10	--	9.9E-11	mg/kg-day	2.3E-05	mg/kg-day	4.3E-06
				PCB-169	3E-04	mg/kg	7.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.5E-08	--	2.2E-11	mg/kg-day	2.3E-08	mg/kg-day	9.2E-04
				PCB-189	2E-04	mg/kg	7.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--	2.1E-11	mg/kg-day	2.3E-05	mg/kg-day	8.9E-07
				KM TEQ PCB	3E-05	mg/kg	9.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-07	--	2.6E-12	mg/kg-day	7.0E-10	mg/kg-day	3.7E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.0E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.0E-08	--	5.7E-08	mg/kg-day	2.0E-05	mg/kg-day	2.8E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	6.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.4E-09	M	1.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	6.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.2E-08	M	1.7E-07	mg/kg-day	3.0E-04	mg/kg-day	5.8E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	5.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-09	M	1.6E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene													
				Chrysene	2E+00	mg/kg	6.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.1E-11	M	1.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-08	M	3.6E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.3E-09	M	6.5E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.7E-07	mg/kg-day	--	--	--	--	4.8E-07	mg/kg-day	4.0E-03	mg/kg-day	1.2E-04
				TPH (C9-C40)	4E+02	mg/kg	1.3E-05	mg/kg-day	--	--	--	--	3.5E-05	mg/kg-day	4.0E-03	mg/kg-day	8.8E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	3.7E-04	mg/kg-day	--	--	--	--	1.0E-03	mg/kg-day	1.0E+00	mg/kg-day	1.0E-03
				Antimony	2E+00	mg/kg	7.2E-08	mg/kg-day	--	--	--	--	2.0E-07	mg/kg-day	4.0E-04	mg/kg-day	5.0E-04

TABLE 7.4 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, inorganic	3E+01	mg/kg	5.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.5E-07	--	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.3E-03
				Cadmium	3E+00	mg/kg	9.4E-08	mg/kg-day	--	--	--	--	2.6E-07	mg/kg-day	1.0E-03	mg/kg-day	2.6E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	3.3E-06	mg/kg-day	--	--	--	--	9.2E-06	mg/kg-day	1.5E+00	mg/kg-day	6.1E-06
				Cobalt	1E+01	mg/kg	4.3E-07	mg/kg-day	--	--	--	--	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.0E-03
				Copper	2E+02	mg/kg	5.1E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	1.0E-03	mg/kg-day	1.4E-02
				Chromium (VI)	1E+00	mg/kg	4.3E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.1E-08	M	1.2E-07	mg/kg-day	3.0E-03	mg/kg-day	4.0E-05
				Iron	4E+04	mg/kg	1.3E-03	mg/kg-day	--	--	--	--	3.7E-03	mg/kg-day	7.0E-01	mg/kg-day	5.3E-03
				Lead	5E+02	mg/kg	1.4E-05	mg/kg-day	--	--	--	--	4.0E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	3.0E-05	mg/kg-day	2.4E-02	mg/kg-day	1.3E-03
				Mercury	2E+00	mg/kg	6.1E-08	mg/kg-day	--	--	--	--	1.7E-07	mg/kg-day	3.0E-04	mg/kg-day	5.7E-04
				Nickel	7E+01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	5.8E-06	mg/kg-day	2.0E-02	mg/kg-day	2.9E-04
				Thallium	2E-01	mg/kg	7.5E-09	mg/kg-day	--	--	--	--	2.1E-08	mg/kg-day	1.0E-05	mg/kg-day	2.1E-03
				Vanadium	5E+01	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	5.0E-03	mg/kg-day	8.6E-04
				Zinc	1E+03	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	1.1E-04	mg/kg-day	3.0E-01	mg/kg-day	3.5E-04
				Total DLCs (excluding KM TEQs)							6.5E-07						1.7E-02
				Total DLCs (based on KM TEQs)							6.2E-07						1.6E-02
				Total PCDD/Fs (excluding KM TEQ)							4.9E-07						1.3E-02
				Total PCDD/Fs (based on KM TEQ)							4.8E-07						1.3E-02
				Total DL-PCBs (excluding KM TEQ)							1.6E-07						4.2E-03
				Total DL-PCBs (based on KM TEQ)							1.4E-07						3.7E-03
				Total Non-DL PCBs							4.0E-08						2.8E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.0E-07						7.1E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-07						6.6E-03
				Total PAHs							9.0E-08						5.8E-04
				Total Organics							0.0E+00						8.9E-03
				Total Inorganics							8.7E-07						3.6E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.6E-06						6.6E-02
		Sediment Ingestion Total (based on KM TEQs)									1.6E-06						6.5E-02
Sediment	Sediment	Worker	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	8E-05	mg/kg	1.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-07	--	4.2E-12	mg/kg-day	7.0E-10	mg/kg-day	5.9E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-08	--	2.2E-13	mg/kg-day	7.0E-10	mg/kg-day	3.1E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-09	--	2.0E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-09	--	7.9E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--	4.7E-13	mg/kg-day	7.0E-09	mg/kg-day	6.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.5E-09	--	1.4E-11	mg/kg-day	7.0E-08	mg/kg-day	2.0E-04
				OCDD	3E-03	mg/kg	5.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-09	--	1.4E-10	mg/kg-day	2.3E-06	mg/kg-day	6.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-09	--	7.5E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.2E-10	--	5.1E-13	mg/kg-day	2.3E-08	mg/kg-day	2.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.1E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.4E-08	--	8.6E-13	mg/kg-day	2.3E-09	mg/kg-day	3.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-08	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-09	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-10	--	7.6E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--	5.7E-13	mg/kg-day	7.0E-09	mg/kg-day	8.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	6.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.3E-09	--	1.7E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.2E-10	--	5.9E-13	mg/kg-day	7.0E-08	mg/kg-day	8.4E-06

TABLE 7.4 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
				OCDF	4E-04	mg/kg	8.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-10	--	2.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	1E-04	mg/kg	2.0E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-07	--	5.7E-12	mg/kg-day	7.0E-10	mg/kg-day	8.1E-03
				PCB-77	8E-03	mg/kg	1.5E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.2E-09	--	4.2E-10	mg/kg-day	7.0E-06	mg/kg-day	6.0E-05
				PCB-81	3E-04	mg/kg	5.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-10	--	1.6E-11	mg/kg-day	2.3E-06	mg/kg-day	6.9E-06
				PCB-105	1E-02	mg/kg	2.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-09	--	6.7E-10	mg/kg-day	2.3E-05	mg/kg-day	2.9E-05
				PCB-114	9E-04	mg/kg	1.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.4E-11	--	4.6E-11	mg/kg-day	2.3E-05	mg/kg-day	2.0E-06
				PCB-118	4E-02	mg/kg	7.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-09	--	2.0E-09	mg/kg-day	2.3E-05	mg/kg-day	8.4E-05
				PCB-123	1E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-11	--	5.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.4E-06
				PCB-126	2E-04	mg/kg	4.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.1E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				PCB-156/157	3E-03	mg/kg	6.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-10	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.5E-06
				PCB-167	1E-03	mg/kg	2.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-10	--	6.3E-11	mg/kg-day	2.3E-05	mg/kg-day	2.7E-06
				PCB-169	3E-04	mg/kg	4.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.2E-08	--	1.4E-11	mg/kg-day	2.3E-08	mg/kg-day	5.9E-04
				PCB-189	2E-04	mg/kg	4.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-11	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.7E-07
				KM TEQ PCB	3E-05	mg/kg	5.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.9E-08	--	1.7E-12	mg/kg-day	7.0E-10	mg/kg-day	2.4E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	6.0E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.2E-07	--	1.7E-07	mg/kg-day	2.0E-05	mg/kg-day	8.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.8E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-08	M	4.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.7E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-07	M	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	1.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-08	M	4.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.0E-07	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.0E-09	M	2.8E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.7E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.7E-10	M	4.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.5E-08	M	9.9E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	6.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.4E-09	M	1.8E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	6.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.0E-07	--	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.6E-03
				Cadmium	3E+00	mg/kg	2.0E-09	mg/kg-day	--	--	--	--	5.6E-09	mg/kg-day	2.5E-05	mg/kg-day	2.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
Total DLCs (excluding KM TEQs)											4.1E-07						1.1E-02
Total DLCs (based on KM TEQs)											3.9E-07						1.0E-02

TABLE 7.4 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
				Total PCDD/Fs (excluding KM TEQ)							3.1E-07					8.3E-03
				Total PCDD/Fs (based on KM TEQ)							3.0E-07					8.1E-03
				Total DL-PCBs (excluding KM TEQ)							1.0E-07					2.7E-03
				Total DL-PCBs (based on KM TEQ)							8.9E-08					2.4E-03
				Total Non-DL PCBs							1.2E-07					8.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.2E-07					1.1E-02
				Total PCBs (DL & NDL; based on KM TEQ)							2.1E-07					1.1E-02
				Total PAHs							2.5E-07					1.6E-03
				Total Organics							0.0E+00					0.0E+00
				Total Inorganics							9.0E-07					5.8E-03
		Sediment Dermal Total (excluding KM TEQs)									1.7E-06					2.7E-02
		Sediment Dermal Total (based on KM TEQs)									1.7E-06					2.6E-02
Sediment Total (excluding KM TEQs)											3.3E-06					9.3E-02
Sediment Total (based on KM TEQs)											3.3E-06					9.1E-02

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	4.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.3E-08	--	1.7E-12	mg/kg-day	7.0E-10	mg/kg-day	2.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-09	--	8.9E-14	mg/kg-day	7.0E-10	mg/kg-day	1.3E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--	8.0E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	9.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-09	--	3.2E-13	mg/kg-day	7.0E-09	mg/kg-day	4.6E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	5.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-09	--	5.7E-12	mg/kg-day	7.0E-08	mg/kg-day	8.2E-05
				OCDD	3E-03	mg/kg	1.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.5E-10	--	5.8E-11	mg/kg-day	2.3E-06	mg/kg-day	2.5E-05
				2,3,7,8-TCDF	1E-05	mg/kg	8.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	3.1E-13	mg/kg-day	7.0E-09	mg/kg-day	4.4E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	6.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-10	--	2.1E-13	mg/kg-day	2.3E-08	mg/kg-day	9.0E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.0E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.5E-09	--	3.5E-13	mg/kg-day	2.3E-09	mg/kg-day	1.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-09	--	1.6E-12	mg/kg-day	7.0E-09	mg/kg-day	2.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	4.2E-13	mg/kg-day	7.0E-09	mg/kg-day	6.0E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	8.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	3.1E-14	mg/kg-day	7.0E-09	mg/kg-day	4.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-09	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.3E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.1E-09	--	7.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	6.9E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-10	--	2.4E-13	mg/kg-day	7.0E-08	mg/kg-day	3.5E-06
				OCDF	4E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.0E-11	mg/kg-day	2.3E-06	mg/kg-day	4.3E-06
				KM TEQ DF	1E-04	mg/kg	6.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.9E-08	--	2.3E-12	mg/kg-day	7.0E-10	mg/kg-day	3.3E-03
				PCB-77	8E-03	mg/kg	4.9E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.4E-10	--	1.7E-10	mg/kg-day	7.0E-06	mg/kg-day	2.5E-05
				PCB-81	3E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.5E-11	--	6.6E-12	mg/kg-day	2.3E-06	mg/kg-day	2.8E-06
				PCB-105	1E-02	mg/kg	7.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--	2.8E-10	mg/kg-day	2.3E-05	mg/kg-day	1.2E-05
				PCB-114	9E-04	mg/kg	5.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	1.9E-11	mg/kg-day	2.3E-05	mg/kg-day	8.1E-07
				PCB-118	4E-02	mg/kg	2.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	8.1E-10	mg/kg-day	2.3E-05	mg/kg-day	3.5E-05
				PCB-123	1E-03	mg/kg	6.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-11	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-126	2E-04	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--	5.4E-12	mg/kg-day	7.0E-09	mg/kg-day	7.8E-04
				PCB-156/157	3E-03	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-11	--	7.2E-11	mg/kg-day	2.3E-05	mg/kg-day	3.1E-06
				PCB-167	1E-03	mg/kg	7.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--	2.6E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				PCB-169	3E-04	mg/kg	1.6E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.2E-09	--	5.6E-12	mg/kg-day	2.3E-08	mg/kg-day	2.4E-04
				PCB-189	2E-04	mg/kg	1.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-12	--	5.4E-12	mg/kg-day	2.3E-05	mg/kg-day	2.3E-07
				KM TEQ PCB	3E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-08	--	6.8E-13	mg/kg-day	7.0E-10	mg/kg-day	9.7E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	4.2E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	8.4E-09	--	1.5E-08	mg/kg-day	2.0E-05	mg/kg-day	7.3E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	4.6E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-08	M	4.5E-08	mg/kg-day	3.0E-04	mg/kg-day	1.5E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-09	M	4.1E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	7.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	7.6E-11	M	2.6E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-11	M	4.4E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	2.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.7E-09	M	9.3E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	4.8E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-10	M	1.7E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	3.6E-08	mg/kg-day	--	--	--	--	1.3E-07	mg/kg-day	4.0E-03	mg/kg-day	3.2E-05
				TPH (C9-C40)	4E+02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	9.2E-06	mg/kg-day	4.0E-03	mg/kg-day	2.3E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	7.7E-05	mg/kg-day	--	--	--	--	2.7E-04	mg/kg-day	1.0E+00	mg/kg-day	2.7E-04
				Antimony	2E+00	mg/kg	1.5E-08	mg/kg-day	--	--	--	--	5.2E-08	mg/kg-day	4.0E-04	mg/kg-day	1.3E-04
				Arsenic, inorganic	3E+01	mg/kg	1.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-07	--	4.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Cadmium	3E+00	mg/kg	2.0E-08	mg/kg-day	--	--	--	--	6.9E-08	mg/kg-day	1.0E-03	mg/kg-day	6.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	6.8E-07	mg/kg-day	--	--	--	--	2.4E-06	mg/kg-day	1.5E+00	mg/kg-day	1.6E-06
				Cobalt	1E+01	mg/kg	9.0E-08	mg/kg-day	--	--	--	--	3.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.0E-03
				Copper	2E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	3.7E-06	mg/kg-day	1.0E-03	mg/kg-day	3.7E-03
				Chromium (VI)	1E+00	mg/kg	8.8E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	4.4E-09	M	3.1E-08	mg/kg-day	3.0E-03	mg/kg-day	1.0E-05

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Iron	4E+04	mg/kg	2.8E-04	mg/kg-day	--	--	--	--	9.7E-04	mg/kg-day	7.0E-01	mg/kg-day	1.4E-03
				Lead	5E+02	mg/kg	3.0E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	7.9E-06	mg/kg-day	2.4E-02	mg/kg-day	3.3E-04
				Mercury	2E+00	mg/kg	1.3E-08	mg/kg-day	--	--	--	--	4.4E-08	mg/kg-day	3.0E-04	mg/kg-day	1.5E-04
				Nickel	7E+01	mg/kg	4.3E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	2.0E-02	mg/kg-day	7.5E-05
				Thallium	2E-01	mg/kg	1.6E-09	mg/kg-day	--	--	--	--	5.5E-09	mg/kg-day	1.0E-05	mg/kg-day	5.5E-04
				Vanadium	5E+01	mg/kg	3.2E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.2E-04
				Zinc	1E+03	mg/kg	7.9E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	3.0E-01	mg/kg-day	9.2E-05
				Total DLCs (excluding KM TEQs)							1.3E-07						4.5E-03
				Total DLCs (based on KM TEQs)							1.3E-07						4.3E-03
				Total PCDD/Fs (excluding KM TEQ)							1.0E-07						3.4E-03
				Total PCDD/Fs (based on KM TEQ)							9.9E-08						3.3E-03
				Total DL-PCBs (excluding KM TEQ)							3.3E-08						1.1E-03
				Total DL-PCBs (based on KM TEQ)							2.9E-08						9.7E-04
				Total Non-DL PCBs							8.4E-09						7.3E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							4.1E-08						1.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							3.8E-08						1.7E-03
				Total PAHs							1.9E-08						1.5E-04
				Total Organics							0.0E+00						2.3E-03
				Total Inorganics							1.8E-07						9.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									3.4E-07						1.7E-02
		Sediment Ingestion Total (based on KM TEQs)									3.4E-07						1.7E-02
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	5.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.5E-08	--	2.0E-12	mg/kg-day	7.0E-10	mg/kg-day	2.8E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	3.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.5E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-10	--	9.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--	3.8E-13	mg/kg-day	7.0E-09	mg/kg-day	5.4E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	6.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-09	--	6.7E-12	mg/kg-day	7.0E-08	mg/kg-day	9.5E-05
				OCDD	3E-03	mg/kg	1.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.7E-10	--	6.8E-11	mg/kg-day	2.3E-06	mg/kg-day	2.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	3.6E-13	mg/kg-day	7.0E-09	mg/kg-day	5.1E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	7.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.2E-10	--	2.5E-13	mg/kg-day	2.3E-08	mg/kg-day	1.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.2E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.3E-09	--	4.1E-13	mg/kg-day	2.3E-09	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	5.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.7E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-09	--	4.9E-13	mg/kg-day	7.0E-09	mg/kg-day	7.0E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	3.7E-14	mg/kg-day	7.0E-09	mg/kg-day	5.2E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	7.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.9E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-09	--	8.3E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	8.1E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-10	--	2.8E-13	mg/kg-day	7.0E-08	mg/kg-day	4.0E-06
				OCDF	4E-04	mg/kg	3.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.0E-06
				KM TEQ DF	1E-04	mg/kg	7.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-07	--	2.7E-12	mg/kg-day	7.0E-10	mg/kg-day	3.9E-03
				PCB-77	8E-03	mg/kg	5.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.6E-10	--	2.0E-10	mg/kg-day	7.0E-06	mg/kg-day	2.9E-05
				PCB-81	3E-04	mg/kg	2.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.9E-11	--	7.7E-12	mg/kg-day	2.3E-06	mg/kg-day	3.3E-06
				PCB-105	1E-02	mg/kg	9.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-10	--	3.2E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-114	9E-04	mg/kg	6.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-11	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.5E-07
				PCB-118	4E-02	mg/kg	2.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-09	--	9.4E-10	mg/kg-day	2.3E-05	mg/kg-day	4.0E-05
				PCB-123	1E-03	mg/kg	7.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-11	--	2.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-08	--	6.4E-12	mg/kg-day	7.0E-09	mg/kg-day	9.1E-04
				PCB-156/157	3E-03	mg/kg	2.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--	8.4E-11	mg/kg-day	2.3E-05	mg/kg-day	3.6E-06
				PCB-167	1E-03	mg/kg	8.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-169	3E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.4E-09	--	6.6E-12	mg/kg-day	2.3E-08	mg/kg-day	2.8E-04
				PCB-189	2E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-12	--	6.3E-12	mg/kg-day	2.3E-05	mg/kg-day	2.7E-07
				KM TEQ PCB	3E-05	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--	7.9E-13	mg/kg-day	7.0E-10	mg/kg-day	1.1E-03

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.3E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.6E-08	--	8.0E-08	mg/kg-day	2.0E-05	mg/kg-day	4.0E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	6.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.7E-09	M	2.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	6.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-08	M	2.3E-07	mg/kg-day	3.0E-04	mg/kg-day	7.7E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	5.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.9E-09	M	2.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.8E-10	M	1.3E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	6.4E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.4E-11	M	2.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-08	M	4.7E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.4E-09	M	8.5E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	2.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-07	--	8.0E-07	mg/kg-day	3.0E-04	mg/kg-day	2.7E-03
				Cadmium	3E+00	mg/kg	7.6E-10	mg/kg-day	--	--	--	--	2.7E-09	mg/kg-day	2.5E-05	mg/kg-day	1.1E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							1.6E-07						5.2E-03
				Total DLCs (based on KM TEQs)							1.5E-07						5.0E-03
				Total PCDD/Fs (excluding KM TEQ)							1.2E-07						4.0E-03
				Total PCDD/Fs (based on KM TEQ)							1.2E-07						3.9E-03
				Total DL-PCBs (excluding KM TEQ)							3.9E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							3.4E-08						1.1E-03
				Total Non-DL PCBs							4.6E-08						4.0E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							8.4E-08						5.3E-03
				Total PCBs (DL & NDL; based on KM TEQ)							8.0E-08						5.1E-03
				Total PAHs							9.5E-08						7.7E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							3.4E-07						2.8E-03
		Sediment Dermal Total (excluding KM TEQs)									6.4E-07						1.3E-02
		Sediment Dermal Total (based on KM TEQs)									6.3E-07						1.3E-02
	Wader Sediment Total (excluding KM TEQs)										9.8E-07						3.0E-02
	Wader Sediment Total (based on KM TEQs)										9.7E-07						2.9E-02
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	4.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.3E-08	--	1.7E-12	mg/kg-day	7.0E-10	mg/kg-day	2.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-09	--	8.9E-14	mg/kg-day	7.0E-10	mg/kg-day	1.3E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--	8.0E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	9.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-09	--	3.2E-13	mg/kg-day	7.0E-09	mg/kg-day	4.6E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	5.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-09	--	5.7E-12	mg/kg-day	7.0E-08	mg/kg-day	8.2E-05

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				OCDD	3E-03	mg/kg	1.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.5E-10	--	5.8E-11	mg/kg-day	2.3E-06	mg/kg-day	2.5E-05
				2,3,7,8-TCDF	1E-05	mg/kg	8.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	3.1E-13	mg/kg-day	7.0E-09	mg/kg-day	4.4E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	6.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-10	--	2.1E-13	mg/kg-day	2.3E-08	mg/kg-day	9.0E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.0E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.5E-09	--	3.5E-13	mg/kg-day	2.3E-09	mg/kg-day	1.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-09	--	1.6E-12	mg/kg-day	7.0E-09	mg/kg-day	2.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	4.2E-13	mg/kg-day	7.0E-09	mg/kg-day	6.0E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	8.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	3.1E-14	mg/kg-day	7.0E-09	mg/kg-day	4.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-09	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.3E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.1E-09	--	7.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	6.9E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-10	--	2.4E-13	mg/kg-day	7.0E-08	mg/kg-day	3.5E-06
				OCDF	4E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.0E-11	mg/kg-day	2.3E-06	mg/kg-day	4.3E-06
				KM TEQ DF	1E-04	mg/kg	6.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.9E-08	--	2.3E-12	mg/kg-day	7.0E-10	mg/kg-day	3.3E-03
				PCB-77	8E-03	mg/kg	4.9E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.4E-10	--	1.7E-10	mg/kg-day	7.0E-06	mg/kg-day	2.5E-05
				PCB-81	3E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.5E-11	--	6.6E-12	mg/kg-day	2.3E-06	mg/kg-day	2.8E-06
				PCB-105	1E-02	mg/kg	7.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--	2.8E-10	mg/kg-day	2.3E-05	mg/kg-day	1.2E-05
				PCB-114	9E-04	mg/kg	5.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	1.9E-11	mg/kg-day	2.3E-05	mg/kg-day	8.1E-07
				PCB-118	4E-02	mg/kg	2.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	8.1E-10	mg/kg-day	2.3E-05	mg/kg-day	3.5E-05
				PCB-123	1E-03	mg/kg	6.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-11	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-126	2E-04	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--	5.4E-12	mg/kg-day	7.0E-09	mg/kg-day	7.8E-04
				PCB-156/157	3E-03	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-11	--	7.2E-11	mg/kg-day	2.3E-05	mg/kg-day	3.1E-06
				PCB-167	1E-03	mg/kg	7.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--	2.6E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				PCB-169	3E-04	mg/kg	1.6E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.2E-09	--	5.6E-12	mg/kg-day	2.3E-08	mg/kg-day	2.4E-04
				PCB-189	2E-04	mg/kg	1.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-12	--	5.4E-12	mg/kg-day	2.3E-05	mg/kg-day	2.3E-07
				KM TEQ PCB	3E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-08	--	6.8E-13	mg/kg-day	7.0E-10	mg/kg-day	9.7E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	4.2E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	8.4E-09	--	1.5E-08	mg/kg-day	2.0E-05	mg/kg-day	7.3E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	4.6E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-08	M	4.5E-08	mg/kg-day	3.0E-04	mg/kg-day	1.5E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-09	M	4.1E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	7.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	7.6E-11	M	2.6E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-11	M	4.4E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	2.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.7E-09	M	9.3E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	4.8E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-10	M	1.7E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	3.6E-08	mg/kg-day	--	--	--	--	1.3E-07	mg/kg-day	4.0E-03	mg/kg-day	3.2E-05
				TPH (C9-C40)	4E+02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	9.2E-06	mg/kg-day	4.0E-03	mg/kg-day	2.3E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	7.7E-05	mg/kg-day	--	--	--	--	2.7E-04	mg/kg-day	1.0E+00	mg/kg-day	2.7E-04
				Antimony	2E+00	mg/kg	1.5E-08	mg/kg-day	--	--	--	--	5.2E-08	mg/kg-day	4.0E-04	mg/kg-day	1.3E-04
				Arsenic, inorganic	3E+01	mg/kg	1.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-07	--	4.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Cadmium	3E+00	mg/kg	2.0E-08	mg/kg-day	--	--	--	--	6.9E-08	mg/kg-day	1.0E-03	mg/kg-day	6.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	6.8E-07	mg/kg-day	--	--	--	--	2.4E-06	mg/kg-day	1.5E+00	mg/kg-day	1.6E-06
				Cobalt	1E+01	mg/kg	9.0E-08	mg/kg-day	--	--	--	--	3.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.0E-03
				Copper	2E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	3.7E-06	mg/kg-day	1.0E-03	mg/kg-day	3.7E-03
				Chromium (VI)	1E+00	mg/kg	8.8E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	4.4E-09	M	3.1E-08	mg/kg-day	3.0E-03	mg/kg-day	1.0E-05
				Iron	4E+04	mg/kg	2.8E-04	mg/kg-day	--	--	--	--	9.7E-04	mg/kg-day	7.0E-01	mg/kg-day	1.4E-03
				Lead	5E+02	mg/kg	3.0E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	7.9E-06	mg/kg-day	2.4E-02	mg/kg-day	3.3E-04
				Mercury	2E+00	mg/kg	1.3E-08	mg/kg-day	--	--	--	--	4.4E-08	mg/kg-day	3.0E-04	mg/kg-day	1.5E-04
				Nickel	7E+01	mg/kg	4.3E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	2.0E-02	mg/kg-day	7.5E-05
				Thallium	2E-01	mg/kg	1.6E-09	mg/kg-day	--	--	--	--	5.5E-09	mg/kg-day	1.0E-05	mg/kg-day	5.5E-04
				Vanadium	5E+01	mg/kg	3.2E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.2E-04

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Zinc	1E+03	mg/kg	7.9E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	3.0E-01	mg/kg-day	9.2E-05
				Total DLCs (excluding KM TEQs)							1.3E-07						4.5E-03
				Total DLCs (based on KM TEQs)							1.3E-07						4.3E-03
				Total PCDD/Fs (excluding KM TEQ)							1.0E-07						3.4E-03
				Total PCDD/Fs (based on KM TEQ)							9.9E-08						3.3E-03
				Total DL-PCBs (excluding KM TEQ)							3.3E-08						1.1E-03
				Total DL-PCBs (based on KM TEQ)							2.9E-08						9.7E-04
				Total Non-DL PCBs							8.4E-09						7.3E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							4.1E-08						1.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							3.8E-08						1.7E-03
				Total PAHs							1.9E-08						1.5E-04
				Total Organics							0.0E+00						2.3E-03
				Total Inorganics							1.8E-07						9.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									3.4E-07						1.7E-02
		Sediment Ingestion Total (based on KM TEQs)									3.4E-07						1.7E-02
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	5.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.5E-08	--	2.0E-12	mg/kg-day	7.0E-10	mg/kg-day	2.8E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	3.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.5E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-10	--	9.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--	3.8E-13	mg/kg-day	7.0E-09	mg/kg-day	5.4E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	6.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-09	--	6.7E-12	mg/kg-day	7.0E-08	mg/kg-day	9.5E-05
				OCDD	3E-03	mg/kg	1.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.7E-10	--	6.8E-11	mg/kg-day	2.3E-06	mg/kg-day	2.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	3.6E-13	mg/kg-day	7.0E-09	mg/kg-day	5.1E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	7.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.2E-10	--	2.5E-13	mg/kg-day	2.3E-08	mg/kg-day	1.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.2E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.3E-09	--	4.1E-13	mg/kg-day	2.3E-09	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	5.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.7E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-09	--	4.9E-13	mg/kg-day	7.0E-09	mg/kg-day	7.0E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	3.7E-14	mg/kg-day	7.0E-09	mg/kg-day	5.2E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	7.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.9E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-09	--	8.3E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	8.1E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-10	--	2.8E-13	mg/kg-day	7.0E-08	mg/kg-day	4.0E-06
				OCDF	4E-04	mg/kg	3.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.0E-06
				KM TEQ DF	1E-04	mg/kg	7.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-07	--	2.7E-12	mg/kg-day	7.0E-10	mg/kg-day	3.9E-03
				PCB-77	8E-03	mg/kg	5.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.6E-10	--	2.0E-10	mg/kg-day	7.0E-06	mg/kg-day	2.9E-05
				PCB-81	3E-04	mg/kg	2.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.9E-11	--	7.7E-12	mg/kg-day	2.3E-06	mg/kg-day	3.3E-06
				PCB-105	1E-02	mg/kg	9.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-10	--	3.2E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-114	9E-04	mg/kg	6.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-11	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.5E-07
				PCB-118	4E-02	mg/kg	2.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-09	--	9.4E-10	mg/kg-day	2.3E-05	mg/kg-day	4.0E-05
				PCB-123	1E-03	mg/kg	7.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-11	--	2.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-08	--	6.4E-12	mg/kg-day	7.0E-09	mg/kg-day	9.1E-04
				PCB-156/157	3E-03	mg/kg	2.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--	8.4E-11	mg/kg-day	2.3E-05	mg/kg-day	3.6E-06
				PCB-167	1E-03	mg/kg	8.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-169	3E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.4E-09	--	6.6E-12	mg/kg-day	2.3E-08	mg/kg-day	2.8E-04
				PCB-189	2E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-12	--	6.3E-12	mg/kg-day	2.3E-05	mg/kg-day	2.7E-07
				KM TEQ PCB	3E-05	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--	7.9E-13	mg/kg-day	7.0E-10	mg/kg-day	1.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.3E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.6E-08	--	8.0E-08	mg/kg-day	2.0E-05	mg/kg-day	4.0E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	6.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.7E-09	M	2.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	6.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-08	M	2.3E-07	mg/kg-day	3.0E-04	mg/kg-day	7.7E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	5.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.9E-09	M	2.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.8E-10	M	1.3E-07	mg/kg-day	--	--	--

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	2E+00	mg/kg	6.4E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.4E-11	M	2.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-08	M	4.7E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.4E-09	M	8.5E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	2.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-07	--	8.0E-07	mg/kg-day	3.0E-04	mg/kg-day	2.7E-03
				Cadmium	3E+00	mg/kg	7.6E-10	mg/kg-day	--	--	--	--	2.7E-09	mg/kg-day	2.5E-05	mg/kg-day	1.1E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							1.6E-07						5.2E-03
				Total DLCs (based on KM TEQs)							1.5E-07						5.0E-03
				Total PCDD/Fs (excluding KM TEQ)							1.2E-07						4.0E-03
				Total PCDD/Fs (based on KM TEQ)							1.2E-07						3.9E-03
				Total DL-PCBs (excluding KM TEQ)							3.9E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							3.4E-08						1.1E-03
				Total Non-DL PCBs							4.6E-08						4.0E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							8.4E-08						5.3E-03
				Total PCBs (DL & NDL; based on KM TEQ)							8.0E-08						5.1E-03
				Total PAHs							9.5E-08						7.7E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							3.4E-07						2.8E-03
		Sediment Dermal Total (excluding KM TEQs)									6.4E-07						1.3E-02
		Sediment Dermal Total (based on KM TEQs)									6.3E-07						1.3E-02
Swimmer Sediment Total (excluding KM TEQs)											9.8E-07						3.0E-02
Swimmer Sediment Total (based on KM TEQs)											9.7E-07						2.9E-02
Sediment	Sediment	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	3.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-08	--	1.2E-12	mg/kg-day	7.0E-10	mg/kg-day	1.7E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-09	--	6.2E-14	mg/kg-day	7.0E-10	mg/kg-day	8.8E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--	5.6E-14	mg/kg-day	7.0E-09	mg/kg-day	7.9E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	6.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.7E-09	--	4.0E-12	mg/kg-day	7.0E-08	mg/kg-day	5.6E-05
				OCDD	3E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-10	--	4.0E-11	mg/kg-day	2.3E-06	mg/kg-day	1.7E-05
				2,3,7,8-TCDF	1E-05	mg/kg	6.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-10	--	2.1E-13	mg/kg-day	7.0E-09	mg/kg-day	3.0E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	4.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-10	--	1.5E-13	mg/kg-day	2.3E-08	mg/kg-day	6.2E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.9E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.1E-09	--	2.4E-13	mg/kg-day	2.3E-09	mg/kg-day	1.0E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.6E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	8.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	6.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-11	--	2.2E-14	mg/kg-day	7.0E-09	mg/kg-day	3.1E-06

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-10	--	1.6E-13	mg/kg-day	7.0E-09	mg/kg-day	2.3E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-09	--	4.9E-12	mg/kg-day	7.0E-08	mg/kg-day	7.0E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.2E-11	--	1.7E-13	mg/kg-day	7.0E-08	mg/kg-day	2.4E-06
				OCDF	4E-04	mg/kg	2.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.9E-11	--	6.9E-12	mg/kg-day	2.3E-06	mg/kg-day	3.0E-06
				KM TEQ DF	1E-04	mg/kg	4.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.3E-03
				PCB-77	8E-03	mg/kg	3.4E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.1E-10	--	1.2E-10	mg/kg-day	7.0E-06	mg/kg-day	1.7E-05
				PCB-81	3E-04	mg/kg	1.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.9E-11	--	4.6E-12	mg/kg-day	2.3E-06	mg/kg-day	2.0E-06
				PCB-105	1E-02	mg/kg	5.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-10	--	1.9E-10	mg/kg-day	2.3E-05	mg/kg-day	8.2E-06
				PCB-114	9E-04	mg/kg	3.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-11	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.6E-07
				PCB-118	4E-02	mg/kg	1.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-10	--	5.6E-10	mg/kg-day	2.3E-05	mg/kg-day	2.4E-05
				PCB-123	1E-03	mg/kg	4.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-11	--	1.6E-11	mg/kg-day	2.3E-05	mg/kg-day	6.9E-07
				PCB-126	2E-04	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--	3.8E-12	mg/kg-day	7.0E-09	mg/kg-day	5.4E-04
				PCB-156/157	3E-03	mg/kg	1.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-11	--	5.0E-11	mg/kg-day	2.3E-05	mg/kg-day	2.1E-06
				PCB-167	1E-03	mg/kg	5.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-11	--	1.8E-11	mg/kg-day	2.3E-05	mg/kg-day	7.7E-07
				PCB-169	3E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.0E-09	--	3.9E-12	mg/kg-day	2.3E-08	mg/kg-day	1.7E-04
				PCB-189	2E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-12	--	3.7E-12	mg/kg-day	2.3E-05	mg/kg-day	1.6E-07
				KM TEQ PCB	3E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-08	--	4.7E-13	mg/kg-day	7.0E-10	mg/kg-day	6.7E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.8E-09	--	1.0E-08	mg/kg-day	2.0E-05	mg/kg-day	5.1E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	9.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-10	M	3.2E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	9.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-09	M	3.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.0E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	8.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-10	M	2.8E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	5.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-11	M	1.8E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	8.8E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-12	M	3.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.8E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-09	M	6.5E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.3E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-10	M	1.2E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	2.5E-08	mg/kg-day	--	--	--	--	8.7E-08	mg/kg-day	4.0E-03	mg/kg-day	2.2E-05
				TPH (C9-C40)	4E+02	mg/kg	1.8E-06	mg/kg-day	--	--	--	--	6.3E-06	mg/kg-day	4.0E-03	mg/kg-day	1.6E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	5.4E-05	mg/kg-day	--	--	--	--	1.9E-04	mg/kg-day	1.0E+00	mg/kg-day	1.9E-04
				Antimony	2E+00	mg/kg	1.0E-08	mg/kg-day	--	--	--	--	3.6E-08	mg/kg-day	4.0E-04	mg/kg-day	9.0E-05
				Arsenic, inorganic	3E+01	mg/kg	8.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-07	--	2.8E-07	mg/kg-day	3.0E-04	mg/kg-day	9.5E-04
				Cadmium	3E+00	mg/kg	1.4E-08	mg/kg-day	--	--	--	--	4.8E-08	mg/kg-day	1.0E-03	mg/kg-day	4.8E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	4.7E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	1.5E+00	mg/kg-day	1.1E-06
				Cobalt	1E+01	mg/kg	6.2E-08	mg/kg-day	--	--	--	--	2.2E-07	mg/kg-day	3.0E-04	mg/kg-day	7.2E-04
				Copper	2E+02	mg/kg	7.4E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	1.0E-03	mg/kg-day	2.6E-03
				Chromium (VI)	1E+00	mg/kg	6.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-09	M	2.1E-08	mg/kg-day	3.0E-03	mg/kg-day	7.1E-06
				Iron	4E+04	mg/kg	1.9E-04	mg/kg-day	--	--	--	--	6.7E-04	mg/kg-day	7.0E-01	mg/kg-day	9.6E-04
				Lead	5E+02	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	7.2E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	5.5E-06	mg/kg-day	2.4E-02	mg/kg-day	2.3E-04
				Mercury	2E+00	mg/kg	8.8E-09	mg/kg-day	--	--	--	--	3.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.0E-04
				Nickel	7E+01	mg/kg	3.0E-07	mg/kg-day	--	--	--	--	1.0E-06	mg/kg-day	2.0E-02	mg/kg-day	5.2E-05
				Thallium	2E-01	mg/kg	1.1E-09	mg/kg-day	--	--	--	--	3.8E-09	mg/kg-day	1.0E-05	mg/kg-day	3.8E-04
				Vanadium	5E+01	mg/kg	2.2E-07	mg/kg-day	--	--	--	--	7.7E-07	mg/kg-day	5.0E-03	mg/kg-day	1.5E-04
				Zinc	1E+03	mg/kg	5.4E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	3.0E-01	mg/kg-day	6.4E-05
				Total DLCs (excluding KM TEQs)							9.3E-08						3.1E-03
				Total DLCs (based on KM TEQs)							8.9E-08						3.0E-03
				Total PCDD/Fs (excluding KM TEQ)							7.0E-08						2.3E-03
				Total PCDD/Fs (based on KM TEQ)							6.9E-08						2.3E-03
				Total DL-PCBs (excluding KM TEQ)							2.3E-08						7.6E-04
				Total DL-PCBs (based on KM TEQ)							2.0E-08						6.7E-04

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total Non-DL PCBs							5.8E-09						5.1E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							2.9E-08						1.3E-03
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-08						1.2E-03
				Total PAHs							1.3E-08						1.0E-04
				Total Organics							0.0E+00						1.6E-03
				Total Inorganics							1.2E-07						6.5E-03
		Sediment Ingestion Total (excluding KM TEQs)									2.4E-07						1.2E-02
		Sediment Ingestion Total (based on KM TEQs)									2.3E-07						1.2E-02
Sediment	Sediment	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.4E-08	--	5.7E-13	mg/kg-day	7.0E-10	mg/kg-day	8.2E-04
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.6E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--	3.0E-14	mg/kg-day	7.0E-10	mg/kg-day	4.3E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	2.7E-14	mg/kg-day	7.0E-09	mg/kg-day	3.8E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-10	--	6.4E-14	mg/kg-day	7.0E-09	mg/kg-day	9.2E-06
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.2E-10	--	1.9E-12	mg/kg-day	7.0E-08	mg/kg-day	2.7E-05
				OCDD	3E-03	mg/kg	5.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-10	--	1.9E-11	mg/kg-day	2.3E-06	mg/kg-day	8.4E-06
				2,3,7,8-TCDF	1E-05	mg/kg	2.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-10	--	1.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.1E-11	--	7.0E-14	mg/kg-day	2.3E-08	mg/kg-day	3.0E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.4E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.5E-09	--	1.2E-13	mg/kg-day	2.3E-09	mg/kg-day	5.0E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	5.4E-13	mg/kg-day	7.0E-09	mg/kg-day	7.7E-05
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	2.0E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-11	--	1.0E-14	mg/kg-day	7.0E-09	mg/kg-day	1.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--	7.8E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	6.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--	2.4E-12	mg/kg-day	7.0E-08	mg/kg-day	3.4E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-11	--	8.1E-14	mg/kg-day	7.0E-08	mg/kg-day	1.2E-06
				OCDF	4E-04	mg/kg	9.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.3E-11	--	3.3E-12	mg/kg-day	2.3E-06	mg/kg-day	1.4E-06
				KM TEQ DF	1E-04	mg/kg	2.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-08	--	7.8E-13	mg/kg-day	7.0E-10	mg/kg-day	1.1E-03
				PCB-77	8E-03	mg/kg	1.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10	--	5.8E-11	mg/kg-day	7.0E-06	mg/kg-day	8.2E-06
				PCB-81	3E-04	mg/kg	6.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--	2.2E-12	mg/kg-day	2.3E-06	mg/kg-day	9.5E-07
				PCB-105	1E-02	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	9.3E-11	mg/kg-day	2.3E-05	mg/kg-day	4.0E-06
				PCB-114	9E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-12	--	6.4E-12	mg/kg-day	2.3E-05	mg/kg-day	2.7E-07
				PCB-118	4E-02	mg/kg	7.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--	2.7E-10	mg/kg-day	2.3E-05	mg/kg-day	1.2E-05
				PCB-123	1E-03	mg/kg	2.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	7.8E-12	mg/kg-day	2.3E-05	mg/kg-day	3.4E-07
				PCB-126	2E-04	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.6E-04
				PCB-156/157	3E-03	mg/kg	6.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-11	--	2.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-167	1E-03	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	8.7E-12	mg/kg-day	2.3E-05	mg/kg-day	3.7E-07
				PCB-169	3E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-09	--	1.9E-12	mg/kg-day	2.3E-08	mg/kg-day	8.1E-05
				PCB-189	2E-04	mg/kg	5.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--	1.8E-12	mg/kg-day	2.3E-05	mg/kg-day	7.8E-08
				KM TEQ PCB	3E-05	mg/kg	6.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.8E-09	--	2.3E-13	mg/kg-day	7.0E-10	mg/kg-day	3.3E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	6.6E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.3E-08	--	2.3E-08	mg/kg-day	2.0E-05	mg/kg-day	1.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-09	M	6.8E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	M	6.6E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-09	M	5.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-10	M	3.8E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.8E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.8E-11	M	6.5E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.9E-09	M	1.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.0E-10	M	2.4E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	6.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.8E-08	--	2.3E-07	mg/kg-day	3.0E-04	mg/kg-day	7.7E-04
				Cadmium	3E+00	mg/kg	2.2E-10	mg/kg-day	--	--	--	--	7.7E-10	mg/kg-day	2.5E-05	mg/kg-day	3.1E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							4.5E-08						1.5E-03
				Total DLCs (based on KM TEQs)							4.3E-08						1.4E-03
				Total PCDD/Fs (excluding KM TEQ)							3.4E-08						1.1E-03
				Total PCDD/Fs (based on KM TEQ)							3.3E-08						1.1E-03
				Total DL-PCBs (excluding KM TEQ)							1.1E-08						3.7E-04
				Total DL-PCBs (based on KM TEQ)							9.8E-09						3.3E-04
				Total Non-DL PCBs							1.3E-08						1.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.4E-08						1.5E-03
				Total PCBs (DL & NDL; based on KM TEQ)							2.3E-08						1.5E-03
				Total PAHs							2.7E-08						2.2E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							9.8E-08						8.0E-04
		Sediment Dermal Total (excluding KM TEQs)									1.8E-07						3.7E-03
		Sediment Dermal Total (based on KM TEQs)									1.8E-07						3.6E-03
Boater Sediment Total (excluding KM TEQs)											4.2E-07						1.6E-02
Boater Sediment Total (based on KM TEQs)											4.1E-07						1.5E-02
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-10	--	6.0E-15	mg/kg-day	7.0E-10	mg/kg-day	8.6E-06
				1,2,3,7,8-PeCDD	4E-07	µg/L	5.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.9E-11	--	2.1E-15	mg/kg-day	7.0E-10	mg/kg-day	3.0E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	4.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-11	--	1.5E-14	mg/kg-day	7.0E-09	mg/kg-day	2.1E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	6.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-11	--	2.4E-15	mg/kg-day	7.0E-09	mg/kg-day	3.4E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	1.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-11	--	4.2E-15	mg/kg-day	7.0E-09	mg/kg-day	6.1E-07
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	8.7E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-11	--	3.0E-14	mg/kg-day	7.0E-08	mg/kg-day	4.3E-07
				OCDD	6E-05	µg/L	9.1E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.1E-12	--	3.2E-13	mg/kg-day	2.3E-06	mg/kg-day	1.4E-07
				2,3,7,8-TCDF	5E-07	µg/L	6.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-11	--	2.3E-15	mg/kg-day	7.0E-09	mg/kg-day	3.3E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	5.3E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-12	--	1.9E-15	mg/kg-day	2.3E-08	mg/kg-day	8.0E-08
				2,3,4,7,8-PeCDF	7E-07	µg/L	9.2E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.1E-11	--	3.2E-15	mg/kg-day	2.3E-09	mg/kg-day	1.4E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-11	--	9.0E-15	mg/kg-day	7.0E-09	mg/kg-day	1.3E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	6.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-12	--	2.2E-15	mg/kg-day	7.0E-09	mg/kg-day	3.1E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	3.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-11	--	1.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1.8E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	3.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-12	--	1.4E-15	mg/kg-day	7.0E-09	mg/kg-day	2.0E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	1.1E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-11	--	3.8E-14	mg/kg-day	7.0E-08	mg/kg-day	5.4E-07
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	6.8E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-12	--	2.4E-15	mg/kg-day	7.0E-08	mg/kg-day	3.4E-08
				OCDF	1E-05	µg/L	2.0E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.2E-13	--	7.1E-14	mg/kg-day	2.3E-06	mg/kg-day	3.1E-08
				KM TEQ DF	2E-06	µg/L	3.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.1E-10	--	1.2E-14	mg/kg-day	7.0E-10	mg/kg-day	1.7E-05
				PCB-77	2E-05	µg/L	2.9E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.3E-13	--	1.0E-13	mg/kg-day	7.0E-06	mg/kg-day	1.4E-08
				PCB-81	7E-07	µg/L	9.6E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.3E-14	--	3.3E-15	mg/kg-day	2.3E-06	mg/kg-day	1.4E-09

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-105	7E-05	µg/L	1.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-13	--	3.6E-13	mg/kg-day	2.3E-05	mg/kg-day	1.5E-08
				PCB-114	4E-06	µg/L	5.3E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-14	--	1.9E-14	mg/kg-day	2.3E-05	mg/kg-day	8.0E-10
				PCB-118	2E-04	µg/L	2.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-12	--	8.0E-13	mg/kg-day	2.3E-05	mg/kg-day	3.4E-08
				PCB-123	3E-06	µg/L	4.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-14	--	1.6E-14	mg/kg-day	2.3E-05	mg/kg-day	6.7E-10
				PCB-126	7E-07	µg/L	9.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--	3.3E-15	mg/kg-day	7.0E-09	mg/kg-day	4.7E-07
				PCB-156/157	2E-05	µg/L	2.7E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	9.5E-14	mg/kg-day	2.3E-05	mg/kg-day	4.1E-09
				PCB-167	7E-06	µg/L	9.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-14	--	3.2E-14	mg/kg-day	2.3E-05	mg/kg-day	1.4E-09
				PCB-169	4E-07	µg/L	5.6E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-12	--	2.0E-15	mg/kg-day	2.3E-08	mg/kg-day	8.5E-08
				PCB-189	9E-07	µg/L	1.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.4E-15	--	4.2E-15	mg/kg-day	2.3E-05	mg/kg-day	1.8E-10
				KM TEQ PCB	1E-07	µg/L	1.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-11	--	5.3E-16	mg/kg-day	7.0E-10	mg/kg-day	7.6E-07
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.7E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-12	M	5.8E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	2.1E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-11	M	7.4E-11	mg/kg-day	3.0E-04	mg/kg-day	2.5E-07
				Benzo(b)fluoranthene	2E-02	µg/L	2.9E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.9E-12	M	1.0E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.3E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.3E-13	M	4.5E-11	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	2.8E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.8E-14	M	9.9E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	5.5E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.5E-12	M	1.9E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	1.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-12	M	4.2E-11	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	5.0E-11	mg/kg-day	--	--	--	--	1.7E-10	mg/kg-day	2.0E-02	mg/kg-day	8.7E-09
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.7E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.2E-12	--	5.9E-10	mg/kg-day	1.0E-02	mg/kg-day	5.9E-08
				Trichloroethylene	1E-01	µg/L	1.8E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	8.4E-12	M	6.4E-10	mg/kg-day	5.0E-04	mg/kg-day	1.3E-06
				Inorganics													
				Antimony	7E-01	µg/L	9.8E-10	mg/kg-day	--	--	--	--	3.4E-09	mg/kg-day	4.0E-04	mg/kg-day	8.5E-06
				Arsenic, inorganic	1E+00	µg/L	1.8E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-09	--	6.2E-09	mg/kg-day	3.0E-04	mg/kg-day	2.1E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.8E-09	mg/kg-day	--	--	--	--	6.3E-09	mg/kg-day	1.5E+00	mg/kg-day	4.2E-09
				Chromium (VI)	2E-01	µg/L	3.1E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.6E-10	M	1.1E-09	mg/kg-day	3.0E-03	mg/kg-day	3.6E-07
				Iron	5E+02	µg/L	7.5E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	7.0E-01	mg/kg-day	3.7E-06
				Manganese	7E+01	µg/L	9.7E-08	mg/kg-day	--	--	--	--	3.4E-07	mg/kg-day	2.4E-02	mg/kg-day	1.4E-05
				Mercury	3E-02	µg/L	3.7E-11	mg/kg-day	--	--	--	--	1.3E-10	mg/kg-day	3.0E-04	mg/kg-day	4.3E-07
				Thallium	1E-02	µg/L	1.7E-11	mg/kg-day	--	--	--	--	6.1E-11	mg/kg-day	1.0E-05	mg/kg-day	6.1E-06
				Titanium	8E+00	µg/L	1.1E-08	mg/kg-day	--	--	--	--	3.9E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							6.6E-10						2.2E-05
				Total DLCs (based on KM TEQs)							5.3E-10						1.8E-05
				Total PCDD/Fs (excluding KM TEQ)							6.4E-10						2.1E-05
				Total PCDD/Fs (based on KM TEQ)							5.1E-10						1.7E-05
				Total DL-PCBs (excluding KM TEQ)							1.9E-11						6.3E-07
				Total DL-PCBs (based on KM TEQ)							2.3E-11						7.6E-07
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-11						6.3E-07
				Total PCBs (DL & NDL; based on KM TEQ)							2.3E-11						7.6E-07
				Total PAHs							3.3E-11						2.6E-07
				Total Organics							1.4E-11						1.3E-06
				Total Inorganics							2.8E-09						5.4E-05
		Surface Water Ingestion Total (excluding KM TEQs)									3.5E-09						7.8E-05
		Surface Water Ingestion Total (based on KM TEQs)									3.4E-09						7.3E-05
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	2.8E-09	mg/kg-day	--	--	--	--	9.8E-09	mg/kg-day	2.0E-02	mg/kg-day	4.9E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.3E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	4.0E-11	--	4.6E-09	mg/kg-day	1.0E-02	mg/kg-day	4.6E-07
				Trichloroethylene	1E-01	µg/L	2.6E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.2E-10	M	9.2E-09	mg/kg-day	5.0E-04	mg/kg-day	1.8E-05
				Inorganics													
				Antimony	7E-01	µg/L	5.8E-10	mg/kg-day	--	--	--	--	2.0E-09	mg/kg-day	6.0E-05	mg/kg-day	3.4E-05
				Arsenic, inorganic	1E+00	µg/L	1.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-09	--	3.7E-09	mg/kg-day	3.0E-04	mg/kg-day	1.2E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.1E-09	mg/kg-day	--	--	--	--	3.7E-09	mg/kg-day	2.0E-02	mg/kg-day	1.9E-07
				Chromium (VI)	2E-01	µg/L	3.7E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	7.4E-09	M	1.3E-09	mg/kg-day	7.5E-05	mg/kg-day	1.7E-05
				Iron	5E+02	µg/L	4.4E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	7.0E-01	mg/kg-day	2.2E-06
				Manganese	7E+01	µg/L	5.7E-08	mg/kg-day	--	--	--	--	2.0E-07	mg/kg-day	9.6E-04	mg/kg-day	2.1E-04
				Mercury	3E-02	µg/L	2.2E-11	mg/kg-day	--	--	--	--	7.6E-11	mg/kg-day	2.1E-05	mg/kg-day	3.6E-06
				Thallium	1E-02	µg/L	1.0E-11	mg/kg-day	--	--	--	--	3.6E-11	mg/kg-day	1.0E-05	mg/kg-day	3.6E-06
				Titanium	8E+00	µg/L	6.5E-09	mg/kg-day	--	--	--	--	2.3E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						4.9E-07
				Total Organics							1.6E-10						1.9E-05
				Total Inorganics							8.9E-09						2.8E-04
		Surface Water Dermal Total (excluding KM TEQs)									9.1E-09						3.0E-04
		Surface Water Dermal Total (based on KM TEQs)									9.1E-09						3.0E-04
Wader Surface Water Total (excluding KM TEQs)											1.3E-08						3.8E-04
Wader Surface Water Total (based on KM TEQs)											1.3E-08						3.7E-04
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											1.0E-06						3.0E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)											9.8E-07						3.0E-02
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	8.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--	3.0E-14	mg/kg-day	7.0E-10	mg/kg-day	4.3E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.4E-10	--	1.0E-14	mg/kg-day	7.0E-10	mg/kg-day	1.5E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-10	--	7.5E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	3.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-11	--	1.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.7E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	6.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-11	--	2.1E-14	mg/kg-day	7.0E-09	mg/kg-day	3.0E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	4.3E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-11	--	1.5E-13	mg/kg-day	7.0E-08	mg/kg-day	2.2E-06
				OCDD	6E-05	µg/L	4.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-11	--	1.6E-12	mg/kg-day	2.3E-06	mg/kg-day	6.7E-07
				2,3,7,8-TCDF	5E-07	µg/L	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-11	--	1.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.7E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.6E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-11	--	9.2E-15	mg/kg-day	2.3E-08	mg/kg-day	4.0E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	4.6E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.1E-10	--	1.6E-14	mg/kg-day	2.3E-09	mg/kg-day	6.9E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-10	--	4.5E-14	mg/kg-day	7.0E-09	mg/kg-day	6.4E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-11	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.5E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-10	--	6.4E-14	mg/kg-day	7.0E-09	mg/kg-day	9.2E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-11	--	6.8E-15	mg/kg-day	7.0E-09	mg/kg-day	9.8E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	5.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.1E-11	--	1.9E-13	mg/kg-day	7.0E-08	mg/kg-day	2.7E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	3.4E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.1E-12	--	1.2E-14	mg/kg-day	7.0E-08	mg/kg-day	1.7E-07
				OCDF	1E-05	µg/L	1.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-12	--	3.5E-13	mg/kg-day	2.3E-06	mg/kg-day	1.5E-07
				KM TEQ DF	2E-06	µg/L	1.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-09	--	5.9E-14	mg/kg-day	7.0E-10	mg/kg-day	8.5E-05
				PCB-77	2E-05	µg/L	1.4E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-12	--	5.0E-13	mg/kg-day	7.0E-06	mg/kg-day	7.1E-08
				PCB-81	7E-07	µg/L	4.8E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-13	--	1.7E-14	mg/kg-day	2.3E-06	mg/kg-day	7.1E-09
				PCB-105	7E-05	µg/L	5.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--	1.8E-12	mg/kg-day	2.3E-05	mg/kg-day	7.6E-08
				PCB-114	4E-06	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	9.3E-14	mg/kg-day	2.3E-05	mg/kg-day	4.0E-09
				PCB-118	2E-04	µg/L	1.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-12	--	4.0E-12	mg/kg-day	2.3E-05	mg/kg-day	1.7E-07
				PCB-123	3E-06	µg/L	2.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.9E-14	--	7.7E-14	mg/kg-day	2.3E-05	mg/kg-day	3.3E-09
				PCB-126	7E-07	µg/L	4.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.0E-11	--	1.6E-14	mg/kg-day	7.0E-09	mg/kg-day	2.3E-06
				PCB-156/157	2E-05	µg/L	1.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-13	--	4.7E-13	mg/kg-day	2.3E-05	mg/kg-day	2.0E-08
				PCB-167	7E-06	µg/L	4.5E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-13	--	1.6E-13	mg/kg-day	2.3E-05	mg/kg-day	6.8E-09
				PCB-169	4E-07	µg/L	2.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-11	--	9.8E-15	mg/kg-day	2.3E-08	mg/kg-day	4.2E-07
				PCB-189	9E-07	µg/L	6.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-14	--	2.1E-14	mg/kg-day	2.3E-05	mg/kg-day	8.9E-10
				KM TEQ PCB	1E-07	µg/L	7.6E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-10	--	2.6E-15	mg/kg-day	7.0E-10	mg/kg-day	3.8E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	8.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.2E-12	M	2.9E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.1E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-10	M	3.7E-10	mg/kg-day	3.0E-04	mg/kg-day	1.2E-06
				Benzo(b)fluoranthene	2E-02	µg/L	1.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-11	M	5.0E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	6.4E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	6.4E-13	M	2.2E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.4E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.4E-13	M	4.9E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.7E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.7E-11	M	9.5E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	6.0E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.0E-12	M	2.1E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.5E-10	mg/kg-day	--	--	--	--	8.6E-10	mg/kg-day	2.0E-02	mg/kg-day	4.3E-08
				Pesticides & Organics													

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chloroform	1E-01	µg/L	8.3E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.6E-11	--	2.9E-09	mg/kg-day	1.0E-02	mg/kg-day	2.9E-07
				Trichloroethylene	1E-01	µg/L	9.1E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.2E-11	M	3.2E-09	mg/kg-day	5.0E-04	mg/kg-day	6.4E-06
				Inorganics													
				Antimony	7E-01	µg/L	4.8E-09	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	4.0E-04	mg/kg-day	4.2E-05
				Arsenic, inorganic	1E+00	µg/L	8.9E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-08	--	3.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.0E-04
				Chromium [as Cr(III)]	1E+00	µg/L	9.0E-09	mg/kg-day	--	--	--	--	3.1E-08	mg/kg-day	1.5E+00	mg/kg-day	2.1E-08
				Chromium (VI)	2E-01	µg/L	1.5E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	7.7E-10	M	5.4E-09	mg/kg-day	3.0E-03	mg/kg-day	1.8E-06
				Iron	5E+02	µg/L	3.7E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	7.0E-01	mg/kg-day	1.8E-05
				Manganese	7E+01	µg/L	4.8E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	2.4E-02	mg/kg-day	7.0E-05
				Mercury	3E-02	µg/L	1.8E-10	mg/kg-day	--	--	--	--	6.4E-10	mg/kg-day	3.0E-04	mg/kg-day	2.1E-06
				Thallium	1E-02	µg/L	8.6E-11	mg/kg-day	--	--	--	--	3.0E-10	mg/kg-day	1.0E-05	mg/kg-day	3.0E-05
				Titanium	8E+00	µg/L	5.5E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							3.3E-09						1.1E-04
				Total DLCs (based on KM TEQs)							2.7E-09						8.8E-05
				Total PCDD/Fs (excluding KM TEQ)							3.2E-09						1.1E-04
				Total PCDD/Fs (based on KM TEQ)							2.5E-09						8.5E-05
				Total DL-PCBs (excluding KM TEQ)							9.4E-11						3.1E-06
				Total DL-PCBs (based on KM TEQ)							1.1E-10						3.8E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							9.4E-11						3.1E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-10						3.8E-06
				Total PAHs							1.6E-10						1.3E-06
				Total Organics							6.8E-11						6.7E-06
				Total Inorganics							1.4E-08						2.7E-04
		Surface Water Ingestion Total (excluding KM TEQs)									1.8E-08						3.8E-04
		Surface Water Ingestion Total (based on KM TEQs)									1.7E-08						3.6E-04
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.5E-08	mg/kg-day	--	--	--	--	5.4E-08	mg/kg-day	2.0E-02	mg/kg-day	2.7E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	7.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.4E-10	--	2.7E-08	mg/kg-day	1.0E-02	mg/kg-day	2.7E-06
				Trichloroethylene	1E-01	µg/L	1.5E-08	mg/kg-day	4.6E-02	(mg/kg-day)-1	6.8E-10	M	5.2E-08	mg/kg-day	5.0E-04	mg/kg-day	1.0E-04
				Inorganics													
				Antimony	7E-01	µg/L	4.8E-09	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	6.0E-05	mg/kg-day	2.8E-04
				Arsenic, inorganic	1E+00	µg/L	8.8E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-08	--	3.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.0E-04
				Chromium [as Cr(III)]	1E+00	µg/L	8.9E-09	mg/kg-day	--	--	--	--	3.1E-08	mg/kg-day	2.0E-02	mg/kg-day	1.6E-06
				Chromium (VI)	2E-01	µg/L	3.1E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	6.2E-08	M	1.1E-08	mg/kg-day	7.5E-05	mg/kg-day	1.4E-04
				Iron	5E+02	µg/L	3.7E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	7.0E-01	mg/kg-day	1.8E-05
				Manganese	7E+01	µg/L	4.8E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	9.6E-04	mg/kg-day	1.7E-03
				Mercury	3E-02	µg/L	1.8E-10	mg/kg-day	--	--	--	--	6.4E-10	mg/kg-day	2.1E-05	mg/kg-day	3.0E-05
				Thallium	1E-02	µg/L	8.5E-11	mg/kg-day	--	--	--	--	3.0E-10	mg/kg-day	1.0E-05	mg/kg-day	3.0E-05
				Titanium	8E+00	µg/L	5.5E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						2.7E-06
				Total Organics							9.2E-10						1.1E-04
				Total Inorganics							7.5E-08						2.4E-03
		Surface Water Dermal Total (excluding KM TEQs)									7.6E-08						2.5E-03
		Surface Water Dermal Total (based on KM TEQs)									7.6E-08						2.5E-03
Swimmer Surface Water Total (excluding KM TEQs)											9.3E-08						2.8E-03
Swimmer Surface Water Total (based on KM TEQs)											9.3E-08						2.8E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											1.1E-06						3.3E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											1.1E-06						3.2E-02
Surface Water	Surface Water	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	6.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	2.4E-13	mg/kg-day	7.0E-10	mg/kg-day	3.4E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.5E-09	--	8.3E-14	mg/kg-day	7.0E-10	mg/kg-day	1.2E-04
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	6.0E-13	mg/kg-day	7.0E-09	mg/kg-day	8.6E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-10	--	9.6E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-10	--	1.7E-13	mg/kg-day	7.0E-09	mg/kg-day	2.4E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-10	--	1.2E-12	mg/kg-day	7.0E-08	mg/kg-day	1.7E-05
				OCDD	6E-05	µg/L	3.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-10	--	1.3E-11	mg/kg-day	2.3E-06	mg/kg-day	5.4E-06

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,7,8-TCDF	5E-07	µg/L	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-10	--	9.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.5E-11	--	7.4E-14	mg/kg-day	2.3E-08	mg/kg-day	3.2E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--	1.3E-13	mg/kg-day	2.3E-09	mg/kg-day	5.5E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	3.6E-13	mg/kg-day	7.0E-09	mg/kg-day	5.1E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	8.6E-14	mg/kg-day	7.0E-09	mg/kg-day	1.2E-05
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--	5.2E-13	mg/kg-day	7.0E-09	mg/kg-day	7.4E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--	5.5E-14	mg/kg-day	7.0E-09	mg/kg-day	7.8E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-10	--	1.5E-12	mg/kg-day	7.0E-08	mg/kg-day	2.2E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-11	--	9.5E-14	mg/kg-day	7.0E-08	mg/kg-day	1.4E-06
				OCDF	1E-05	µg/L	8.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--	2.8E-12	mg/kg-day	2.3E-06	mg/kg-day	1.2E-06
				KM TEQ DF	2E-06	µg/L	1.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-08	--	4.8E-13	mg/kg-day	7.0E-10	mg/kg-day	6.8E-04
				PCB-77	2E-05	µg/L	1.1E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-11	--	4.0E-12	mg/kg-day	7.0E-06	mg/kg-day	5.7E-07
				PCB-81	7E-07	µg/L	3.8E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-12	--	1.3E-13	mg/kg-day	2.3E-06	mg/kg-day	5.7E-08
				PCB-105	7E-05	µg/L	4.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-11	--	1.4E-11	mg/kg-day	2.3E-05	mg/kg-day	6.1E-07
				PCB-114	4E-06	µg/L	2.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-13	--	7.4E-13	mg/kg-day	2.3E-05	mg/kg-day	3.2E-08
				PCB-118	2E-04	µg/L	9.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-11	--	3.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-123	3E-06	µg/L	1.8E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-13	--	6.2E-13	mg/kg-day	2.3E-05	mg/kg-day	2.7E-08
				PCB-126	7E-07	µg/L	3.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				PCB-156/157	2E-05	µg/L	1.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-12	--	3.8E-12	mg/kg-day	2.3E-05	mg/kg-day	1.6E-07
				PCB-167	7E-06	µg/L	3.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-12	--	1.3E-12	mg/kg-day	2.3E-05	mg/kg-day	5.5E-08
				PCB-169	4E-07	µg/L	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--	7.9E-14	mg/kg-day	2.3E-08	mg/kg-day	3.4E-06
				PCB-189	9E-07	µg/L	4.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-13	--	1.7E-13	mg/kg-day	2.3E-05	mg/kg-day	7.2E-09
				KM TEQ PCB	1E-07	µg/L	6.1E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.1E-10	--	2.1E-14	mg/kg-day	7.0E-10	mg/kg-day	3.0E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	6.6E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.6E-11	M	2.3E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	8.5E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.5E-10	M	3.0E-09	mg/kg-day	3.0E-04	mg/kg-day	9.9E-06
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-10	M	4.0E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	5.1E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.1E-12	M	1.8E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.1E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.1E-12	M	3.9E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.2E-10	M	7.6E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.8E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-11	M	1.7E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.0E-09	mg/kg-day	--	--	--	--	6.9E-09	mg/kg-day	2.0E-02	mg/kg-day	3.5E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	6.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.1E-10	--	2.3E-08	mg/kg-day	1.0E-02	mg/kg-day	2.3E-06
				Trichloroethylene	1E-01	µg/L	7.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.4E-10	M	2.6E-08	mg/kg-day	5.0E-04	mg/kg-day	5.1E-05
				Inorganics													
				Antimony	7E-01	µg/L	3.9E-08	mg/kg-day	--	--	--	--	1.4E-07	mg/kg-day	4.0E-04	mg/kg-day	3.4E-04
				Arsenic, inorganic	1E+00	µg/L	7.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--	2.5E-07	mg/kg-day	3.0E-04	mg/kg-day	8.3E-04
				Chromium [as Cr(III)]	1E+00	µg/L	7.2E-08	mg/kg-day	--	--	--	--	2.5E-07	mg/kg-day	1.5E+00	mg/kg-day	1.7E-07
				Chromium (VI)	2E-01	µg/L	1.2E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	6.2E-09	M	4.3E-08	mg/kg-day	3.0E-03	mg/kg-day	1.4E-05
				Iron	5E+02	µg/L	3.0E-05	mg/kg-day	--	--	--	--	1.0E-04	mg/kg-day	7.0E-01	mg/kg-day	1.5E-04
				Manganese	7E+01	µg/L	3.9E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	2.4E-02	mg/kg-day	5.6E-04
				Mercury	3E-02	µg/L	1.5E-09	mg/kg-day	--	--	--	--	5.1E-09	mg/kg-day	3.0E-04	mg/kg-day	1.7E-05
				Thallium	1E-02	µg/L	6.9E-10	mg/kg-day	--	--	--	--	2.4E-09	mg/kg-day	1.0E-05	mg/kg-day	2.4E-04
				Titanium	8E+00	µg/L	4.4E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							2.6E-08						8.7E-04
				Total DLCs (based on KM TEQs)							2.1E-08						7.1E-04
				Total PCDD/Fs (excluding KM TEQ)							2.5E-08						8.5E-04
				Total PCDD/Fs (based on KM TEQ)							2.0E-08						6.8E-04
				Total DL-PCBs (excluding KM TEQ)							7.5E-10						2.5E-05
				Total DL-PCBs (based on KM TEQ)							9.1E-10						3.0E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.5E-10						2.5E-05

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total PCBs (DL & NDL; based on KM TEQ)							9.1E-10						3.0E-05
				Total PAHs							1.3E-09						1.0E-05
				Total Organics							5.4E-10						5.4E-05
				Total Inorganics							1.1E-07						2.2E-03
		Surface Water Ingestion Total (excluding KM TEQs)									1.4E-07						3.1E-03
		Surface Water Ingestion Total (based on KM TEQs)									1.4E-07						2.9E-03
Surface Water	Surface Water	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	3.4E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	2.0E-02	mg/kg-day	5.9E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.6E-08	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.1E-10	--	5.8E-08	mg/kg-day	1.0E-02	mg/kg-day	5.8E-06
				Trichloroethylene	1E-01	µg/L	3.2E-08	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.5E-09	M	1.1E-07	mg/kg-day	5.0E-04	mg/kg-day	2.3E-04
				Inorganics													
				Antimony	7E-01	µg/L	9.5E-09	mg/kg-day	--	--	--	--	3.3E-08	mg/kg-day	6.0E-05	mg/kg-day	5.6E-04
				Arsenic, inorganic	1E+00	µg/L	1.7E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-08	--	6.1E-08	mg/kg-day	3.0E-04	mg/kg-day	2.0E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.8E-08	mg/kg-day	--	--	--	--	6.2E-08	mg/kg-day	2.0E-02	mg/kg-day	3.2E-06

TABLE 7.5 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium (VI)	2E-01	µg/L	6.1E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.2E-07	M	2.1E-08	mg/kg-day	7.5E-05	mg/kg-day	2.8E-04
				Iron	5E+02	µg/L	7.3E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	7.0E-01	mg/kg-day	3.6E-05
				Manganese	7E+01	µg/L	9.4E-07	mg/kg-day	--	--	--	--	3.3E-06	mg/kg-day	9.6E-04	mg/kg-day	3.4E-03
				Mercury	3E-02	µg/L	3.6E-10	mg/kg-day	--	--	--	--	1.3E-09	mg/kg-day	2.1E-05	mg/kg-day	6.0E-05
				Thallium	1E-02	µg/L	1.7E-10	mg/kg-day	--	--	--	--	5.9E-10	mg/kg-day	1.0E-05	mg/kg-day	5.9E-05
				Titanium	8E+00	µg/L	1.1E-07	mg/kg-day	--	--	--	--	3.8E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						5.9E-06
				Total Organics							2.0E-09						2.3E-04
				Total Inorganics							1.5E-07						4.6E-03
		Surface Water Dermal Total (excluding KM TEQs)									1.5E-07						4.9E-03
		Surface Water Dermal Total (based on KM TEQs)									1.5E-07						4.9E-03
Boater Surface Water Total (excluding KM TEQs)											2.9E-07						8.0E-03
Boater Surface Water Total (based on KM TEQs)											2.9E-07						7.8E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)											7.1E-07						2.3E-02
Boater Sediment Total + Surface Water Total (based on KM TEQs)											7.0E-07						2.3E-02

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-07	--	7.9E-12	mg/kg-day	7.0E-10	mg/kg-day	1.1E-02
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	4.1E-13	mg/kg-day	7.0E-10	mg/kg-day	5.9E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	8.8E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-09	--	2.6E-11	mg/kg-day	7.0E-08	mg/kg-day	3.8E-04
				OCDD	3E-03	mg/kg	4.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--	2.7E-10	mg/kg-day	2.3E-06	mg/kg-day	1.1E-04
				2,3,7,8-TCDF	1E-05	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	2.0E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.5E-10	--	9.7E-13	mg/kg-day	2.3E-08	mg/kg-day	4.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-08	--	1.6E-12	mg/kg-day	2.3E-09	mg/kg-day	6.9E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	7.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	2.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-09	--	3.3E-11	mg/kg-day	7.0E-08	mg/kg-day	4.7E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.6E-05
				OCDF	4E-04	mg/kg	7.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--	4.6E-11	mg/kg-day	2.3E-06	mg/kg-day	2.0E-05
				KM TEQ DF	1E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--	1.1E-11	mg/kg-day	7.0E-10	mg/kg-day	1.5E-02
				PCB-77	8E-03	mg/kg	1.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-09	--	7.9E-10	mg/kg-day	7.0E-06	mg/kg-day	1.1E-04
				PCB-81	3E-04	mg/kg	5.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-10	--	3.1E-11	mg/kg-day	2.3E-06	mg/kg-day	1.3E-05
				PCB-105	1E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.8E-10	--	1.3E-09	mg/kg-day	2.3E-05	mg/kg-day	5.5E-05
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.7E-11	--	8.7E-11	mg/kg-day	2.3E-05	mg/kg-day	3.7E-06
				PCB-118	4E-02	mg/kg	6.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-09	--	3.7E-09	mg/kg-day	2.3E-05	mg/kg-day	1.6E-04
				PCB-123	1E-03	mg/kg	1.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-11	--	1.1E-10	mg/kg-day	2.3E-05	mg/kg-day	4.6E-06
				PCB-126	2E-04	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-08	--	2.5E-11	mg/kg-day	7.0E-09	mg/kg-day	3.6E-03
				PCB-156/157	3E-03	mg/kg	5.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-10	--	3.3E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-167	1E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-11	--	1.2E-10	mg/kg-day	2.3E-05	mg/kg-day	5.1E-06
				PCB-169	3E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-08	--	2.6E-11	mg/kg-day	2.3E-08	mg/kg-day	1.1E-03
				PCB-189	2E-04	mg/kg	4.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-11	--	2.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				KM TEQ PCB	3E-05	mg/kg	5.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.1E-08	--	3.1E-12	mg/kg-day	7.0E-10	mg/kg-day	4.5E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.3E-08	--	6.8E-08	mg/kg-day	2.0E-05	mg/kg-day	3.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-09	M	2.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-08	M	2.1E-07	mg/kg-day	3.0E-04	mg/kg-day	7.0E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	3.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	1.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-10	M	1.2E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-11	M	2.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-08	M	4.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	7.8E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.0E-07	mg/kg-day	--	--	--	--	5.8E-07	mg/kg-day	4.0E-03	mg/kg-day	1.5E-04
				TPH (C9-C40)	4E+02	mg/kg	7.2E-06	mg/kg-day	--	--	--	--	4.2E-05	mg/kg-day	4.0E-03	mg/kg-day	1.1E-02
				Inorganics													
				Aluminum	1E+04	mg/kg	2.1E-04	mg/kg-day	--	--	--	--	1.3E-03	mg/kg-day	1.0E+00	mg/kg-day	1.3E-03
				Antimony	2E+00	mg/kg	4.1E-08	mg/kg-day	--	--	--	--	2.4E-07	mg/kg-day	4.0E-04	mg/kg-day	6.0E-04
				Arsenic, inorganic	3E+01	mg/kg	3.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.9E-07	--	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.3E-03
				Cadmium	3E+00	mg/kg	5.4E-08	mg/kg-day	--	--	--	--	3.2E-07	mg/kg-day	1.0E-03	mg/kg-day	3.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.5E+00	mg/kg-day	7.4E-06
				Cobalt	1E+01	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.8E-03
				Copper	2E+02	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.0E-03	mg/kg-day	1.7E-02

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Chromium (VI)	1E+00	mg/kg	2.4E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-08	M	1.4E-07	mg/kg-day	3.0E-03	mg/kg-day	4.8E-05
				Iron	4E+04	mg/kg	7.7E-04	mg/kg-day	--	--	--	--	4.5E-03	mg/kg-day	7.0E-01	mg/kg-day	6.4E-03
				Lead	5E+02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	6.2E-06	mg/kg-day	--	--	--	--	3.6E-05	mg/kg-day	2.4E-02	mg/kg-day	1.5E-03
				Mercury	2E+00	mg/kg	3.5E-08	mg/kg-day	--	--	--	--	2.0E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04
				Nickel	7E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	6.9E-06	mg/kg-day	2.0E-02	mg/kg-day	3.5E-04
				Thallium	2E-01	mg/kg	4.3E-09	mg/kg-day	--	--	--	--	2.5E-08	mg/kg-day	1.0E-05	mg/kg-day	2.5E-03
				Vanadium	5E+01	mg/kg	8.8E-07	mg/kg-day	--	--	--	--	5.1E-06	mg/kg-day	5.0E-03	mg/kg-day	1.0E-03
				Zinc	1E+03	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-01	mg/kg-day	4.2E-04
				Total DLCs (excluding KM TEQs)							3.7E-07						2.1E-02
				Total DLCs (based on KM TEQs)							3.6E-07						2.0E-02
				Total PCDD/Fs (excluding KM TEQ)							2.8E-07						1.6E-02
				Total PCDD/Fs (based on KM TEQ)							2.8E-07						1.5E-02
				Total DL-PCBs (excluding KM TEQ)							9.1E-08						5.1E-03
				Total DL-PCBs (based on KM TEQ)							8.1E-08						4.5E-03
				Total Non-DL PCBs							2.3E-08						3.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07						8.5E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-07						7.9E-03
				Total PAHs							1.3E-07						7.0E-04
				Total Organics							0.0E+00						1.1E-02
				Total Inorganics							5.2E-07						4.3E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.0E-06						7.9E-02
		Sediment Ingestion Total (based on KM TEQs)									1.0E-06						7.8E-02
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	7.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--	4.2E-12	mg/kg-day	7.0E-10	mg/kg-day	6.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	3.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.7E-09	--	2.2E-13	mg/kg-day	7.0E-10	mg/kg-day	3.1E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	2.0E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	8.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	8.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	4.7E-13	mg/kg-day	7.0E-09	mg/kg-day	6.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-09	--	1.4E-11	mg/kg-day	7.0E-08	mg/kg-day	2.0E-04
				OCDD	3E-03	mg/kg	2.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-09	--	1.4E-10	mg/kg-day	2.3E-06	mg/kg-day	6.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-09	--	7.5E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	8.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-10	--	5.2E-13	mg/kg-day	2.3E-08	mg/kg-day	2.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.5E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.7E-09	--	8.6E-13	mg/kg-day	2.3E-09	mg/kg-day	3.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	6.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	9.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	5.7E-13	mg/kg-day	7.0E-09	mg/kg-day	8.2E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	3.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-09	--	1.8E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-10	--	5.9E-13	mg/kg-day	7.0E-08	mg/kg-day	8.5E-06
				OCDF	4E-04	mg/kg	4.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-10	--	2.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	1E-04	mg/kg	9.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-07	--	5.7E-12	mg/kg-day	7.0E-10	mg/kg-day	8.1E-03
				PCB-77	8E-03	mg/kg	7.2E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-09	--	4.2E-10	mg/kg-day	7.0E-06	mg/kg-day	6.0E-05
				PCB-81	3E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.6E-11	mg/kg-day	2.3E-06	mg/kg-day	7.0E-06
				PCB-105	1E-02	mg/kg	1.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-10	--	6.8E-10	mg/kg-day	2.3E-05	mg/kg-day	2.9E-05
				PCB-114	9E-04	mg/kg	8.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-11	--	4.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.0E-06
				PCB-118	4E-02	mg/kg	3.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--	2.0E-09	mg/kg-day	2.3E-05	mg/kg-day	8.5E-05
				PCB-123	1E-03	mg/kg	9.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-11	--	5.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.5E-06
				PCB-126	2E-04	mg/kg	2.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				PCB-156/157	3E-03	mg/kg	3.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-167	1E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-11	--	6.3E-11	mg/kg-day	2.3E-05	mg/kg-day	2.7E-06

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-169	3E-04	mg/kg	2.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-08	--	1.4E-11	mg/kg-day	2.3E-08	mg/kg-day	5.9E-04
				PCB-189	2E-04	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.7E-07
				KM TEQ PCB	3E-05	mg/kg	2.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-08	--	1.7E-12	mg/kg-day	7.0E-10	mg/kg-day	2.4E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.8E-08	--	1.7E-07	mg/kg-day	2.0E-05	mg/kg-day	8.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	8.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M	4.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	8.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	7.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-08	M	4.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	4.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.2E-09	M	2.8E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	8.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-10	M	4.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.3E-08	M	1.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.7E-09	M	1.8E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	2.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-07	--	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.6E-03
				Cadmium	3E+00	mg/kg	9.6E-10	mg/kg-day	--	--	--	--	5.6E-09	mg/kg-day	2.5E-05	mg/kg-day	2.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							2.0E-07						1.1E-02
				Total DLCs (based on KM TEQs)							1.9E-07						1.1E-02
				Total PCDD/Fs (excluding KM TEQ)							1.5E-07						8.3E-03
				Total PCDD/Fs (based on KM TEQ)							1.5E-07						8.1E-03
				Total DL-PCBs (excluding KM TEQ)							4.9E-08						2.7E-03
				Total DL-PCBs (based on KM TEQ)							4.3E-08						2.4E-03
				Total Non-DL PCBs							5.8E-08						8.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07						1.1E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-07						1.1E-02
				Total PAHs							3.0E-07						1.6E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							4.3E-07						5.8E-03
		Sediment Dermal Total (excluding KM TEQs)									9.9E-07						2.7E-02
		Sediment Dermal Total (based on KM TEQs)									9.8E-07						2.6E-02
Wader Sediment Total (excluding KM TEQs)											2.0E-06						1.1E-01
Wader Sediment Total (based on KM TEQs)											2.0E-06						1.0E-01
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-07	--	7.9E-12	mg/kg-day	7.0E-10	mg/kg-day	1.1E-02

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	4.1E-13	mg/kg-day	7.0E-10	mg/kg-day	5.9E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	8.8E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-09	--	2.6E-11	mg/kg-day	7.0E-08	mg/kg-day	3.8E-04
				OCDD	3E-03	mg/kg	4.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--	2.7E-10	mg/kg-day	2.3E-06	mg/kg-day	1.1E-04
				2,3,7,8-TCDF	1E-05	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	2.0E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.5E-10	--	9.7E-13	mg/kg-day	2.3E-08	mg/kg-day	4.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-08	--	1.6E-12	mg/kg-day	2.3E-09	mg/kg-day	6.9E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	7.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	2.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-09	--	3.3E-11	mg/kg-day	7.0E-08	mg/kg-day	4.7E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.6E-05
				OCDF	4E-04	mg/kg	7.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--	4.6E-11	mg/kg-day	2.3E-06	mg/kg-day	2.0E-05
				KM TEQ DF	1E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--	1.1E-11	mg/kg-day	7.0E-10	mg/kg-day	1.5E-02
				PCB-77	8E-03	mg/kg	1.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-09	--	7.9E-10	mg/kg-day	7.0E-06	mg/kg-day	1.1E-04
				PCB-81	3E-04	mg/kg	5.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-10	--	3.1E-11	mg/kg-day	2.3E-06	mg/kg-day	1.3E-05
				PCB-105	1E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.8E-10	--	1.3E-09	mg/kg-day	2.3E-05	mg/kg-day	5.5E-05
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.7E-11	--	8.7E-11	mg/kg-day	2.3E-05	mg/kg-day	3.7E-06
				PCB-118	4E-02	mg/kg	6.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-09	--	3.7E-09	mg/kg-day	2.3E-05	mg/kg-day	1.6E-04
				PCB-123	1E-03	mg/kg	1.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-11	--	1.1E-10	mg/kg-day	2.3E-05	mg/kg-day	4.6E-06
				PCB-126	2E-04	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-08	--	2.5E-11	mg/kg-day	7.0E-09	mg/kg-day	3.6E-03
				PCB-156/157	3E-03	mg/kg	5.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-10	--	3.3E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-167	1E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-11	--	1.2E-10	mg/kg-day	2.3E-05	mg/kg-day	5.1E-06
				PCB-169	3E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-08	--	2.6E-11	mg/kg-day	2.3E-08	mg/kg-day	1.1E-03
				PCB-189	2E-04	mg/kg	4.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-11	--	2.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				KM TEQ PCB	3E-05	mg/kg	5.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.1E-08	--	3.1E-12	mg/kg-day	7.0E-10	mg/kg-day	4.5E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.3E-08	--	6.8E-08	mg/kg-day	2.0E-05	mg/kg-day	3.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-09	M	2.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-08	M	2.1E-07	mg/kg-day	3.0E-04	mg/kg-day	7.0E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	3.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	1.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-10	M	1.2E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-11	M	2.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-08	M	4.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	7.8E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.0E-07	mg/kg-day	--	--	--	--	5.8E-07	mg/kg-day	4.0E-03	mg/kg-day	1.5E-04
				TPH (C9-C40)	4E+02	mg/kg	7.2E-06	mg/kg-day	--	--	--	--	4.2E-05	mg/kg-day	4.0E-03	mg/kg-day	1.1E-02
				Inorganics													
				Aluminum	1E+04	mg/kg	2.1E-04	mg/kg-day	--	--	--	--	1.3E-03	mg/kg-day	1.0E+00	mg/kg-day	1.3E-03
				Antimony	2E+00	mg/kg	4.1E-08	mg/kg-day	--	--	--	--	2.4E-07	mg/kg-day	4.0E-04	mg/kg-day	6.0E-04
				Arsenic, inorganic	3E+01	mg/kg	3.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.9E-07	--	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.3E-03
				Cadmium	3E+00	mg/kg	5.4E-08	mg/kg-day	--	--	--	--	3.2E-07	mg/kg-day	1.0E-03	mg/kg-day	3.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.5E+00	mg/kg-day	7.4E-06
				Cobalt	1E+01	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.8E-03
				Copper	2E+02	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.0E-03	mg/kg-day	1.7E-02
				Chromium (VI)	1E+00	mg/kg	2.4E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-08	M	1.4E-07	mg/kg-day	3.0E-03	mg/kg-day	4.8E-05

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Iron	4E+04	mg/kg	7.7E-04	mg/kg-day	--	--	--	--	4.5E-03	mg/kg-day	7.0E-01	mg/kg-day	6.4E-03
				Lead	5E+02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	6.2E-06	mg/kg-day	--	--	--	--	3.6E-05	mg/kg-day	2.4E-02	mg/kg-day	1.5E-03
				Mercury	2E+00	mg/kg	3.5E-08	mg/kg-day	--	--	--	--	2.0E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04
				Nickel	7E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	6.9E-06	mg/kg-day	2.0E-02	mg/kg-day	3.5E-04
				Thallium	2E-01	mg/kg	4.3E-09	mg/kg-day	--	--	--	--	2.5E-08	mg/kg-day	1.0E-05	mg/kg-day	2.5E-03
				Vanadium	5E+01	mg/kg	8.8E-07	mg/kg-day	--	--	--	--	5.1E-06	mg/kg-day	5.0E-03	mg/kg-day	1.0E-03
				Zinc	1E+03	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-01	mg/kg-day	4.2E-04
				Total DLCs (excluding KM TEQs)							3.7E-07						2.1E-02
				Total DLCs (based on KM TEQs)							3.6E-07						2.0E-02
				Total PCDD/Fs (excluding KM TEQ)							2.8E-07						1.6E-02
				Total PCDD/Fs (based on KM TEQ)							2.8E-07						1.5E-02
				Total DL-PCBs (excluding KM TEQ)							9.1E-08						5.1E-03
				Total DL-PCBs (based on KM TEQ)							8.1E-08						4.5E-03
				Total Non-DL PCBs							2.3E-08						3.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07						8.5E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-07						7.9E-03
				Total PAHs							1.3E-07						7.0E-04
				Total Organics							0.0E+00						1.1E-02
				Total Inorganics							5.2E-07						4.3E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.0E-06						7.9E-02
		Sediment Ingestion Total (based on KM TEQs)									1.0E-06						7.8E-02
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	7.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--	4.2E-12	mg/kg-day	7.0E-10	mg/kg-day	6.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	3.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.7E-09	--	2.2E-13	mg/kg-day	7.0E-10	mg/kg-day	3.1E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	2.0E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	8.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	8.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	4.7E-13	mg/kg-day	7.0E-09	mg/kg-day	6.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-09	--	1.4E-11	mg/kg-day	7.0E-08	mg/kg-day	2.0E-04
				OCDD	3E-03	mg/kg	2.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-09	--	1.4E-10	mg/kg-day	2.3E-06	mg/kg-day	6.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-09	--	7.5E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	8.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-10	--	5.2E-13	mg/kg-day	2.3E-08	mg/kg-day	2.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.5E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.7E-09	--	8.6E-13	mg/kg-day	2.3E-09	mg/kg-day	3.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	6.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	9.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	5.7E-13	mg/kg-day	7.0E-09	mg/kg-day	8.2E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	3.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-09	--	1.8E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-10	--	5.9E-13	mg/kg-day	7.0E-08	mg/kg-day	8.5E-06
				OCDF	4E-04	mg/kg	4.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-10	--	2.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	1E-04	mg/kg	9.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-07	--	5.7E-12	mg/kg-day	7.0E-10	mg/kg-day	8.1E-03
				PCB-77	8E-03	mg/kg	7.2E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-09	--	4.2E-10	mg/kg-day	7.0E-06	mg/kg-day	6.0E-05
				PCB-81	3E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.6E-11	mg/kg-day	2.3E-06	mg/kg-day	7.0E-06
				PCB-105	1E-02	mg/kg	1.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-10	--	6.8E-10	mg/kg-day	2.3E-05	mg/kg-day	2.9E-05
				PCB-114	9E-04	mg/kg	8.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-11	--	4.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.0E-06
				PCB-118	4E-02	mg/kg	3.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--	2.0E-09	mg/kg-day	2.3E-05	mg/kg-day	8.5E-05
				PCB-123	1E-03	mg/kg	9.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-11	--	5.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.5E-06
				PCB-126	2E-04	mg/kg	2.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				PCB-156/157	3E-03	mg/kg	3.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-167	1E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-11	--	6.3E-11	mg/kg-day	2.3E-05	mg/kg-day	2.7E-06
				PCB-169	3E-04	mg/kg	2.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-08	--	1.4E-11	mg/kg-day	2.3E-08	mg/kg-day	5.9E-04

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-189	2E-04	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.7E-07
				KM TEQ PCB	3E-05	mg/kg	2.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-08	--	1.7E-12	mg/kg-day	7.0E-10	mg/kg-day	2.4E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.8E-08	--	1.7E-07	mg/kg-day	2.0E-05	mg/kg-day	8.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	8.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M	4.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	8.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	7.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-08	M	4.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	4.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.2E-09	M	2.8E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	8.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-10	M	4.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.3E-08	M	1.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.7E-09	M	1.8E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	2.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-07	--	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.6E-03
				Cadmium	3E+00	mg/kg	9.6E-10	mg/kg-day	--	--	--	--	5.6E-09	mg/kg-day	2.5E-05	mg/kg-day	2.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							2.0E-07						1.1E-02
				Total DLCs (based on KM TEQs)							1.9E-07						1.1E-02
				Total PCDD/Fs (excluding KM TEQ)							1.5E-07						8.3E-03
				Total PCDD/Fs (based on KM TEQ)							1.5E-07						8.1E-03
				Total DL-PCBs (excluding KM TEQ)							4.9E-08						2.7E-03
				Total DL-PCBs (based on KM TEQ)							4.3E-08						2.4E-03
				Total Non-DL PCBs							5.8E-08						8.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07						1.1E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-07						1.1E-02
				Total PAHs							3.0E-07						1.6E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							4.3E-07						5.8E-03
		Sediment Dermal Total (excluding KM TEQs)									9.9E-07						2.7E-02
		Sediment Dermal Total (based on KM TEQs)									9.8E-07						2.6E-02
Swimmer Sediment Total (excluding KM TEQs)											2.0E-06						1.1E-01
Swimmer Sediment Total (based on KM TEQs)											2.0E-06						1.0E-01
Sediment	Sediment	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-07	--	7.9E-12	mg/kg-day	7.0E-10	mg/kg-day	1.1E-02
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	4.1E-13	mg/kg-day	7.0E-10	mg/kg-day	5.9E-04

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	8.8E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-09	--	2.6E-11	mg/kg-day	7.0E-08	mg/kg-day	3.8E-04
				OCDD	3E-03	mg/kg	4.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--	2.7E-10	mg/kg-day	2.3E-06	mg/kg-day	1.1E-04
				2,3,7,8-TCDF	1E-05	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	2.0E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.5E-10	--	9.7E-13	mg/kg-day	2.3E-08	mg/kg-day	4.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-08	--	1.6E-12	mg/kg-day	2.3E-09	mg/kg-day	6.9E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	7.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	2.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-09	--	3.3E-11	mg/kg-day	7.0E-08	mg/kg-day	4.7E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.6E-05
				OCDF	4E-04	mg/kg	7.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--	4.6E-11	mg/kg-day	2.3E-06	mg/kg-day	2.0E-05
				KM TEQ DF	1E-04	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--	1.1E-11	mg/kg-day	7.0E-10	mg/kg-day	1.5E-02
				PCB-77	8E-03	mg/kg	1.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-09	--	7.9E-10	mg/kg-day	7.0E-06	mg/kg-day	1.1E-04
				PCB-81	3E-04	mg/kg	5.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-10	--	3.1E-11	mg/kg-day	2.3E-06	mg/kg-day	1.3E-05
				PCB-105	1E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.8E-10	--	1.3E-09	mg/kg-day	2.3E-05	mg/kg-day	5.5E-05
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.7E-11	--	8.7E-11	mg/kg-day	2.3E-05	mg/kg-day	3.7E-06
				PCB-118	4E-02	mg/kg	6.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-09	--	3.7E-09	mg/kg-day	2.3E-05	mg/kg-day	1.6E-04
				PCB-123	1E-03	mg/kg	1.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-11	--	1.1E-10	mg/kg-day	2.3E-05	mg/kg-day	4.6E-06
				PCB-126	2E-04	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-08	--	2.5E-11	mg/kg-day	7.0E-09	mg/kg-day	3.6E-03
				PCB-156/157	3E-03	mg/kg	5.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-10	--	3.3E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-167	1E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-11	--	1.2E-10	mg/kg-day	2.3E-05	mg/kg-day	5.1E-06
				PCB-169	3E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-08	--	2.6E-11	mg/kg-day	2.3E-08	mg/kg-day	1.1E-03
				PCB-189	2E-04	mg/kg	4.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-11	--	2.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				KM TEQ PCB	3E-05	mg/kg	5.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.1E-08	--	3.1E-12	mg/kg-day	7.0E-10	mg/kg-day	4.5E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.3E-08	--	6.8E-08	mg/kg-day	2.0E-05	mg/kg-day	3.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-09	M	2.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-08	M	2.1E-07	mg/kg-day	3.0E-04	mg/kg-day	7.0E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	3.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	1.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-10	M	1.2E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-11	M	2.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-08	M	4.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	7.8E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.0E-07	mg/kg-day	--	--	--	--	5.8E-07	mg/kg-day	4.0E-03	mg/kg-day	1.5E-04
				TPH (C9-C40)	4E+02	mg/kg	7.2E-06	mg/kg-day	--	--	--	--	4.2E-05	mg/kg-day	4.0E-03	mg/kg-day	1.1E-02
				Inorganics													
				Aluminum	1E+04	mg/kg	2.1E-04	mg/kg-day	--	--	--	--	1.3E-03	mg/kg-day	1.0E+00	mg/kg-day	1.3E-03
				Antimony	2E+00	mg/kg	4.1E-08	mg/kg-day	--	--	--	--	2.4E-07	mg/kg-day	4.0E-04	mg/kg-day	6.0E-04
				Arsenic, inorganic	3E+01	mg/kg	3.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.9E-07	--	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.3E-03
				Cadmium	3E+00	mg/kg	5.4E-08	mg/kg-day	--	--	--	--	3.2E-07	mg/kg-day	1.0E-03	mg/kg-day	3.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.5E+00	mg/kg-day	7.4E-06
				Cobalt	1E+01	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.8E-03
				Copper	2E+02	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.0E-03	mg/kg-day	1.7E-02
				Chromium (VI)	1E+00	mg/kg	2.4E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-08	M	1.4E-07	mg/kg-day	3.0E-03	mg/kg-day	4.8E-05
				Iron	4E+04	mg/kg	7.7E-04	mg/kg-day	--	--	--	--	4.5E-03	mg/kg-day	7.0E-01	mg/kg-day	6.4E-03

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Lead	5E+02	mg/kg	8.3E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	6.2E-06	mg/kg-day	--	--	--	--	3.6E-05	mg/kg-day	2.4E-02	mg/kg-day	1.5E-03
				Mercury	2E+00	mg/kg	3.5E-08	mg/kg-day	--	--	--	--	2.0E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04
				Nickel	7E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	6.9E-06	mg/kg-day	2.0E-02	mg/kg-day	3.5E-04
				Thallium	2E-01	mg/kg	4.3E-09	mg/kg-day	--	--	--	--	2.5E-08	mg/kg-day	1.0E-05	mg/kg-day	2.5E-03
				Vanadium	5E+01	mg/kg	8.8E-07	mg/kg-day	--	--	--	--	5.1E-06	mg/kg-day	5.0E-03	mg/kg-day	1.0E-03
				Zinc	1E+03	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	1.3E-04	mg/kg-day	3.0E-01	mg/kg-day	4.2E-04
				Total DLCs (excluding KM TEQs)							3.7E-07						2.1E-02
				Total DLCs (based on KM TEQs)							3.6E-07						2.0E-02
				Total PCDD/Fs (excluding KM TEQ)							2.8E-07						1.6E-02
				Total PCDD/Fs (based on KM TEQ)							2.8E-07						1.5E-02
				Total DL-PCBs (excluding KM TEQ)							9.1E-08						5.1E-03
				Total DL-PCBs (based on KM TEQ)							8.1E-08						4.5E-03
				Total Non-DL PCBs							2.3E-08						3.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07						8.5E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-07						7.9E-03
				Total PAHs							1.3E-07						7.0E-04
				Total Organics							0.0E+00						1.1E-02
				Total Inorganics							5.2E-07						4.3E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.0E-06						7.9E-02
		Sediment Ingestion Total (based on KM TEQs)									1.0E-06						7.8E-02
Sediment	Sediment	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	7.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--	4.2E-12	mg/kg-day	7.0E-10	mg/kg-day	6.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	3.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.7E-09	--	2.2E-13	mg/kg-day	7.0E-10	mg/kg-day	3.1E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	2.0E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	8.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	8.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	4.7E-13	mg/kg-day	7.0E-09	mg/kg-day	6.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-09	--	1.4E-11	mg/kg-day	7.0E-08	mg/kg-day	2.0E-04
				OCDD	3E-03	mg/kg	2.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-09	--	1.4E-10	mg/kg-day	2.3E-06	mg/kg-day	6.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-09	--	7.5E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	8.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-10	--	5.2E-13	mg/kg-day	2.3E-08	mg/kg-day	2.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.5E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.7E-09	--	8.6E-13	mg/kg-day	2.3E-09	mg/kg-day	3.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	6.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	9.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--	5.7E-13	mg/kg-day	7.0E-09	mg/kg-day	8.2E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	3.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-09	--	1.8E-11	mg/kg-day	7.0E-08	mg/kg-day	2.5E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-10	--	5.9E-13	mg/kg-day	7.0E-08	mg/kg-day	8.5E-06
				OCDF	4E-04	mg/kg	4.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-10	--	2.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	1E-04	mg/kg	9.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-07	--	5.7E-12	mg/kg-day	7.0E-10	mg/kg-day	8.1E-03
				PCB-77	8E-03	mg/kg	7.2E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-09	--	4.2E-10	mg/kg-day	7.0E-06	mg/kg-day	6.0E-05
				PCB-81	3E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.6E-11	mg/kg-day	2.3E-06	mg/kg-day	7.0E-06
				PCB-105	1E-02	mg/kg	1.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-10	--	6.8E-10	mg/kg-day	2.3E-05	mg/kg-day	2.9E-05
				PCB-114	9E-04	mg/kg	8.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-11	--	4.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.0E-06
				PCB-118	4E-02	mg/kg	3.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--	2.0E-09	mg/kg-day	2.3E-05	mg/kg-day	8.5E-05
				PCB-123	1E-03	mg/kg	9.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-11	--	5.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.5E-06
				PCB-126	2E-04	mg/kg	2.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				PCB-156/157	3E-03	mg/kg	3.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-167	1E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-11	--	6.3E-11	mg/kg-day	2.3E-05	mg/kg-day	2.7E-06
				PCB-169	3E-04	mg/kg	2.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-08	--	1.4E-11	mg/kg-day	2.3E-08	mg/kg-day	5.9E-04
				PCB-189	2E-04	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.7E-07

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ PCB	3E-05	mg/kg	2.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-08	--	1.7E-12	mg/kg-day	7.0E-10	mg/kg-day	2.4E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.8E-08	--	1.7E-07	mg/kg-day	2.0E-05	mg/kg-day	8.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	8.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M	4.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	8.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	7.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-08	M	4.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	4.8E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.2E-09	M	2.8E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	8.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-10	M	4.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.3E-08	M	1.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.7E-09	M	1.8E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	2.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-07	--	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.6E-03
				Cadmium	3E+00	mg/kg	9.6E-10	mg/kg-day	--	--	--	--	5.6E-09	mg/kg-day	2.5E-05	mg/kg-day	2.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							2.0E-07						1.1E-02
				Total DLCs (based on KM TEQs)							1.9E-07						1.1E-02
				Total PCDD/Fs (excluding KM TEQ)							1.5E-07						8.3E-03
				Total PCDD/Fs (based on KM TEQ)							1.5E-07						8.1E-03
				Total DL-PCBs (excluding KM TEQ)							4.9E-08						2.7E-03
				Total DL-PCBs (based on KM TEQ)							4.3E-08						2.4E-03
				Total Non-DL PCBs							5.8E-08						8.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07						1.1E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.0E-07						1.1E-02
				Total PAHs							3.0E-07						1.6E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							4.3E-07						5.8E-03
		Sediment Dermal Total (excluding KM TEQs)									9.9E-07						2.7E-02
		Sediment Dermal Total (based on KM TEQs)									9.8E-07						2.6E-02
Boater Sediment Total (excluding KM TEQs)											2.0E-06						1.1E-01
Boater Sediment Total (based on KM TEQs)											2.0E-06						1.0E-01
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-09	--	6.3E-14	mg/kg-day	7.0E-10	mg/kg-day	9.0E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	3.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.6E-10	--	2.2E-14	mg/kg-day	7.0E-10	mg/kg-day	3.1E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-10	--	1.6E-13	mg/kg-day	7.0E-09	mg/kg-day	2.3E-05

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	4.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-11	--	2.5E-14	mg/kg-day	7.0E-09	mg/kg-day	3.6E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	7.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-10	--	4.5E-14	mg/kg-day	7.0E-09	mg/kg-day	6.4E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	5.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.2E-11	--	3.2E-13	mg/kg-day	7.0E-08	mg/kg-day	4.5E-06
				OCDD	6E-05	µg/L	5.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-11	--	3.3E-12	mg/kg-day	2.3E-06	mg/kg-day	1.4E-06
				2,3,7,8-TCDF	5E-07	µg/L	4.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-11	--	2.4E-14	mg/kg-day	7.0E-09	mg/kg-day	3.5E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	3.3E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-11	--	2.0E-14	mg/kg-day	2.3E-08	mg/kg-day	8.4E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	5.8E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.6E-10	--	3.4E-14	mg/kg-day	2.3E-09	mg/kg-day	1.5E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--	9.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-11	--	2.3E-14	mg/kg-day	7.0E-09	mg/kg-day	3.3E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-11	--	1.4E-14	mg/kg-day	7.0E-09	mg/kg-day	2.1E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	6.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-10	--	4.0E-13	mg/kg-day	7.0E-08	mg/kg-day	5.7E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	4.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.4E-12	--	2.5E-14	mg/kg-day	7.0E-08	mg/kg-day	3.6E-07
				OCDF	1E-05	µg/L	1.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.8E-12	--	7.5E-13	mg/kg-day	2.3E-06	mg/kg-day	3.2E-07
				KM TEQ DF	2E-06	µg/L	2.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.2E-09	--	1.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.8E-04
				PCB-77	2E-05	µg/L	1.8E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-12	--	1.1E-12	mg/kg-day	7.0E-06	mg/kg-day	1.5E-07
				PCB-81	7E-07	µg/L	6.0E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.7E-13	--	3.5E-14	mg/kg-day	2.3E-06	mg/kg-day	1.5E-08
				PCB-105	7E-05	µg/L	6.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-12	--	3.8E-12	mg/kg-day	2.3E-05	mg/kg-day	1.6E-07
				PCB-114	4E-06	µg/L	3.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-13	--	2.0E-13	mg/kg-day	2.3E-05	mg/kg-day	8.4E-09
				PCB-118	2E-04	µg/L	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-12	--	8.4E-12	mg/kg-day	2.3E-05	mg/kg-day	3.6E-07
				PCB-123	3E-06	µg/L	2.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-13	--	1.6E-13	mg/kg-day	2.3E-05	mg/kg-day	7.0E-09
				PCB-126	7E-07	µg/L	5.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-11	--	3.5E-14	mg/kg-day	7.0E-09	mg/kg-day	4.9E-06
				PCB-156/157	2E-05	µg/L	1.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-13	--	1.0E-12	mg/kg-day	2.3E-05	mg/kg-day	4.3E-08
				PCB-167	7E-06	µg/L	5.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-13	--	3.4E-13	mg/kg-day	2.3E-05	mg/kg-day	1.4E-08
				PCB-169	4E-07	µg/L	3.5E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.6E-11	--	2.1E-14	mg/kg-day	2.3E-08	mg/kg-day	8.9E-07
				PCB-189	9E-07	µg/L	7.5E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-14	--	4.4E-14	mg/kg-day	2.3E-05	mg/kg-day	1.9E-09
				KM TEQ PCB	1E-07	µg/L	9.6E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-10	--	5.6E-15	mg/kg-day	7.0E-10	mg/kg-day	8.0E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.0E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.6E-11	M	6.1E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.3E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-10	M	7.8E-10	mg/kg-day	3.0E-04	mg/kg-day	2.6E-06
				Benzo(b)fluoranthene	2E-02	µg/L	1.8E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-11	M	1.1E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	8.1E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.0E-12	M	4.7E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.8E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.4E-13	M	1.0E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	3.4E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.6E-11	M	2.0E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	7.6E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-11	M	4.4E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	3.1E-10	mg/kg-day	--	--	--	--	1.8E-09	mg/kg-day	2.0E-02	mg/kg-day	9.1E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.1E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	3.3E-11	--	6.1E-09	mg/kg-day	1.0E-02	mg/kg-day	6.1E-07
				Trichloroethylene	1E-01	µg/L	1.2E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.3E-10	M	6.7E-09	mg/kg-day	5.0E-04	mg/kg-day	1.3E-05
				Inorganics													
				Antimony	7E-01	µg/L	6.1E-09	mg/kg-day	--	--	--	--	3.6E-08	mg/kg-day	4.0E-04	mg/kg-day	9.0E-05
				Arsenic, inorganic	1E+00	µg/L	1.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.7E-08	--	6.5E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.1E-08	mg/kg-day	--	--	--	--	6.6E-08	mg/kg-day	1.5E+00	mg/kg-day	4.4E-08
				Chromium (VI)	2E-01	µg/L	2.0E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.5E-09	M	1.1E-08	mg/kg-day	3.0E-03	mg/kg-day	3.8E-06
				Iron	5E+02	µg/L	4.7E-06	mg/kg-day	--	--	--	--	2.7E-05	mg/kg-day	7.0E-01	mg/kg-day	3.9E-05
				Manganese	7E+01	µg/L	6.1E-07	mg/kg-day	--	--	--	--	3.6E-06	mg/kg-day	2.4E-02	mg/kg-day	1.5E-04
				Mercury	3E-02	µg/L	2.3E-10	mg/kg-day	--	--	--	--	1.4E-09	mg/kg-day	3.0E-04	mg/kg-day	4.5E-06
				Thallium	1E-02	µg/L	1.1E-10	mg/kg-day	--	--	--	--	6.4E-10	mg/kg-day	1.0E-05	mg/kg-day	6.4E-05
				Titanium	8E+00	µg/L	7.0E-08	mg/kg-day	--	--	--	--	4.1E-07	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											4.1E-09						2.3E-04
Total DLCs (based on KM TEQs)											3.4E-09						1.9E-04

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Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD Value	RfD Units	Hazard Quotient
				Total PCDD/Fs (excluding KM TEQ)							4.0E-09						2.2E-04
				Total PCDD/Fs (based on KM TEQ)							3.2E-09						1.8E-04
				Total DL-PCBs (excluding KM TEQ)							1.2E-10						6.6E-06
				Total DL-PCBs (based on KM TEQ)							1.4E-10						8.0E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.2E-10						6.6E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-10						8.0E-06
				Total PAHs							5.1E-10						2.7E-06
				Total Organics							1.7E-10						1.4E-05
				Total Inorganics							1.9E-08						5.7E-04
		Surface Water Ingestion Total (excluding KM TEQs)									2.4E-08						8.1E-04
		Surface Water Ingestion Total (based on KM TEQs)									2.3E-08						7.7E-04
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
				Naphthalene	4E-02	µg/L	5.3E-09	mg/kg-day	--	--	--	--	3.1E-08	mg/kg-day	2.0E-02	mg/kg-day	1.5E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	2.5E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	7.7E-11	--	1.4E-08	mg/kg-day	1.0E-02	mg/kg-day	1.4E-06
				Trichloroethylene	1E-01	µg/L	5.0E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	5.7E-10	M	2.9E-08	mg/kg-day	5.0E-04	mg/kg-day	5.8E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.1E-09	mg/kg-day	--	--	--	--	6.4E-09	mg/kg-day	6.0E-05	mg/kg-day	1.1E-04
				Arsenic, inorganic	1E+00	µg/L	2.0E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-09	--	1.2E-08	mg/kg-day	3.0E-04	mg/kg-day	3.9E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.0E-09	mg/kg-day	--	--	--	--	1.2E-08	mg/kg-day	2.0E-02	mg/kg-day	6.0E-07
				Chromium (VI)	2E-01	µg/L	7.0E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	3.5E-08	M	4.1E-09	mg/kg-day	7.5E-05	mg/kg-day	5.4E-05
				Iron	5E+02	µg/L	8.3E-07	mg/kg-day	--	--	--	--	4.9E-06	mg/kg-day	7.0E-01	mg/kg-day	6.9E-06
				Manganese	7E+01	µg/L	1.1E-07	mg/kg-day	--	--	--	--	6.3E-07	mg/kg-day	9.6E-04	mg/kg-day	6.6E-04
				Mercury	3E-02	µg/L	4.1E-11	mg/kg-day	--	--	--	--	2.4E-10	mg/kg-day	2.1E-05	mg/kg-day	1.1E-05
				Thallium	1E-02	µg/L	1.9E-11	mg/kg-day	--	--	--	--	1.1E-10	mg/kg-day	1.0E-05	mg/kg-day	1.1E-05
				Titanium	8E+00	µg/L	1.2E-08	mg/kg-day	--	--	--	--	7.2E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.5E-06
				Total Organics							6.5E-10						5.9E-05
				Total Inorganics							3.8E-08						8.9E-04
		Surface Water Dermal Total (excluding KM TEQs)									3.8E-08						9.5E-04
		Surface Water Dermal Total (based on KM TEQs)									3.8E-08						9.5E-04
Wader Surface Water Total (excluding KM TEQs)											6.3E-08						1.8E-03
Wader Surface Water Total (based on KM TEQs)											6.2E-08						1.7E-03
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											2.1E-06						1.1E-01
Wader Sediment Total + Surface Water Total (based on KM TEQs)											2.1E-06						1.1E-01
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	5.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.4E-09	--	3.3E-13	mg/kg-day	7.0E-10	mg/kg-day	4.7E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-09	--	8.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-10	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.3E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-10	--	1.7E-12	mg/kg-day	7.0E-08	mg/kg-day	2.4E-05
				OCDD	6E-05	µg/L	3.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.7E-11	mg/kg-day	2.3E-06	mg/kg-day	7.4E-06
				2,3,7,8-TCDF	5E-07	µg/L	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.8E-05
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.7E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.8E-11	--	1.0E-13	mg/kg-day	2.3E-08	mg/kg-day	4.4E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.0E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.4E-09	--	1.8E-13	mg/kg-day	2.3E-09	mg/kg-day	7.5E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	8.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	4.9E-13	mg/kg-day	7.0E-09	mg/kg-day	7.0E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	7.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-10	--	7.5E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	3.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.3E-10	--	2.1E-12	mg/kg-day	7.0E-08	mg/kg-day	3.0E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-11	--	1.3E-13	mg/kg-day	7.0E-08	mg/kg-day	1.9E-06
				OCDF	1E-05	µg/L	6.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-11	--	3.9E-12	mg/kg-day	2.3E-06	mg/kg-day	1.7E-06
				KM TEQ DF	2E-06	µg/L	1.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-08	--	6.5E-13	mg/kg-day	7.0E-10	mg/kg-day	9.3E-04

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-77	2E-05	µg/L	9.4E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-11	--	5.5E-12	mg/kg-day	7.0E-06	mg/kg-day	7.8E-07
				PCB-81	7E-07	µg/L	3.1E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-12	--	1.8E-13	mg/kg-day	2.3E-06	mg/kg-day	7.8E-08
				PCB-105	7E-05	µg/L	3.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--	2.0E-11	mg/kg-day	2.3E-05	mg/kg-day	8.4E-07
				PCB-114	4E-06	µg/L	1.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.9E-13	--	1.0E-12	mg/kg-day	2.3E-05	mg/kg-day	4.4E-08
				PCB-118	2E-04	µg/L	7.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	4.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.9E-06
				PCB-123	3E-06	µg/L	1.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-13	--	8.5E-13	mg/kg-day	2.3E-05	mg/kg-day	3.6E-08
				PCB-126	7E-07	µg/L	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				PCB-156/157	2E-05	µg/L	8.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-12	--	5.2E-12	mg/kg-day	2.3E-05	mg/kg-day	2.2E-07
				PCB-167	7E-06	µg/L	3.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-12	--	1.7E-12	mg/kg-day	2.3E-05	mg/kg-day	7.5E-08
				PCB-169	4E-07	µg/L	1.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.3E-11	--	1.1E-13	mg/kg-day	2.3E-08	mg/kg-day	4.6E-06
				PCB-189	9E-07	µg/L	3.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-13	--	2.3E-13	mg/kg-day	2.3E-05	mg/kg-day	9.8E-09
				KM TEQ PCB	1E-07	µg/L	5.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.5E-10	--	2.9E-14	mg/kg-day	7.0E-10	mg/kg-day	4.2E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	5.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-10	M	3.2E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	6.9E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-09	M	4.1E-09	mg/kg-day	3.0E-04	mg/kg-day	1.4E-05
				Benzo(b)fluoranthene	2E-02	µg/L	9.5E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.4E-10	M	5.5E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	4.2E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-11	M	2.5E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	9.2E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.3E-12	M	5.4E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	1.8E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-10	M	1.0E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.0E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.9E-11	M	2.3E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	1.6E-09	mg/kg-day	--	--	--	--	9.5E-09	mg/kg-day	2.0E-02	mg/kg-day	4.7E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	5.5E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.7E-10	--	3.2E-08	mg/kg-day	1.0E-02	mg/kg-day	3.2E-06
				Trichloroethylene	1E-01	µg/L	6.0E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	6.9E-10	M	3.5E-08	mg/kg-day	5.0E-04	mg/kg-day	7.0E-05
				Inorganics													
				Antimony	7E-01	µg/L	3.2E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	4.0E-04	mg/kg-day	4.7E-04
				Arsenic, inorganic	1E+00	µg/L	5.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.8E-08	--	3.4E-07	mg/kg-day	3.0E-04	mg/kg-day	1.1E-03
				Chromium [as Cr(III)]	1E+00	µg/L	5.9E-08	mg/kg-day	--	--	--	--	3.5E-07	mg/kg-day	1.5E+00	mg/kg-day	2.3E-07
				Chromium (VI)	2E-01	µg/L	1.0E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.3E-08	M	5.9E-08	mg/kg-day	3.0E-03	mg/kg-day	2.0E-05
				Iron	5E+02	µg/L	2.4E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	7.0E-01	mg/kg-day	2.0E-04
				Manganese	7E+01	µg/L	3.2E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	2.4E-02	mg/kg-day	7.7E-04
				Mercury	3E-02	µg/L	1.2E-09	mg/kg-day	--	--	--	--	7.0E-09	mg/kg-day	3.0E-04	mg/kg-day	2.3E-05
				Thallium	1E-02	µg/L	5.7E-10	mg/kg-day	--	--	--	--	3.3E-09	mg/kg-day	1.0E-05	mg/kg-day	3.3E-04
				Titanium	8E+00	µg/L	3.6E-07	mg/kg-day	--	--	--	--	2.1E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							2.1E-08						1.2E-03
				Total DLCs (based on KM TEQs)							1.7E-08						9.7E-04
				Total PCDD/Fs (excluding KM TEQ)							2.1E-08						1.2E-03
				Total PCDD/Fs (based on KM TEQ)							1.7E-08						9.3E-04
				Total DL-PCBs (excluding KM TEQ)							6.2E-10						3.4E-05
				Total DL-PCBs (based on KM TEQ)							7.5E-10						4.2E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							6.2E-10						3.4E-05
				Total PCBs (DL & NDL; based on KM TEQ)							7.5E-10						4.2E-05
				Total PAHs							2.7E-09						1.4E-05
				Total Organics							8.6E-10						7.3E-05
				Total Inorganics							1.0E-07						2.9E-03
		Surface Water Ingestion Total (excluding KM TEQs)									1.3E-07						4.2E-03
		Surface Water Ingestion Total (based on KM TEQs)									1.2E-07						4.0E-03
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	3.0E-08	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	2.0E-02	mg/kg-day	8.8E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.5E-08	mg/kg-day	3.1E-02	(mg/kg-day)-1	4.7E-10	--	8.8E-08	mg/kg-day	1.0E-02	mg/kg-day	8.8E-06
				Trichloroethylene	1E-01	µg/L	2.9E-08	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.4E-09	M	1.7E-07	mg/kg-day	5.0E-04	mg/kg-day	3.4E-04
				Inorganics													
				Antimony	7E-01	µg/L	9.5E-09	mg/kg-day	--	--	--	--	5.5E-08	mg/kg-day	6.0E-05	mg/kg-day	9.2E-04
				Arsenic, inorganic	1E+00	µg/L	1.7E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-08	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.8E-08	mg/kg-day	--	--	--	--	1.0E-07	mg/kg-day	2.0E-02	mg/kg-day	5.2E-06
				Chromium (VI)	2E-01	µg/L	6.0E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	3.0E-07	M	3.5E-08	mg/kg-day	7.5E-05	mg/kg-day	4.7E-04
				Iron	5E+02	µg/L	7.2E-06	mg/kg-day	--	--	--	--	4.2E-05	mg/kg-day	7.0E-01	mg/kg-day	6.0E-05
				Manganese	7E+01	µg/L	9.4E-07	mg/kg-day	--	--	--	--	5.5E-06	mg/kg-day	9.6E-04	mg/kg-day	5.7E-03
				Mercury	3E-02	µg/L	3.6E-10	mg/kg-day	--	--	--	--	2.1E-09	mg/kg-day	2.1E-05	mg/kg-day	9.9E-05
				Thallium	1E-02	µg/L	1.7E-10	mg/kg-day	--	--	--	--	9.8E-10	mg/kg-day	1.0E-05	mg/kg-day	9.8E-05
				Titanium	8E+00	µg/L	1.1E-07	mg/kg-day	--	--	--	--	6.3E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						8.8E-06
				Total Organics							3.8E-09						3.5E-04
				Total Inorganics							3.3E-07						7.7E-03
		Surface Water Dermal Total (excluding KM TEQs)									3.3E-07						8.1E-03
		Surface Water Dermal Total (based on KM TEQs)									3.3E-07						8.1E-03
Swimmer Surface Water Total (excluding KM TEQs)											4.6E-07						1.2E-02
Swimmer Surface Water Total (based on KM TEQs)											4.5E-07						1.2E-02
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											2.5E-06						1.2E-01
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											2.5E-06						1.2E-01
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											2.5E-06						1.2E-01
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											2.5E-06						1.2E-01
Surface Water	Surface Water	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	5.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.1E-09	--	3.2E-13	mg/kg-day	7.0E-10	mg/kg-day	4.5E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	7.9E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.8E-05
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	3.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-10	--	1.6E-12	mg/kg-day	7.0E-08	mg/kg-day	2.3E-05
				OCDD	6E-05	µg/L	2.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--	1.7E-11	mg/kg-day	2.3E-06	mg/kg-day	7.2E-06
				2,3,7,8-TCDF	5E-07	µg/L	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.8E-05
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.7E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.6E-11	--	9.8E-14	mg/kg-day	2.3E-08	mg/kg-day	4.2E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	2.9E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.3E-09	--	1.7E-13	mg/kg-day	2.3E-09	mg/kg-day	7.3E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	8.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--	4.7E-13	mg/kg-day	7.0E-09	mg/kg-day	6.8E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	6.8E-13	mg/kg-day	7.0E-09	mg/kg-day	9.7E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-10	--	7.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1.0E-05
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	3.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.1E-10	--	2.0E-12	mg/kg-day	7.0E-08	mg/kg-day	2.9E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.2E-11	--	1.3E-13	mg/kg-day	7.0E-08	mg/kg-day	1.8E-06
				OCDF	1E-05	µg/L	6.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--	3.8E-12	mg/kg-day	2.3E-06	mg/kg-day	1.6E-06
				KM TEQ DF	2E-06	µg/L	1.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-08	--	6.3E-13	mg/kg-day	7.0E-10	mg/kg-day	9.0E-04
				PCB-77	2E-05	µg/L	9.1E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-11	--	5.3E-12	mg/kg-day	7.0E-06	mg/kg-day	7.6E-07
				PCB-81	7E-07	µg/L	3.0E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-12	--	1.8E-13	mg/kg-day	2.3E-06	mg/kg-day	7.6E-08
				PCB-105	7E-05	µg/L	3.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--	1.9E-11	mg/kg-day	2.3E-05	mg/kg-day	8.1E-07
				PCB-114	4E-06	µg/L	1.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.6E-13	--	9.8E-13	mg/kg-day	2.3E-05	mg/kg-day	4.2E-08
				PCB-118	2E-04	µg/L	7.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--	4.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-123	3E-06	µg/L	1.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-13	--	8.2E-13	mg/kg-day	2.3E-05	mg/kg-day	3.5E-08
				PCB-126	7E-07	µg/L	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-10	--	1.7E-13	mg/kg-day	7.0E-09	mg/kg-day	2.5E-05
				PCB-156/157	2E-05	µg/L	8.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-12	--	5.0E-12	mg/kg-day	2.3E-05	mg/kg-day	2.1E-07
				PCB-167	7E-06	µg/L	2.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-12	--	1.7E-12	mg/kg-day	2.3E-05	mg/kg-day	7.2E-08
				PCB-169	4E-07	µg/L	1.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.0E-11	--	1.0E-13	mg/kg-day	2.3E-08	mg/kg-day	4.5E-06
				PCB-189	9E-07	µg/L	3.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-13	--	2.2E-13	mg/kg-day	2.3E-05	mg/kg-day	9.5E-09
				KM TEQ PCB	1E-07	µg/L	4.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.2E-10	--	2.8E-14	mg/kg-day	7.0E-10	mg/kg-day	4.0E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	5.2E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-10	M	3.0E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	6.7E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-09	M	3.9E-09	mg/kg-day	3.0E-04	mg/kg-day	1.3E-05

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benzo(b)fluoranthene	2E-02	µg/L	9.1E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.3E-10	M	5.3E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	4.1E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.0E-11	M	2.4E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	8.9E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.2E-12	M	5.2E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	1.7E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.3E-10	M	1.0E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	3.8E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.6E-11	M	2.2E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	1.6E-09	mg/kg-day	--	--	--	--	9.2E-09	mg/kg-day	2.0E-02	mg/kg-day	4.6E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	5.3E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.6E-10	--	3.1E-08	mg/kg-day	1.0E-02	mg/kg-day	3.1E-06
				Trichloroethylene	1E-01	µg/L	5.8E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	6.7E-10	M	3.4E-08	mg/kg-day	5.0E-04	mg/kg-day	6.8E-05
				Inorganics													
				Antimony	7E-01	µg/L	3.1E-08	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	4.0E-04	mg/kg-day	4.5E-04
				Arsenic, inorganic	1E+00	µg/L	5.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.5E-08	--	3.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.1E-03
				Chromium [as Cr(III)]	1E+00	µg/L	5.7E-08	mg/kg-day	--	--	--	--	3.3E-07	mg/kg-day	1.5E+00	mg/kg-day	2.2E-07
				Chromium (VI)	2E-01	µg/L	9.9E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.2E-08	M	5.7E-08	mg/kg-day	3.0E-03	mg/kg-day	1.9E-05
				Iron	5E+02	µg/L	2.4E-05	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	7.0E-01	mg/kg-day	2.0E-04
				Manganese	7E+01	µg/L	3.1E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	2.4E-02	mg/kg-day	7.4E-04
				Mercury	3E-02	µg/L	1.2E-09	mg/kg-day	--	--	--	--	6.8E-09	mg/kg-day	3.0E-04	mg/kg-day	2.3E-05
				Thallium	1E-02	µg/L	5.5E-10	mg/kg-day	--	--	--	--	3.2E-09	mg/kg-day	1.0E-05	mg/kg-day	3.2E-04
				Titanium	8E+00	µg/L	3.5E-07	mg/kg-day	--	--	--	--	2.0E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							2.1E-08						1.2E-03
				Total DLCs (based on KM TEQs)							1.7E-08						9.4E-04
				Total PCDD/Fs (excluding KM TEQ)							2.0E-08						1.1E-03
				Total PCDD/Fs (based on KM TEQ)							1.6E-08						9.0E-04
				Total DL-PCBs (excluding KM TEQ)							6.0E-10						3.3E-05
				Total DL-PCBs (based on KM TEQ)							7.2E-10						4.0E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							6.0E-10						3.3E-05
				Total PCBs (DL & NDL; based on KM TEQ)							7.2E-10						4.0E-05
				Total PAHs							2.6E-09						1.4E-05
				Total Organics							8.3E-10						7.1E-05
				Total Inorganics							9.7E-08						2.8E-03
		Surface Water Ingestion Total (excluding KM TEQs)									1.2E-07						4.1E-03
		Surface Water Ingestion Total (based on KM TEQs)									1.2E-07						3.9E-03
Surface Water	Surface Water	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.9E-08	mg/kg-day	--	--	--	--	1.1E-07	mg/kg-day	2.0E-02	mg/kg-day	5.6E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	9.5E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.9E-10	--	5.5E-08	mg/kg-day	1.0E-02	mg/kg-day	5.5E-06
				Trichloroethylene	1E-01	µg/L	1.9E-08	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.1E-09	M	1.1E-07	mg/kg-day	5.0E-04	mg/kg-day	2.2E-04
				Inorganics													
				Antimony	7E-01	µg/L	5.5E-09	mg/kg-day	--	--	--	--	3.2E-08	mg/kg-day	6.0E-05	mg/kg-day	5.3E-04
				Arsenic, inorganic	1E+00	µg/L	1.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.5E-08	--	5.8E-08	mg/kg-day	3.0E-04	mg/kg-day	1.9E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.0E-08	mg/kg-day	--	--	--	--	5.9E-08	mg/kg-day	2.0E-02	mg/kg-day	3.0E-06
				Chromium (VI)	2E-01	µg/L	3.5E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.7E-07	M	2.0E-08	mg/kg-day	7.5E-05	mg/kg-day	2.7E-04
				Iron	5E+02	µg/L	4.2E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	7.0E-01	mg/kg-day	3.5E-05
				Manganese	7E+01	µg/L	5.4E-07	mg/kg-day	--	--	--	--	3.2E-06	mg/kg-day	9.6E-04	mg/kg-day	3.3E-03
				Mercury	3E-02	µg/L	2.1E-10	mg/kg-day	--	--	--	--	1.2E-09	mg/kg-day	2.1E-05	mg/kg-day	5.8E-05
				Thallium	1E-02	µg/L	9.7E-11	mg/kg-day	--	--	--	--	5.7E-10	mg/kg-day	1.0E-05	mg/kg-day	5.7E-05
				Titanium	8E+00	µg/L	6.2E-08	mg/kg-day	--	--	--	--	3.6E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						5.6E-06
				Total Organics							2.4E-09						2.2E-04
				Total Inorganics							1.9E-07						4.5E-03
		Surface Water Dermal Total (excluding KM TEQs)									1.9E-07						4.7E-03
		Surface Water Dermal Total (based on KM TEQs)									1.9E-07						4.7E-03

TABLE 7.6 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
Boater Surface Water Total (excluding KM TEQs)											3.1E-07					8.8E-03
Boater Surface Water Total (based on KM TEQs)											3.1E-07					8.6E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)											2.3E-06					1.1E-01
Boater Sediment Total + Surface Water Total (based on KM TEQs)											2.3E-06					1.1E-01

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-07	--	1.6E-11	mg/kg-day	7.0E-10	mg/kg-day	2.3E-02
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.4E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-10	--	7.6E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	3.1E-12	mg/kg-day	7.0E-09	mg/kg-day	4.4E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.6E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.9E-09	--	5.4E-11	mg/kg-day	7.0E-08	mg/kg-day	7.7E-04
				OCDD	3E-03	mg/kg	4.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--	5.5E-10	mg/kg-day	2.3E-06	mg/kg-day	2.3E-04
				2,3,7,8-TCDF	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-09	--	2.9E-12	mg/kg-day	7.0E-09	mg/kg-day	4.1E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.6E-10	--	2.0E-12	mg/kg-day	2.3E-08	mg/kg-day	8.5E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.3E-08	--	3.3E-12	mg/kg-day	2.3E-09	mg/kg-day	1.4E-03
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	1.5E-11	mg/kg-day	7.0E-09	mg/kg-day	2.2E-03
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.2E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	2.2E-12	mg/kg-day	7.0E-09	mg/kg-day	3.1E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-09	--	6.7E-11	mg/kg-day	7.0E-08	mg/kg-day	9.6E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	2.3E-12	mg/kg-day	7.0E-08	mg/kg-day	3.3E-05
				OCDF	4E-04	mg/kg	8.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-10	--	9.4E-11	mg/kg-day	2.3E-06	mg/kg-day	4.0E-05
				KM TEQ DF	1E-04	mg/kg	1.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--	2.2E-11	mg/kg-day	7.0E-10	mg/kg-day	3.1E-02
				PCB-77	8E-03	mg/kg	1.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-09	--	1.6E-09	mg/kg-day	7.0E-06	mg/kg-day	2.3E-04
				PCB-81	3E-04	mg/kg	5.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-10	--	6.2E-11	mg/kg-day	2.3E-06	mg/kg-day	2.7E-05
				PCB-105	1E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	2.6E-09	mg/kg-day	2.3E-05	mg/kg-day	1.1E-04
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-11	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-118	4E-02	mg/kg	6.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-09	--	7.6E-09	mg/kg-day	2.3E-05	mg/kg-day	3.3E-04
				PCB-123	1E-03	mg/kg	1.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.5E-11	--	2.2E-10	mg/kg-day	2.3E-05	mg/kg-day	9.4E-06
				PCB-126	2E-04	mg/kg	4.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-08	--	5.1E-11	mg/kg-day	7.0E-09	mg/kg-day	7.3E-03
				PCB-156/157	3E-03	mg/kg	5.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-10	--	6.8E-10	mg/kg-day	2.3E-05	mg/kg-day	2.9E-05
				PCB-167	1E-03	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-11	--	2.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.0E-05
				PCB-169	3E-04	mg/kg	4.5E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-08	--	5.3E-11	mg/kg-day	2.3E-08	mg/kg-day	2.3E-03
				PCB-189	2E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-11	--	5.1E-11	mg/kg-day	2.3E-05	mg/kg-day	2.2E-06
				KM TEQ PCB	3E-05	mg/kg	5.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-08	--	6.4E-12	mg/kg-day	7.0E-10	mg/kg-day	9.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.4E-08	--	1.4E-07	mg/kg-day	2.0E-05	mg/kg-day	6.9E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M	4.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-07	M	4.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M	3.8E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.9E-10	M	2.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.6E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-10	M	4.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-08	M	8.8E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.7E-09	M	1.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.0E-07	mg/kg-day	--	--	--	--	1.2E-06	mg/kg-day	4.0E-03	mg/kg-day	3.0E-04
				TPH (C9-C40)	4E+02	mg/kg	7.4E-06	mg/kg-day	--	--	--	--	8.6E-05	mg/kg-day	4.0E-03	mg/kg-day	2.2E-02
				Inorganics													
				Aluminum	1E+04	mg/kg	2.2E-04	mg/kg-day	--	--	--	--	2.5E-03	mg/kg-day	1.0E+00	mg/kg-day	2.5E-03
				Antimony	2E+00	mg/kg	4.2E-08	mg/kg-day	--	--	--	--	4.9E-07	mg/kg-day	4.0E-04	mg/kg-day	1.2E-03
				Arsenic, inorganic	3E+01	mg/kg	3.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.0E-07	--	3.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Cadmium	3E+00	mg/kg	5.5E-08	mg/kg-day	--	--	--	--	6.5E-07	mg/kg-day	1.0E-03	mg/kg-day	6.5E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	1.5E+00	mg/kg-day	1.5E-05
				Cobalt	1E+01	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	2.9E-06	mg/kg-day	3.0E-04	mg/kg-day	9.8E-03
				Copper	2E+02	mg/kg	3.0E-06	mg/kg-day	--	--	--	--	3.5E-05	mg/kg-day	1.0E-03	mg/kg-day	3.5E-02

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration	RfD Value	RfD Units	Hazard Quotient
				Chromium (VI)	1E+00	mg/kg	2.5E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.2E-08	M	2.9E-07	mg/kg-day	3.0E-03	mg/kg-day	9.7E-05
				Iron	4E+04	mg/kg	7.8E-04	mg/kg-day	--	--	--	--	9.1E-03	mg/kg-day	7.0E-01	mg/kg-day	1.3E-02
				Lead	5E+02	mg/kg	8.4E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	6.4E-06	mg/kg-day	--	--	--	--	7.4E-05	mg/kg-day	2.4E-02	mg/kg-day	3.1E-03
				Mercury	2E+00	mg/kg	3.6E-08	mg/kg-day	--	--	--	--	4.2E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Nickel	7E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	2.0E-02	mg/kg-day	7.0E-04
				Thallium	2E-01	mg/kg	4.4E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	1.0E-05	mg/kg-day	5.1E-03
				Vanadium	5E+01	mg/kg	9.0E-07	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	5.0E-03	mg/kg-day	2.1E-03
				Zinc	1E+03	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	2.6E-04	mg/kg-day	3.0E-01	mg/kg-day	8.6E-04
				Total DLCs (excluding KM TEQs)							3.8E-07						4.2E-02
				Total DLCs (based on KM TEQs)							3.6E-07						4.0E-02
				Total PCDD/Fs (excluding KM TEQ)							2.9E-07						3.2E-02
				Total PCDD/Fs (based on KM TEQ)							2.8E-07						3.1E-02
				Total DL-PCBs (excluding KM TEQ)							9.3E-08						1.0E-02
				Total DL-PCBs (based on KM TEQ)							8.2E-08						9.1E-03
				Total Non-DL PCBs							2.4E-08						6.9E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.2E-07						1.7E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-07						1.6E-02
				Total PAHs							2.2E-07						1.4E-03
				Total Organics							0.0E+00						2.2E-02
				Total Inorganics							5.5E-07						8.9E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.2E-06						1.6E-01
		Sediment Ingestion Total (based on KM TEQs)									1.2E-06						1.6E-01
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-08	--	2.2E-12	mg/kg-day	7.0E-10	mg/kg-day	3.1E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	1.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-10	--	4.2E-13	mg/kg-day	7.0E-09	mg/kg-day	5.9E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-10	--	2.5E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-10	--	7.3E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-03	mg/kg	6.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-10	--	7.5E-11	mg/kg-day	2.3E-06	mg/kg-day	3.2E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	3.9E-13	mg/kg-day	7.0E-09	mg/kg-day	5.6E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.3E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--	2.7E-13	mg/kg-day	2.3E-08	mg/kg-day	1.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.9E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--	4.5E-13	mg/kg-day	2.3E-09	mg/kg-day	1.9E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--	2.1E-12	mg/kg-day	7.0E-09	mg/kg-day	2.9E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-10	--	5.4E-13	mg/kg-day	7.0E-09	mg/kg-day	7.7E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-11	--	4.0E-14	mg/kg-day	7.0E-09	mg/kg-day	5.7E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-10	--	3.0E-13	mg/kg-day	7.0E-09	mg/kg-day	4.3E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-09	--	9.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.0E-11	--	3.1E-13	mg/kg-day	7.0E-08	mg/kg-day	4.4E-06
				OCDF	4E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.9E-11	--	1.3E-11	mg/kg-day	2.3E-06	mg/kg-day	5.5E-06
				KM TEQ DF	1E-04	mg/kg	2.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-08	--	3.0E-12	mg/kg-day	7.0E-10	mg/kg-day	4.3E-03
				PCB-77	8E-03	mg/kg	1.9E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.8E-10	--	2.2E-10	mg/kg-day	7.0E-06	mg/kg-day	3.1E-05
				PCB-81	3E-04	mg/kg	7.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-11	--	8.5E-12	mg/kg-day	2.3E-06	mg/kg-day	3.6E-06
				PCB-105	1E-02	mg/kg	3.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	3.5E-10	mg/kg-day	2.3E-05	mg/kg-day	1.5E-05
				PCB-114	9E-04	mg/kg	2.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-12	--	2.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-118	4E-02	mg/kg	8.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-10	--	1.0E-09	mg/kg-day	2.3E-05	mg/kg-day	4.4E-05
				PCB-123	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-126	2E-04	mg/kg	6.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-09	--	7.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				PCB-156/157	3E-03	mg/kg	7.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-11	--	9.3E-11	mg/kg-day	2.3E-05	mg/kg-day	4.0E-06
				PCB-167	1E-03	mg/kg	2.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-11	--	3.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06

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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				PCB-169	3E-04	mg/kg	6.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-09	--	7.2E-12	mg/kg-day	2.3E-08	mg/kg-day	3.1E-04
				PCB-189	2E-04	mg/kg	6.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-12	--	6.9E-12	mg/kg-day	2.3E-05	mg/kg-day	3.0E-07
				KM TEQ PCB	3E-05	mg/kg	7.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.7E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	7.5E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-08	--	8.8E-08	mg/kg-day	2.0E-05	mg/kg-day	4.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-08	M	2.5E-07	mg/kg-day	3.0E-04	mg/kg-day	8.4E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	2.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.3E-10	M	1.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-11	M	2.5E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	M	5.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	8.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	9.4E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	7.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--	8.8E-07	mg/kg-day	3.0E-04	mg/kg-day	2.9E-03
				Cadmium	3E+00	mg/kg	2.5E-10	mg/kg-day	--	--	--	--	2.9E-09	mg/kg-day	2.5E-05	mg/kg-day	1.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.2E-08						5.8E-03
				Total DLCs (based on KM TEQs)							4.9E-08						5.5E-03
				Total PCDD/Fs (excluding KM TEQ)							3.9E-08						4.4E-03
				Total PCDD/Fs (based on KM TEQ)							3.8E-08						4.3E-03
				Total DL-PCBs (excluding KM TEQ)							1.3E-08						1.4E-03
				Total DL-PCBs (based on KM TEQ)							1.1E-08						1.2E-03
				Total Non-DL PCBs							1.5E-08						4.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.8E-08						5.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-08						5.6E-03
				Total PAHs							1.3E-07						8.4E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.1E-07						3.0E-03
		Sediment Dermal Total (excluding KM TEQs)									3.1E-07						1.4E-02
		Sediment Dermal Total (based on KM TEQs)									3.1E-07						1.4E-02
Wader Sediment Total (excluding KM TEQs)											1.5E-06						1.8E-01
Wader Sediment Total (based on KM TEQs)											1.5E-06						1.7E-01
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-07	--	1.6E-11	mg/kg-day	7.0E-10	mg/kg-day	2.3E-02

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.4E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-10	--	7.6E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	3.1E-12	mg/kg-day	7.0E-09	mg/kg-day	4.4E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.6E-04
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.9E-09	--	5.4E-11	mg/kg-day	7.0E-08	mg/kg-day	7.7E-04
				OCDD	3E-03	mg/kg	4.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--	5.5E-10	mg/kg-day	2.3E-06	mg/kg-day	2.3E-04
				2,3,7,8-TCDF	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-09	--	2.9E-12	mg/kg-day	7.0E-09	mg/kg-day	4.1E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.6E-10	--	2.0E-12	mg/kg-day	2.3E-08	mg/kg-day	8.5E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.3E-08	--	3.3E-12	mg/kg-day	2.3E-09	mg/kg-day	1.4E-03
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	1.5E-11	mg/kg-day	7.0E-09	mg/kg-day	2.2E-03
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.2E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--	2.2E-12	mg/kg-day	7.0E-09	mg/kg-day	3.1E-04
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-09	--	6.7E-11	mg/kg-day	7.0E-08	mg/kg-day	9.6E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	2.3E-12	mg/kg-day	7.0E-08	mg/kg-day	3.3E-05
				OCDF	4E-04	mg/kg	8.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-10	--	9.4E-11	mg/kg-day	2.3E-06	mg/kg-day	4.0E-05
				KM TEQ DF	1E-04	mg/kg	1.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--	2.2E-11	mg/kg-day	7.0E-10	mg/kg-day	3.1E-02
				PCB-77	8E-03	mg/kg	1.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-09	--	1.6E-09	mg/kg-day	7.0E-06	mg/kg-day	2.3E-04
				PCB-81	3E-04	mg/kg	5.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-10	--	6.2E-11	mg/kg-day	2.3E-06	mg/kg-day	2.7E-05
				PCB-105	1E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	2.6E-09	mg/kg-day	2.3E-05	mg/kg-day	1.1E-04
				PCB-114	9E-04	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-11	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-118	4E-02	mg/kg	6.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-09	--	7.6E-09	mg/kg-day	2.3E-05	mg/kg-day	3.3E-04
				PCB-123	1E-03	mg/kg	1.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.5E-11	--	2.2E-10	mg/kg-day	2.3E-05	mg/kg-day	9.4E-06
				PCB-126	2E-04	mg/kg	4.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-08	--	5.1E-11	mg/kg-day	7.0E-09	mg/kg-day	7.3E-03
				PCB-156/157	3E-03	mg/kg	5.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-10	--	6.8E-10	mg/kg-day	2.3E-05	mg/kg-day	2.9E-05
				PCB-167	1E-03	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-11	--	2.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.0E-05
				PCB-169	3E-04	mg/kg	4.5E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-08	--	5.3E-11	mg/kg-day	2.3E-08	mg/kg-day	2.3E-03
				PCB-189	2E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-11	--	5.1E-11	mg/kg-day	2.3E-05	mg/kg-day	2.2E-06
				KM TEQ PCB	3E-05	mg/kg	5.5E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-08	--	6.4E-12	mg/kg-day	7.0E-10	mg/kg-day	9.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.4E-08	--	1.4E-07	mg/kg-day	2.0E-05	mg/kg-day	6.9E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M	4.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-07	M	4.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M	3.8E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.9E-10	M	2.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.6E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-10	M	4.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-08	M	8.8E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.7E-09	M	1.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.0E-07	mg/kg-day	--	--	--	--	1.2E-06	mg/kg-day	4.0E-03	mg/kg-day	3.0E-04
				TPH (C9-C40)	4E+02	mg/kg	7.4E-06	mg/kg-day	--	--	--	--	8.6E-05	mg/kg-day	4.0E-03	mg/kg-day	2.2E-02
				Inorganics													
				Aluminum	1E+04	mg/kg	2.2E-04	mg/kg-day	--	--	--	--	2.5E-03	mg/kg-day	1.0E+00	mg/kg-day	2.5E-03
				Antimony	2E+00	mg/kg	4.2E-08	mg/kg-day	--	--	--	--	4.9E-07	mg/kg-day	4.0E-04	mg/kg-day	1.2E-03
				Arsenic, inorganic	3E+01	mg/kg	3.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.0E-07	--	3.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Cadmium	3E+00	mg/kg	5.5E-08	mg/kg-day	--	--	--	--	6.5E-07	mg/kg-day	1.0E-03	mg/kg-day	6.5E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	1.5E+00	mg/kg-day	1.5E-05
				Cobalt	1E+01	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	2.9E-06	mg/kg-day	3.0E-04	mg/kg-day	9.8E-03
				Copper	2E+02	mg/kg	3.0E-06	mg/kg-day	--	--	--	--	3.5E-05	mg/kg-day	1.0E-03	mg/kg-day	3.5E-02
				Chromium (VI)	1E+00	mg/kg	2.5E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.2E-08	M	2.9E-07	mg/kg-day	3.0E-03	mg/kg-day	9.7E-05

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration	RfD Value	RfD Units	Hazard Quotient
				Iron	4E+04	mg/kg	7.8E-04	mg/kg-day	--	--	--	--	9.1E-03	mg/kg-day	7.0E-01	mg/kg-day	1.3E-02
				Lead	5E+02	mg/kg	8.4E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	6.4E-06	mg/kg-day	--	--	--	--	7.4E-05	mg/kg-day	2.4E-02	mg/kg-day	3.1E-03
				Mercury	2E+00	mg/kg	3.6E-08	mg/kg-day	--	--	--	--	4.2E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Nickel	7E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	2.0E-02	mg/kg-day	7.0E-04
				Thallium	2E-01	mg/kg	4.4E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	1.0E-05	mg/kg-day	5.1E-03
				Vanadium	5E+01	mg/kg	9.0E-07	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	5.0E-03	mg/kg-day	2.1E-03
				Zinc	1E+03	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	2.6E-04	mg/kg-day	3.0E-01	mg/kg-day	8.6E-04
				Total DLCs (excluding KM TEQs)							3.8E-07						4.2E-02
				Total DLCs (based on KM TEQs)							3.6E-07						4.0E-02
				Total PCDD/Fs (excluding KM TEQ)							2.9E-07						3.2E-02
				Total PCDD/Fs (based on KM TEQ)							2.8E-07						3.1E-02
				Total DL-PCBs (excluding KM TEQ)							9.3E-08						1.0E-02
				Total DL-PCBs (based on KM TEQ)							8.2E-08						9.1E-03
				Total Non-DL PCBs							2.4E-08						6.9E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.2E-07						1.7E-02
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-07						1.6E-02
				Total PAHs							2.2E-07						1.4E-03
				Total Organics							0.0E+00						2.2E-02
				Total Inorganics							5.5E-07						8.9E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.2E-06						1.6E-01
		Sediment Ingestion Total (based on KM TEQs)									1.2E-06						1.6E-01
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-08	--	2.2E-12	mg/kg-day	7.0E-10	mg/kg-day	3.1E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	1.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-10	--	4.2E-13	mg/kg-day	7.0E-09	mg/kg-day	5.9E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-10	--	2.5E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-10	--	7.3E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-03	mg/kg	6.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-10	--	7.5E-11	mg/kg-day	2.3E-06	mg/kg-day	3.2E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	3.9E-13	mg/kg-day	7.0E-09	mg/kg-day	5.6E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.3E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--	2.7E-13	mg/kg-day	2.3E-08	mg/kg-day	1.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.9E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--	4.5E-13	mg/kg-day	2.3E-09	mg/kg-day	1.9E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--	2.1E-12	mg/kg-day	7.0E-09	mg/kg-day	2.9E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-10	--	5.4E-13	mg/kg-day	7.0E-09	mg/kg-day	7.7E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-11	--	4.0E-14	mg/kg-day	7.0E-09	mg/kg-day	5.7E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-10	--	3.0E-13	mg/kg-day	7.0E-09	mg/kg-day	4.3E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-09	--	9.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.0E-11	--	3.1E-13	mg/kg-day	7.0E-08	mg/kg-day	4.4E-06
				OCDF	4E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.9E-11	--	1.3E-11	mg/kg-day	2.3E-06	mg/kg-day	5.5E-06
				KM TEQ DF	1E-04	mg/kg	2.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-08	--	3.0E-12	mg/kg-day	7.0E-10	mg/kg-day	4.3E-03
				PCB-77	8E-03	mg/kg	1.9E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.8E-10	--	2.2E-10	mg/kg-day	7.0E-06	mg/kg-day	3.1E-05
				PCB-81	3E-04	mg/kg	7.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-11	--	8.5E-12	mg/kg-day	2.3E-06	mg/kg-day	3.6E-06
				PCB-105	1E-02	mg/kg	3.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--	3.5E-10	mg/kg-day	2.3E-05	mg/kg-day	1.5E-05
				PCB-114	9E-04	mg/kg	2.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-12	--	2.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-118	4E-02	mg/kg	8.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-10	--	1.0E-09	mg/kg-day	2.3E-05	mg/kg-day	4.4E-05
				PCB-123	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-126	2E-04	mg/kg	6.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-09	--	7.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				PCB-156/157	3E-03	mg/kg	7.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-11	--	9.3E-11	mg/kg-day	2.3E-05	mg/kg-day	4.0E-06
				PCB-167	1E-03	mg/kg	2.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-11	--	3.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-169	3E-04	mg/kg	6.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-09	--	7.2E-12	mg/kg-day	2.3E-08	mg/kg-day	3.1E-04

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				PCB-189	2E-04	mg/kg	6.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-12	--	6.9E-12	mg/kg-day	2.3E-05	mg/kg-day	3.0E-07
				KM TEQ PCB	3E-05	mg/kg	7.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.7E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	7.5E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-08	--	8.8E-08	mg/kg-day	2.0E-05	mg/kg-day	4.4E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-08	M	2.5E-07	mg/kg-day	3.0E-04	mg/kg-day	8.4E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	2.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.3E-10	M	1.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-11	M	2.5E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	M	5.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	8.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	9.4E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	7.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--	8.8E-07	mg/kg-day	3.0E-04	mg/kg-day	2.9E-03
				Cadmium	3E+00	mg/kg	2.5E-10	mg/kg-day	--	--	--	--	2.9E-09	mg/kg-day	2.5E-05	mg/kg-day	1.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.2E-08						5.8E-03
				Total DLCs (based on KM TEQs)							4.9E-08						5.5E-03
				Total PCDD/Fs (excluding KM TEQ)							3.9E-08						4.4E-03
				Total PCDD/Fs (based on KM TEQ)							3.8E-08						4.3E-03
				Total DL-PCBs (excluding KM TEQ)							1.3E-08						1.4E-03
				Total DL-PCBs (based on KM TEQ)							1.1E-08						1.2E-03
				Total Non-DL PCBs							1.5E-08						4.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.8E-08						5.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-08						5.6E-03
				Total PAHs							1.3E-07						8.4E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.1E-07						3.0E-03
		Sediment Dermal Total (excluding KM TEQs)									3.1E-07						1.4E-02
		Sediment Dermal Total (based on KM TEQs)									3.1E-07						1.4E-02
Swimmer Sediment Total (excluding KM TEQs)											1.5E-06						1.8E-01
Swimmer Sediment Total (based on KM TEQs)											1.5E-06						1.7E-01
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	5.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-10	--	6.4E-14	mg/kg-day	7.0E-10	mg/kg-day	9.2E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-10	--	2.2E-14	mg/kg-day	7.0E-10	mg/kg-day	3.2E-05

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--	1.6E-13	mg/kg-day	7.0E-09	mg/kg-day	2.3E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-11	--	2.6E-14	mg/kg-day	7.0E-09	mg/kg-day	3.7E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	3.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-11	--	4.5E-14	mg/kg-day	7.0E-09	mg/kg-day	6.5E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.2E-11	--	3.2E-13	mg/kg-day	7.0E-08	mg/kg-day	4.6E-06
				OCDD	6E-05	µg/L	2.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-11	--	3.4E-12	mg/kg-day	2.3E-06	mg/kg-day	1.5E-06
				2,3,7,8-TCDF	5E-07	µg/L	2.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-11	--	2.5E-14	mg/kg-day	7.0E-09	mg/kg-day	3.6E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.7E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.7E-12	--	2.0E-14	mg/kg-day	2.3E-08	mg/kg-day	8.5E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.0E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.3E-10	--	3.5E-14	mg/kg-day	2.3E-09	mg/kg-day	1.5E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	8.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	9.6E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-11	--	2.3E-14	mg/kg-day	7.0E-09	mg/kg-day	3.3E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	2.0E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-11	--	1.5E-14	mg/kg-day	7.0E-09	mg/kg-day	2.1E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	3.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-11	--	4.1E-13	mg/kg-day	7.0E-08	mg/kg-day	5.8E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.2E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.3E-12	--	2.6E-14	mg/kg-day	7.0E-08	mg/kg-day	3.7E-07
				OCDF	1E-05	µg/L	6.5E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-12	--	7.6E-13	mg/kg-day	2.3E-06	mg/kg-day	3.3E-07
				KM TEQ DF	2E-06	µg/L	1.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-09	--	1.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.8E-04
				PCB-77	2E-05	µg/L	9.2E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-12	--	1.1E-12	mg/kg-day	7.0E-06	mg/kg-day	1.5E-07
				PCB-81	7E-07	µg/L	3.1E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-13	--	3.6E-14	mg/kg-day	2.3E-06	mg/kg-day	1.5E-08
				PCB-105	7E-05	µg/L	3.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-12	--	3.8E-12	mg/kg-day	2.3E-05	mg/kg-day	1.6E-07
				PCB-114	4E-06	µg/L	1.7E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-14	--	2.0E-13	mg/kg-day	2.3E-05	mg/kg-day	8.6E-09
				PCB-118	2E-04	µg/L	7.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-12	--	8.6E-12	mg/kg-day	2.3E-05	mg/kg-day	3.7E-07
				PCB-123	3E-06	µg/L	1.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-14	--	1.7E-13	mg/kg-day	2.3E-05	mg/kg-day	7.1E-09
				PCB-126	7E-07	µg/L	3.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-11	--	3.5E-14	mg/kg-day	7.0E-09	mg/kg-day	5.0E-06
				PCB-156/157	2E-05	µg/L	8.7E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-13	--	1.0E-12	mg/kg-day	2.3E-05	mg/kg-day	4.4E-08
				PCB-167	7E-06	µg/L	2.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-13	--	3.4E-13	mg/kg-day	2.3E-05	mg/kg-day	1.5E-08
				PCB-169	4E-07	µg/L	1.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.1E-12	--	2.1E-14	mg/kg-day	2.3E-08	mg/kg-day	9.0E-07
				PCB-189	9E-07	µg/L	3.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-14	--	4.5E-14	mg/kg-day	2.3E-05	mg/kg-day	1.9E-09
				KM TEQ PCB	1E-07	µg/L	4.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.3E-11	--	5.7E-15	mg/kg-day	7.0E-10	mg/kg-day	8.2E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	5.3E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-11	M	6.2E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	6.8E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.8E-10	M	7.9E-10	mg/kg-day	3.0E-04	mg/kg-day	2.6E-06
				Benzo(b)fluoranthene	2E-02	µg/L	9.3E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.9E-11	M	1.1E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	4.1E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.7E-12	M	4.8E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	9.0E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.8E-13	M	1.1E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	1.8E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.3E-11	M	2.0E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	3.9E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-11	M	4.5E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	1.6E-10	mg/kg-day	--	--	--	--	1.9E-09	mg/kg-day	2.0E-02	mg/kg-day	9.3E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	5.4E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.7E-11	--	6.3E-09	mg/kg-day	1.0E-02	mg/kg-day	6.3E-07
				Trichloroethylene	1E-01	µg/L	5.9E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.1E-10	M	6.9E-09	mg/kg-day	5.0E-04	mg/kg-day	1.4E-05
				Inorganics													
				Antimony	7E-01	µg/L	3.1E-09	mg/kg-day	--	--	--	--	3.7E-08	mg/kg-day	4.0E-04	mg/kg-day	9.1E-05
				Arsenic, inorganic	1E+00	µg/L	5.7E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.6E-09	--	6.7E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
				Chromium [as Cr(III)]	1E+00	µg/L	5.8E-09	mg/kg-day	--	--	--	--	6.8E-08	mg/kg-day	1.5E+00	mg/kg-day	4.5E-08
				Chromium (VI)	2E-01	µg/L	1.0E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.1E-09	M	1.2E-08	mg/kg-day	3.0E-03	mg/kg-day	3.9E-06
				Iron	5E+02	µg/L	2.4E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	7.0E-01	mg/kg-day	4.0E-05
				Manganese	7E+01	µg/L	3.1E-07	mg/kg-day	--	--	--	--	3.6E-06	mg/kg-day	2.4E-02	mg/kg-day	1.5E-04
				Mercury	3E-02	µg/L	1.2E-10	mg/kg-day	--	--	--	--	1.4E-09	mg/kg-day	3.0E-04	mg/kg-day	4.6E-06
				Thallium	1E-02	µg/L	5.6E-11	mg/kg-day	--	--	--	--	6.5E-10	mg/kg-day	1.0E-05	mg/kg-day	6.5E-05
				Titanium	8E+00	µg/L	3.6E-08	mg/kg-day	--	--	--	--	4.1E-07	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											2.1E-09						2.3E-04

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration	RfD Value	RfD Units	Hazard Quotient
				Total DLCs (based on KM TEQs)							1.7E-09						1.9E-04
				Total PCDD/Fs (excluding KM TEQ)							2.0E-09						2.3E-04
				Total PCDD/Fs (based on KM TEQ)							1.6E-09						1.8E-04
				Total DL-PCBs (excluding KM TEQ)							6.1E-11						6.7E-06
				Total DL-PCBs (based on KM TEQ)							7.3E-11						8.2E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							6.1E-11						6.7E-06
				Total PCBs (DL & NDL; based on KM TEQ)							7.3E-11						8.2E-06
				Total PAHs							4.4E-10						2.7E-06
				Total Organics							1.3E-10						1.4E-05
				Total Inorganics							1.1E-08						5.8E-04
		Surface Water Ingestion Total (excluding KM TEQs)									1.3E-08						8.3E-04
		Surface Water Ingestion Total (based on KM TEQs)									1.3E-08						7.9E-04
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration	RfD Value	RfD Units	Hazard Quotient
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.4E-09	mg/kg-day	--	--	--	--	1.6E-08	mg/kg-day	2.0E-02	mg/kg-day	8.1E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	6.5E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.0E-11	--	7.5E-09	mg/kg-day	1.0E-02	mg/kg-day	7.5E-07
				Trichloroethylene	1E-01	µg/L	1.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.5E-10	M	1.5E-08	mg/kg-day	5.0E-04	mg/kg-day	3.0E-05
				Inorganics													
				Antimony	7E-01	µg/L	2.8E-10	mg/kg-day	--	--	--	--	3.3E-09	mg/kg-day	6.0E-05	mg/kg-day	5.5E-05
				Arsenic, inorganic	1E+00	µg/L	5.2E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.8E-10	--	6.1E-09	mg/kg-day	3.0E-04	mg/kg-day	2.0E-05
				Chromium [as Cr(III)]	1E+00	µg/L	5.3E-10	mg/kg-day	--	--	--	--	6.2E-09	mg/kg-day	2.0E-02	mg/kg-day	3.2E-07
				Chromium (VI)	2E-01	µg/L	1.8E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.5E-08	M	2.1E-09	mg/kg-day	7.5E-05	mg/kg-day	2.8E-05
				Iron	5E+02	µg/L	2.2E-07	mg/kg-day	--	--	--	--	2.5E-06	mg/kg-day	7.0E-01	mg/kg-day	3.6E-06
				Manganese	7E+01	µg/L	2.8E-08	mg/kg-day	--	--	--	--	3.3E-07	mg/kg-day	9.6E-04	mg/kg-day	3.4E-04
				Mercury	3E-02	µg/L	1.1E-11	mg/kg-day	--	--	--	--	1.3E-10	mg/kg-day	2.1E-05	mg/kg-day	6.0E-06
				Thallium	1E-02	µg/L	5.0E-12	mg/kg-day	--	--	--	--	5.9E-11	mg/kg-day	1.0E-05	mg/kg-day	5.9E-06
				Titanium	8E+00	µg/L	3.2E-09	mg/kg-day	--	--	--	--	3.8E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						8.1E-07
				Total Organics							2.7E-10						3.1E-05
				Total Inorganics							1.6E-08						4.6E-04
		Surface Water Dermal Total (excluding KM TEQs)									1.6E-08						4.9E-04
		Surface Water Dermal Total (based on KM TEQs)									1.6E-08						4.9E-04
Wader Surface Water Total (excluding KM TEQs)											3.0E-08						1.3E-03
Wader Surface Water Total (based on KM TEQs)											2.9E-08						1.3E-03
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											1.5E-06						1.8E-01
Wader Sediment Total + Surface Water Total (based on KM TEQs)											1.5E-06						1.7E-01
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	2.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-09	--	3.3E-13	mg/kg-day	7.0E-10	mg/kg-day	4.8E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	9.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-09	--	1.2E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	7.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-09	--	8.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	1.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3.4E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	1.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.2E-10	--	1.7E-12	mg/kg-day	7.0E-08	mg/kg-day	2.4E-05
				OCDD	6E-05	µg/L	1.5E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.8E-11	--	1.8E-11	mg/kg-day	2.3E-06	mg/kg-day	7.6E-06
				2,3,7,8-TCDF	5E-07	µg/L	1.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,7,8-PeCDF	4E-07	µg/L	8.9E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-11	--	1.0E-13	mg/kg-day	2.3E-08	mg/kg-day	4.4E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	1.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.9E-10	--	1.8E-13	mg/kg-day	2.3E-09	mg/kg-day	7.7E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	4.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-10	--	5.0E-13	mg/kg-day	7.0E-09	mg/kg-day	7.1E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	6.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.2E-10	--	7.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	6.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.8E-11	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	1.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-10	--	2.1E-12	mg/kg-day	7.0E-08	mg/kg-day	3.0E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	1.1E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.7E-11	--	1.3E-13	mg/kg-day	7.0E-08	mg/kg-day	1.9E-06
				OCDF	1E-05	µg/L	3.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-11	--	4.0E-12	mg/kg-day	2.3E-06	mg/kg-day	1.7E-06

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				KM TEQ DF	2E-06	µg/L	5.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.5E-09	--	6.6E-13	mg/kg-day	7.0E-10	mg/kg-day	9.5E-04
				PCB-77	2E-05	µg/L	4.8E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.2E-12	--	5.6E-12	mg/kg-day	7.0E-06	mg/kg-day	8.0E-07
				PCB-81	7E-07	µg/L	1.6E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.2E-13	--	1.9E-13	mg/kg-day	2.3E-06	mg/kg-day	8.0E-08
				PCB-105	7E-05	µg/L	1.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-12	--	2.0E-11	mg/kg-day	2.3E-05	mg/kg-day	8.6E-07
				PCB-114	4E-06	µg/L	8.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-13	--	1.0E-12	mg/kg-day	2.3E-05	mg/kg-day	4.4E-08
				PCB-118	2E-04	µg/L	3.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-11	--	4.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.9E-06
				PCB-123	3E-06	µg/L	7.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-13	--	8.6E-13	mg/kg-day	2.3E-05	mg/kg-day	3.7E-08
				PCB-126	7E-07	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				PCB-156/157	2E-05	µg/L	4.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-12	--	5.3E-12	mg/kg-day	2.3E-05	mg/kg-day	2.3E-07
				PCB-167	7E-06	µg/L	1.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-13	--	1.8E-12	mg/kg-day	2.3E-05	mg/kg-day	7.6E-08
				PCB-169	4E-07	µg/L	9.4E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.2E-11	--	1.1E-13	mg/kg-day	2.3E-08	mg/kg-day	4.7E-06
				PCB-189	9E-07	µg/L	2.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-14	--	2.3E-13	mg/kg-day	2.3E-05	mg/kg-day	1.0E-08
				KM TEQ PCB	1E-07	µg/L	2.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-10	--	3.0E-14	mg/kg-day	7.0E-10	mg/kg-day	4.2E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	2.8E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-10	M	3.2E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	3.5E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	M	4.1E-09	mg/kg-day	3.0E-04	mg/kg-day	1.4E-05
				Benzo(b)fluoranthene	2E-02	µg/L	4.8E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-10	M	5.6E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	2.1E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.0E-12	M	2.5E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	4.7E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-12	M	5.5E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	9.1E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.8E-10	M	1.1E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	2.0E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-11	M	2.4E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	8.3E-10	mg/kg-day	--	--	--	--	9.7E-09	mg/kg-day	2.0E-02	mg/kg-day	4.8E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	2.8E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	8.7E-11	--	3.3E-08	mg/kg-day	1.0E-02	mg/kg-day	3.3E-06
				Trichloroethylene	1E-01	µg/L	3.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	5.9E-10	M	3.6E-08	mg/kg-day	5.0E-04	mg/kg-day	7.1E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.6E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	4.0E-04	mg/kg-day	4.8E-04
				Arsenic, inorganic	1E+00	µg/L	3.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.5E-08	--	3.5E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Chromium [as Cr(III)]	1E+00	µg/L	3.0E-08	mg/kg-day	--	--	--	--	3.5E-07	mg/kg-day	1.5E+00	mg/kg-day	2.3E-07
				Chromium (VI)	2E-01	µg/L	5.2E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.1E-08	M	6.1E-08	mg/kg-day	3.0E-03	mg/kg-day	2.0E-05
				Iron	5E+02	µg/L	1.2E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	7.0E-01	mg/kg-day	2.1E-04
				Manganese	7E+01	µg/L	1.6E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	2.4E-02	mg/kg-day	7.8E-04
				Mercury	3E-02	µg/L	6.2E-10	mg/kg-day	--	--	--	--	7.2E-09	mg/kg-day	3.0E-04	mg/kg-day	2.4E-05
				Thallium	1E-02	µg/L	2.9E-10	mg/kg-day	--	--	--	--	3.4E-09	mg/kg-day	1.0E-05	mg/kg-day	3.4E-04
				Titanium	8E+00	µg/L	1.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							1.1E-08						1.2E-03
				Total DLCs (based on KM TEQs)							8.9E-09						9.9E-04
				Total PCDD/Fs (excluding KM TEQ)							1.1E-08						1.2E-03
				Total PCDD/Fs (based on KM TEQ)							8.5E-09						9.5E-04
				Total DL-PCBs (excluding KM TEQ)							3.1E-10						3.5E-05
				Total DL-PCBs (based on KM TEQ)							3.8E-10						4.2E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							3.1E-10						3.5E-05
				Total PCBs (DL & NDL; based on KM TEQ)							3.8E-10						4.2E-05
				Total PAHs							2.3E-09						1.4E-05
				Total Organics							6.7E-10						7.5E-05
				Total Inorganics							5.5E-08						3.0E-03
		Surface Water Ingestion Total (excluding KM TEQs)									6.9E-08						4.3E-03
		Surface Water Ingestion Total (based on KM TEQs)									6.7E-08						4.1E-03
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--

TABLE 7.7 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	7.7E-09	mg/kg-day	--	--	--	--	9.0E-08	mg/kg-day	2.0E-02	mg/kg-day	4.5E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	3.9E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.2E-10	--	4.5E-08	mg/kg-day	1.0E-02	mg/kg-day	4.5E-06
				Trichloroethylene	1E-01	µg/L	7.5E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.4E-09	M	8.8E-08	mg/kg-day	5.0E-04	mg/kg-day	1.8E-04
				Inorganics													
				Antimony	7E-01	µg/L	2.4E-09	mg/kg-day	--	--	--	--	2.9E-08	mg/kg-day	6.0E-05	mg/kg-day	4.8E-04
				Arsenic, inorganic	1E+00	µg/L	4.5E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.7E-09	--	5.2E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Chromium [as Cr(III)]	1E+00	µg/L	4.5E-09	mg/kg-day	--	--	--	--	5.3E-08	mg/kg-day	2.0E-02	mg/kg-day	2.7E-06
				Chromium (VI)	2E-01	µg/L	1.6E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.3E-07	M	1.8E-08	mg/kg-day	7.5E-05	mg/kg-day	2.4E-04
				Iron	5E+02	µg/L	1.9E-06	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	7.0E-01	mg/kg-day	3.1E-05
				Manganese	7E+01	µg/L	2.4E-07	mg/kg-day	--	--	--	--	2.8E-06	mg/kg-day	9.6E-04	mg/kg-day	2.9E-03
				Mercury	3E-02	µg/L	9.2E-11	mg/kg-day	--	--	--	--	1.1E-09	mg/kg-day	2.1E-05	mg/kg-day	5.1E-05
				Thallium	1E-02	µg/L	4.3E-11	mg/kg-day	--	--	--	--	5.1E-10	mg/kg-day	1.0E-05	mg/kg-day	5.1E-05
				Titanium	8E+00	µg/L	2.8E-08	mg/kg-day	--	--	--	--	3.2E-07	mg/kg-day	--	--	--

TABLE 7.7 RME
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration	RfD Value	RfD Units	Hazard Quotient
				Total DLCs (excluding KM TEQs)							0.0E+00					0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00					0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00					0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00					0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00					0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00					0.0E+00
				Total Non-DL PCBs							0.0E+00					0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00					0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00					0.0E+00
				Total PAHs							0.0E+00					4.5E-06
				Total Organics							1.6E-09					1.8E-04
				Total Inorganics							1.4E-07					4.0E-03
		Surface Water Dermal Total (excluding KM TEQs)									1.4E-07					4.2E-03
		Surface Water Dermal Total (based on KM TEQs)									1.4E-07					4.2E-03
Swimmer Surface Water Total (excluding KM TEQs)											2.1E-07					8.5E-03
Swimmer Surface Water Total (based on KM TEQs)											2.1E-07					8.2E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											1.7E-06					1.8E-01
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											1.7E-06					1.8E-01

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-08	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-09	--
				OCDD	3E-03	mg/kg	6.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.3E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-09	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-08	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.0E-10	--
				OCDF	4E-04	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.9E-10	--
				KM TEQ DF	1E-04	mg/kg	2.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-07	--
				PCB-77	8E-03	mg/kg	1.9E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.8E-09	--
				PCB-81	3E-04	mg/kg	7.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-10	--
				PCB-105	1E-02	mg/kg	3.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-09	--
				PCB-114	9E-04	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-11	--
				PCB-118	4E-02	mg/kg	8.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-09	--
				PCB-123	1E-03	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--
				PCB-126	2E-04	mg/kg	6.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-08	--
				PCB-156/157	3E-03	mg/kg	7.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--
				PCB-167	1E-03	mg/kg	2.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--
				PCB-169	3E-04	mg/kg	6.1E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-08	--
				PCB-189	2E-04	mg/kg	5.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-11	--
				KM TEQ PCB	3E-05	mg/kg	7.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.6E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.2E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	5.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-08	M
				Benzo(a)pyrene	2E+00	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-07	M
				Benzo(b)fluoranthene	2E+00	mg/kg	4.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-08	M
				Benzo(k)fluoranthene	1E+00	mg/kg	2.9E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.6E-10	M
				Chrysene	2E+00	mg/kg	4.9E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-10	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.1E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	1.4E-07	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.0E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	3.0E-04	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	5.7E-08	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	4.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.7E-07	--
				Cadmium	3E+00	mg/kg	7.5E-08	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	3.4E-07	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	4.1E-06	mg/kg-day	--	--	--	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Chromium (VI)	1E+00	mg/kg	3.4E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.6E-08	M
				Iron	4E+04	mg/kg	1.1E-03	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	1.1E-05	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	8.6E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	4.8E-08	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	6.0E-09	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	3.0E-05	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							5.1E-07	
				Total DLCs (based on KM TEQs)							4.9E-07	
				Total PCDD/Fs (excluding KM TEQ)							3.9E-07	
				Total PCDD/Fs (based on KM TEQ)							3.8E-07	
				Total DL-PCBs (excluding KM TEQ)							1.3E-07	
				Total DL-PCBs (based on KM TEQ)							1.1E-07	
				Total Non-DL PCBs							3.2E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-07	
				Total PAHs							2.4E-07	
				Total Organics							0.0E+00	
				Total Inorganics							7.3E-07	
		Sediment Ingestion Total (excluding KM TEQs)									1.5E-06	
		Sediment Ingestion Total (based on KM TEQs)									1.5E-06	
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	7.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	4.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.0E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	8.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	2.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-09	--
				OCDD	3E-03	mg/kg	2.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	9.3E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.2E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.6E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.0E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	7.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	3.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.7E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-10	--
				OCDF	4E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--
				KM TEQ DF	1E-04	mg/kg	1.0E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-07	--
				PCB-77	8E-03	mg/kg	7.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-09	--
				PCB-81	3E-04	mg/kg	2.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--
				PCB-105	1E-02	mg/kg	1.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-10	--
				PCB-114	9E-04	mg/kg	8.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-11	--
				PCB-118	4E-02	mg/kg	3.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-09	--
				PCB-123	1E-03	mg/kg	1.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-11	--
				PCB-126	2E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-08	--
				PCB-156/157	3E-03	mg/kg	3.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--
				PCB-167	1E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-11	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				PCB-169	3E-04	mg/kg	2.5E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-08	--
				PCB-189	2E-04	mg/kg	2.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				KM TEQ PCB	3E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	3.0E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.1E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	8.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M
				Benzo(a)pyrene	2E+00	mg/kg	8.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-07	M
				Benzo(b)fluoranthene	2E+00	mg/kg	7.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M
				Benzo(k)fluoranthene	1E+00	mg/kg	5.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.1E-10	M
				Chrysene	2E+00	mg/kg	8.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-10	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.8E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.2E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.8E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	3.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-07	--
				Cadmium	3E+00	mg/kg	1.0E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.1E-07	
				Total DLCs (based on KM TEQs)							2.0E-07	
				Total PCDD/Fs (excluding KM TEQ)							1.6E-07	
				Total PCDD/Fs (based on KM TEQ)							1.5E-07	
				Total DL-PCBs (excluding KM TEQ)							5.1E-08	
				Total DL-PCBs (based on KM TEQ)							4.5E-08	
				Total Non-DL PCBs							6.1E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-07	
				Total PAHs							2.2E-07	
				Total Organics							0.0E+00	
				Total Inorganics							4.6E-07	
		Sediment Dermal Total (excluding KM TEQs)									9.5E-07	
		Sediment Dermal Total (based on KM TEQs)									9.4E-07	
Wader Sediment Total (excluding KM TEQs)											2.5E-06	
Wader Sediment Total (based on KM TEQs)											2.4E-06	
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-08	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-09	--
				OCDD	3E-03	mg/kg	6.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.3E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-09	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.8E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-08	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.0E-10	--
				OCDF	4E-04	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.9E-10	--
				KM TEQ DF	1E-04	mg/kg	2.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-07	--
				PCB-77	8E-03	mg/kg	1.9E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.8E-09	--
				PCB-81	3E-04	mg/kg	7.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-10	--
				PCB-105	1E-02	mg/kg	3.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-09	--
				PCB-114	9E-04	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-11	--
				PCB-118	4E-02	mg/kg	8.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-09	--
				PCB-123	1E-03	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-10	--
				PCB-126	2E-04	mg/kg	6.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-08	--
				PCB-156/157	3E-03	mg/kg	7.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--
				PCB-167	1E-03	mg/kg	2.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--
				PCB-169	3E-04	mg/kg	6.1E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-08	--
				PCB-189	2E-04	mg/kg	5.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-11	--
				KM TEQ PCB	3E-05	mg/kg	7.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.6E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.2E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	5.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-08	M
				Benzo(a)pyrene	2E+00	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-07	M
				Benzo(b)fluoranthene	2E+00	mg/kg	4.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-08	M
				Benzo(k)fluoranthene	1E+00	mg/kg	2.9E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.6E-10	M
				Chrysene	2E+00	mg/kg	4.9E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-10	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.1E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	1.4E-07	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.0E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	3.0E-04	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	5.7E-08	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	4.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.7E-07	--
				Cadmium	3E+00	mg/kg	7.5E-08	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	2.6E-06	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	3.4E-07	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	4.1E-06	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	3.4E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.6E-08	M

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Iron	4E+04	mg/kg	1.1E-03	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	1.1E-05	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	8.6E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	4.8E-08	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	6.0E-09	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	3.0E-05	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							5.1E-07	
				Total DLCs (based on KM TEQs)							4.9E-07	
				Total PCDD/Fs (excluding KM TEQ)							3.9E-07	
				Total PCDD/Fs (based on KM TEQ)							3.8E-07	
				Total DL-PCBs (excluding KM TEQ)							1.3E-07	
				Total DL-PCBs (based on KM TEQ)							1.1E-07	
				Total Non-DL PCBs							3.2E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-07	
				Total PAHs							2.4E-07	
				Total Organics							0.0E+00	
				Total Inorganics							7.3E-07	
		Sediment Ingestion Total (excluding KM TEQs)									1.5E-06	
		Sediment Ingestion Total (based on KM TEQs)									1.5E-06	
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	7.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-07	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	4.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.0E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	8.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	2.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-09	--
				OCDD	3E-03	mg/kg	2.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--
				2,3,7,8-TCDF	1E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	9.3E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.2E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.6E-13	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.0E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	7.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	3.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.7E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-10	--
				OCDF	4E-04	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--
				KM TEQ DF	1E-04	mg/kg	1.0E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-07	--
				PCB-77	8E-03	mg/kg	7.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-09	--
				PCB-81	3E-04	mg/kg	2.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--
				PCB-105	1E-02	mg/kg	1.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-10	--
				PCB-114	9E-04	mg/kg	8.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-11	--
				PCB-118	4E-02	mg/kg	3.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-09	--
				PCB-123	1E-03	mg/kg	1.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-11	--
				PCB-126	2E-04	mg/kg	2.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-08	--
				PCB-156/157	3E-03	mg/kg	3.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-10	--
				PCB-167	1E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-11	--
				PCB-169	3E-04	mg/kg	2.5E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-08	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				PCB-189	2E-04	mg/kg	2.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				KM TEQ PCB	3E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	3.0E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.1E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	8.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M
				Benzo(a)pyrene	2E+00	mg/kg	8.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-07	M
				Benzo(b)fluoranthene	2E+00	mg/kg	7.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M
				Benzo(k)fluoranthene	1E+00	mg/kg	5.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.1E-10	M
				Chrysene	2E+00	mg/kg	8.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.5E-10	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.8E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.2E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.8E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	3.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-07	--
				Cadmium	3E+00	mg/kg	1.0E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.1E-07	
				Total DLCs (based on KM TEQs)							2.0E-07	
				Total PCDD/Fs (excluding KM TEQ)							1.6E-07	
				Total PCDD/Fs (based on KM TEQ)							1.5E-07	
				Total DL-PCBs (excluding KM TEQ)							5.1E-08	
				Total DL-PCBs (based on KM TEQ)							4.5E-08	
				Total Non-DL PCBs							6.1E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-07	
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-07	
				Total PAHs							2.2E-07	
				Total Organics							0.0E+00	
				Total Inorganics							4.6E-07	
		Sediment Dermal Total (excluding KM TEQs)									9.5E-07	
		Sediment Dermal Total (based on KM TEQs)									9.4E-07	
Swimmer Sediment Total (excluding KM TEQs)											2.5E-06	
Swimmer Sediment Total (based on KM TEQs)											2.4E-06	
Sediment	Sediment	Boater	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	3.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-09	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	6.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.7E-09	--
				OCDD	3E-03	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	6.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	4.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.9E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.1E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	8.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	6.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.2E-11	--
				OCDF	4E-04	mg/kg	2.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.9E-11	--
				KM TEQ DF	1E-04	mg/kg	4.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-08	--
				PCB-77	8E-03	mg/kg	3.4E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.1E-10	--
				PCB-81	3E-04	mg/kg	1.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.9E-11	--
				PCB-105	1E-02	mg/kg	5.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-10	--
				PCB-114	9E-04	mg/kg	3.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-11	--
				PCB-118	4E-02	mg/kg	1.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-10	--
				PCB-123	1E-03	mg/kg	4.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-11	--
				PCB-126	2E-04	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--
				PCB-156/157	3E-03	mg/kg	1.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-11	--
				PCB-167	1E-03	mg/kg	5.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-11	--
				PCB-169	3E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.0E-09	--
				PCB-189	2E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-12	--
				KM TEQ PCB	3E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.8E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	9.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-10	M
				Benzo(a)pyrene	2E+00	mg/kg	9.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-09	M
				Benzo(b)fluoranthene	2E+00	mg/kg	8.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-10	M
				Benzo(k)fluoranthene	1E+00	mg/kg	5.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-11	M
				Chrysene	2E+00	mg/kg	8.8E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-12	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.8E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.3E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	2.5E-08	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.8E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	5.4E-05	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	1.0E-08	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	8.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-07	--
				Cadmium	3E+00	mg/kg	1.4E-08	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	4.7E-07	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	6.2E-08	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	7.4E-07	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	6.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-09	M
				Iron	4E+04	mg/kg	1.9E-04	mg/kg-day	--	--	--	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Lead	5E+02	mg/kg	2.1E-06	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	8.8E-09	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	3.0E-07	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	1.1E-09	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	2.2E-07	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	5.4E-06	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							9.3E-08	
				Total DLCs (based on KM TEQs)							8.9E-08	
				Total PCDD/Fs (excluding KM TEQ)							7.0E-08	
				Total PCDD/Fs (based on KM TEQ)							6.9E-08	
				Total DL-PCBs (excluding KM TEQ)							2.3E-08	
				Total DL-PCBs (based on KM TEQ)							2.0E-08	
				Total Non-DL PCBs							5.8E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							2.9E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-08	
				Total PAHs							1.3E-08	
				Total Organics							0.0E+00	
				Total Inorganics							1.2E-07	
		Sediment Ingestion Total (excluding KM TEQs)									2.4E-07	
		Sediment Ingestion Total (based on KM TEQs)									2.3E-07	
Sediment	Sediment	Boater	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.4E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.6E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.2E-10	--
				OCDD	3E-03	mg/kg	5.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	2.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.1E-11	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.4E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.5E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	6.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-11	--
				OCDF	4E-04	mg/kg	9.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.3E-11	--
				KM TEQ DF	1E-04	mg/kg	2.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-08	--
				PCB-77	8E-03	mg/kg	1.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10	--
				PCB-81	3E-04	mg/kg	6.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--
				PCB-105	1E-02	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--
				PCB-114	9E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-12	--
				PCB-118	4E-02	mg/kg	7.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--
				PCB-123	1E-03	mg/kg	2.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--
				PCB-126	2E-04	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-09	--
				PCB-156/157	3E-03	mg/kg	6.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-11	--
				PCB-167	1E-03	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				PCB-169	3E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-09	--
				PCB-189	2E-04	mg/kg	5.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				KM TEQ PCB	3E-05	mg/kg	6.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.8E-09	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	6.6E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.3E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	M
				Benzo(b)fluoranthene	2E+00	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	1.1E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-10	M
				Chrysene	2E+00	mg/kg	1.8E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.8E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.9E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.0E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	6.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.8E-08	--
				Cadmium	3E+00	mg/kg	2.2E-10	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							4.5E-08	
				Total DLCs (based on KM TEQs)							4.3E-08	
				Total PCDD/Fs (excluding KM TEQ)							3.4E-08	
				Total PCDD/Fs (based on KM TEQ)							3.3E-08	
				Total DL-PCBs (excluding KM TEQ)							1.1E-08	
				Total DL-PCBs (based on KM TEQ)							9.8E-09	
				Total Non-DL PCBs							1.3E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							2.4E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							2.3E-08	
				Total PAHs							2.7E-08	
				Total Organics							0.0E+00	
				Total Inorganics							9.8E-08	
		Sediment Dermal Total (excluding KM TEQs)									1.8E-07	
		Sediment Dermal Total (based on KM TEQs)									1.8E-07	
Boater Sediment Total (excluding KM TEQs)											4.2E-07	
Boater Sediment Total (based on KM TEQs)											4.1E-07	
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	7.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-09	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-10	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-10	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-11	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	5.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-11	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.6E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.5E-11	--
				OCDD	6E-05	µg/L	3.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-11	--
				2,3,7,8-TCDF	5E-07	µg/L	2.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-11	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-11	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.9E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-10	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-11	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-10	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-11	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.6E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-11	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.9E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-12	--
				OCDF	1E-05	µg/L	8.6E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-12	--
				KM TEQ DF	2E-06	µg/L	1.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-09	--
				PCB-77	2E-05	µg/L	1.2E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.8E-12	--
				PCB-81	7E-07	µg/L	4.0E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-13	--
				PCB-105	7E-05	µg/L	4.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-12	--
				PCB-114	4E-06	µg/L	2.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-13	--
				PCB-118	2E-04	µg/L	9.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-12	--
				PCB-123	3E-06	µg/L	1.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-14	--
				PCB-126	7E-07	µg/L	4.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-11	--
				PCB-156/157	2E-05	µg/L	1.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-13	--
				PCB-167	7E-06	µg/L	3.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-13	--
				PCB-169	4E-07	µg/L	2.4E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-11	--
				PCB-189	9E-07	µg/L	5.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-14	--
				KM TEQ PCB	1E-07	µg/L	6.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.6E-11	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	6.9E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.4E-11	M
				Benzo(a)pyrene	2E-02	µg/L	8.9E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-10	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.1E-11	M
				Benzo(k)fluoranthene	9E-03	µg/L	5.4E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.9E-12	M
				Chrysene	2E-02	µg/L	1.2E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.1E-13	M
				Dibenz(a,h)anthracene	4E-03	µg/L	2.3E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.8E-11	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	5.1E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-11	M
				Naphthalene	4E-02	µg/L	2.1E-10	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	7.0E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.2E-11	--
				Trichloroethylene	1E-01	µg/L	7.7E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.2E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	4.1E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	7.5E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-08	--
				Chromium [as Cr(III)]	1E+00	µg/L	7.6E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.3E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.2E-09	M
				Iron	5E+02	µg/L	3.1E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	4.1E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	1.6E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	7.3E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	4.7E-08	mg/kg-day	--	--	--	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total DLCs (excluding KM TEQs)							2.8E-09	
				Total DLCs (based on KM TEQs)							2.2E-09	
				Total PCDD/Fs (excluding KM TEQ)							2.7E-09	
				Total PCDD/Fs (based on KM TEQ)							2.2E-09	
				Total DL-PCBs (excluding KM TEQ)							7.9E-11	
				Total DL-PCBs (based on KM TEQ)							9.6E-11	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							7.9E-11	
				Total PCBs (DL & NDL; based on KM TEQ)							9.6E-11	
				Total PAHs							4.7E-10	
				Total Organics							1.4E-10	
				Total Inorganics							1.3E-08	
		Surface Water Ingestion Total (excluding KM TEQs)									1.7E-08	
		Surface Water Ingestion Total (based on KM TEQs)									1.6E-08	
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	4.2E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	2.0E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	6.0E-11	--
				Trichloroethylene	1E-01	µg/L	3.9E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.7E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	8.6E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	1.6E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.4E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	1.6E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	5.5E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	2.2E-08	M
				Iron	5E+02	µg/L	6.6E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	8.5E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	3.3E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	1.5E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	9.8E-09	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							4.3E-10	
				Total Inorganics							2.5E-08	
		Surface Water Dermal Total (excluding KM TEQs)									2.5E-08	
		Surface Water Dermal Total (based on KM TEQs)									2.5E-08	
Wader Surface Water Total (excluding KM TEQs)											4.2E-08	
Wader Surface Water Total (based on KM TEQs)											4.2E-08	
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											2.5E-06	
Wader Sediment Total + Surface Water Total (based on KM TEQs)											2.5E-06	
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	3.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.6E-09	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-09	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	9.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-09	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	1.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-10	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	2.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-10	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-10	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				OCDD	6E-05	µg/L	2.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.8E-11	--
				2,3,7,8-TCDF	5E-07	µg/L	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-10	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.2E-11	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	2.0E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.0E-10	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	5.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.3E-10	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	8.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-09	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	8.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	2.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-10	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	1.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.2E-11	--
				OCDF	1E-05	µg/L	4.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-11	--
				KM TEQ DF	2E-06	µg/L	7.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--
				PCB-77	2E-05	µg/L	6.2E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.3E-12	--
				PCB-81	7E-07	µg/L	2.1E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.3E-13	--
				PCB-105	7E-05	µg/L	2.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--
				PCB-114	4E-06	µg/L	1.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-13	--
				PCB-118	2E-04	µg/L	5.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-11	--
				PCB-123	3E-06	µg/L	9.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-13	--
				PCB-126	7E-07	µg/L	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-10	--
				PCB-156/157	2E-05	µg/L	5.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-12	--
				PCB-167	7E-06	µg/L	2.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-13	--
				PCB-169	4E-07	µg/L	1.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.5E-11	--
				PCB-189	9E-07	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--
				KM TEQ PCB	1E-07	µg/L	3.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-10	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	3.6E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-10	M
				Benzo(a)pyrene	2E-02	µg/L	4.6E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-09	M
				Benzo(b)fluoranthene	2E-02	µg/L	6.3E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-10	M
				Benzo(k)fluoranthene	9E-03	µg/L	2.8E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.6E-12	M
				Chrysene	2E-02	µg/L	6.1E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.1E-12	M
				Dibenz(a,h)anthracene	4E-03	µg/L	1.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.1E-10	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	2.6E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.0E-11	M
				Naphthalene	4E-02	µg/L	1.1E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	3.6E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.1E-10	--
				Trichloroethylene	1E-01	µg/L	4.0E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	6.3E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	2.1E-08	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	3.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-08	--
				Chromium [as Cr(III)]	1E+00	µg/L	3.9E-08	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	6.7E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.2E-08	M
				Iron	5E+02	µg/L	1.6E-05	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	2.1E-06	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	8.0E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	3.7E-10	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	2.4E-07	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.4E-08	
				Total DLCs (based on KM TEQs)							1.2E-08	

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total PCDD/Fs (excluding KM TEQ)							1.4E-08	
				Total PCDD/Fs (based on KM TEQ)							1.1E-08	
				Total DL-PCBs (excluding KM TEQ)							4.1E-10	
				Total DL-PCBs (based on KM TEQ)							5.0E-10	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							4.1E-10	
				Total PCBs (DL & NDL; based on KM TEQ)							5.0E-10	
				Total PAHs							2.4E-09	
				Total Organics							7.4E-10	
				Total Inorganics							7.0E-08	
		Surface Water Ingestion Total (excluding KM TEQs)									8.7E-08	
		Surface Water Ingestion Total (based on KM TEQs)									8.4E-08	
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	2.3E-08	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	1.2E-08	mg/kg-day	3.1E-02	(mg/kg-day)-1	3.6E-10	--
				Trichloroethylene	1E-01	µg/L	2.2E-08	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.1E-09	M
				Inorganics								
				Antimony	7E-01	µg/L	7.3E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	1.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-08	--
				Chromium [as Cr(III)]	1E+00	µg/L	1.3E-08	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	4.6E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.9E-07	M
				Iron	5E+02	µg/L	5.5E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	7.2E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	2.7E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	1.3E-10	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	8.2E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							2.5E-09	
				Total Inorganics							2.1E-07	
		Surface Water Dermal Total (excluding KM TEQs)									2.1E-07	
		Surface Water Dermal Total (based on KM TEQs)									2.1E-07	
Swimmer Surface Water Total (excluding KM TEQs)											3.0E-07	
Swimmer Surface Water Total (based on KM TEQs)											3.0E-07	
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											2.8E-06	
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											2.7E-06	
Surface Water	Surface Water	Boater	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	6.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.5E-09	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-10	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-10	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-10	--
				OCDD	6E-05	µg/L	3.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-10	--
				2,3,7,8-TCDF	5E-07	µg/L	2.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-10	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.5E-11	--

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-09	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-10	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-10	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-11	--
				OCDF	1E-05	µg/L	8.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--
				KM TEQ DF	2E-06	µg/L	1.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-08	--
				PCB-77	2E-05	µg/L	1.1E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-11	--
				PCB-81	7E-07	µg/L	3.8E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-12	--
				PCB-105	7E-05	µg/L	4.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-11	--
				PCB-114	4E-06	µg/L	2.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-13	--
				PCB-118	2E-04	µg/L	9.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-11	--
				PCB-123	3E-06	µg/L	1.8E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-13	--
				PCB-126	7E-07	µg/L	3.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-10	--
				PCB-156/157	2E-05	µg/L	1.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-12	--
				PCB-167	7E-06	µg/L	3.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-12	--
				PCB-169	4E-07	µg/L	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--
				PCB-189	9E-07	µg/L	4.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-13	--
				KM TEQ PCB	1E-07	µg/L	6.1E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.1E-10	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	6.6E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.6E-11	M
				Benzo(a)pyrene	2E-02	µg/L	8.5E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.5E-10	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-10	M
				Benzo(k)fluoranthene	9E-03	µg/L	5.1E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.1E-12	M
				Chrysene	2E-02	µg/L	1.1E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.1E-12	M
				Dibenz(a,h)anthracene	4E-03	µg/L	2.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.2E-10	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.8E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-11	M
				Naphthalene	4E-02	µg/L	2.0E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	6.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.1E-10	--
				Trichloroethylene	1E-01	µg/L	7.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.4E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	3.9E-08	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	7.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--
				Chromium [as Cr(III)]	1E+00	µg/L	7.2E-08	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.2E-08	mg/kg-day	5.0E-01	(mg/kg-day)-1	6.2E-09	M
				Iron	5E+02	µg/L	3.0E-05	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	3.9E-06	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	1.5E-09	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	6.9E-10	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	4.4E-07	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.6E-08	
				Total DLCs (based on KM TEQs)							2.1E-08	
				Total PCDD/Fs (excluding KM TEQ)							2.5E-08	
				Total PCDD/Fs (based on KM TEQ)							2.0E-08	

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total DL-PCBs (excluding KM TEQ)							7.5E-10	
				Total DL-PCBs (based on KM TEQ)							9.1E-10	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							7.5E-10	
				Total PCBs (DL & NDL; based on KM TEQ)							9.1E-10	
				Total PAHs							1.3E-09	
				Total Organics							5.4E-10	
				Total Inorganics							1.1E-07	
		Surface Water Ingestion Total (excluding KM TEQs)									1.4E-07	
		Surface Water Ingestion Total (based on KM TEQs)									1.4E-07	
Surface Water	Surface Water	Boater	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	3.4E-08	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	1.6E-08	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.1E-10	--
				Trichloroethylene	1E-01	µg/L	3.2E-08	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.5E-09	M
				Inorganics								
				Antimony	7E-01	µg/L	9.5E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	1.7E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-08	--
				Chromium [as Cr(III)]	1E+00	µg/L	1.8E-08	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	6.1E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.2E-07	M
				Iron	5E+02	µg/L	7.3E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	9.4E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	3.6E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	1.7E-10	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	1.1E-07	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							2.0E-09	
				Total Inorganics							1.5E-07	
		Surface Water Dermal Total (excluding KM TEQs)									1.5E-07	
		Surface Water Dermal Total (based on KM TEQs)									1.5E-07	
Boater Surface Water Total (excluding KM TEQs)											2.9E-07	
Boater Surface Water Total (based on KM TEQs)											2.9E-07	
Boater Sediment Total + Surface Water Total (excluding KM TEQs)											7.1E-07	
Boater Sediment Total + Surface Water Total (based on KM TEQs)											7.0E-07	

Note: Sediment and surface water boater risks are for adult only, since the child is not expected to participate in boating activities on the Bay.

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

TABLE 7.B RME
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		
							Value	Units	Value	Units	Cancer Risk[a]

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-06	mg/kg	3.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-06	--	2.6E-10	mg/kg-day	7.0E-10	mg/kg-day	3.7E-01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-07	--	1.4E-11	mg/kg-day	7.0E-10	mg/kg-day	2.0E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	8.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-08	--	6.4E-12	mg/kg-day	7.0E-09	mg/kg-day	9.2E-04
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	2.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-08	--	2.0E-11	mg/kg-day	7.0E-09	mg/kg-day	2.8E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	6.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-09	--	4.7E-12	mg/kg-day	7.0E-09	mg/kg-day	6.7E-04
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	2.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-09	--	2.2E-11	mg/kg-day	7.0E-08	mg/kg-day	3.2E-04
				OCDD	4E-06	mg/kg	1.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.6E-10	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.6E-05
				2,3,7,8-TCDF	2E-06	mg/kg	6.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--	5.3E-11	mg/kg-day	7.0E-09	mg/kg-day	7.6E-03
				1,2,3,7,8-PeCDF	2E-06	mg/kg	6.2E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-08	--	4.8E-11	mg/kg-day	2.3E-08	mg/kg-day	2.1E-03
				2,3,4,7,8-PeCDF	2E-06	mg/kg	9.9E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.4E-07	--	7.7E-11	mg/kg-day	2.3E-09	mg/kg-day	3.3E-02
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	4.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-08	--	3.5E-11	mg/kg-day	7.0E-09	mg/kg-day	4.9E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	4.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-08	--	3.1E-11	mg/kg-day	7.0E-09	mg/kg-day	4.4E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-09	--	3.6E-12	mg/kg-day	7.0E-09	mg/kg-day	5.1E-04
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	6.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	5.3E-12	mg/kg-day	7.0E-09	mg/kg-day	7.6E-04
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	9.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-08	--	7.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.0E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-10	--	3.4E-12	mg/kg-day	7.0E-08	mg/kg-day	4.9E-05
				OCDF	2E-07	mg/kg	9.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.1E-11	--	7.2E-12	mg/kg-day	2.3E-06	mg/kg-day	3.1E-06
				KM TEQ DF	1E-05	mg/kg	4.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.0E-06	--	3.1E-10	mg/kg-day	7.0E-10	mg/kg-day	4.4E-01
				PCB-77	5E-04	mg/kg	2.2E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.3E-08	--	1.7E-08	mg/kg-day	7.0E-06	mg/kg-day	2.4E-03
				PCB-81	2E-05	mg/kg	8.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.8E-09	--	6.6E-10	mg/kg-day	2.3E-06	mg/kg-day	2.8E-04
				PCB-105	8E-03	mg/kg	3.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	2.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-114	6E-04	mg/kg	2.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-08	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.7E-04
				PCB-118	3E-02	mg/kg	1.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-07	--	1.1E-06	mg/kg-day	2.3E-05	mg/kg-day	4.6E-02
				PCB-123	6E-04	mg/kg	2.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	1.9E-08	mg/kg-day	2.3E-05	mg/kg-day	8.3E-04
				PCB-126	9E-05	mg/kg	4.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-06	--	3.1E-09	mg/kg-day	7.0E-09	mg/kg-day	4.5E-01
				PCB-156/157	3E-03	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-08	--	9.7E-08	mg/kg-day	2.3E-05	mg/kg-day	4.2E-03
				PCB-167	1E-03	mg/kg	5.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-08	--	4.3E-08	mg/kg-day	2.3E-05	mg/kg-day	1.8E-03
				PCB-169	4E-06	mg/kg	1.7E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.6E-08	--	1.3E-10	mg/kg-day	2.3E-08	mg/kg-day	5.6E-03
				PCB-189	2E-04	mg/kg	1.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-09	--	7.8E-09	mg/kg-day	2.3E-05	mg/kg-day	3.3E-04
				KM TEQ PCB	1E-05	mg/kg	5.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.7E-06	--	4.0E-10	mg/kg-day	7.0E-10	mg/kg-day	5.7E-01
				Non-DL PCBs													
				Total Non-DL PCBs	4E-01	mg/kg	1.8E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-06	--	1.4E-05	mg/kg-day	2.0E-05	mg/kg-day	7.1E-01
				PAHs													
				Benz(a)anthracene	8E-03	mg/kg	5.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.2E-09	M	4.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8E-03	mg/kg	5.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.2E-08	M	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Benzo(b)fluoranthene	8E-03	mg/kg	5.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.2E-09	M	4.0E-07	mg/kg-day	--	--	--
				Chrysene	8E-03	mg/kg	5.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.2E-11	M	4.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	8E-03	mg/kg	5.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.2E-08	M	4.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	5.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.2E-09	M	4.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-02	mg/kg	7.7E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.9E-08	--	6.0E-07	mg/kg-day	3.0E-05	mg/kg-day	2.0E-02
				2,4'-DDE	6E-03	mg/kg	2.4E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.3E-09	--	1.9E-07	mg/kg-day	3.0E-04	mg/kg-day	6.3E-04
				2,4'-DDT	3E-03	mg/kg	1.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.6E-09	--	1.3E-07	mg/kg-day	5.0E-04	mg/kg-day	2.6E-04
				4,4'-DDD	9E-02	mg/kg	3.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.2E-08	--	3.0E-06	mg/kg-day	3.0E-05	mg/kg-day	9.9E-02
				4,4'-DDE	1E-01	mg/kg	5.2E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-07	--	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				4,4'-DDT	1E-02	mg/kg	6.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-08	--	5.3E-07	mg/kg-day	5.0E-04	mg/kg-day	1.1E-03
				Benzaldehyde	1E+00	mg/kg	8.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.2E-08	--	6.3E-05	mg/kg-day	1.0E-01	mg/kg-day	6.3E-04
				Chlordane, alpha (cis)	2E-02	mg/kg	6.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-08	--	4.9E-07	mg/kg-day	5.0E-04	mg/kg-day	9.8E-04
				Chlordane, gamma (trans)	4E-03	mg/kg	1.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.3E-09	--	1.2E-07	mg/kg-day	5.0E-04	mg/kg-day	2.4E-04
				Dieldrin	8E-03	mg/kg	3.3E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.3E-07	--	2.6E-07	mg/kg-day	5.0E-05	mg/kg-day	5.2E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	7.2E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.6E-08	--	5.6E-08	mg/kg-day	1.3E-05	mg/kg-day	4.3E-03

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Heptachlor epoxide, trans-	9E-05	mg/kg	3.5E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.2E-09	--	2.7E-09	mg/kg-day	1.3E-05	mg/kg-day	2.1E-04
				Hexachlorobenzene	1E-03	mg/kg	6.1E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	9.8E-09	--	4.8E-08	mg/kg-day	8.0E-04	mg/kg-day	6.0E-05
				Mirex	3E-04	mg/kg	6.7E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.2E-08	--	5.2E-09	mg/kg-day	2.0E-04	mg/kg-day	2.6E-05
				Nonachlor, cis-	6E-03	mg/kg	2.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.2E-09	--	2.0E-07	mg/kg-day	1.0E-04	mg/kg-day	2.0E-03
				Nonachlor, trans-	2E-02	mg/kg	6.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.4E-08	--	5.4E-07	mg/kg-day	1.6E-05	mg/kg-day	3.5E-02
				Oxychlordane	5E-03	mg/kg	1.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.6E-09	--	1.5E-07	mg/kg-day	8.9E-05	mg/kg-day	1.6E-03
				Pyridine	1E+00	mg/kg	8.0E-06	mg/kg-day	--	--	--	--	6.3E-05	mg/kg-day	1.0E-03	mg/kg-day	6.3E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	4.0E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.0E+00	mg/kg-day	3.1E-04
				Arsenic, organic	1E+00	mg/kg	6.4E-06	mg/kg-day	--	--	--	--	5.0E-05	mg/kg-day	2.0E-02	mg/kg-day	2.5E-03
				Arsenic, inorganic	1E-01	mg/kg	7.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-06	--	5.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Cadmium	5E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03
				Chromium [as Cr(III)]	6E-01	mg/kg	4.0E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.5E+00	mg/kg-day	2.1E-05
				Cobalt	2E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.6E-02
				Copper	5E-01	mg/kg	3.0E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	1.0E-03	mg/kg-day	2.3E-02
				Iron	7E+00	mg/kg	4.4E-05	mg/kg-day	--	--	--	--	3.4E-04	mg/kg-day	7.0E-01	mg/kg-day	4.9E-04
				Lead	4E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.8E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	1.4E-01	mg/kg-day	9.9E-05
				Mercury	3E-01	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	4.9E-02
				Methyl Mercury	4E-01	mg/kg	2.2E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.0E-04	mg/kg-day	1.7E-01
				Selenium	5E-01	mg/kg	3.4E-06	mg/kg-day	--	--	--	--	2.6E-05	mg/kg-day	5.0E-03	mg/kg-day	5.2E-03
				Silver	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	5.0E-03	mg/kg-day	1.9E-04
				Vanadium	3E-02	mg/kg	1.7E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	5.0E-03	mg/kg-day	2.7E-04
				Zinc	1E+01	mg/kg	9.1E-05	mg/kg-day	--	--	--	--	7.1E-04	mg/kg-day	3.0E-01	mg/kg-day	2.4E-03
				Total DLCs (excluding KM TEQs)							1.3E-05						9.7E-01
				Total DLCs (based on KM TEQs)							1.4E-05						1.0E+00
				Total PCDD/Fs (excluding KM TEQ)							6.1E-06						4.5E-01
				Total PCDD/Fs (based on KM TEQ)							6.0E-06						4.4E-01
				Total DL-PCBs (excluding KM TEQ)							7.0E-06						5.2E-01
				Total DL-PCBs (based on KM TEQ)							7.7E-06						5.7E-01
				Total Non-DL PCBs							1.8E-06						7.1E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							8.8E-06						1.2E+00
				Total PCBs (DL & NDL; based on KM TEQ)							9.5E-06						1.3E+00
				Total PAHs							1.2E-07						1.3E-03
				Total Organics							1.0E-06						2.5E-01
				Total Inorganics							1.1E-06						3.1E-01
		Mixed Fish/All Species Total (excluding KM TEQs)									1.7E-05						2.2E+00
		Mixed Fish/All Species Total (based on KM TEQs)									1.8E-05						2.3E+00
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	3.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.3E-06	--	2.8E-10	mg/kg-day	7.0E-10	mg/kg-day	4.0E-01
				1,2,3,7,8-PeCDD	7E-07	mg/kg	2.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-07	--	2.2E-11	mg/kg-day	7.0E-10	mg/kg-day	3.2E-02
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	7.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	6.0E-11	mg/kg-day	7.0E-09	mg/kg-day	8.5E-03
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	1.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-08	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.6E-03
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	5.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.9E-09	--	4.1E-11	mg/kg-day	7.0E-08	mg/kg-day	5.8E-04
				OCDD	3E-06	mg/kg	1.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.8E-10	--	1.0E-10	mg/kg-day	2.3E-06	mg/kg-day	4.3E-05
				2,3,7,8-TCDF	1E-07	mg/kg	4.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-09	--	3.3E-12	mg/kg-day	7.0E-09	mg/kg-day	4.7E-04
				1,2,3,7,8-PeCDF	1E-06	mg/kg	5.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-08	--	4.4E-11	mg/kg-day	2.3E-08	mg/kg-day	1.9E-03
				2,3,4,7,8-PeCDF	4E-06	mg/kg	1.6E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.0E-07	--	1.2E-10	mg/kg-day	2.3E-09	mg/kg-day	5.2E-02
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	8.5E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	8.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	6.4E-11	mg/kg-day	7.0E-09	mg/kg-day	9.1E-03

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-09	--	3.6E-12	mg/kg-day	7.0E-09	mg/kg-day	5.1E-04
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-08	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.6E-03
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	1.9E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-08	--	1.5E-10	mg/kg-day	7.0E-08	mg/kg-day	2.1E-03
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	6.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.8E-10	--	5.1E-12	mg/kg-day	7.0E-08	mg/kg-day	7.3E-05
				OCDF	4E-07	mg/kg	1.5E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.6E-11	--	1.1E-11	mg/kg-day	2.3E-06	mg/kg-day	4.9E-06
				KM TEQ DF	1E-05	mg/kg	4.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.8E-06	--	3.5E-10	mg/kg-day	7.0E-10	mg/kg-day	5.1E-01
				PCB-77	7E-05	mg/kg	3.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.0E-09	--	2.6E-09	mg/kg-day	7.0E-06	mg/kg-day	3.7E-04
				PCB-81	1E-05	mg/kg	5.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-09	--	4.1E-10	mg/kg-day	2.3E-06	mg/kg-day	1.7E-04
				PCB-105	2E-02	mg/kg	9.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-07	--	7.2E-07	mg/kg-day	2.3E-05	mg/kg-day	3.1E-02
				PCB-114	1E-03	mg/kg	5.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-08	--	4.6E-08	mg/kg-day	2.3E-05	mg/kg-day	2.0E-03
				PCB-118	7E-02	mg/kg	3.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-06	--	2.5E-06	mg/kg-day	2.3E-05	mg/kg-day	1.1E-01
				PCB-123	1E-03	mg/kg	6.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-08	--	4.9E-08	mg/kg-day	2.3E-05	mg/kg-day	2.1E-03
				PCB-126	1E-04	mg/kg	5.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-06	--	4.1E-09	mg/kg-day	7.0E-09	mg/kg-day	5.9E-01
				PCB-156/157	6E-03	mg/kg	2.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--	2.1E-07	mg/kg-day	2.3E-05	mg/kg-day	9.2E-03
				PCB-167	3E-03	mg/kg	1.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.4E-08	--	9.4E-08	mg/kg-day	2.3E-05	mg/kg-day	4.0E-03
				PCB-169	4E-06	mg/kg	1.9E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.7E-08	--	1.5E-10	mg/kg-day	2.3E-08	mg/kg-day	6.5E-03
				PCB-189	5E-04	mg/kg	2.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.7E-09	--	1.7E-08	mg/kg-day	2.3E-05	mg/kg-day	7.2E-04
				KM TEQ PCB	2E-05	mg/kg	9.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-05	--	7.5E-10	mg/kg-day	7.0E-10	mg/kg-day	1.1E+00
				Non-DL PCBs													
				Total Non-DL PCBs	6E-01	mg/kg	2.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.6E-06	--	2.0E-05	mg/kg-day	2.0E-05	mg/kg-day	1.0E+00
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.0E-09	M	6.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.0E-08	M	6.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.1E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.0E-09	M	6.3E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.0E-11	M	6.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.0E-08	M	6.3E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.0E-09	M	6.3E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	1.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.1E-09	--	1.0E-07	mg/kg-day	3.0E-05	mg/kg-day	3.4E-03
				2,4'-DDE	2E-03	mg/kg	8.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.8E-09	--	6.4E-08	mg/kg-day	3.0E-04	mg/kg-day	2.1E-04
				2,4'-DDT	4E-04	mg/kg	1.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.8E-10	--	1.3E-08	mg/kg-day	5.0E-04	mg/kg-day	2.6E-05
				4,4'-DDD	1E-01	mg/kg	5.6E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-07	--	4.4E-06	mg/kg-day	3.0E-05	mg/kg-day	1.5E-01
				4,4'-DDE	3E-01	mg/kg	1.2E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-07	--	9.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				4,4'-DDT	8E-03	mg/kg	3.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-08	--	2.8E-07	mg/kg-day	5.0E-04	mg/kg-day	5.7E-04
				Benzaldehyde	1E+00	mg/kg	8.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.2E-08	--	6.3E-05	mg/kg-day	1.0E-01	mg/kg-day	6.3E-04
				Chlordane, alpha (cis)	1E-02	mg/kg	5.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.9E-08	--	4.2E-07	mg/kg-day	5.0E-04	mg/kg-day	8.5E-04
				Chlordane, gamma (trans)	4E-03	mg/kg	1.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.7E-09	--	1.3E-07	mg/kg-day	5.0E-04	mg/kg-day	2.5E-04
				Dieldrin	1E-02	mg/kg	6.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	9.9E-07	--	4.8E-07	mg/kg-day	5.0E-05	mg/kg-day	9.6E-03
				Heptachlor epoxide, cis-	4E-03	mg/kg	1.5E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.3E-07	--	1.1E-07	mg/kg-day	1.3E-05	mg/kg-day	8.7E-03
				Heptachlor epoxide, trans-	4E-04	mg/kg	1.5E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-08	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	8.9E-04
				Hexachlorobenzene	4E-03	mg/kg	1.7E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.7E-08	--	1.3E-07	mg/kg-day	8.0E-04	mg/kg-day	1.6E-04
				Mirex	4E-04	mg/kg	1.1E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.0E-08	--	8.7E-09	mg/kg-day	2.0E-04	mg/kg-day	4.3E-05
				Nonachlor, cis-	1E-02	mg/kg	4.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-08	--	3.4E-07	mg/kg-day	1.0E-04	mg/kg-day	3.4E-03
				Nonachlor, trans-	3E-02	mg/kg	1.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.1E-08	--	9.1E-07	mg/kg-day	1.6E-05	mg/kg-day	5.9E-02
				Oxychlordane	1E-02	mg/kg	5.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-08	--	4.5E-07	mg/kg-day	8.9E-05	mg/kg-day	5.1E-03
				Pyridine	1E+00	mg/kg	8.0E-06	mg/kg-day	--	--	--	--	6.3E-05	mg/kg-day	1.0E-03	mg/kg-day	6.3E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	3.9E-05	mg/kg-day	--	--	--	--	3.0E-04	mg/kg-day	1.0E+00	mg/kg-day	3.0E-04
				Arsenic, organic	1E+00	mg/kg	6.6E-06	mg/kg-day	--	--	--	--	5.2E-05	mg/kg-day	2.0E-02	mg/kg-day	2.6E-03
				Arsenic, inorganic	1E-01	mg/kg	7.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-06	--	5.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Cadmium	5E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium [as Cr(III)]	2E+00	mg/kg	1.5E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	1.5E+00	mg/kg-day	7.8E-05
				Cobalt	7E-03	mg/kg	4.3E-08	mg/kg-day	--	--	--	--	3.4E-07	mg/kg-day	3.0E-04	mg/kg-day	1.1E-03
				Copper	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.0E-03	mg/kg-day	1.0E-02
				Iron	8E+00	mg/kg	4.7E-05	mg/kg-day	--	--	--	--	3.6E-04	mg/kg-day	7.0E-01	mg/kg-day	5.2E-04
				Lead	2E-02	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.4E-01	mg/kg-day	1.2E-04
				Mercury	4E-01	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	3.0E-04	mg/kg-day	6.7E-02
				Methyl Mercury	5E-01	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	1.0E-04	mg/kg-day	2.2E-01
				Selenium	5E-01	mg/kg	3.2E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	5.0E-03	mg/kg-day	4.9E-03
				Silver	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.5E-07	mg/kg-day	5.0E-03	mg/kg-day	1.9E-04
				Vanadium	2E-02	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.2E-04
				Zinc	3E+01	mg/kg	1.8E-04	mg/kg-day	--	--	--	--	1.4E-03	mg/kg-day	3.0E-01	mg/kg-day	4.7E-03
				Total DLCs (excluding KM TEQs)							1.7E-05						1.3E+00
				Total DLCs (based on KM TEQs)							2.1E-05						1.6E+00
				Total PCDD/Fs (excluding KM TEQ)							7.0E-06						5.2E-01
				Total PCDD/Fs (based on KM TEQ)							6.8E-06						5.1E-01
				Total DL-PCBs (excluding KM TEQ)							1.0E-05						7.5E-01
				Total DL-PCBs (based on KM TEQ)							1.4E-05						1.1E+00
				Total Non-DL PCBs							2.6E-06						1.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-05						1.8E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.7E-05						2.1E+00
				Total PAHs							1.9E-07						2.1E-03
				Total Organics							1.9E-06						3.3E-01
				Total Inorganics							1.1E-06						3.3E-01
		American Eel Total (excluding KM TEQs)									2.3E-05						3.0E+00
		American Eel Total (based on KM TEQs)									2.7E-05						3.3E+00
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	mg/kg	6.0E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.0E-07	--	4.7E-11	mg/kg-day	7.0E-10	mg/kg-day	6.7E-02
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-07	--	9.4E-12	mg/kg-day	7.0E-10	mg/kg-day	1.3E-02
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	2.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-09	--	2.3E-12	mg/kg-day	7.0E-09	mg/kg-day	3.3E-04
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	8.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-08	--	6.3E-12	mg/kg-day	7.0E-09	mg/kg-day	9.0E-04
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-09	--	2.2E-12	mg/kg-day	7.0E-09	mg/kg-day	3.1E-04
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	5.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-10	--	4.5E-12	mg/kg-day	7.0E-08	mg/kg-day	6.4E-05
				OCDD	3E-07	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-11	--	8.1E-12	mg/kg-day	2.3E-06	mg/kg-day	3.5E-06
				2,3,7,8-TCDF	4E-07	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.7E-03
				1,2,3,7,8-PeCDF	7E-07	mg/kg	2.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-08	--	2.1E-11	mg/kg-day	2.3E-08	mg/kg-day	9.0E-04
				2,3,4,7,8-PeCDF	8E-07	mg/kg	3.0E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.4E-07	--	2.4E-11	mg/kg-day	2.3E-09	mg/kg-day	1.0E-02
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	3.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-09	--	3.0E-12	mg/kg-day	7.0E-09	mg/kg-day	4.2E-04
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	9.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--	7.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	3.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-09	--	2.7E-12	mg/kg-day	7.0E-09	mg/kg-day	3.8E-04
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	2.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.5E-04
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	2.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.0E-09	--	2.1E-11	mg/kg-day	7.0E-08	mg/kg-day	3.0E-04
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	3.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.6E-10	--	2.4E-12	mg/kg-day	7.0E-08	mg/kg-day	3.4E-05
				OCDF	2E-07	mg/kg	6.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--	5.4E-12	mg/kg-day	2.3E-06	mg/kg-day	2.3E-06
				KM TEQ DF	2E-06	mg/kg	8.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-06	--	6.3E-11	mg/kg-day	7.0E-10	mg/kg-day	9.1E-02
				PCB-77	1E-04	mg/kg	4.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.5E-09	--	3.4E-09	mg/kg-day	7.0E-06	mg/kg-day	4.8E-04
				PCB-81	4E-06	mg/kg	1.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.2E-10	--	1.2E-10	mg/kg-day	2.3E-06	mg/kg-day	5.3E-05
				PCB-105	1E-03	mg/kg	5.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-08	--	4.3E-08	mg/kg-day	2.3E-05	mg/kg-day	1.9E-03
				PCB-114	8E-05	mg/kg	3.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--	2.6E-09	mg/kg-day	2.3E-05	mg/kg-day	1.1E-04
				PCB-118	5E-03	mg/kg	2.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-07	--	1.8E-07	mg/kg-day	2.3E-05	mg/kg-day	7.8E-03
				PCB-123	7E-05	mg/kg	3.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-09	--	2.6E-09	mg/kg-day	2.3E-05	mg/kg-day	1.1E-04

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-126	4E-05	mg/kg	1.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.9E-01
				PCB-156/157	6E-04	mg/kg	2.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.4E-04
				PCB-167	3E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.8E-09	--	1.0E-08	mg/kg-day	2.3E-05	mg/kg-day	4.3E-04
				PCB-169	2E-06	mg/kg	8.0E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.6E-08	--	6.2E-11	mg/kg-day	2.3E-08	mg/kg-day	2.7E-03
				PCB-189	6E-05	mg/kg	2.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-09	--	2.0E-09	mg/kg-day	2.3E-05	mg/kg-day	8.4E-05
				KM TEQ PCB	4E-06	mg/kg	1.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-06	--	1.4E-10	mg/kg-day	7.0E-10	mg/kg-day	2.0E-01
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	5.3E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.3E-07	--	4.1E-06	mg/kg-day	2.0E-05	mg/kg-day	2.1E-01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.5E-04
				Benzo(b)fluoranthene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	6E-04	mg/kg	2.4E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.8E-10	--	1.9E-08	mg/kg-day	3.0E-05	mg/kg-day	6.3E-04
				2,4'-DDE	1E-03	mg/kg	4.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-09	--	3.4E-08	mg/kg-day	3.0E-04	mg/kg-day	1.1E-04
				2,4'-DDT	2E-04	mg/kg	1.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.5E-10	--	8.1E-09	mg/kg-day	5.0E-04	mg/kg-day	1.6E-05
				4,4'-DDD	6E-03	mg/kg	2.8E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.6E-09	--	2.2E-07	mg/kg-day	3.0E-05	mg/kg-day	7.2E-03
				4,4'-DDE	3E-02	mg/kg	1.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-08	--	9.9E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-03
				4,4'-DDT	2E-02	mg/kg	9.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.4E-08	--	7.7E-07	mg/kg-day	5.0E-04	mg/kg-day	1.5E-03
				Benzaldehyde	1E+00	mg/kg	8.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.2E-08	--	6.3E-05	mg/kg-day	1.0E-01	mg/kg-day	6.3E-04
				Chlordane, alpha (cis)	6E-03	mg/kg	2.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.0E-09	--	1.8E-07	mg/kg-day	5.0E-04	mg/kg-day	3.6E-04
				Chlordane, gamma (trans)	2E-03	mg/kg	9.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.3E-09	--	7.4E-08	mg/kg-day	5.0E-04	mg/kg-day	1.5E-04
				Dieldrin	5E-03	mg/kg	2.0E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.1E-07	--	1.5E-07	mg/kg-day	5.0E-05	mg/kg-day	3.0E-03
				Heptachlor epoxide, cis-	1E-03	mg/kg	4.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.3E-08	--	3.7E-08	mg/kg-day	1.3E-05	mg/kg-day	2.8E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	6.6E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.0E-10	--	5.2E-10	mg/kg-day	1.3E-05	mg/kg-day	4.0E-05
				Hexachlorobenzene	5E-04	mg/kg	2.2E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.6E-09	--	1.7E-08	mg/kg-day	8.0E-04	mg/kg-day	2.2E-05
				Mirex	1E-04	mg/kg	3.5E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	6.4E-09	--	2.8E-09	mg/kg-day	2.0E-04	mg/kg-day	1.4E-05
				Nonachlor, cis-	2E-03	mg/kg	6.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.4E-09	--	5.3E-08	mg/kg-day	1.0E-04	mg/kg-day	5.3E-04
				Nonachlor, trans-	3E-03	mg/kg	1.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-09	--	1.1E-07	mg/kg-day	1.6E-05	mg/kg-day	6.8E-03
				Oxychlordane	3E-04	mg/kg	1.4E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.0E-10	--	1.1E-08	mg/kg-day	8.9E-05	mg/kg-day	1.2E-04
				Pyridine	1E+00	mg/kg	8.0E-06	mg/kg-day	--	--	--	--	6.3E-05	mg/kg-day	1.0E-03	mg/kg-day	6.3E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	3.7E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	1.0E+00	mg/kg-day	2.9E-04
				Arsenic, organic	6E-01	mg/kg	4.0E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	2.0E-02	mg/kg-day	1.6E-03
				Arsenic, inorganic	7E-02	mg/kg	4.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.7E-07	--	3.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Cadmium	5E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03
				Chromium [as Cr(III)]	9E-02	mg/kg	5.5E-07	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	1.5E+00	mg/kg-day	2.8E-06
				Cobalt	2E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.6E-02
				Copper	8E-01	mg/kg	4.9E-06	mg/kg-day	--	--	--	--	3.8E-05	mg/kg-day	1.0E-03	mg/kg-day	3.8E-02
				Iron	1E+01	mg/kg	6.1E-05	mg/kg-day	--	--	--	--	4.8E-04	mg/kg-day	7.0E-01	mg/kg-day	6.8E-04
				Lead	4E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--	--	2.0E-06	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	8.8E-06	mg/kg-day	1.4E-01	mg/kg-day	6.3E-05
				Mercury	3E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	3.0E-04	mg/kg-day	5.2E-02
				Methyl Mercury	4E-01	mg/kg	2.4E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	1.0E-04	mg/kg-day	1.9E-01
				Selenium	5E-01	mg/kg	3.3E-06	mg/kg-day	--	--	--	--	2.6E-05	mg/kg-day	5.0E-03	mg/kg-day	5.2E-03
				Silver	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	5.0E-03	mg/kg-day	1.9E-04
				Vanadium	2E-02	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.2E-04
				Zinc	2E+01	mg/kg	1.1E-04	mg/kg-day	--	--	--	--	8.4E-04	mg/kg-day	3.0E-01	mg/kg-day	2.8E-03

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total DLCs (excluding KM TEQs)							4.1E-06						3.0E-01
				Total DLCs (based on KM TEQs)							3.9E-06						2.9E-01
				Total PCDD/Fs (excluding KM TEQ)							1.3E-06						9.7E-02
				Total PCDD/Fs (based on KM TEQ)							1.2E-06						9.1E-02
				Total DL-PCBs (excluding KM TEQ)							2.8E-06						2.0E-01
				Total DL-PCBs (based on KM TEQ)							2.7E-06						2.0E-01
				Total Non-DL PCBs							5.3E-07						2.1E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							3.3E-06						4.1E-01
				Total PCBs (DL & NDL; based on KM TEQ)							3.2E-06						4.1E-01
				Total PAHs							7.5E-08						8.5E-04
				Total Organics							5.0E-07						9.0E-02
				Total Inorganics							6.7E-07						3.4E-01
		Bluefish Total (excluding KM TEQs)									5.8E-06						9.4E-01
		Bluefish Total (based on KM TEQs)									5.7E-06						9.2E-01
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	3.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.7E-06	--	3.0E-10	mg/kg-day	7.0E-10	mg/kg-day	4.2E-01
				1,2,3,7,8-PeCDD	5E-07	mg/kg	2.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-07	--	1.7E-11	mg/kg-day	7.0E-10	mg/kg-day	2.5E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	8.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-08	--	6.4E-12	mg/kg-day	7.0E-09	mg/kg-day	9.2E-04
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	8.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--	6.6E-12	mg/kg-day	7.0E-09	mg/kg-day	9.4E-04
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	3.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-09	--	2.7E-12	mg/kg-day	7.0E-09	mg/kg-day	3.9E-04
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	5.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.7E-09	--	4.5E-11	mg/kg-day	7.0E-08	mg/kg-day	6.5E-04
				OCDD	2E-05	mg/kg	6.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-09	--	5.1E-10	mg/kg-day	2.3E-06	mg/kg-day	2.2E-04
				2,3,7,8-TCDF	4E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.7E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	8.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-08	--	6.9E-11	mg/kg-day	2.3E-08	mg/kg-day	3.0E-03
				2,3,4,7,8-PeCDF	3E-06	mg/kg	1.3E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.0E-07	--	1.0E-10	mg/kg-day	2.3E-09	mg/kg-day	4.4E-02
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	4.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.4E-08	--	3.8E-11	mg/kg-day	7.0E-09	mg/kg-day	5.5E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-09	--	3.8E-12	mg/kg-day	7.0E-09	mg/kg-day	5.4E-04
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	4.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-09	--	3.1E-12	mg/kg-day	7.0E-09	mg/kg-day	4.4E-04
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	1.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-08	--	1.0E-10	mg/kg-day	7.0E-08	mg/kg-day	1.5E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-10	--	3.4E-12	mg/kg-day	7.0E-08	mg/kg-day	4.9E-05
				OCDF	2E-07	mg/kg	7.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-11	--	6.0E-12	mg/kg-day	2.3E-06	mg/kg-day	2.6E-06
				KM TEQ DF	1E-05	mg/kg	4.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.1E-06	--	3.7E-10	mg/kg-day	7.0E-10	mg/kg-day	5.2E-01
				PCB-77	1E-03	mg/kg	5.1E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.6E-08	--	4.0E-08	mg/kg-day	7.0E-06	mg/kg-day	5.6E-03
				PCB-81	3E-05	mg/kg	1.3E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.7E-09	--	9.8E-10	mg/kg-day	2.3E-06	mg/kg-day	4.2E-04
				PCB-105	6E-03	mg/kg	2.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--	2.0E-07	mg/kg-day	2.3E-05	mg/kg-day	8.8E-03
				PCB-114	7E-04	mg/kg	3.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-08	--	2.5E-08	mg/kg-day	2.3E-05	mg/kg-day	1.1E-03
				PCB-118	4E-02	mg/kg	1.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.5E-07	--	1.3E-06	mg/kg-day	2.3E-05	mg/kg-day	5.5E-02
				PCB-123	6E-04	mg/kg	2.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.4E-04
				PCB-126	2E-04	mg/kg	8.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-05	--	6.5E-09	mg/kg-day	7.0E-09	mg/kg-day	9.3E-01
				PCB-156/157	3E-03	mg/kg	1.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.6E-08	--	1.1E-07	mg/kg-day	2.3E-05	mg/kg-day	4.9E-03
				PCB-167	1E-03	mg/kg	6.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-08	--	5.1E-08	mg/kg-day	2.3E-05	mg/kg-day	2.2E-03
				PCB-169	3E-06	mg/kg	1.5E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.7E-08	--	1.2E-10	mg/kg-day	2.3E-08	mg/kg-day	5.0E-03
				PCB-189	3E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.7E-09	--	9.9E-09	mg/kg-day	2.3E-05	mg/kg-day	4.2E-04
				KM TEQ PCB	2E-05	mg/kg	8.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-05	--	6.7E-10	mg/kg-day	7.0E-10	mg/kg-day	9.6E-01
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	3.2E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.2E-06	--	2.5E-05	mg/kg-day	2.0E-05	mg/kg-day	1.2E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.5E-04
				Benzo(b)fluoranthene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-02	mg/kg	1.4E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.4E-08	--	1.1E-06	mg/kg-day	3.0E-05	mg/kg-day	3.6E-02
				2,4'-DDE	1E-02	mg/kg	5.4E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-08	--	4.2E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				2,4'-DDT	3E-03	mg/kg	1.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-09	--	9.9E-08	mg/kg-day	5.0E-04	mg/kg-day	2.0E-04
				4,4'-DDD	1E-01	mg/kg	5.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-07	--	4.5E-06	mg/kg-day	3.0E-05	mg/kg-day	1.5E-01
				4,4'-DDE	2E-01	mg/kg	6.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.2E-07	--	5.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.7E-02
				4,4'-DDT	1E-02	mg/kg	6.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.1E-08	--	4.9E-07	mg/kg-day	5.0E-04	mg/kg-day	9.8E-04
				Benzaldehyde	1E+00	mg/kg	8.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.2E-08	--	6.3E-05	mg/kg-day	1.0E-01	mg/kg-day	6.3E-04
				Chlordane, alpha (cis)	4E-02	mg/kg	1.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-08	--	1.1E-06	mg/kg-day	5.0E-04	mg/kg-day	2.1E-03
				Chlordane, gamma (trans)	6E-03	mg/kg	2.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.3E-09	--	2.1E-07	mg/kg-day	5.0E-04	mg/kg-day	4.1E-04
				Dieldrin	1E-02	mg/kg	4.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.5E-07	--	3.6E-07	mg/kg-day	5.0E-05	mg/kg-day	7.3E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	7.2E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.5E-08	--	5.6E-08	mg/kg-day	1.3E-05	mg/kg-day	4.3E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	6.6E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.0E-10	--	5.2E-10	mg/kg-day	1.3E-05	mg/kg-day	4.0E-05
				Hexachlorobenzene	1E-03	mg/kg	4.3E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	6.9E-09	--	3.4E-08	mg/kg-day	8.0E-04	mg/kg-day	4.2E-05
				Mirex	3E-04	mg/kg	7.9E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.4E-08	--	6.1E-09	mg/kg-day	2.0E-04	mg/kg-day	3.1E-05
				Nonachlor, cis-	1E-02	mg/kg	4.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-08	--	3.5E-07	mg/kg-day	1.0E-04	mg/kg-day	3.5E-03
				Nonachlor, trans-	3E-02	mg/kg	1.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.1E-08	--	9.1E-07	mg/kg-day	1.6E-05	mg/kg-day	5.9E-02
				Oxychlordane	4E-03	mg/kg	1.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.6E-09	--	1.2E-07	mg/kg-day	8.9E-05	mg/kg-day	1.4E-03
				Pyridine	1E+00	mg/kg	8.0E-06	mg/kg-day	--	--	--	--	6.3E-05	mg/kg-day	1.0E-03	mg/kg-day	6.3E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	3.5E-05	mg/kg-day	--	--	--	--	2.7E-04	mg/kg-day	1.0E+00	mg/kg-day	2.7E-04
				Arsenic, organic	1E+00	mg/kg	7.1E-06	mg/kg-day	--	--	--	--	5.5E-05	mg/kg-day	2.0E-02	mg/kg-day	2.8E-03
				Arsenic, inorganic	1E-01	mg/kg	7.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-06	--	6.1E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				Cadmium	5E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03
				Chromium [as Cr(III)]	1E-01	mg/kg	7.6E-07	mg/kg-day	--	--	--	--	5.9E-06	mg/kg-day	1.5E+00	mg/kg-day	3.9E-06
				Cobalt	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
				Copper	6E-01	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	2.7E-05	mg/kg-day	1.0E-03	mg/kg-day	2.7E-02
				Iron	7E+00	mg/kg	4.1E-05	mg/kg-day	--	--	--	--	3.2E-04	mg/kg-day	7.0E-01	mg/kg-day	4.6E-04
				Lead	4E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.4E-01	mg/kg-day	7.4E-05
				Mercury	3E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.5E-02
				Methyl Mercury	3E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-04	mg/kg-day	1.6E-01
				Selenium	4E-01	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	5.0E-03	mg/kg-day	3.6E-03
				Silver	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	5.0E-03	mg/kg-day	1.9E-04
				Vanadium	3E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	5.0E-03	mg/kg-day	2.9E-04
				Zinc	7E+00	mg/kg	4.5E-05	mg/kg-day	--	--	--	--	3.5E-04	mg/kg-day	3.0E-01	mg/kg-day	1.2E-03
				Total DLCs (excluding KM TEQs)							2.1E-05						1.5E+00
				Total DLCs (based on KM TEQs)							2.0E-05						1.5E+00
				Total PCDD/Fs (excluding KM TEQ)							7.1E-06						5.2E-01
				Total PCDD/Fs (based on KM TEQ)							7.1E-06						5.2E-01
				Total DL-PCBs (excluding KM TEQ)							1.4E-05						1.0E+00
				Total DL-PCBs (based on KM TEQ)							1.3E-05						9.6E-01
				Total Non-DL PCBs							3.2E-06						1.2E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.7E-05						2.2E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.6E-05						2.2E+00
				Total PAHs							7.5E-08						8.5E-04
				Total Organics							1.4E-06						3.5E-01
				Total Inorganics							1.2E-06						2.7E-01

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
		Striped Bass Total (excluding KM TEQs)									2.7E-05						3.4E+00
		Striped Bass Total (based on KM TEQs)									2.6E-05						3.3E+00
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	5E-06	mg/kg	2.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-06	--	1.7E-10	mg/kg-day	7.0E-10	mg/kg-day	2.5E-01
				1,2,3,7,8-PeCDD	2E-07	mg/kg	9.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-07	--	7.7E-12	mg/kg-day	7.0E-10	mg/kg-day	1.1E-02
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-09	--	2.6E-12	mg/kg-day	7.0E-09	mg/kg-day	3.6E-04
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-08	--	8.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-09	--	3.4E-12	mg/kg-day	7.0E-09	mg/kg-day	4.8E-04
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-09	--	9.8E-12	mg/kg-day	7.0E-08	mg/kg-day	1.4E-04
				OCDD	5E-07	mg/kg	1.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.2E-11	--	1.4E-11	mg/kg-day	2.3E-06	mg/kg-day	6.1E-06
				2,3,7,8-TCDF	3E-07	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--	8.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,7,8-PeCDF	3E-07	mg/kg	1.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.4E-09	--	1.1E-11	mg/kg-day	2.3E-08	mg/kg-day	4.7E-04
				2,3,4,7,8-PeCDF	9E-07	mg/kg	3.6E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-07	--	2.8E-11	mg/kg-day	2.3E-09	mg/kg-day	1.2E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	2.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-08	--	2.1E-11	mg/kg-day	7.0E-09	mg/kg-day	2.9E-03
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--	8.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	5.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.7E-09	--	4.5E-12	mg/kg-day	7.0E-09	mg/kg-day	6.4E-04
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-09	--	3.4E-12	mg/kg-day	7.0E-09	mg/kg-day	4.9E-04
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	2.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-09	--	1.6E-11	mg/kg-day	7.0E-08	mg/kg-day	2.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-10	--	3.4E-12	mg/kg-day	7.0E-08	mg/kg-day	4.8E-05
				OCDF	2E-07	mg/kg	8.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--	6.3E-12	mg/kg-day	2.3E-06	mg/kg-day	2.7E-06
				KM TEQ DF	6E-06	mg/kg	2.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-06	--	1.9E-10	mg/kg-day	7.0E-10	mg/kg-day	2.7E-01
				PCB-77	1E-04	mg/kg	6.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.5E-09	--	4.9E-09	mg/kg-day	7.0E-06	mg/kg-day	7.1E-04
				PCB-81	1E-05	mg/kg	6.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-09	--	5.1E-10	mg/kg-day	2.3E-06	mg/kg-day	2.2E-04
				PCB-105	3E-03	mg/kg	1.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-08	--	9.5E-08	mg/kg-day	2.3E-05	mg/kg-day	4.1E-03
				PCB-114	2E-04	mg/kg	1.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-09	--	8.2E-09	mg/kg-day	2.3E-05	mg/kg-day	3.5E-04
				PCB-118	1E-02	mg/kg	5.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-07	--	4.1E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02
				PCB-123	2E-04	mg/kg	8.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-09	--	6.2E-09	mg/kg-day	2.3E-05	mg/kg-day	2.7E-04
				PCB-126	4E-05	mg/kg	1.9E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-06	--	1.5E-09	mg/kg-day	7.0E-09	mg/kg-day	2.2E-01
				PCB-156/157	1E-03	mg/kg	5.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-08	--	4.0E-08	mg/kg-day	2.3E-05	mg/kg-day	1.7E-03
				PCB-167	5E-04	mg/kg	2.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	1.8E-08	mg/kg-day	2.3E-05	mg/kg-day	7.9E-04
				PCB-169	2E-06	mg/kg	9.0E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.1E-08	--	7.0E-11	mg/kg-day	2.3E-08	mg/kg-day	3.0E-03
				PCB-189	8E-05	mg/kg	3.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-09	--	2.7E-09	mg/kg-day	2.3E-05	mg/kg-day	1.2E-04
				KM TEQ PCB	5E-06	mg/kg	2.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.2E-06	--	1.7E-10	mg/kg-day	7.0E-10	mg/kg-day	2.4E-01
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	6.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-07	--	5.1E-06	mg/kg-day	2.0E-05	mg/kg-day	2.6E-01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.5E-04
				Benzo(b)fluoranthene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	2.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	1.4E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.4E-09	--	1.1E-07	mg/kg-day	3.0E-05	mg/kg-day	3.7E-03
				2,4'-DDE	3E-03	mg/kg	1.2E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-09	--	9.1E-08	mg/kg-day	3.0E-04	mg/kg-day	3.0E-04
				2,4'-DDT	2E-04	mg/kg	1.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.5E-10	--	8.0E-09	mg/kg-day	5.0E-04	mg/kg-day	1.6E-05
				4,4'-DDD	2E-02	mg/kg	8.1E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.9E-08	--	6.3E-07	mg/kg-day	3.0E-05	mg/kg-day	2.1E-02
				4,4'-DDE	4E-02	mg/kg	1.7E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.8E-08	--	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.4E-03
				4,4'-DDT	1E-03	mg/kg	6.9E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-09	--	5.4E-08	mg/kg-day	5.0E-04	mg/kg-day	1.1E-04
				Benzaldehyde	1E+00	mg/kg	8.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.2E-08	--	6.3E-05	mg/kg-day	1.0E-01	mg/kg-day	6.3E-04
				Chlordane, alpha (cis)	2E-03	mg/kg	8.1E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-09	--	6.3E-08	mg/kg-day	5.0E-04	mg/kg-day	1.3E-04

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chlordane, gamma (trans)	7E-04	mg/kg	2.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-09	--	2.3E-08	mg/kg-day	5.0E-04	mg/kg-day	4.5E-05
				Dieldrin	1E-03	mg/kg	6.2E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	9.8E-08	--	4.8E-08	mg/kg-day	5.0E-05	mg/kg-day	9.6E-04
				Heptachlor epoxide, cis-	3E-04	mg/kg	1.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-08	--	1.0E-08	mg/kg-day	1.3E-05	mg/kg-day	8.0E-04
				Heptachlor epoxide, trans-	2E-05	mg/kg	6.6E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.0E-10	--	5.2E-10	mg/kg-day	1.3E-05	mg/kg-day	4.0E-05
				Hexachlorobenzene	5E-04	mg/kg	2.0E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.2E-09	--	1.6E-08	mg/kg-day	8.0E-04	mg/kg-day	2.0E-05
				Mirex	6E-05	mg/kg	1.7E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.0E-09	--	1.3E-09	mg/kg-day	2.0E-04	mg/kg-day	6.5E-06
				Nonachlor, cis-	1E-03	mg/kg	4.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-09	--	3.6E-08	mg/kg-day	1.0E-04	mg/kg-day	3.6E-04
				Nonachlor, trans-	3E-03	mg/kg	1.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.4E-09	--	9.7E-08	mg/kg-day	1.6E-05	mg/kg-day	6.3E-03
				Oxychlordane	1E-03	mg/kg	5.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.8E-09	--	4.0E-08	mg/kg-day	8.9E-05	mg/kg-day	4.5E-04
				Pyridine	1E+00	mg/kg	8.0E-06	mg/kg-day	--	--	--	--	6.3E-05	mg/kg-day	1.0E-03	mg/kg-day	6.3E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	3.5E-05	mg/kg-day	--	--	--	--	2.7E-04	mg/kg-day	1.0E+00	mg/kg-day	2.7E-04
				Arsenic, organic	2E+00	mg/kg	1.0E-05	mg/kg-day	--	--	--	--	7.9E-05	mg/kg-day	2.0E-02	mg/kg-day	4.0E-03
				Arsenic, inorganic	2E-01	mg/kg	1.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.7E-06	--	8.8E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Cadmium	5E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03
				Chromium [as Cr(III)]	5E-01	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	1.5E+00	mg/kg-day	1.5E-05
				Cobalt	9E-01	mg/kg	5.3E-06	mg/kg-day	--	--	--	--	4.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.4E-01
				Copper	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.0E-03	mg/kg-day	1.0E-02
				Iron	5E+00	mg/kg	3.2E-05	mg/kg-day	--	--	--	--	2.5E-04	mg/kg-day	7.0E-01	mg/kg-day	3.5E-04
				Lead	3E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	1.4E-01	mg/kg-day	1.1E-04
				Mercury	2E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	8.7E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Methyl Mercury	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.0E-04	mg/kg-day	1.0E-01
				Selenium	6E-01	mg/kg	4.0E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	5.0E-03	mg/kg-day	6.2E-03
				Silver	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	5.0E-03	mg/kg-day	1.9E-04
				Vanadium	3E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	5.0E-03	mg/kg-day	2.9E-04
				Zinc	7E+00	mg/kg	4.2E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	3.0E-01	mg/kg-day	1.1E-03
				Total DLCs (excluding KM TEQs)							7.1E-06						5.2E-01
				Total DLCs (based on KM TEQs)							6.9E-06						5.1E-01
				Total PCDD/Fs (excluding KM TEQ)							3.8E-06						2.8E-01
				Total PCDD/Fs (based on KM TEQ)							3.7E-06						2.7E-01
				Total DL-PCBs (excluding KM TEQ)							3.3E-06						2.4E-01
				Total DL-PCBs (based on KM TEQ)							3.2E-06						2.4E-01
				Total Non-DL PCBs							6.6E-07						2.6E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							4.0E-06						5.0E-01
				Total PCBs (DL & NDL; based on KM TEQ)							3.9E-06						4.9E-01
				Total PAHs							7.5E-08						8.5E-04
				Total Organics							2.5E-07						1.0E-01
				Total Inorganics							1.7E-06						3.2E-01
		Summer Flounder Total (excluding KM TEQs)									9.7E-06						1.2E+00
		Summer Flounder Total (based on KM TEQs)									9.6E-06						1.2E+00
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	2E-05	mg/kg	6.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.8E-06	--	5.1E-10	mg/kg-day	7.0E-10	mg/kg-day	7.2E-01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-07	--	1.3E-11	mg/kg-day	7.0E-10	mg/kg-day	1.9E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	9.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-08	--	7.6E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	2.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.7E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	5.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.5E-09	--	4.4E-12	mg/kg-day	7.0E-09	mg/kg-day	6.3E-04
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.2E-09	--	1.2E-11	mg/kg-day	7.0E-08	mg/kg-day	1.7E-04
				OCDD	8E-07	mg/kg	3.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--	2.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.1E-05
				2,3,7,8-TCDF	4E-06	mg/kg	1.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.7E-02
				1,2,3,7,8-PeCDF	3E-06	mg/kg	1.2E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.5E-08	--	9.5E-11	mg/kg-day	2.3E-08	mg/kg-day	4.1E-03

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,7,8-PeCDF	3E-06	mg/kg	1.4E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.2E-07	--	1.1E-10	mg/kg-day	2.3E-09	mg/kg-day	4.6E-02
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	6.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.9E-08	--	5.1E-11	mg/kg-day	7.0E-09	mg/kg-day	7.3E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	4.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-08	--	3.7E-11	mg/kg-day	7.0E-09	mg/kg-day	5.4E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-09	--	3.3E-12	mg/kg-day	7.0E-09	mg/kg-day	4.7E-04
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	8.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--	6.7E-12	mg/kg-day	7.0E-09	mg/kg-day	9.6E-04
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	9.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-08	--	7.5E-11	mg/kg-day	7.0E-08	mg/kg-day	1.1E-03
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	3.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.3E-10	--	2.8E-12	mg/kg-day	7.0E-08	mg/kg-day	3.9E-05
				OCDF	2E-07	mg/kg	8.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.0E-11	--	6.9E-12	mg/kg-day	2.3E-06	mg/kg-day	2.9E-06
				KM TEQ DF	2E-05	mg/kg	7.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-05	--	5.7E-10	mg/kg-day	7.0E-10	mg/kg-day	8.2E-01
				PCB-77	1E-03	mg/kg	4.4E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.5E-08	--	3.4E-08	mg/kg-day	7.0E-06	mg/kg-day	4.8E-03
				PCB-81	4E-05	mg/kg	1.6E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.4E-09	--	1.3E-09	mg/kg-day	2.3E-06	mg/kg-day	5.5E-04
				PCB-105	7E-03	mg/kg	3.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	2.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-114	6E-04	mg/kg	2.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.4E-04
				PCB-118	3E-02	mg/kg	1.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-07	--	9.7E-07	mg/kg-day	2.3E-05	mg/kg-day	4.2E-02
				PCB-123	6E-04	mg/kg	2.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	1.9E-08	mg/kg-day	2.3E-05	mg/kg-day	8.3E-04
				PCB-126	6E-05	mg/kg	2.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-06	--	2.1E-09	mg/kg-day	7.0E-09	mg/kg-day	3.0E-01
				PCB-156/157	3E-03	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.7E-08	--	9.9E-08	mg/kg-day	2.3E-05	mg/kg-day	4.2E-03
				PCB-167	1E-03	mg/kg	5.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-08	--	4.0E-08	mg/kg-day	2.3E-05	mg/kg-day	1.7E-03
				PCB-169	7E-06	mg/kg	3.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-07	--	2.6E-10	mg/kg-day	2.3E-08	mg/kg-day	1.1E-02
				PCB-189	2E-04	mg/kg	1.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-09	--	7.8E-09	mg/kg-day	2.3E-05	mg/kg-day	3.3E-04
				KM TEQ PCB	7E-06	mg/kg	3.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-06	--	2.6E-10	mg/kg-day	7.0E-10	mg/kg-day	3.7E-01
				Non-DL PCBs													
				Total Non-DL PCBs	5E-01	mg/kg	2.1E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-06	--	1.6E-05	mg/kg-day	2.0E-05	mg/kg-day	8.2E-01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.0E-09	M	6.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.0E-08	M	6.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.1E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.0E-09	M	6.3E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.0E-11	M	6.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.0E-08	M	6.3E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	8.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.0E-09	M	6.3E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	5E-02	mg/kg	2.2E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.2E-08	--	1.7E-06	mg/kg-day	3.0E-05	mg/kg-day	5.7E-02
				2,4'-DDE	1E-02	mg/kg	4.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-08	--	3.4E-07	mg/kg-day	3.0E-04	mg/kg-day	1.1E-03
				2,4'-DDT	1E-02	mg/kg	6.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-08	--	5.2E-07	mg/kg-day	5.0E-04	mg/kg-day	1.0E-03
				4,4'-DDD	2E-01	mg/kg	6.6E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.6E-07	--	5.1E-06	mg/kg-day	3.0E-05	mg/kg-day	1.7E-01
				4,4'-DDE	1E-01	mg/kg	5.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-07	--	3.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				4,4'-DDT	3E-02	mg/kg	1.3E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.5E-08	--	1.0E-06	mg/kg-day	5.0E-04	mg/kg-day	2.1E-03
				Benzaldehyde	1E+00	mg/kg	8.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.2E-08	--	6.3E-05	mg/kg-day	1.0E-01	mg/kg-day	6.3E-04
				Chlordane, alpha (cis)	2E-02	mg/kg	9.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.2E-08	--	7.2E-07	mg/kg-day	5.0E-04	mg/kg-day	1.4E-03
				Chlordane, gamma (trans)	5E-03	mg/kg	2.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.1E-09	--	1.6E-07	mg/kg-day	5.0E-04	mg/kg-day	3.2E-04
				Dieldrin	7E-03	mg/kg	3.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.1E-07	--	2.5E-07	mg/kg-day	5.0E-05	mg/kg-day	4.9E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	8.2E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.5E-08	--	6.4E-08	mg/kg-day	1.3E-05	mg/kg-day	4.9E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	6.6E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.0E-10	--	5.2E-10	mg/kg-day	1.3E-05	mg/kg-day	4.0E-05
				Hexachlorobenzene	1E-03	mg/kg	5.2E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	8.4E-09	--	4.1E-08	mg/kg-day	8.0E-04	mg/kg-day	5.1E-05
				Mirex	4E-04	mg/kg	9.5E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.7E-08	--	7.4E-09	mg/kg-day	2.0E-04	mg/kg-day	3.7E-05
				Nonachlor, cis-	8E-03	mg/kg	3.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	2.4E-07	mg/kg-day	1.0E-04	mg/kg-day	2.4E-03
				Nonachlor, trans-	2E-02	mg/kg	8.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-08	--	6.7E-07	mg/kg-day	1.6E-05	mg/kg-day	4.3E-02
				Oxychlordane	3E-03	mg/kg	1.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.4E-09	--	9.8E-08	mg/kg-day	8.9E-05	mg/kg-day	1.1E-03
				Pyridine	1E+00	mg/kg	8.0E-06	mg/kg-day	--	--	--	--	6.3E-05	mg/kg-day	1.0E-03	mg/kg-day	6.3E-02
				Inorganics													
				Aluminum	9E+00	mg/kg	5.4E-05	mg/kg-day	--	--	--	--	4.2E-04	mg/kg-day	1.0E+00	mg/kg-day	4.2E-04

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, organic	7E-01	mg/kg	4.3E-06	mg/kg-day	--	--	--	--	3.3E-05	mg/kg-day	2.0E-02	mg/kg-day	1.7E-03
				Arsenic, inorganic	8E-02	mg/kg	4.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.1E-07	--	3.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Cadmium	5E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03
				Chromium [as Cr(III)]	1E-01	mg/kg	8.9E-07	mg/kg-day	--	--	--	--	6.9E-06	mg/kg-day	1.5E+00	mg/kg-day	4.6E-06
				Cobalt	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
				Copper	6E-01	mg/kg	3.9E-06	mg/kg-day	--	--	--	--	3.0E-05	mg/kg-day	1.0E-03	mg/kg-day	3.0E-02
				Iron	6E+00	mg/kg	3.8E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	7.0E-01	mg/kg-day	4.2E-04
				Lead	5E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--	--	2.4E-06	mg/kg-day	--	--	--
				Manganese	4E-01	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	1.4E-01	mg/kg-day	1.3E-04
				Mercury	3E-01	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	4.9E-02
				Methyl Mercury	4E-01	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-04	mg/kg-day	2.0E-01
				Selenium	7E-01	mg/kg	4.0E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	5.0E-03	mg/kg-day	6.3E-03
				Silver	2E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.6E-07	mg/kg-day	5.0E-03	mg/kg-day	1.9E-04
				Vanadium	3E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	5.0E-03	mg/kg-day	3.3E-04
				Zinc	1E+01	mg/kg	7.7E-05	mg/kg-day	--	--	--	--	6.0E-04	mg/kg-day	3.0E-01	mg/kg-day	2.0E-03
				Total DLCs (excluding KM TEQs)							1.6E-05						1.2E+00
				Total DLCs (based on KM TEQs)							1.6E-05						1.2E+00
				Total PCDD/Fs (excluding KM TEQ)							1.1E-05						8.3E-01
				Total PCDD/Fs (based on KM TEQ)							1.1E-05						8.2E-01
				Total DL-PCBs (excluding KM TEQ)							5.1E-06						3.8E-01
				Total DL-PCBs (based on KM TEQ)							5.0E-06						3.7E-01
				Total Non-DL PCBs							2.1E-06						8.2E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							7.2E-06						1.2E+00
				Total PCBs (DL & NDL; based on KM TEQ)							7.1E-06						1.2E+00
				Total PAHs							1.9E-07						2.1E-03
				Total Organics							1.2E-06						3.7E-01
				Total Inorganics							7.1E-07						3.1E-01
		White Perch Total (excluding KM TEQs)									2.0E-05						2.7E+00
		White Perch Total (based on KM TEQs)									2.0E-05						2.7E+00
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	3E-05	mg/kg	1.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-05	--	9.9E-10	mg/kg-day	7.0E-10	mg/kg-day	1.4E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	3.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-07	--	2.6E-11	mg/kg-day	7.0E-10	mg/kg-day	3.7E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	9.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--	7.5E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	2.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-08	--	2.2E-11	mg/kg-day	7.0E-09	mg/kg-day	3.2E-03
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-08	--	7.9E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	3.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.9E-09	--	2.6E-11	mg/kg-day	7.0E-08	mg/kg-day	3.6E-04
				OCDD	2E-06	mg/kg	9.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.4E-10	--	7.5E-11	mg/kg-day	2.3E-06	mg/kg-day	3.2E-05
				2,3,7,8-TCDF	1E-05	mg/kg	4.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.0E-07	--	3.6E-10	mg/kg-day	7.0E-09	mg/kg-day	5.2E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.6E-08	--	7.9E-11	mg/kg-day	2.3E-08	mg/kg-day	3.4E-03
				2,3,4,7,8-PeCDF	5E-06	mg/kg	2.3E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.1E-06	--	1.8E-10	mg/kg-day	2.3E-09	mg/kg-day	7.8E-02
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	2.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.5E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	6.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--	5.2E-11	mg/kg-day	7.0E-09	mg/kg-day	7.5E-03
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	4.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-09	--	3.2E-12	mg/kg-day	7.0E-09	mg/kg-day	4.6E-04
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-08	--	1.4E-11	mg/kg-day	7.0E-09	mg/kg-day	2.0E-03
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	2.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-08	--	1.8E-10	mg/kg-day	7.0E-08	mg/kg-day	2.5E-03
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	3.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.8E-10	--	2.5E-12	mg/kg-day	7.0E-08	mg/kg-day	3.6E-05
				OCDF	2E-07	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.3E-11	--	9.1E-12	mg/kg-day	2.3E-06	mg/kg-day	3.9E-06
				KM TEQ DF	3E-05	mg/kg	1.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-05	--	1.1E-09	mg/kg-day	7.0E-10	mg/kg-day	1.6E+00
				PCB-77	2E-03	mg/kg	9.4E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-07	--	7.3E-08	mg/kg-day	7.0E-06	mg/kg-day	1.0E-02
				PCB-81	9E-05	mg/kg	4.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-08	--	3.2E-09	mg/kg-day	2.3E-06	mg/kg-day	1.4E-03
				PCB-105	1E-02	mg/kg	5.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-07	--	3.9E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-114	9E-04	mg/kg	4.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-08	--	3.3E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-118	5E-02	mg/kg	2.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-06	--	1.7E-06	mg/kg-day	2.3E-05	mg/kg-day	7.5E-02
				PCB-123	8E-04	mg/kg	3.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-08	--	3.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-126	1E-04	mg/kg	4.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.0E-06	--	3.6E-09	mg/kg-day	7.0E-09	mg/kg-day	5.2E-01
				PCB-156/157	4E-03	mg/kg	1.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-08	--	1.4E-07	mg/kg-day	2.3E-05	mg/kg-day	6.0E-03
				PCB-167	2E-03	mg/kg	7.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-08	--	5.8E-08	mg/kg-day	2.3E-05	mg/kg-day	2.5E-03
				PCB-169	1E-05	mg/kg	5.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-07	--	4.1E-10	mg/kg-day	2.3E-08	mg/kg-day	1.8E-02
				PCB-189	3E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.8E-09	--	1.0E-08	mg/kg-day	2.3E-05	mg/kg-day	4.3E-04
				KM TEQ PCB	1E-05	mg/kg	5.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.4E-06	--	4.3E-10	mg/kg-day	7.0E-10	mg/kg-day	6.2E-01
				Non-DL PCBs													
				Total Non-DL PCBs	3E-01	mg/kg	1.5E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-06	--	1.2E-05	mg/kg-day	2.0E-05	mg/kg-day	6.0E-01
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	1.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-08	M	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Benzo(b)fluoranthene	3E-03	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	9.8E-08	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.8E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.8E-11	M	1.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-08	M	9.9E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	1.0E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.0E-08	M	8.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-04	mg/kg	1.1E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.5E-10	--	8.2E-09	mg/kg-day	3.0E-05	mg/kg-day	2.7E-04
				2,4'-DDE	4E-04	mg/kg	2.2E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.3E-10	--	1.7E-08	mg/kg-day	3.0E-04	mg/kg-day	5.6E-05
				2,4'-DDT	2E-04	mg/kg	9.5E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.2E-10	--	7.4E-09	mg/kg-day	5.0E-04	mg/kg-day	1.5E-05
				4,4'-DDD	3E-02	mg/kg	1.7E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.0E-08	--	1.3E-06	mg/kg-day	3.0E-05	mg/kg-day	4.4E-02
				4,4'-DDE	9E-02	mg/kg	4.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-07	--	3.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				4,4'-DDT	1E-03	mg/kg	5.2E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-09	--	4.1E-08	mg/kg-day	5.0E-04	mg/kg-day	8.1E-05
				Benzaldehyde	1E+00	mg/kg	5.7E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.3E-08	--	4.5E-05	mg/kg-day	1.0E-01	mg/kg-day	4.5E-04
				Chlordane, alpha (cis)	2E-03	mg/kg	9.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.4E-09	--	7.6E-08	mg/kg-day	5.0E-04	mg/kg-day	1.5E-04
				Chlordane, gamma (trans)	3E-04	mg/kg	1.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.3E-10	--	9.5E-09	mg/kg-day	5.0E-04	mg/kg-day	1.9E-05
				Dieldrin	6E-03	mg/kg	3.0E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.7E-07	--	2.3E-07	mg/kg-day	5.0E-05	mg/kg-day	4.6E-03
				Heptachlor epoxide, cis-	4E-03	mg/kg	1.7E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.6E-07	--	1.3E-07	mg/kg-day	1.3E-05	mg/kg-day	1.0E-02
				Heptachlor epoxide, trans-	1E-03	mg/kg	5.5E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.0E-08	--	4.3E-08	mg/kg-day	1.3E-05	mg/kg-day	3.3E-03
				Hexachlorobenzene	1E-03	mg/kg	5.3E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	8.5E-09	--	4.1E-08	mg/kg-day	8.0E-04	mg/kg-day	5.2E-05
				Mirex	2E-04	mg/kg	9.7E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.7E-08	--	7.6E-09	mg/kg-day	2.0E-04	mg/kg-day	3.8E-05
				Nonachlor, cis-	5E-03	mg/kg	2.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.9E-09	--	2.0E-07	mg/kg-day	1.0E-04	mg/kg-day	2.0E-03
				Nonachlor, trans-	1E-02	mg/kg	5.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.8E-08	--	3.9E-07	mg/kg-day	1.6E-05	mg/kg-day	2.5E-02
				Oxychlordane	2E-02	mg/kg	7.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.6E-08	--	5.9E-07	mg/kg-day	8.9E-05	mg/kg-day	6.6E-03
				Pyridine	5E-01	mg/kg	2.4E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	1.0E-03	mg/kg-day	1.9E-02
				Inorganics													
				Aluminum	9E+00	mg/kg	4.4E-05	mg/kg-day	--	--	--	--	3.4E-04	mg/kg-day	1.0E+00	mg/kg-day	3.4E-04
				Arsenic, organic	3E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--	9.5E-05	mg/kg-day	2.0E-02	mg/kg-day	4.7E-03
				Arsenic, inorganic	3E-01	mg/kg	1.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-06	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.5E-02
				Cadmium	4E-01	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	1.0E-03	mg/kg-day	1.5E-02
				Chromium [as Cr(III)]	2E-01	mg/kg	8.0E-07	mg/kg-day	--	--	--	--	6.2E-06	mg/kg-day	1.5E+00	mg/kg-day	4.2E-06
				Cobalt	9E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--	3.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.1E-02
				Copper	3E+01	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.0E-03	mg/kg-day	1.1E+00
				Iron	4E+01	mg/kg	1.9E-04	mg/kg-day	--	--	--	--	1.5E-03	mg/kg-day	7.0E-01	mg/kg-day	2.1E-03
				Lead	3E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	--	--	--
				Manganese	1E+01	mg/kg	4.8E-05	mg/kg-day	--	--	--	--	3.7E-04	mg/kg-day	1.4E-01	mg/kg-day	2.7E-03
				Mercury	2E-01	mg/kg	7.3E-07	mg/kg-day	--	--	--	--	5.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Methyl Mercury	2E-01	mg/kg	8.3E-07	mg/kg-day	--	--	--	--	6.5E-06	mg/kg-day	1.0E-04	mg/kg-day	6.5E-02
				Selenium	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	4.3E-05	mg/kg-day	5.0E-03	mg/kg-day	8.5E-03

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Silver	8E-01	mg/kg	3.8E-06	mg/kg-day	--	--	--	--	2.9E-05	mg/kg-day	5.0E-03	mg/kg-day	5.9E-03
				Vanadium	7E-02	mg/kg	3.5E-07	mg/kg-day	--	--	--	--	2.7E-06	mg/kg-day	5.0E-03	mg/kg-day	5.5E-04
				Zinc	5E+01	mg/kg	2.2E-04	mg/kg-day	--	--	--	--	1.7E-03	mg/kg-day	3.0E-01	mg/kg-day	5.8E-03
				Total DLCs (excluding KM TEQs)							3.1E-05						2.3E+00
				Total DLCs (based on KM TEQs)							3.0E-05						2.2E+00
				Total PCDD/Fs (excluding KM TEQ)							2.2E-05						1.6E+00
				Total PCDD/Fs (based on KM TEQ)							2.2E-05						1.6E+00
				Total DL-PCBs (excluding KM TEQ)							8.8E-06						6.5E-01
				Total DL-PCBs (based on KM TEQ)							8.4E-06						6.2E-01
				Total Non-DL PCBs							1.5E-06						6.0E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							1.0E-05						1.2E+00
				Total PCBs (DL & NDL; based on KM TEQ)							9.9E-06						1.2E+00
				Total PAHs							3.9E-08						3.4E-04
				Total Organics							9.8E-07						1.3E-01
				Total Inorganics							2.0E-06						1.2E+00
		Crab (H+M) Total (excluding KM TEQs)									3.5E-05						4.2E+00
		Crab (H+M) Total (based on KM TEQs)									3.5E-05						4.2E+00
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	4E-06	mg/kg	1.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-06	--	1.4E-10	mg/kg-day	7.0E-10	mg/kg-day	2.1E-01
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-07	--	9.4E-12	mg/kg-day	7.0E-10	mg/kg-day	1.3E-02
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--	2.6E-12	mg/kg-day	7.0E-09	mg/kg-day	3.7E-04
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	1.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.9E-04
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	6.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.7E-10	--	5.0E-12	mg/kg-day	7.0E-08	mg/kg-day	7.2E-05
				OCDD	5E-07	mg/kg	2.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-10	--	1.7E-11	mg/kg-day	2.3E-06	mg/kg-day	7.4E-06
				2,3,7,8-TCDF	1E-06	mg/kg	5.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-08	--	4.3E-11	mg/kg-day	7.0E-09	mg/kg-day	6.2E-03
				1,2,3,7,8-PeCDF	3E-07	mg/kg	1.3E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.8E-09	--	1.0E-11	mg/kg-day	2.3E-08	mg/kg-day	4.3E-04
				2,3,4,7,8-PeCDF	5E-07	mg/kg	2.3E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.0E-07	--	1.8E-11	mg/kg-day	2.3E-09	mg/kg-day	7.7E-03
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	3.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-08	--	2.7E-11	mg/kg-day	7.0E-09	mg/kg-day	3.8E-03
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	8.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--	6.8E-12	mg/kg-day	7.0E-09	mg/kg-day	9.7E-04
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--	2.7E-12	mg/kg-day	7.0E-09	mg/kg-day	3.8E-04
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	2.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-09	--	1.7E-12	mg/kg-day	7.0E-09	mg/kg-day	2.5E-04
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	1.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-09	--	1.5E-11	mg/kg-day	7.0E-08	mg/kg-day	2.1E-04
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	1.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-10	--	1.3E-12	mg/kg-day	7.0E-08	mg/kg-day	1.8E-05
				OCDF	9E-08	mg/kg	4.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-11	--	3.5E-12	mg/kg-day	2.3E-06	mg/kg-day	1.5E-06
				KM TEQ DF	4E-06	mg/kg	2.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.2E-06	--	1.6E-10	mg/kg-day	7.0E-10	mg/kg-day	2.4E-01
				PCB-77	2E-04	mg/kg	9.6E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-08	--	7.5E-09	mg/kg-day	7.0E-06	mg/kg-day	1.1E-03
				PCB-81	9E-06	mg/kg	4.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--	3.4E-10	mg/kg-day	2.3E-06	mg/kg-day	1.5E-04
				PCB-105	1E-03	mg/kg	5.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-08	--	4.0E-08	mg/kg-day	2.3E-05	mg/kg-day	1.7E-03
				PCB-114	9E-05	mg/kg	4.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-09	--	3.5E-09	mg/kg-day	2.3E-05	mg/kg-day	1.5E-04
				PCB-118	4E-03	mg/kg	1.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.4E-03
				PCB-123	8E-05	mg/kg	3.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-09	--	2.9E-09	mg/kg-day	2.3E-05	mg/kg-day	1.3E-04
				PCB-126	8E-06	mg/kg	4.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-07	--	3.2E-10	mg/kg-day	7.0E-09	mg/kg-day	4.5E-02
				PCB-156/157	3E-04	mg/kg	1.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-09	--	1.2E-08	mg/kg-day	2.3E-05	mg/kg-day	5.2E-04
				PCB-167	1E-04	mg/kg	5.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-09	--	4.6E-09	mg/kg-day	2.3E-05	mg/kg-day	2.0E-04
				PCB-169	1E-05	mg/kg	5.5E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-07	--	4.3E-10	mg/kg-day	2.3E-08	mg/kg-day	1.8E-02
				PCB-189	2E-05	mg/kg	7.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-10	--	5.9E-10	mg/kg-day	2.3E-05	mg/kg-day	2.5E-05
				KM TEQ PCB	1E-06	mg/kg	4.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.4E-07	--	3.8E-11	mg/kg-day	7.0E-10	mg/kg-day	5.4E-02
				Non-DL PCBs													
				Total Non-DL PCBs	3E-02	mg/kg	1.3E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	--	1.0E-06	mg/kg-day	2.0E-05	mg/kg-day	5.2E-02
				PAHs													

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	1E-02	mg/kg	6.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.3E-09	M	4.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	6.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.3E-08	M	4.9E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	6.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.3E-09	M	4.9E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	6.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.3E-11	M	4.9E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	6.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.3E-08	M	4.9E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	6.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.3E-09	M	4.9E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-05	mg/kg	1.2E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.8E-11	--	9.0E-10	mg/kg-day	3.0E-05	mg/kg-day	3.0E-05
				2,4'-DDE	5E-05	mg/kg	2.3E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.9E-11	--	1.8E-09	mg/kg-day	3.0E-04	mg/kg-day	6.0E-06
				2,4'-DDT	4E-05	mg/kg	1.8E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.1E-11	--	1.4E-09	mg/kg-day	5.0E-04	mg/kg-day	2.8E-06
				4,4'-DDD	5E-03	mg/kg	2.5E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.0E-09	--	1.9E-07	mg/kg-day	3.0E-05	mg/kg-day	6.5E-03
				4,4'-DDE	1E-02	mg/kg	7.0E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-08	--	5.5E-07	mg/kg-day	3.0E-04	mg/kg-day	1.8E-03
				4,4'-DDT	2E-04	mg/kg	7.3E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.5E-10	--	5.7E-09	mg/kg-day	5.0E-04	mg/kg-day	1.1E-05
				Benzaldehyde	1E+00	mg/kg	6.3E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.5E-08	--	4.9E-05	mg/kg-day	1.0E-01	mg/kg-day	4.9E-04
				Chlordane, alpha (cis)	6E-04	mg/kg	2.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.8E-10	--	2.2E-08	mg/kg-day	5.0E-04	mg/kg-day	4.4E-05
				Chlordane, gamma (trans)	3E-05	mg/kg	1.3E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.5E-11	--	9.9E-10	mg/kg-day	5.0E-04	mg/kg-day	2.0E-06
				Dieldrin	1E-03	mg/kg	6.5E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.0E-07	--	5.1E-08	mg/kg-day	5.0E-05	mg/kg-day	1.0E-03
				Heptachlor epoxide, cis-	3E-04	mg/kg	1.6E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.4E-08	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	9.4E-04
				Heptachlor epoxide, trans-	2E-04	mg/kg	1.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.9E-09	--	8.5E-09	mg/kg-day	1.3E-05	mg/kg-day	6.5E-04
				Hexachlorobenzene	2E-04	mg/kg	1.1E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.7E-09	--	8.3E-09	mg/kg-day	8.0E-04	mg/kg-day	1.0E-05
				Mirex	5E-05	mg/kg	2.4E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.4E-09	--	1.9E-09	mg/kg-day	2.0E-04	mg/kg-day	9.5E-06
				Nonachlor, cis-	7E-04	mg/kg	3.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-09	--	2.5E-08	mg/kg-day	1.0E-04	mg/kg-day	2.5E-04
				Nonachlor, trans-	1E-03	mg/kg	5.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-09	--	4.5E-08	mg/kg-day	1.6E-05	mg/kg-day	2.9E-03
				Oxychlordane	2E-03	mg/kg	8.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-09	--	6.4E-08	mg/kg-day	8.9E-05	mg/kg-day	7.2E-04
				Pyridine	4E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-03	mg/kg-day	1.6E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	2.1E-04	mg/kg-day	1.0E+00	mg/kg-day	2.1E-04
				Arsenic, organic	2E+00	mg/kg	1.1E-05	mg/kg-day	--	--	--	--	8.9E-05	mg/kg-day	2.0E-02	mg/kg-day	4.4E-03
				Arsenic, inorganic	3E-01	mg/kg	1.3E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.9E-06	--	9.8E-06	mg/kg-day	3.0E-04	mg/kg-day	3.3E-02
				Cadmium	2E-01	mg/kg	7.9E-07	mg/kg-day	--	--	--	--	6.2E-06	mg/kg-day	1.0E-03	mg/kg-day	6.2E-03
				Chromium [as Cr(III)]	2E-01	mg/kg	7.3E-07	mg/kg-day	--	--	--	--	5.7E-06	mg/kg-day	1.5E+00	mg/kg-day	3.8E-06
				Cobalt	7E-02	mg/kg	3.4E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.8E-03
				Copper	2E+01	mg/kg	8.8E-05	mg/kg-day	--	--	--	--	6.9E-04	mg/kg-day	1.0E-03	mg/kg-day	6.9E-01
				Iron	2E+01	mg/kg	9.0E-05	mg/kg-day	--	--	--	--	7.0E-04	mg/kg-day	7.0E-01	mg/kg-day	1.0E-03
				Lead	1E-01	mg/kg	4.7E-07	mg/kg-day	--	--	--	--	3.6E-06	mg/kg-day	--	--	--
				Manganese	6E+00	mg/kg	3.0E-05	mg/kg-day	--	--	--	--	2.3E-04	mg/kg-day	1.4E-01	mg/kg-day	1.6E-03
				Mercury	2E-01	mg/kg	8.7E-07	mg/kg-day	--	--	--	--	6.8E-06	mg/kg-day	3.0E-04	mg/kg-day	2.3E-02
				Methyl Mercury	2E-01	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	8.0E-06	mg/kg-day	1.0E-04	mg/kg-day	8.0E-02
				Selenium	9E-01	mg/kg	4.5E-06	mg/kg-day	--	--	--	--	3.5E-05	mg/kg-day	5.0E-03	mg/kg-day	7.0E-03
				Silver	5E-01	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	5.0E-03	mg/kg-day	3.6E-03
				Vanadium	4E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--	--	1.6E-06	mg/kg-day	5.0E-03	mg/kg-day	3.2E-04
				Zinc	5E+01	mg/kg	2.3E-04	mg/kg-day	--	--	--	--	1.8E-03	mg/kg-day	3.0E-01	mg/kg-day	5.9E-03
Total DLCs (excluding KM TEQs)											4.3E-06						3.2E-01
Total DLCs (based on KM TEQs)											3.9E-06						2.9E-01
Total PCDD/Fs (excluding KM TEQ)											3.3E-06						2.4E-01
Total PCDD/Fs (based on KM TEQ)											3.2E-06						2.4E-01
Total DL-PCBs (excluding KM TEQ)											1.0E-06						7.4E-02
Total DL-PCBs (based on KM TEQ)											7.4E-07						5.4E-02
Total Non-DL PCBs											1.3E-07						5.2E-02
Total PCBs (DL & NDL; excluding KM TEQ)											1.1E-06						1.3E-01
Total PCBs (DL & NDL; based on KM TEQ)											8.7E-07						1.1E-01

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PAHs							1.4E-07						1.6E-03
				Total Organics							2.0E-07						3.1E-02
				Total Inorganics							1.9E-06						8.6E-01
		Crab (Muscle) Total (excluding KM TEQs)									6.6E-06						1.3E+00
		Crab (Muscle) Total (based on KM TEQs)									6.3E-06						1.2E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-05	mg/kg	4.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.6E-05	--	3.4E-09	mg/kg-day	7.0E-10	mg/kg-day	4.9E+00
				1,2,3,7,8-PeCDD	2E-06	mg/kg	1.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-06	--	8.1E-11	mg/kg-day	7.0E-10	mg/kg-day	1.2E-01
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	3.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-08	--	2.6E-11	mg/kg-day	7.0E-09	mg/kg-day	3.7E-03
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--	7.9E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	3.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-08	--	2.7E-11	mg/kg-day	7.0E-09	mg/kg-day	3.8E-03
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	1.1E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-08	--	8.5E-11	mg/kg-day	7.0E-08	mg/kg-day	1.2E-03
				OCDD	6E-06	mg/kg	3.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-09	--	2.4E-10	mg/kg-day	2.3E-06	mg/kg-day	1.0E-04
				2,3,7,8-TCDF	3E-05	mg/kg	1.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.8E-01
				1,2,3,7,8-PeCDF	7E-06	mg/kg	3.6E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.6E-07	--	2.8E-10	mg/kg-day	2.3E-08	mg/kg-day	1.2E-02
				2,3,4,7,8-PeCDF	2E-05	mg/kg	8.4E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.8E-06	--	6.6E-10	mg/kg-day	2.3E-09	mg/kg-day	2.8E-01
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	8.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-06	--	6.2E-10	mg/kg-day	7.0E-09	mg/kg-day	8.9E-02
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	2.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	6.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.8E-09	--	5.1E-12	mg/kg-day	7.0E-09	mg/kg-day	7.3E-04
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	6.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.4E-08	--	4.9E-11	mg/kg-day	7.0E-09	mg/kg-day	7.0E-03
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	8.2E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-07	--	6.4E-10	mg/kg-day	7.0E-08	mg/kg-day	9.1E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.9E-10	--	5.1E-12	mg/kg-day	7.0E-08	mg/kg-day	7.4E-05
				OCDF	8E-07	mg/kg	4.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-10	--	3.1E-11	mg/kg-day	2.3E-06	mg/kg-day	1.3E-05
				KM TEQ DF	1E-04	mg/kg	5.0E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.6E-05	--	3.9E-09	mg/kg-day	7.0E-10	mg/kg-day	5.6E+00
				PCB-77	7E-03	mg/kg	3.3E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.0E-07	--	2.6E-07	mg/kg-day	7.0E-06	mg/kg-day	3.7E-02
				PCB-81	3E-04	mg/kg	1.5E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.6E-08	--	1.1E-08	mg/kg-day	2.3E-06	mg/kg-day	4.9E-03
				PCB-105	4E-02	mg/kg	1.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-07	--	1.4E-06	mg/kg-day	2.3E-05	mg/kg-day	6.0E-02
				PCB-114	3E-03	mg/kg	1.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-08	--	1.2E-07	mg/kg-day	2.3E-05	mg/kg-day	5.1E-03
				PCB-118	2E-01	mg/kg	8.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-06	--	6.3E-06	mg/kg-day	2.3E-05	mg/kg-day	2.7E-01
				PCB-123	3E-03	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-08	--	1.1E-07	mg/kg-day	2.3E-05	mg/kg-day	4.7E-03
				PCB-126	4E-04	mg/kg	1.7E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-05	--	1.3E-08	mg/kg-day	7.0E-09	mg/kg-day	1.9E+00
				PCB-156/157	1E-02	mg/kg	6.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-07	--	5.1E-07	mg/kg-day	2.3E-05	mg/kg-day	2.2E-02
				PCB-167	6E-03	mg/kg	2.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--	2.1E-07	mg/kg-day	2.3E-05	mg/kg-day	9.1E-03
				PCB-169	4E-05	mg/kg	1.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.9E-07	--	1.4E-09	mg/kg-day	2.3E-08	mg/kg-day	5.8E-02
				PCB-189	1E-03	mg/kg	4.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-08	--	3.7E-08	mg/kg-day	2.3E-05	mg/kg-day	1.6E-03
				KM TEQ PCB	4E-05	mg/kg	2.0E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-05	--	1.6E-09	mg/kg-day	7.0E-10	mg/kg-day	2.2E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E+00	mg/kg	5.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.6E-06	--	4.4E-05	mg/kg-day	2.0E-05	mg/kg-day	2.2E+00
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	1.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-09	M	1.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	1.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-08	M	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.6E-04
				Benzo(b)fluoranthene	3E-03	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	1.0E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.2E-11	M	1.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	1.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-08	M	1.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	3.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.6E-08	M	2.8E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	8E-04	mg/kg	3.7E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.8E-10	--	2.8E-08	mg/kg-day	3.0E-05	mg/kg-day	9.5E-04
				2,4'-DDE	2E-03	mg/kg	7.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.6E-09	--	6.0E-08	mg/kg-day	3.0E-04	mg/kg-day	2.0E-04
				2,4'-DDT	7E-04	mg/kg	3.1E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-09	--	2.4E-08	mg/kg-day	5.0E-04	mg/kg-day	4.9E-05
				4,4'-DDD	1E-01	mg/kg	5.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-07	--	4.5E-06	mg/kg-day	3.0E-05	mg/kg-day	1.5E-01
				4,4'-DDE	3E-01	mg/kg	1.6E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.3E-07	--	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	4.0E-02

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				4,4'-DDT	4E-03	mg/kg	1.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.1E-09	--	1.4E-07	mg/kg-day	5.0E-04	mg/kg-day	2.8E-04
				Benzaldehyde	3E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--	9.5E-05	mg/kg-day	1.0E-01	mg/kg-day	9.5E-04
				Chlordane, alpha (cis)	7E-03	mg/kg	3.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	2.5E-07	mg/kg-day	5.0E-04	mg/kg-day	5.0E-04
				Chlordane, gamma (trans)	9E-04	mg/kg	4.4E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-09	--	3.4E-08	mg/kg-day	5.0E-04	mg/kg-day	6.8E-05
				Dieldrin	2E-02	mg/kg	9.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.6E-06	--	7.6E-07	mg/kg-day	5.0E-05	mg/kg-day	1.5E-02
				Heptachlor epoxide, cis-	1E-02	mg/kg	6.3E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.7E-07	--	4.9E-07	mg/kg-day	1.3E-05	mg/kg-day	3.8E-02
				Heptachlor epoxide, trans-	4E-03	mg/kg	1.9E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.7E-07	--	1.4E-07	mg/kg-day	1.3E-05	mg/kg-day	1.1E-02
				Hexachlorobenzene	4E-03	mg/kg	1.8E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.8E-08	--	1.4E-07	mg/kg-day	8.0E-04	mg/kg-day	1.7E-04
				Mirex	7E-04	mg/kg	3.2E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	5.8E-08	--	2.5E-08	mg/kg-day	2.0E-04	mg/kg-day	1.2E-04
				Nonachlor, cis-	2E-02	mg/kg	8.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.1E-08	--	6.9E-07	mg/kg-day	1.0E-04	mg/kg-day	6.9E-03
				Nonachlor, trans-	4E-02	mg/kg	1.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.3E-08	--	1.4E-06	mg/kg-day	1.6E-05	mg/kg-day	9.0E-02
				Oxychlordane	6E-02	mg/kg	2.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.3E-08	--	2.1E-06	mg/kg-day	8.9E-05	mg/kg-day	2.3E-02
				Pyridine	8E-01	mg/kg	3.8E-06	mg/kg-day	--	--	--	--	3.0E-05	mg/kg-day	1.0E-03	mg/kg-day	3.0E-02
				Inorganics													
				Aluminum	3E+01	mg/kg	1.4E-04	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.0E+00	mg/kg-day	1.1E-03
				Arsenic, organic	3E+00	mg/kg	1.5E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	2.0E-02	mg/kg-day	5.8E-03
				Arsenic, inorganic	3E-01	mg/kg	1.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.5E-06	--	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	4.3E-02
				Cadmium	1E+00	mg/kg	6.1E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	1.0E-03	mg/kg-day	4.8E-02
				Chromium [as Cr(III)]	3E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.5E+00	mg/kg-day	7.1E-06
				Cobalt	2E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	8.4E-06	mg/kg-day	3.0E-04	mg/kg-day	2.8E-02
				Copper	7E+01	mg/kg	3.6E-04	mg/kg-day	--	--	--	--	2.8E-03	mg/kg-day	1.0E-03	mg/kg-day	2.8E+00
				Iron	1E+02	mg/kg	4.9E-04	mg/kg-day	--	--	--	--	3.8E-03	mg/kg-day	7.0E-01	mg/kg-day	5.4E-03
				Lead	8E-01	mg/kg	3.9E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	--	--	--
				Manganese	2E+01	mg/kg	8.9E-05	mg/kg-day	--	--	--	--	6.9E-04	mg/kg-day	1.4E-01	mg/kg-day	5.0E-03
				Mercury	7E-02	mg/kg	3.6E-07	mg/kg-day	--	--	--	--	2.8E-06	mg/kg-day	3.0E-04	mg/kg-day	9.4E-03
				Methyl Mercury	6E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-04	mg/kg-day	2.2E-02
				Selenium	2E+00	mg/kg	8.8E-06	mg/kg-day	--	--	--	--	6.8E-05	mg/kg-day	5.0E-03	mg/kg-day	1.4E-02
				Silver	2E+00	mg/kg	9.2E-06	mg/kg-day	--	--	--	--	7.2E-05	mg/kg-day	5.0E-03	mg/kg-day	1.4E-02
				Vanadium	2E-01	mg/kg	8.2E-07	mg/kg-day	--	--	--	--	6.4E-06	mg/kg-day	5.0E-03	mg/kg-day	1.3E-03
				Zinc	5E+01	mg/kg	2.3E-04	mg/kg-day	--	--	--	--	1.8E-03	mg/kg-day	3.0E-01	mg/kg-day	5.9E-03
				Total DLCs (excluding KM TEQs)							1.1E-04						8.0E+00
				Total DLCs (based on KM TEQs)							1.1E-04						7.8E+00
				Total PCDD/Fs (excluding KM TEQ)							7.6E-05						5.6E+00
				Total PCDD/Fs (based on KM TEQ)							7.6E-05						5.6E+00
				Total DL-PCBs (excluding KM TEQ)							3.2E-05						2.4E+00
				Total DL-PCBs (based on KM TEQ)							3.0E-05						2.2E+00
				Total Non-DL PCBs							5.6E-06						2.2E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							3.7E-05						4.5E+00
				Total PCBs (DL & NDL; based on KM TEQ)							3.6E-05						4.4E+00
				Total PAHs							6.6E-08						3.6E-04
				Total Organics							3.3E-06						4.1E-01
				Total Inorganics							2.5E-06						3.0E+00
		Crab (Hepatopancreas) Total (excluding KM TEQs)									1.2E-04						1.4E+01
		Crab (Hepatopancreas) Total (based on KM TEQs)									1.2E-04						1.3E+01
Sediment	Sediment	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.2E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-09	--	8.3E-14	mg/kg-day	7.0E-10	mg/kg-day	1.2E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	9.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-10	--	7.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-10	--	3.0E-13	mg/kg-day	7.0E-09	mg/kg-day	4.3E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.5E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--	5.3E-12	mg/kg-day	7.0E-08	mg/kg-day	7.5E-05

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				OCDD	3E-03	mg/kg	6.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-10	--	5.4E-11	mg/kg-day	2.3E-06	mg/kg-day	2.3E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-10	--	2.8E-13	mg/kg-day	7.0E-09	mg/kg-day	4.0E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.5E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-10	--	1.9E-13	mg/kg-day	2.3E-08	mg/kg-day	8.3E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.2E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-09	--	3.2E-13	mg/kg-day	2.3E-09	mg/kg-day	1.4E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.1E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.5E-10	--	3.9E-13	mg/kg-day	7.0E-09	mg/kg-day	5.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-11	--	2.9E-14	mg/kg-day	7.0E-09	mg/kg-day	4.1E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	8.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-09	--	6.6E-12	mg/kg-day	7.0E-08	mg/kg-day	9.4E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.9E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-11	--	2.2E-13	mg/kg-day	7.0E-08	mg/kg-day	3.2E-06
				OCDF	4E-04	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.3E-11	--	9.2E-12	mg/kg-day	2.3E-06	mg/kg-day	3.9E-06
				KM TEQ DF	1E-04	mg/kg	2.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.1E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	3.1E-03
				PCB-77	8E-03	mg/kg	2.0E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.1E-10	--	1.6E-10	mg/kg-day	7.0E-06	mg/kg-day	2.3E-05
				PCB-81	3E-04	mg/kg	7.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-11	--	6.1E-12	mg/kg-day	2.3E-06	mg/kg-day	2.6E-06
				PCB-105	1E-02	mg/kg	3.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-10	--	2.5E-10	mg/kg-day	2.3E-05	mg/kg-day	1.1E-05
				PCB-114	9E-04	mg/kg	2.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	1.7E-11	mg/kg-day	2.3E-05	mg/kg-day	7.5E-07
				PCB-118	4E-02	mg/kg	9.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-10	--	7.4E-10	mg/kg-day	2.3E-05	mg/kg-day	3.2E-05
				PCB-123	1E-03	mg/kg	2.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.2E-07
				PCB-126	2E-04	mg/kg	6.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-09	--	5.0E-12	mg/kg-day	7.0E-09	mg/kg-day	7.2E-04
				PCB-156/157	3E-03	mg/kg	8.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-11	--	6.7E-11	mg/kg-day	2.3E-05	mg/kg-day	2.9E-06
				PCB-167	1E-03	mg/kg	3.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--	2.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-169	3E-04	mg/kg	6.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.0E-09	--	5.2E-12	mg/kg-day	2.3E-08	mg/kg-day	2.2E-04
				PCB-189	2E-04	mg/kg	6.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-12	--	5.0E-12	mg/kg-day	2.3E-05	mg/kg-day	2.1E-07
				KM TEQ PCB	3E-05	mg/kg	8.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-08	--	6.3E-13	mg/kg-day	7.0E-10	mg/kg-day	9.0E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-09	--	1.4E-08	mg/kg-day	2.0E-05	mg/kg-day	6.8E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	5.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.5E-10	M	4.3E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.4E-09	M	4.2E-08	mg/kg-day	3.0E-04	mg/kg-day	1.4E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.8E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-10	M	3.8E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.1E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.1E-11	M	2.4E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	5.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.3E-12	M	4.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-09	M	8.6E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-10	M	1.6E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.5E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	4.0E-03	mg/kg-day	2.9E-05
				TPH (C9-C40)	4E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	8.5E-06	mg/kg-day	4.0E-03	mg/kg-day	2.1E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	3.2E-05	mg/kg-day	--	--	--	--	2.5E-04	mg/kg-day	1.0E+00	mg/kg-day	2.5E-04
				Antimony	2E+00	mg/kg	6.2E-09	mg/kg-day	--	--	--	--	4.8E-08	mg/kg-day	4.0E-04	mg/kg-day	1.2E-04
				Arsenic, inorganic	3E+01	mg/kg	4.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.3E-08	--	3.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Cadmium	3E+00	mg/kg	8.1E-09	mg/kg-day	--	--	--	--	6.3E-08	mg/kg-day	1.0E-03	mg/kg-day	6.3E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.5E+00	mg/kg-day	1.5E-06
				Cobalt	1E+01	mg/kg	3.7E-08	mg/kg-day	--	--	--	--	2.9E-07	mg/kg-day	3.0E-04	mg/kg-day	9.6E-04
				Copper	2E+02	mg/kg	4.4E-07	mg/kg-day	--	--	--	--	3.4E-06	mg/kg-day	1.0E-03	mg/kg-day	3.4E-03
				Chromium (VI)	1E+00	mg/kg	3.7E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.8E-09	M	2.9E-08	mg/kg-day	3.0E-03	mg/kg-day	9.5E-06
				Iron	4E+04	mg/kg	1.1E-04	mg/kg-day	--	--	--	--	8.9E-04	mg/kg-day	7.0E-01	mg/kg-day	1.3E-03
				Lead	5E+02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	9.6E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	9.4E-07	mg/kg-day	--	--	--	--	7.3E-06	mg/kg-day	2.4E-02	mg/kg-day	3.0E-04
				Mercury	2E+00	mg/kg	5.3E-09	mg/kg-day	--	--	--	--	4.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.4E-04
				Nickel	7E+01	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	2.0E-02	mg/kg-day	6.9E-05

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Thallium	2E-01	mg/kg	6.5E-10	mg/kg-day	--	--	--	--	5.0E-09	mg/kg-day	1.0E-05	mg/kg-day	5.0E-04
				Vanadium	5E+01	mg/kg	1.3E-07	mg/kg-day	--	--	--	--	1.0E-06	mg/kg-day	5.0E-03	mg/kg-day	2.1E-04
				Zinc	1E+03	mg/kg	3.3E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	3.0E-01	mg/kg-day	8.5E-05
				Total DLCs (excluding KM TEQs)							5.6E-08						4.1E-03
				Total DLCs (based on KM TEQs)							5.3E-08						4.0E-03
				Total PCDD/Fs (excluding KM TEQ)							4.2E-08						3.1E-03
				Total PCDD/Fs (based on KM TEQ)							4.1E-08						3.1E-03
				Total DL-PCBs (excluding KM TEQ)							1.4E-08						1.0E-03
				Total DL-PCBs (based on KM TEQ)							1.2E-08						9.0E-04
				Total Non-DL PCBs							1.7E-09						6.8E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-08						1.7E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-08						1.6E-03
				Total PAHs							7.8E-09						1.4E-04
				Total Organics							0.0E+00						2.1E-03
				Total Inorganics							7.5E-08						8.7E-03
		Sediment Ingestion Total (excluding KM TEQs)									1.4E-07						1.6E-02
		Sediment Ingestion Total (based on KM TEQs)									1.4E-07						1.6E-02
Sediment	Sediment	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	4.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.1E-08	--	3.7E-12	mg/kg-day	7.0E-10	mg/kg-day	5.2E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-09	--	1.9E-13	mg/kg-day	7.0E-10	mg/kg-day	2.8E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--	1.7E-13	mg/kg-day	7.0E-09	mg/kg-day	2.5E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	9.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	7.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	5.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-10	--	4.1E-13	mg/kg-day	7.0E-09	mg/kg-day	5.9E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-09	--	1.2E-11	mg/kg-day	7.0E-08	mg/kg-day	1.8E-04
				OCDD	3E-03	mg/kg	1.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.3E-10	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.4E-05
				2,3,7,8-TCDF	1E-05	mg/kg	8.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	6.6E-13	mg/kg-day	7.0E-09	mg/kg-day	9.4E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	5.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-10	--	4.5E-13	mg/kg-day	2.3E-08	mg/kg-day	1.9E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	9.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.4E-09	--	7.6E-13	mg/kg-day	2.3E-09	mg/kg-day	3.2E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	4.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-09	--	3.5E-12	mg/kg-day	7.0E-09	mg/kg-day	5.0E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-09	--	9.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	8.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	6.7E-14	mg/kg-day	7.0E-09	mg/kg-day	9.6E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	6.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-10	--	5.0E-13	mg/kg-day	7.0E-09	mg/kg-day	7.2E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-09	--	1.5E-11	mg/kg-day	7.0E-08	mg/kg-day	2.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-10	--	5.2E-13	mg/kg-day	7.0E-08	mg/kg-day	7.5E-06
				OCDF	4E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-10	--	2.1E-11	mg/kg-day	2.3E-06	mg/kg-day	9.2E-06
				KM TEQ DF	1E-04	mg/kg	6.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.7E-08	--	5.0E-12	mg/kg-day	7.0E-10	mg/kg-day	7.2E-03
				PCB-77	8E-03	mg/kg	4.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.1E-10	--	3.7E-10	mg/kg-day	7.0E-06	mg/kg-day	5.3E-05
				PCB-81	3E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.3E-11	--	1.4E-11	mg/kg-day	2.3E-06	mg/kg-day	6.1E-06
				PCB-105	1E-02	mg/kg	7.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-10	--	6.0E-10	mg/kg-day	2.3E-05	mg/kg-day	2.6E-05
				PCB-114	9E-04	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	4.1E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-118	4E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	1.7E-09	mg/kg-day	2.3E-05	mg/kg-day	7.5E-05
				PCB-123	1E-03	mg/kg	6.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-11	--	5.0E-11	mg/kg-day	2.3E-05	mg/kg-day	2.2E-06
				PCB-126	2E-04	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.7E-03
				PCB-156/157	3E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-11	--	1.6E-10	mg/kg-day	2.3E-05	mg/kg-day	6.7E-06
				PCB-167	1E-03	mg/kg	7.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-11	--	5.6E-11	mg/kg-day	2.3E-05	mg/kg-day	2.4E-06
				PCB-169	3E-04	mg/kg	1.6E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.0E-09	--	1.2E-11	mg/kg-day	2.3E-08	mg/kg-day	5.2E-04
				PCB-189	2E-04	mg/kg	1.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.8E-12	--	1.2E-11	mg/kg-day	2.3E-05	mg/kg-day	5.0E-07
				KM TEQ PCB	3E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-08	--	1.5E-12	mg/kg-day	7.0E-10	mg/kg-day	2.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	--	1.5E-07	mg/kg-day	2.0E-05	mg/kg-day	7.4E-03
				PAHs													

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	2E+00	mg/kg	5.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-09	M	4.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	5.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.5E-08	M	4.2E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Benzo(b)fluoranthene	2E+00	mg/kg	4.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.9E-09	M	3.8E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.2E-10	M	2.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	5.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.3E-11	M	4.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-08	M	8.7E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-09	M	1.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	1.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-07	--	1.5E-06	mg/kg-day	3.0E-04	mg/kg-day	4.9E-03
				Cadmium	3E+00	mg/kg	6.3E-10	mg/kg-day	--	--	--	--	4.9E-09	mg/kg-day	2.5E-05	mg/kg-day	2.0E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							1.3E-07						9.7E-03
				Total DLCs (based on KM TEQs)							1.2E-07						9.2E-03
				Total PCDD/Fs (excluding KM TEQ)							9.9E-08						7.3E-03
				Total PCDD/Fs (based on KM TEQ)							9.7E-08						7.2E-03
				Total DL-PCBs (excluding KM TEQ)							3.2E-08						2.4E-03
				Total DL-PCBs (based on KM TEQ)							2.8E-08						2.1E-03
				Total Non-DL PCBs							1.9E-08						7.4E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							5.1E-08						9.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							4.7E-08						9.5E-03
				Total PAHs							7.9E-08						1.4E-03
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							2.8E-07						5.1E-03
		Sediment Dermal Total (excluding KM TEQs)									5.1E-07						2.4E-02
		Sediment Dermal Total (based on KM TEQs)									5.1E-07						2.3E-02
Fishing - Sediment Total (excluding KM TEQs)											6.5E-07						3.9E-02
Fishing - Sediment Total (based on KM TEQs)											6.5E-07						3.9E-02
Surface Water	Surface Water	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	7.1E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-10	--	5.5E-15	mg/kg-day	7.0E-10	mg/kg-day	7.9E-06
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-11	--	1.9E-15	mg/kg-day	7.0E-10	mg/kg-day	2.7E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-11	--	1.4E-14	mg/kg-day	7.0E-09	mg/kg-day	2.0E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-12	--	2.2E-15	mg/kg-day	7.0E-09	mg/kg-day	3.2E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	5.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-12	--	3.9E-15	mg/kg-day	7.0E-09	mg/kg-day	5.6E-07
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.4E-12	--	2.8E-14	mg/kg-day	7.0E-08	mg/kg-day	4.0E-07
				OCDD	6E-05	µg/L	3.8E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-12	--	2.9E-13	mg/kg-day	2.3E-06	mg/kg-day	1.3E-07

TABLE 7.1 CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,7,8-TCDF	5E-07	µg/L	2.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-12	--	2.2E-15	mg/kg-day	7.0E-09	mg/kg-day	3.1E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.2E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.9E-13	--	1.7E-15	mg/kg-day	2.3E-08	mg/kg-day	7.4E-08
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.8E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-11	--	3.0E-15	mg/kg-day	2.3E-09	mg/kg-day	1.3E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-11	--	8.3E-15	mg/kg-day	7.0E-09	mg/kg-day	1.2E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-12	--	2.0E-15	mg/kg-day	7.0E-09	mg/kg-day	2.9E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--	1.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.7E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-12	--	1.3E-15	mg/kg-day	7.0E-09	mg/kg-day	1.8E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-12	--	3.5E-14	mg/kg-day	7.0E-08	mg/kg-day	5.0E-07
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.8E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-13	--	2.2E-15	mg/kg-day	7.0E-08	mg/kg-day	3.2E-08
				OCDF	1E-05	µg/L	8.5E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.8E-13	--	6.6E-14	mg/kg-day	2.3E-06	mg/kg-day	2.8E-08
				KM TEQ DF	2E-06	µg/L	1.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-10	--	1.1E-14	mg/kg-day	7.0E-10	mg/kg-day	1.6E-05
				PCB-77	2E-05	µg/L	1.2E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.8E-13	--	9.3E-14	mg/kg-day	7.0E-06	mg/kg-day	1.3E-08
				PCB-81	7E-07	µg/L	4.0E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-14	--	3.1E-15	mg/kg-day	2.3E-06	mg/kg-day	1.3E-09
				PCB-105	7E-05	µg/L	4.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-13	--	3.3E-13	mg/kg-day	2.3E-05	mg/kg-day	1.4E-08
				PCB-114	4E-06	µg/L	2.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-14	--	1.7E-14	mg/kg-day	2.3E-05	mg/kg-day	7.4E-10
				PCB-118	2E-04	µg/L	9.5E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-13	--	7.4E-13	mg/kg-day	2.3E-05	mg/kg-day	3.2E-08
				PCB-123	3E-06	µg/L	1.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-15	--	1.4E-14	mg/kg-day	2.3E-05	mg/kg-day	6.1E-10
				PCB-126	7E-07	µg/L	3.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-12	--	3.0E-15	mg/kg-day	7.0E-09	mg/kg-day	4.4E-07
				PCB-156/157	2E-05	µg/L	1.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-14	--	8.8E-14	mg/kg-day	2.3E-05	mg/kg-day	3.8E-09
				PCB-167	7E-06	µg/L	3.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-14	--	3.0E-14	mg/kg-day	2.3E-05	mg/kg-day	1.3E-09
				PCB-169	4E-07	µg/L	2.3E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-12	--	1.8E-15	mg/kg-day	2.3E-08	mg/kg-day	7.8E-08
				PCB-189	9E-07	µg/L	5.0E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-15	--	3.9E-15	mg/kg-day	2.3E-05	mg/kg-day	1.7E-10
				KM TEQ PCB	1E-07	µg/L	6.3E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-12	--	4.9E-16	mg/kg-day	7.0E-10	mg/kg-day	7.0E-07
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	6.9E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.9E-13	M	5.3E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	8.8E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.8E-12	M	6.9E-11	mg/kg-day	3.0E-04	mg/kg-day	2.3E-07
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-12	M	9.3E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	5.4E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.4E-14	M	4.2E-11	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.2E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.2E-14	M	9.1E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.3E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.3E-12	M	1.8E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	5.0E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.0E-13	M	3.9E-11	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.1E-11	mg/kg-day	--	--	--	--	1.6E-10	mg/kg-day	2.0E-02	mg/kg-day	8.0E-09
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	7.0E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.2E-12	--	5.4E-10	mg/kg-day	1.0E-02	mg/kg-day	5.4E-08
				Trichloroethylene	1E-01	µg/L	7.6E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.5E-12	M	5.9E-10	mg/kg-day	5.0E-04	mg/kg-day	1.2E-06
				Inorganics													
				Antimony	7E-01	µg/L	4.1E-10	mg/kg-day	--	--	--	--	3.2E-09	mg/kg-day	4.0E-04	mg/kg-day	7.9E-06
				Arsenic, inorganic	1E+00	µg/L	7.4E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-09	--	5.8E-09	mg/kg-day	3.0E-04	mg/kg-day	1.9E-05
				Chromium [as Cr(III)]	1E+00	µg/L	7.5E-10	mg/kg-day	--	--	--	--	5.8E-09	mg/kg-day	1.5E+00	mg/kg-day	3.9E-09
				Chromium (VI)	2E-01	µg/L	1.3E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	6.5E-11	M	1.0E-09	mg/kg-day	3.0E-03	mg/kg-day	3.4E-07
				Iron	5E+02	µg/L	3.1E-07	mg/kg-day	--	--	--	--	2.4E-06	mg/kg-day	7.0E-01	mg/kg-day	3.4E-06
				Manganese	7E+01	µg/L	4.0E-08	mg/kg-day	--	--	--	--	3.1E-07	mg/kg-day	2.4E-02	mg/kg-day	1.3E-05
				Mercury	3E-02	µg/L	1.5E-11	mg/kg-day	--	--	--	--	1.2E-10	mg/kg-day	3.0E-04	mg/kg-day	4.0E-07
				Thallium	1E-02	µg/L	7.2E-12	mg/kg-day	--	--	--	--	5.6E-11	mg/kg-day	1.0E-05	mg/kg-day	5.6E-06
				Titanium	8E+00	µg/L	4.6E-09	mg/kg-day	--	--	--	--	3.6E-08	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											2.7E-10						2.0E-05
Total DLCs (based on KM TEQs)											2.2E-10						1.6E-05
Total PCDD/Fs (excluding KM TEQ)											2.6E-10						2.0E-05

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PCDD/Fs (based on KM TEQ)							2.1E-10						1.6E-05
				Total DL-PCBs (excluding KM TEQ)							7.8E-12						5.8E-07
				Total DL-PCBs (based on KM TEQ)							9.5E-12						7.0E-07
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.8E-12						5.8E-07
				Total PCBs (DL & NDL; based on KM TEQ)							9.5E-12						7.0E-07
				Total PAHs							1.4E-11						2.4E-07
				Total Organics							5.7E-12						1.2E-06
				Total Inorganics							1.2E-09						5.0E-05
		Surface Water Ingestion Total (excluding KM TEQs)									1.5E-09						7.2E-05
		Surface Water Ingestion Total (based on KM TEQs)									1.4E-09						6.8E-05
Surface Water	Surface Water	Angler - Fishing	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.6E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	2.0E-02	mg/kg-day	6.4E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	7.7E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.4E-11	--	6.0E-09	mg/kg-day	1.0E-02	mg/kg-day	6.0E-07
				Trichloroethylene	1E-01	µg/L	1.5E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	7.1E-11	M	1.2E-08	mg/kg-day	5.0E-04	mg/kg-day	2.4E-05
				Inorganics													
				Antimony	7E-01	µg/L	2.4E-10	mg/kg-day	--	--	--	--	1.9E-09	mg/kg-day	6.0E-05	mg/kg-day	3.1E-05
				Arsenic, inorganic	1E+00	µg/L	4.4E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.6E-10	--	3.4E-09	mg/kg-day	3.0E-04	mg/kg-day	1.1E-05
				Chromium [as Cr(III)]	1E+00	µg/L	4.4E-10	mg/kg-day	--	--	--	--	3.4E-09	mg/kg-day	2.0E-02	mg/kg-day	1.8E-07
				Chromium (VI)	2E-01	µg/L	1.5E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	3.1E-09	M	1.2E-09	mg/kg-day	7.5E-05	mg/kg-day	1.6E-05
				Iron	5E+02	µg/L	1.8E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	7.0E-01	mg/kg-day	2.0E-06
				Manganese	7E+01	µg/L	2.4E-08	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	9.6E-04	mg/kg-day	1.9E-04
				Mercury	3E-02	µg/L	9.0E-12	mg/kg-day	--	--	--	--	7.0E-11	mg/kg-day	2.1E-05	mg/kg-day	3.4E-06
				Thallium	1E-02	µg/L	4.2E-12	mg/kg-day	--	--	--	--	3.3E-11	mg/kg-day	1.0E-05	mg/kg-day	3.3E-06
				Titanium	8E+00	µg/L	2.7E-09	mg/kg-day	--	--	--	--	2.1E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						6.4E-07
				Total Organics							9.5E-11						2.5E-05
				Total Inorganics							3.7E-09						2.6E-04
		Surface Water Dermal Total (excluding KM TEQs)									3.8E-09						2.8E-04
		Surface Water Dermal Total (based on KM TEQs)									3.8E-09						2.8E-04
Fishing - Surface Water Total (excluding KM TEQs)											5.3E-09						3.6E-04
Fishing - Surface Water Total (based on KM TEQs)											5.2E-09						3.5E-04
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)											1.8E-05						2.3E+00
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)											1.8E-05						2.3E+00
Sediment	Sediment	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-08	--	9.8E-13	mg/kg-day	7.0E-10	mg/kg-day	1.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.6E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-09	--	5.2E-14	mg/kg-day	7.0E-10	mg/kg-day	7.4E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-11	--	4.6E-14	mg/kg-day	7.0E-09	mg/kg-day	6.6E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.4E-10	--	3.3E-12	mg/kg-day	7.0E-08	mg/kg-day	4.7E-05
				OCDD	3E-03	mg/kg	4.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-10	--	3.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.4E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.5E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.0E-11	--	1.2E-13	mg/kg-day	2.3E-08	mg/kg-day	5.2E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.6E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-09	--	2.0E-13	mg/kg-day	2.3E-09	mg/kg-day	8.7E-05

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	9.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	2.6E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-10	--	1.3E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.9E-10	--	4.1E-12	mg/kg-day	7.0E-08	mg/kg-day	5.9E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-11	--	1.4E-13	mg/kg-day	7.0E-08	mg/kg-day	2.0E-06
				OCDF	4E-04	mg/kg	7.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-11	--	5.7E-12	mg/kg-day	2.3E-06	mg/kg-day	2.5E-06
				KM TEQ DF	1E-04	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--	1.3E-12	mg/kg-day	7.0E-10	mg/kg-day	1.9E-03
				PCB-77	8E-03	mg/kg	1.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.9E-10	--	9.9E-11	mg/kg-day	7.0E-06	mg/kg-day	1.4E-05
				PCB-81	3E-04	mg/kg	4.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-11	--	3.8E-12	mg/kg-day	2.3E-06	mg/kg-day	1.6E-06
				PCB-105	1E-02	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-11	--	1.6E-10	mg/kg-day	2.3E-05	mg/kg-day	6.8E-06
				PCB-114	9E-04	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-12	--	1.1E-11	mg/kg-day	2.3E-05	mg/kg-day	4.7E-07
				PCB-118	4E-02	mg/kg	6.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-10	--	4.6E-10	mg/kg-day	2.3E-05	mg/kg-day	2.0E-05
				PCB-123	1E-03	mg/kg	1.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-12	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.8E-07
				PCB-126	2E-04	mg/kg	4.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-09	--	3.1E-12	mg/kg-day	7.0E-09	mg/kg-day	4.5E-04
				PCB-156/157	3E-03	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	4.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-167	1E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-12	--	1.5E-11	mg/kg-day	2.3E-05	mg/kg-day	6.4E-07
				PCB-169	3E-04	mg/kg	4.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-09	--	3.2E-12	mg/kg-day	2.3E-08	mg/kg-day	1.4E-04
				PCB-189	2E-04	mg/kg	4.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-12	--	3.1E-12	mg/kg-day	2.3E-05	mg/kg-day	1.3E-07
				KM TEQ PCB	3E-05	mg/kg	5.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.6E-09	--	3.9E-13	mg/kg-day	7.0E-10	mg/kg-day	5.6E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-09	--	8.5E-09	mg/kg-day	2.0E-05	mg/kg-day	4.2E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.4E-10	M	2.7E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-09	M	2.6E-08	mg/kg-day	3.0E-04	mg/kg-day	8.7E-05
				Benzo(b)fluoranthene	2E+00	mg/kg	3.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.0E-10	M	2.4E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.0E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.0E-11	M	1.5E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-12	M	2.6E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	6.9E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.9E-10	M	5.4E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-10	M	9.7E-09	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	9.3E-09	mg/kg-day	--	--	--	--	7.3E-08	mg/kg-day	4.0E-03	mg/kg-day	1.8E-05
				TPH (C9-C40)	4E+02	mg/kg	6.8E-07	mg/kg-day	--	--	--	--	5.3E-06	mg/kg-day	4.0E-03	mg/kg-day	1.3E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.0E-05	mg/kg-day	--	--	--	--	1.6E-04	mg/kg-day	1.0E+00	mg/kg-day	1.6E-04
				Antimony	2E+00	mg/kg	3.9E-09	mg/kg-day	--	--	--	--	3.0E-08	mg/kg-day	4.0E-04	mg/kg-day	7.5E-05
				Arsenic, inorganic	3E+01	mg/kg	3.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-08	--	2.4E-07	mg/kg-day	3.0E-04	mg/kg-day	7.9E-04
				Cadmium	3E+00	mg/kg	5.1E-09	mg/kg-day	--	--	--	--	4.0E-08	mg/kg-day	1.0E-03	mg/kg-day	4.0E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	1.5E+00	mg/kg-day	9.2E-07
				Cobalt	1E+01	mg/kg	2.3E-08	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	3.0E-04	mg/kg-day	6.0E-04
				Copper	2E+02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	2.1E-06	mg/kg-day	1.0E-03	mg/kg-day	2.1E-03
				Chromium (VI)	1E+00	mg/kg	2.3E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.1E-09	M	1.8E-08	mg/kg-day	3.0E-03	mg/kg-day	6.0E-06
				Iron	4E+04	mg/kg	7.2E-05	mg/kg-day	--	--	--	--	5.6E-04	mg/kg-day	7.0E-01	mg/kg-day	8.0E-04
				Lead	5E+02	mg/kg	7.7E-07	mg/kg-day	--	--	--	--	6.0E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	5.9E-07	mg/kg-day	--	--	--	--	4.6E-06	mg/kg-day	2.4E-02	mg/kg-day	1.9E-04
				Mercury	2E+00	mg/kg	3.3E-09	mg/kg-day	--	--	--	--	2.6E-08	mg/kg-day	3.0E-04	mg/kg-day	8.5E-05
				Nickel	7E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	8.6E-07	mg/kg-day	2.0E-02	mg/kg-day	4.3E-05
				Thallium	2E-01	mg/kg	4.0E-10	mg/kg-day	--	--	--	--	3.1E-09	mg/kg-day	1.0E-05	mg/kg-day	3.1E-04

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Vanadium	5E+01	mg/kg	8.3E-08	mg/kg-day	--	--	--	--	6.4E-07	mg/kg-day	5.0E-03	mg/kg-day	1.3E-04
				Zinc	1E+03	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	3.0E-01	mg/kg-day	5.3E-05
				Total DLCs (excluding KM TEQs)							3.5E-08						2.6E-03
				Total DLCs (based on KM TEQs)							3.3E-08						2.5E-03
				Total PCDD/Fs (excluding KM TEQ)							2.6E-08						2.0E-03
				Total PCDD/Fs (based on KM TEQ)							2.6E-08						1.9E-03
				Total DL-PCBs (excluding KM TEQ)							8.6E-09						6.3E-04
				Total DL-PCBs (based on KM TEQ)							7.6E-09						5.6E-04
				Total Non-DL PCBs							1.1E-09						4.2E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							9.6E-09						1.1E-03
				Total PCBs (DL & NDL; based on KM TEQ)							8.6E-09						9.8E-04
				Total PAHs							4.9E-09						8.7E-05
				Total Organics							0.0E+00						1.3E-03
				Total Inorganics							4.7E-08						5.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									8.8E-08						9.9E-03
		Sediment Ingestion Total (based on KM TEQs)									8.6E-08						9.8E-03
Sediment	Sediment	Angler - Crabbing	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	8E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.4E-08	--	2.3E-12	mg/kg-day	7.0E-10	mg/kg-day	3.3E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-09	--	1.2E-13	mg/kg-day	7.0E-10	mg/kg-day	1.7E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	5.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-10	--	4.4E-13	mg/kg-day	7.0E-09	mg/kg-day	6.2E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--	2.6E-13	mg/kg-day	7.0E-09	mg/kg-day	3.7E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	9.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--	7.7E-12	mg/kg-day	7.0E-08	mg/kg-day	1.1E-04
				OCDD	3E-03	mg/kg	1.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-10	--	7.8E-11	mg/kg-day	2.3E-06	mg/kg-day	3.4E-05
				2,3,7,8-TCDF	1E-05	mg/kg	5.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-10	--	4.1E-13	mg/kg-day	7.0E-09	mg/kg-day	5.9E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	3.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.6E-10	--	2.8E-13	mg/kg-day	2.3E-08	mg/kg-day	1.2E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.1E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.7E-09	--	4.7E-13	mg/kg-day	2.3E-09	mg/kg-day	2.0E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-09	--	2.2E-12	mg/kg-day	7.0E-09	mg/kg-day	3.1E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	7.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-09	--	5.6E-13	mg/kg-day	7.0E-09	mg/kg-day	8.1E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	5.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-11	--	4.2E-14	mg/kg-day	7.0E-09	mg/kg-day	6.0E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-10	--	3.1E-13	mg/kg-day	7.0E-09	mg/kg-day	4.5E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-09	--	9.6E-12	mg/kg-day	7.0E-08	mg/kg-day	1.4E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.3E-11	--	3.3E-13	mg/kg-day	7.0E-08	mg/kg-day	4.7E-06
				OCDF	4E-04	mg/kg	1.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.8E-11	--	1.3E-11	mg/kg-day	2.3E-06	mg/kg-day	5.8E-06
				KM TEQ DF	1E-04	mg/kg	4.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.0E-08	--	3.1E-12	mg/kg-day	7.0E-10	mg/kg-day	4.5E-03
				PCB-77	8E-03	mg/kg	3.0E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.5E-10	--	2.3E-10	mg/kg-day	7.0E-06	mg/kg-day	3.3E-05
				PCB-81	3E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-11	--	8.9E-12	mg/kg-day	2.3E-06	mg/kg-day	3.8E-06
				PCB-105	1E-02	mg/kg	4.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-10	--	3.7E-10	mg/kg-day	2.3E-05	mg/kg-day	1.6E-05
				PCB-114	9E-04	mg/kg	3.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--	2.6E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				PCB-118	4E-02	mg/kg	1.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-10	--	1.1E-09	mg/kg-day	2.3E-05	mg/kg-day	4.7E-05
				PCB-123	1E-03	mg/kg	4.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-11	--	3.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-126	2E-04	mg/kg	9.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--	7.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				PCB-156/157	3E-03	mg/kg	1.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-11	--	9.7E-11	mg/kg-day	2.3E-05	mg/kg-day	4.2E-06
				PCB-167	1E-03	mg/kg	4.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-11	--	3.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.5E-06
				PCB-169	3E-04	mg/kg	9.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.4E-09	--	7.6E-12	mg/kg-day	2.3E-08	mg/kg-day	3.2E-04
				PCB-189	2E-04	mg/kg	9.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-12	--	7.3E-12	mg/kg-day	2.3E-05	mg/kg-day	3.1E-07

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ PCB	3E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-08	--	9.2E-13	mg/kg-day	7.0E-10	mg/kg-day	1.3E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.2E-08	--	9.2E-08	mg/kg-day	2.0E-05	mg/kg-day	4.6E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-09	M	2.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-08	M	2.7E-07	mg/kg-day	3.0E-04	mg/kg-day	8.8E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-09	M	2.4E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.0E-10	M	1.5E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.0E-09	M	5.5E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	9.8E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	1.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-07	--	9.2E-07	mg/kg-day	3.0E-04	mg/kg-day	3.1E-03
				Cadmium	3E+00	mg/kg	4.0E-10	mg/kg-day	--	--	--	--	3.1E-09	mg/kg-day	2.5E-05	mg/kg-day	1.2E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							8.2E-08						6.1E-03
				Total DLCs (based on KM TEQs)							7.8E-08						5.8E-03
				Total PCDD/Fs (excluding KM TEQ)							6.2E-08						4.6E-03
				Total PCDD/Fs (based on KM TEQ)							6.0E-08						4.5E-03
				Total DL-PCBs (excluding KM TEQ)							2.0E-08						1.5E-03
				Total DL-PCBs (based on KM TEQ)							1.8E-08						1.3E-03
				Total Non-DL PCBs							1.2E-08						4.6E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							3.2E-08						6.1E-03
				Total PCBs (DL & NDL; based on KM TEQ)							3.0E-08						5.9E-03
				Total PAHs							4.9E-08						8.8E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.8E-07						3.2E-03
		Sediment Dermal Total (excluding KM TEQs)									3.2E-07						1.5E-02
		Sediment Dermal Total (based on KM TEQs)									3.2E-07						1.4E-02
Crabbing - Sediment Total (excluding KM TEQs)											4.1E-07						2.5E-02

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Crabbing - Sediment Total (based on KM TEQs)											4.0E-07						2.4E-02
Surface Water	Surface Water	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	4.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-11	--	3.5E-15	mg/kg-day	7.0E-10	mg/kg-day	4.9E-06
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-11	--	1.2E-15	mg/kg-day	7.0E-10	mg/kg-day	1.7E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-11	--	8.7E-15	mg/kg-day	7.0E-09	mg/kg-day	1.2E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	1.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-12	--	1.4E-15	mg/kg-day	7.0E-09	mg/kg-day	2.0E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	3.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-12	--	2.4E-15	mg/kg-day	7.0E-09	mg/kg-day	3.5E-07
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-12	--	1.8E-14	mg/kg-day	7.0E-08	mg/kg-day	2.5E-07
				OCDD	6E-05	µg/L	2.4E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-12	--	1.8E-13	mg/kg-day	2.3E-06	mg/kg-day	7.8E-08
				2,3,7,8-TCDF	5E-07	µg/L	1.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-12	--	1.3E-15	mg/kg-day	7.0E-09	mg/kg-day	1.9E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.4E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.2E-13	--	1.1E-15	mg/kg-day	2.3E-08	mg/kg-day	4.6E-08
				2,3,4,7,8-PeCDF	7E-07	µg/L	2.4E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.1E-11	--	1.9E-15	mg/kg-day	2.3E-09	mg/kg-day	8.0E-07
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	6.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-11	--	5.2E-15	mg/kg-day	7.0E-09	mg/kg-day	7.4E-07
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	1.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-12	--	1.3E-15	mg/kg-day	7.0E-09	mg/kg-day	1.8E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	9.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--	7.5E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-12	--	7.9E-16	mg/kg-day	7.0E-09	mg/kg-day	1.1E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	2.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.2E-12	--	2.2E-14	mg/kg-day	7.0E-08	mg/kg-day	3.1E-07
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	1.8E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-13	--	1.4E-15	mg/kg-day	7.0E-08	mg/kg-day	2.0E-08
				OCDF	1E-05	µg/L	5.3E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-13	--	4.1E-14	mg/kg-day	2.3E-06	mg/kg-day	1.8E-08
				KM TEQ DF	2E-06	µg/L	8.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-10	--	6.9E-15	mg/kg-day	7.0E-10	mg/kg-day	9.8E-06
				PCB-77	2E-05	µg/L	7.5E-15	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-13	--	5.8E-14	mg/kg-day	7.0E-06	mg/kg-day	8.3E-09
				PCB-81	7E-07	µg/L	2.5E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-14	--	1.9E-15	mg/kg-day	2.3E-06	mg/kg-day	8.3E-10
				PCB-105	7E-05	µg/L	2.7E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	2.1E-13	mg/kg-day	2.3E-05	mg/kg-day	8.9E-09
				PCB-114	4E-06	µg/L	1.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-15	--	1.1E-14	mg/kg-day	2.3E-05	mg/kg-day	4.6E-10
				PCB-118	2E-04	µg/L	6.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-13	--	4.6E-13	mg/kg-day	2.3E-05	mg/kg-day	2.0E-08
				PCB-123	3E-06	µg/L	1.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-15	--	9.0E-15	mg/kg-day	2.3E-05	mg/kg-day	3.8E-10
				PCB-126	7E-07	µg/L	2.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-12	--	1.9E-15	mg/kg-day	7.0E-09	mg/kg-day	2.7E-07
				PCB-156/157	2E-05	µg/L	7.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-14	--	5.5E-14	mg/kg-day	2.3E-05	mg/kg-day	2.3E-09
				PCB-167	7E-06	µg/L	2.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-14	--	1.8E-14	mg/kg-day	2.3E-05	mg/kg-day	7.9E-10
				PCB-169	4E-07	µg/L	1.5E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.6E-13	--	1.1E-15	mg/kg-day	2.3E-08	mg/kg-day	4.9E-08
				PCB-189	9E-07	µg/L	3.1E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-15	--	2.4E-15	mg/kg-day	2.3E-05	mg/kg-day	1.0E-10
				KM TEQ PCB	1E-07	µg/L	4.0E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.9E-12	--	3.1E-16	mg/kg-day	7.0E-10	mg/kg-day	4.4E-07
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	4.3E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.3E-13	M	3.3E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	5.5E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.5E-12	M	4.3E-11	mg/kg-day	3.0E-04	mg/kg-day	1.4E-07
				Benzo(b)fluoranthene	2E-02	µg/L	7.5E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.5E-13	M	5.8E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	3.3E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.3E-14	M	2.6E-11	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	7.3E-12	mg/kg-day	1.0E-03	(mg/kg-day)-1	7.3E-15	M	5.7E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	1.4E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-12	M	1.1E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	3.1E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-13	M	2.4E-11	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	1.3E-11	mg/kg-day	--	--	--	--	1.0E-10	mg/kg-day	2.0E-02	mg/kg-day	5.0E-09
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	4.3E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.3E-12	--	3.4E-10	mg/kg-day	1.0E-02	mg/kg-day	3.4E-08
				Trichloroethylene	1E-01	µg/L	4.8E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.2E-12	M	3.7E-10	mg/kg-day	5.0E-04	mg/kg-day	7.4E-07
				Inorganics													
				Antimony	7E-01	µg/L	2.5E-10	mg/kg-day	--	--	--	--	2.0E-09	mg/kg-day	4.0E-04	mg/kg-day	4.9E-06
				Arsenic, inorganic	1E+00	µg/L	4.6E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.9E-10	--	3.6E-09	mg/kg-day	3.0E-04	mg/kg-day	1.2E-05
				Chromium [as Cr(III)]	1E+00	µg/L	4.7E-10	mg/kg-day	--	--	--	--	3.7E-09	mg/kg-day	1.5E+00	mg/kg-day	2.4E-09

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium (VI)	2E-01	µg/L	8.1E-11	mg/kg-day	5.0E-01	(mg/kg-day)-1	4.0E-11	M	6.3E-10	mg/kg-day	3.0E-03	mg/kg-day	2.1E-07
				Iron	5E+02	µg/L	1.9E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	7.0E-01	mg/kg-day	2.2E-06
				Manganese	7E+01	µg/L	2.5E-08	mg/kg-day	--	--	--	--	2.0E-07	mg/kg-day	2.4E-02	mg/kg-day	8.1E-06
				Mercury	3E-02	µg/L	9.6E-12	mg/kg-day	--	--	--	--	7.5E-11	mg/kg-day	3.0E-04	mg/kg-day	2.5E-07
				Thallium	1E-02	µg/L	4.5E-12	mg/kg-day	--	--	--	--	3.5E-11	mg/kg-day	1.0E-05	mg/kg-day	3.5E-06
				Titanium	8E+00	µg/L	2.9E-09	mg/kg-day	--	--	--	--	2.2E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							1.7E-10						1.3E-05
				Total DLCs (based on KM TEQs)							1.4E-10						1.0E-05
				Total PCDD/Fs (excluding KM TEQ)							1.7E-10						1.2E-05
				Total PCDD/Fs (based on KM TEQ)							1.3E-10						9.8E-06
				Total DL-PCBs (excluding KM TEQ)							4.9E-12						3.6E-07
				Total DL-PCBs (based on KM TEQ)							5.9E-12						4.4E-07
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							4.9E-12						3.6E-07
				Total PCBs (DL & NDL; based on KM TEQ)							5.9E-12						4.4E-07
				Total PAHs							8.5E-12						1.5E-07
				Total Organics							3.5E-12						7.7E-07
				Total Inorganics							7.3E-10						3.1E-05
		Surface Water Ingestion Total (excluding KM TEQs)									9.2E-10						4.5E-05
		Surface Water Ingestion Total (based on KM TEQs)									8.9E-10						4.2E-05
Surface Water	Surface Water	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--

TABLE 7.1 CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.0E-09	mg/kg-day	--	--	--	--	8.0E-09	mg/kg-day	2.0E-02	mg/kg-day	4.0E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	4.8E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.5E-11	--	3.7E-09	mg/kg-day	1.0E-02	mg/kg-day	3.7E-07
				Trichloroethylene	1E-01	µg/L	9.6E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.4E-11	M	7.5E-09	mg/kg-day	5.0E-04	mg/kg-day	1.5E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.5E-10	mg/kg-day	--	--	--	--	1.2E-09	mg/kg-day	6.0E-05	mg/kg-day	1.9E-05
				Arsenic, inorganic	1E+00	µg/L	2.7E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.1E-10	--	2.1E-09	mg/kg-day	3.0E-04	mg/kg-day	7.1E-06
				Chromium [as Cr(III)]	1E+00	µg/L	2.8E-10	mg/kg-day	--	--	--	--	2.2E-09	mg/kg-day	2.0E-02	mg/kg-day	1.1E-07
				Chromium (VI)	2E-01	µg/L	9.5E-11	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.9E-09	M	7.4E-10	mg/kg-day	7.5E-05	mg/kg-day	9.9E-06
				Iron	5E+02	µg/L	1.1E-07	mg/kg-day	--	--	--	--	8.9E-07	mg/kg-day	7.0E-01	mg/kg-day	1.3E-06
				Manganese	7E+01	µg/L	1.5E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	9.6E-04	mg/kg-day	1.2E-04
				Mercury	3E-02	µg/L	5.7E-12	mg/kg-day	--	--	--	--	4.4E-11	mg/kg-day	2.1E-05	mg/kg-day	2.1E-06
				Thallium	1E-02	µg/L	2.7E-12	mg/kg-day	--	--	--	--	2.1E-11	mg/kg-day	1.0E-05	mg/kg-day	2.1E-06
				Titanium	8E+00	µg/L	1.7E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						4.0E-07
				Total Organics							5.9E-11						1.5E-05
				Total Inorganics							2.3E-09						1.6E-04
		Surface Water Dermal Total (excluding KM TEQs)									2.4E-09						1.8E-04
		Surface Water Dermal Total (based on KM TEQs)									2.4E-09						1.8E-04
Crabbing - Surface Water Total (excluding KM TEQs)											3.3E-09						2.2E-04
Crabbing - Surface Water Total (based on KM TEQs)											3.3E-09						2.2E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											3.6E-05						4.3E+00
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											3.5E-05						4.2E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											7.0E-06						1.3E-00

TABLE 7.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											6.7E-06					1.3E+00

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-06	mg/kg	2.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-06	--	2.7E-10	mg/kg-day	7.0E-10	mg/kg-day	3.8E-01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-07	--	1.4E-11	mg/kg-day	7.0E-10	mg/kg-day	2.0E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	5.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.5E-09	--	6.6E-12	mg/kg-day	7.0E-09	mg/kg-day	9.4E-04
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-08	--	2.0E-11	mg/kg-day	7.0E-09	mg/kg-day	2.9E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	4.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-09	--	4.8E-12	mg/kg-day	7.0E-09	mg/kg-day	6.9E-04
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	2.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-09	--	2.3E-11	mg/kg-day	7.0E-08	mg/kg-day	3.3E-04
				OCDD	4E-06	mg/kg	1.2E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-10	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.8E-05
				2,3,7,8-TCDF	2E-06	mg/kg	4.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.0E-08	--	5.4E-11	mg/kg-day	7.0E-09	mg/kg-day	7.8E-03
				1,2,3,7,8-PeCDF	2E-06	mg/kg	4.2E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-08	--	4.9E-11	mg/kg-day	2.3E-08	mg/kg-day	2.1E-03
				2,3,4,7,8-PeCDF	2E-06	mg/kg	6.7E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.0E-07	--	7.9E-11	mg/kg-day	2.3E-09	mg/kg-day	3.4E-02
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	3.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-08	--	3.5E-11	mg/kg-day	7.0E-09	mg/kg-day	5.1E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	2.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-08	--	3.2E-11	mg/kg-day	7.0E-09	mg/kg-day	4.5E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	3.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-09	--	3.7E-12	mg/kg-day	7.0E-09	mg/kg-day	5.2E-04
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	4.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.0E-09	--	5.4E-12	mg/kg-day	7.0E-09	mg/kg-day	7.8E-04
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	6.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.7E-09	--	7.5E-11	mg/kg-day	7.0E-08	mg/kg-day	1.1E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-10	--	3.5E-12	mg/kg-day	7.0E-08	mg/kg-day	5.0E-05
				OCDF	2E-07	mg/kg	6.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-11	--	7.4E-12	mg/kg-day	2.3E-06	mg/kg-day	3.2E-06
				KM TEQ DF	1E-05	mg/kg	2.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.1E-06	--	3.2E-10	mg/kg-day	7.0E-10	mg/kg-day	4.5E-01
				PCB-77	5E-04	mg/kg	1.5E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.2E-08	--	1.7E-08	mg/kg-day	7.0E-06	mg/kg-day	2.5E-03
				PCB-81	2E-05	mg/kg	5.8E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-09	--	6.8E-10	mg/kg-day	2.3E-06	mg/kg-day	2.9E-04
				PCB-105	8E-03	mg/kg	2.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-07	--	2.7E-07	mg/kg-day	2.3E-05	mg/kg-day	1.2E-02
				PCB-114	6E-04	mg/kg	1.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-09	--	2.1E-08	mg/kg-day	2.3E-05	mg/kg-day	8.9E-04
				PCB-118	3E-02	mg/kg	9.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-07	--	1.1E-06	mg/kg-day	2.3E-05	mg/kg-day	4.7E-02
				PCB-123	6E-04	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.6E-09	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.5E-04
				PCB-126	9E-05	mg/kg	2.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-06	--	3.2E-09	mg/kg-day	7.0E-09	mg/kg-day	4.6E-01
				PCB-156/157	3E-03	mg/kg	8.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-08	--	1.0E-07	mg/kg-day	2.3E-05	mg/kg-day	4.3E-03
				PCB-167	1E-03	mg/kg	3.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--	4.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.9E-03
				PCB-169	4E-06	mg/kg	1.2E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.2E-08	--	1.3E-10	mg/kg-day	2.3E-08	mg/kg-day	5.8E-03
				PCB-189	2E-04	mg/kg	6.9E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-09	--	8.0E-09	mg/kg-day	2.3E-05	mg/kg-day	3.4E-04
				KM TEQ PCB	1E-05	mg/kg	3.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.2E-06	--	4.1E-10	mg/kg-day	7.0E-10	mg/kg-day	5.8E-01
				Non-DL PCBs													
				Total Non-DL PCBs	4E-01	mg/kg	1.2E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.2E-06	--	1.5E-05	mg/kg-day	2.0E-05	mg/kg-day	7.3E-01
				PAHs													
				Benz(a)anthracene	8E-03	mg/kg	3.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.1E-09	M	4.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8E-03	mg/kg	3.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.1E-08	M	4.1E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				Benzo(b)fluoranthene	8E-03	mg/kg	3.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.1E-09	M	4.1E-07	mg/kg-day	--	--	--
				Chrysene	8E-03	mg/kg	3.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	7.1E-11	M	4.1E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	8E-03	mg/kg	3.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.1E-08	M	4.1E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	3.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.1E-09	M	4.1E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-02	mg/kg	5.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-08	--	6.2E-07	mg/kg-day	3.0E-05	mg/kg-day	2.1E-02
				2,4'-DDE	6E-03	mg/kg	1.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.7E-09	--	1.9E-07	mg/kg-day	3.0E-04	mg/kg-day	6.5E-04
				2,4'-DDT	3E-03	mg/kg	1.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.8E-09	--	1.3E-07	mg/kg-day	5.0E-04	mg/kg-day	2.6E-04
				4,4'-DDD	9E-02	mg/kg	2.6E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.3E-08	--	3.0E-06	mg/kg-day	3.0E-05	mg/kg-day	1.0E-01
				4,4'-DDE	1E-01	mg/kg	3.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-07	--	4.2E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				4,4'-DDT	1E-02	mg/kg	4.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-08	--	5.4E-07	mg/kg-day	5.0E-04	mg/kg-day	1.1E-03
				Benzaldehyde	1E+00	mg/kg	5.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-08	--	6.4E-05	mg/kg-day	1.0E-01	mg/kg-day	6.4E-04
				Chlordane, alpha (cis)	2E-02	mg/kg	4.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-08	--	5.0E-07	mg/kg-day	5.0E-04	mg/kg-day	1.0E-03
				Chlordane, gamma (trans)	4E-03	mg/kg	1.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.6E-09	--	1.2E-07	mg/kg-day	5.0E-04	mg/kg-day	2.4E-04
				Dieldrin	8E-03	mg/kg	2.3E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.6E-07	--	2.6E-07	mg/kg-day	5.0E-05	mg/kg-day	5.3E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	4.9E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.5E-08	--	5.8E-08	mg/kg-day	1.3E-05	mg/kg-day	4.4E-03

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Heptachlor epoxide, trans-	9E-05	mg/kg	2.4E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.2E-09	--	2.8E-09	mg/kg-day	1.3E-05	mg/kg-day	2.1E-04
				Hexachlorobenzene	1E-03	mg/kg	4.2E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	6.7E-09	--	4.9E-08	mg/kg-day	8.0E-04	mg/kg-day	6.1E-05
				Mirex	3E-04	mg/kg	4.6E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	8.3E-09	--	5.4E-09	mg/kg-day	2.0E-04	mg/kg-day	2.7E-05
				Nonachlor, cis-	6E-03	mg/kg	1.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.3E-09	--	2.1E-07	mg/kg-day	1.0E-04	mg/kg-day	2.1E-03
				Nonachlor, trans-	2E-02	mg/kg	4.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-08	--	5.5E-07	mg/kg-day	1.6E-05	mg/kg-day	3.6E-02
				Oxychlordane	5E-03	mg/kg	1.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.5E-09	--	1.5E-07	mg/kg-day	8.9E-05	mg/kg-day	1.7E-03
				Pyridine	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.0E-03	mg/kg-day	6.4E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.2E-04	mg/kg-day	1.0E+00	mg/kg-day	3.2E-04
				Arsenic, organic	1E+00	mg/kg	4.4E-06	mg/kg-day	--	--	--	--	5.1E-05	mg/kg-day	2.0E-02	mg/kg-day	2.6E-03
				Arsenic, inorganic	1E-01	mg/kg	4.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.3E-07	--	5.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Cadmium	5E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.0E-03	mg/kg-day	2.3E-03
				Chromium [as Cr(III)]	6E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	1.5E+00	mg/kg-day	2.1E-05
				Cobalt	2E-01	mg/kg	9.5E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.7E-02
				Copper	5E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	1.0E-03	mg/kg-day	2.4E-02
				Iron	7E+00	mg/kg	3.0E-05	mg/kg-day	--	--	--	--	3.5E-04	mg/kg-day	7.0E-01	mg/kg-day	5.0E-04
				Lead	4E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	1.4E-01	mg/kg-day	1.0E-04
				Mercury	3E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	5.0E-02
				Methyl Mercury	4E-01	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	1.0E-04	mg/kg-day	1.8E-01
				Selenium	5E-01	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	2.7E-05	mg/kg-day	5.0E-03	mg/kg-day	5.4E-03
				Silver	2E-02	mg/kg	8.4E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Vanadium	3E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	5.0E-03	mg/kg-day	2.8E-04
				Zinc	1E+01	mg/kg	6.2E-05	mg/kg-day	--	--	--	--	7.2E-04	mg/kg-day	3.0E-01	mg/kg-day	2.4E-03
				Total DLCs (excluding KM TEQs)							8.9E-06						9.9E-01
				Total DLCs (based on KM TEQs)							9.3E-06						1.0E+00
				Total PCDD/Fs (excluding KM TEQ)							4.2E-06						4.6E-01
				Total PCDD/Fs (based on KM TEQ)							4.1E-06						4.5E-01
				Total DL-PCBs (excluding KM TEQ)							4.8E-06						5.3E-01
				Total DL-PCBs (based on KM TEQ)							5.2E-06						5.8E-01
				Total Non-DL PCBs							1.2E-06						7.3E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							6.0E-06						1.3E+00
				Total PCBs (DL & NDL; based on KM TEQ)							6.5E-06						1.3E+00
				Total PAHs							1.6E-07						1.4E-03
				Total Organics							7.2E-07						2.5E-01
				Total Inorganics							7.3E-07						3.2E-01
		Mixed Fish/All Species Total (excluding KM TEQs)									1.2E-05						2.3E+00
		Mixed Fish/All Species Total (based on KM TEQs)									1.2E-05						2.3E+00
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	2.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-06	--	2.8E-10	mg/kg-day	7.0E-10	mg/kg-day	4.1E-01
				1,2,3,7,8-PeCDD	7E-07	mg/kg	1.9E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-07	--	2.3E-11	mg/kg-day	7.0E-10	mg/kg-day	3.2E-02
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-08	--	1.4E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	5.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-08	--	6.1E-11	mg/kg-day	7.0E-09	mg/kg-day	8.7E-03
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	9.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.6E-03
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	3.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.4E-09	--	4.2E-11	mg/kg-day	7.0E-08	mg/kg-day	6.0E-04
				OCDD	3E-06	mg/kg	8.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-10	--	1.0E-10	mg/kg-day	2.3E-06	mg/kg-day	4.4E-05
				2,3,7,8-TCDF	1E-07	mg/kg	2.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-09	--	3.4E-12	mg/kg-day	7.0E-09	mg/kg-day	4.8E-04
				1,2,3,7,8-PeCDF	1E-06	mg/kg	3.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-08	--	4.5E-11	mg/kg-day	2.3E-08	mg/kg-day	1.9E-03
				2,3,4,7,8-PeCDF	4E-06	mg/kg	1.1E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.8E-07	--	1.2E-10	mg/kg-day	2.3E-09	mg/kg-day	5.3E-02
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	7.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--	8.7E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	5.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-08	--	6.5E-11	mg/kg-day	7.0E-09	mg/kg-day	9.3E-03

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-09	--	3.7E-12	mg/kg-day	7.0E-09	mg/kg-day	5.3E-04
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-08	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.7E-03
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	1.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-08	--	1.5E-10	mg/kg-day	7.0E-08	mg/kg-day	2.2E-03
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	4.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.7E-10	--	5.2E-12	mg/kg-day	7.0E-08	mg/kg-day	7.4E-05
				OCDF	4E-07	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-11	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.0E-06
				KM TEQ DF	1E-05	mg/kg	3.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.7E-06	--	3.6E-10	mg/kg-day	7.0E-10	mg/kg-day	5.2E-01
				PCB-77	7E-05	mg/kg	2.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-09	--	2.7E-09	mg/kg-day	7.0E-06	mg/kg-day	3.8E-04
				PCB-81	1E-05	mg/kg	3.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-09	--	4.2E-10	mg/kg-day	2.3E-06	mg/kg-day	1.8E-04
				PCB-105	2E-02	mg/kg	6.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-07	--	7.4E-07	mg/kg-day	2.3E-05	mg/kg-day	3.2E-02
				PCB-114	1E-03	mg/kg	4.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-08	--	4.7E-08	mg/kg-day	2.3E-05	mg/kg-day	2.0E-03
				PCB-118	7E-02	mg/kg	2.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.7E-07	--	2.5E-06	mg/kg-day	2.3E-05	mg/kg-day	1.1E-01
				PCB-123	1E-03	mg/kg	4.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-08	--	5.0E-08	mg/kg-day	2.3E-05	mg/kg-day	2.1E-03
				PCB-126	1E-04	mg/kg	3.6E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-06	--	4.2E-09	mg/kg-day	7.0E-09	mg/kg-day	6.1E-01
				PCB-156/157	6E-03	mg/kg	1.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.5E-08	--	2.2E-07	mg/kg-day	2.3E-05	mg/kg-day	9.4E-03
				PCB-167	3E-03	mg/kg	8.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-08	--	9.6E-08	mg/kg-day	2.3E-05	mg/kg-day	4.1E-03
				PCB-169	4E-06	mg/kg	1.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.0E-08	--	1.6E-10	mg/kg-day	2.3E-08	mg/kg-day	6.6E-03
				PCB-189	5E-04	mg/kg	1.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.6E-09	--	1.7E-08	mg/kg-day	2.3E-05	mg/kg-day	7.4E-04
				KM TEQ PCB	2E-05	mg/kg	6.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.9E-06	--	7.7E-10	mg/kg-day	7.0E-10	mg/kg-day	1.1E+00
				Non-DL PCBs													
				Total Non-DL PCBs	6E-01	mg/kg	1.8E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-06	--	2.1E-05	mg/kg-day	2.0E-05	mg/kg-day	1.1E+00
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	6.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-07	M	6.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.1E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	6.4E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.1E-10	M	6.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-07	M	6.4E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	6.4E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	9.0E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.2E-09	--	1.0E-07	mg/kg-day	3.0E-05	mg/kg-day	3.5E-03
				2,4'-DDE	2E-03	mg/kg	5.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-09	--	6.6E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
				2,4'-DDT	4E-04	mg/kg	1.2E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-10	--	1.4E-08	mg/kg-day	5.0E-04	mg/kg-day	2.7E-05
				4,4'-DDD	1E-01	mg/kg	3.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.2E-08	--	4.5E-06	mg/kg-day	3.0E-05	mg/kg-day	1.5E-01
				4,4'-DDE	3E-01	mg/kg	8.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-07	--	9.4E-06	mg/kg-day	3.0E-04	mg/kg-day	3.1E-02
				4,4'-DDT	8E-03	mg/kg	2.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.5E-09	--	2.9E-07	mg/kg-day	5.0E-04	mg/kg-day	5.8E-04
				Benzaldehyde	1E+00	mg/kg	5.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-08	--	6.4E-05	mg/kg-day	1.0E-01	mg/kg-day	6.4E-04
				Chlordane, alpha (cis)	1E-02	mg/kg	3.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-08	--	4.4E-07	mg/kg-day	5.0E-04	mg/kg-day	8.7E-04
				Chlordane, gamma (trans)	4E-03	mg/kg	1.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.9E-09	--	1.3E-07	mg/kg-day	5.0E-04	mg/kg-day	2.6E-04
				Dieldrin	1E-02	mg/kg	4.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.8E-07	--	4.9E-07	mg/kg-day	5.0E-05	mg/kg-day	9.9E-03
				Heptachlor epoxide, cis-	4E-03	mg/kg	1.0E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.1E-08	--	1.2E-07	mg/kg-day	1.3E-05	mg/kg-day	9.0E-03
				Heptachlor epoxide, trans-	4E-04	mg/kg	1.0E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.2E-09	--	1.2E-08	mg/kg-day	1.3E-05	mg/kg-day	9.1E-04
				Hexachlorobenzene	4E-03	mg/kg	1.2E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.8E-08	--	1.3E-07	mg/kg-day	8.0E-04	mg/kg-day	1.7E-04
				Mirex	4E-04	mg/kg	7.6E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.4E-08	--	8.9E-09	mg/kg-day	2.0E-04	mg/kg-day	4.4E-05
				Nonachlor, cis-	1E-02	mg/kg	3.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	3.5E-07	mg/kg-day	1.0E-04	mg/kg-day	3.5E-03
				Nonachlor, trans-	3E-02	mg/kg	8.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.8E-08	--	9.3E-07	mg/kg-day	1.6E-05	mg/kg-day	6.0E-02
				Oxychlordane	1E-02	mg/kg	4.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-08	--	4.7E-07	mg/kg-day	8.9E-05	mg/kg-day	5.2E-03
				Pyridine	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.0E-03	mg/kg-day	6.4E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.0E+00	mg/kg-day	3.1E-04
				Arsenic, organic	1E+00	mg/kg	4.5E-06	mg/kg-day	--	--	--	--	5.3E-05	mg/kg-day	2.0E-02	mg/kg-day	2.6E-03
				Arsenic, inorganic	1E-01	mg/kg	5.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.6E-07	--	5.9E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				Cadmium	5E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	2.2E-03

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium [as Cr(III)]	2E+00	mg/kg	1.0E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	1.5E+00	mg/kg-day	8.0E-05
				Cobalt	7E-03	mg/kg	3.0E-08	mg/kg-day	--	--	--	--	3.5E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Copper	2E-01	mg/kg	8.9E-07	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.0E-03	mg/kg-day	1.0E-02
				Iron	8E+00	mg/kg	3.2E-05	mg/kg-day	--	--	--	--	3.7E-04	mg/kg-day	7.0E-01	mg/kg-day	5.3E-04
				Lead	2E-02	mg/kg	9.7E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.4E-01	mg/kg-day	1.2E-04
				Mercury	4E-01	mg/kg	1.8E-06	mg/kg-day	--	--	--	--	2.1E-05	mg/kg-day	3.0E-04	mg/kg-day	6.9E-02
				Methyl Mercury	5E-01	mg/kg	1.9E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	1.0E-04	mg/kg-day	2.3E-01
				Selenium	5E-01	mg/kg	2.2E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	5.0E-03	mg/kg-day	5.1E-03
				Silver	2E-02	mg/kg	8.4E-08	mg/kg-day	--	--	--	--	9.8E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Vanadium	2E-02	mg/kg	9.6E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.2E-04
				Zinc	3E+01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--	1.4E-03	mg/kg-day	3.0E-01	mg/kg-day	4.8E-03
				Total DLCs (excluding KM TEQs)							1.2E-05						1.3E+00
				Total DLCs (based on KM TEQs)							1.5E-05						1.6E+00
				Total PCDD/Fs (excluding KM TEQ)							4.8E-06						5.3E-01
				Total PCDD/Fs (based on KM TEQ)							4.7E-06						5.2E-01
				Total DL-PCBs (excluding KM TEQ)							6.9E-06						7.7E-01
				Total DL-PCBs (based on KM TEQ)							9.9E-06						1.1E+00
				Total Non-DL PCBs							1.8E-06						1.1E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							8.7E-06						1.8E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-05						2.1E+00
				Total PAHs							2.5E-07						2.1E-03
				Total Organics							1.3E-06						3.4E-01
				Total Inorganics							7.6E-07						3.4E-01
		American Eel Total (excluding KM TEQs)									1.6E-05						3.0E+00
		American Eel Total (based on KM TEQs)									1.9E-05						3.4E+00
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	mg/kg	4.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.2E-07	--	4.8E-11	mg/kg-day	7.0E-10	mg/kg-day	6.9E-02
				1,2,3,7,8-PeCDD	3E-07	mg/kg	8.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-07	--	9.6E-12	mg/kg-day	7.0E-10	mg/kg-day	1.4E-02
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--	2.3E-12	mg/kg-day	7.0E-09	mg/kg-day	3.4E-04
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	5.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.3E-09	--	6.5E-12	mg/kg-day	7.0E-09	mg/kg-day	9.2E-04
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-09	--	2.2E-12	mg/kg-day	7.0E-09	mg/kg-day	3.2E-04
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	3.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.9E-10	--	4.6E-12	mg/kg-day	7.0E-08	mg/kg-day	6.5E-05
				OCDD	3E-07	mg/kg	7.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-11	--	8.3E-12	mg/kg-day	2.3E-06	mg/kg-day	3.6E-06
				2,3,7,8-TCDF	4E-07	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				1,2,3,7,8-PeCDF	7E-07	mg/kg	1.8E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.3E-09	--	2.1E-11	mg/kg-day	2.3E-08	mg/kg-day	9.2E-04
				2,3,4,7,8-PeCDF	8E-07	mg/kg	2.1E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.4E-08	--	2.4E-11	mg/kg-day	2.3E-09	mg/kg-day	1.0E-02
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--	3.0E-12	mg/kg-day	7.0E-09	mg/kg-day	4.3E-04
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	6.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-09	--	7.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--	2.8E-12	mg/kg-day	7.0E-09	mg/kg-day	3.9E-04
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.6E-04
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-09	--	2.1E-11	mg/kg-day	7.0E-08	mg/kg-day	3.0E-04
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	2.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.2E-10	--	2.5E-12	mg/kg-day	7.0E-08	mg/kg-day	3.5E-05
				OCDF	2E-07	mg/kg	4.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-11	--	5.5E-12	mg/kg-day	2.3E-06	mg/kg-day	2.4E-06
				KM TEQ DF	2E-06	mg/kg	5.6E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.4E-07	--	6.5E-11	mg/kg-day	7.0E-10	mg/kg-day	9.3E-02
				PCB-77	1E-04	mg/kg	3.0E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.5E-09	--	3.5E-09	mg/kg-day	7.0E-06	mg/kg-day	5.0E-04
				PCB-81	4E-06	mg/kg	1.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.9E-10	--	1.3E-10	mg/kg-day	2.3E-06	mg/kg-day	5.5E-05
				PCB-105	1E-03	mg/kg	3.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--	4.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.9E-03
				PCB-114	8E-05	mg/kg	2.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	2.7E-09	mg/kg-day	2.3E-05	mg/kg-day	1.2E-04
				PCB-118	5E-03	mg/kg	1.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-08	--	1.9E-07	mg/kg-day	2.3E-05	mg/kg-day	8.0E-03
				PCB-123	7E-05	mg/kg	2.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--	2.6E-09	mg/kg-day	2.3E-05	mg/kg-day	1.1E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-126	4E-05	mg/kg	1.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-06	--	1.4E-09	mg/kg-day	7.0E-09	mg/kg-day	1.9E-01
				PCB-156/157	6E-04	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-09	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.6E-04
				PCB-167	3E-04	mg/kg	8.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-09	--	1.0E-08	mg/kg-day	2.3E-05	mg/kg-day	4.4E-04
				PCB-169	2E-06	mg/kg	5.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-08	--	6.3E-11	mg/kg-day	2.3E-08	mg/kg-day	2.7E-03
				PCB-189	6E-05	mg/kg	1.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-10	--	2.0E-09	mg/kg-day	2.3E-05	mg/kg-day	8.6E-05
				KM TEQ PCB	4E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-06	--	1.4E-10	mg/kg-day	7.0E-10	mg/kg-day	2.0E-01
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	3.6E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.6E-07	--	4.2E-06	mg/kg-day	2.0E-05	mg/kg-day	2.1E-01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-08	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.7E-04
				Benzo(b)fluoranthene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.5E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-08	M	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	6E-04	mg/kg	1.6E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.0E-10	--	1.9E-08	mg/kg-day	3.0E-05	mg/kg-day	6.4E-04
				2,4'-DDE	1E-03	mg/kg	3.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.0E-09	--	3.5E-08	mg/kg-day	3.0E-04	mg/kg-day	1.2E-04
				2,4'-DDT	2E-04	mg/kg	7.1E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-10	--	8.3E-09	mg/kg-day	5.0E-04	mg/kg-day	1.7E-05
				4,4'-DDD	6E-03	mg/kg	1.9E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.5E-09	--	2.2E-07	mg/kg-day	3.0E-05	mg/kg-day	7.4E-03
				4,4'-DDE	3E-02	mg/kg	8.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.0E-08	--	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.4E-03
				4,4'-DDT	2E-02	mg/kg	6.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-08	--	7.9E-07	mg/kg-day	5.0E-04	mg/kg-day	1.6E-03
				Benzaldehyde	1E+00	mg/kg	5.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-08	--	6.4E-05	mg/kg-day	1.0E-01	mg/kg-day	6.4E-04
				Chlordane, alpha (cis)	6E-03	mg/kg	1.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.5E-09	--	1.8E-07	mg/kg-day	5.0E-04	mg/kg-day	3.6E-04
				Chlordane, gamma (trans)	2E-03	mg/kg	6.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-09	--	7.6E-08	mg/kg-day	5.0E-04	mg/kg-day	1.5E-04
				Dieldrin	5E-03	mg/kg	1.3E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.1E-07	--	1.6E-07	mg/kg-day	5.0E-05	mg/kg-day	3.1E-03
				Heptachlor epoxide, cis-	1E-03	mg/kg	3.2E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.9E-08	--	3.8E-08	mg/kg-day	1.3E-05	mg/kg-day	2.9E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	4.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.1E-10	--	5.3E-10	mg/kg-day	1.3E-05	mg/kg-day	4.1E-05
				Hexachlorobenzene	5E-04	mg/kg	1.5E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.4E-09	--	1.8E-08	mg/kg-day	8.0E-04	mg/kg-day	2.2E-05
				Mirex	1E-04	mg/kg	2.4E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.4E-09	--	2.8E-09	mg/kg-day	2.0E-04	mg/kg-day	1.4E-05
				Nonachlor, cis-	2E-03	mg/kg	4.7E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-09	--	5.4E-08	mg/kg-day	1.0E-04	mg/kg-day	5.4E-04
				Nonachlor, trans-	3E-03	mg/kg	9.3E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.3E-09	--	1.1E-07	mg/kg-day	1.6E-05	mg/kg-day	7.0E-03
				Oxychlordane	3E-04	mg/kg	9.7E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.4E-10	--	1.1E-08	mg/kg-day	8.9E-05	mg/kg-day	1.3E-04
				Pyridine	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.0E-03	mg/kg-day	6.4E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.5E-05	mg/kg-day	--	--	--	--	2.9E-04	mg/kg-day	1.0E+00	mg/kg-day	2.9E-04
				Arsenic, organic	6E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	2.0E-02	mg/kg-day	1.6E-03
				Arsenic, inorganic	7E-02	mg/kg	3.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-07	--	3.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Cadmium	5E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.0E-03	mg/kg-day	2.3E-03
				Chromium [as Cr(III)]	9E-02	mg/kg	3.7E-07	mg/kg-day	--	--	--	--	4.4E-06	mg/kg-day	1.5E+00	mg/kg-day	2.9E-06
				Cobalt	2E-01	mg/kg	9.4E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.7E-02
				Copper	8E-01	mg/kg	3.3E-06	mg/kg-day	--	--	--	--	3.9E-05	mg/kg-day	1.0E-03	mg/kg-day	3.9E-02
				Iron	1E+01	mg/kg	4.2E-05	mg/kg-day	--	--	--	--	4.9E-04	mg/kg-day	7.0E-01	mg/kg-day	7.0E-04
				Lead	4E-02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	2.1E-06	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	7.7E-07	mg/kg-day	--	--	--	--	9.0E-06	mg/kg-day	1.4E-01	mg/kg-day	6.4E-05
				Mercury	3E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	3.0E-04	mg/kg-day	5.4E-02
				Methyl Mercury	4E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	1.0E-04	mg/kg-day	1.9E-01
				Selenium	5E-01	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	2.7E-05	mg/kg-day	5.0E-03	mg/kg-day	5.3E-03
				Silver	2E-02	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Vanadium	2E-02	mg/kg	9.7E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.3E-04
				Zinc	2E+01	mg/kg	7.4E-05	mg/kg-day	--	--	--	--	8.6E-04	mg/kg-day	3.0E-01	mg/kg-day	2.9E-03

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total DLCs (excluding KM TEQs)							2.8E-06						3.1E-01
				Total DLCs (based on KM TEQs)							2.7E-06						3.0E-01
				Total PCDD/Fs (excluding KM TEQ)							9.0E-07						1.0E-01
				Total PCDD/Fs (based on KM TEQ)							8.4E-07						9.3E-02
				Total DL-PCBs (excluding KM TEQ)							1.9E-06						2.1E-01
				Total DL-PCBs (based on KM TEQ)							1.8E-06						2.0E-01
				Total Non-DL PCBs							3.6E-07						2.1E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.2E-06						4.2E-01
				Total PCBs (DL & NDL; based on KM TEQ)							2.2E-06						4.2E-01
				Total PAHs							1.0E-07						8.7E-04
				Total Organics							3.4E-07						9.2E-02
				Total Inorganics							4.6E-07						3.5E-01
		Bluefish Total (excluding KM TEQs)									4.0E-06						9.6E-01
		Bluefish Total (based on KM TEQs)									3.9E-06						9.5E-01
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	2.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.9E-06	--	3.0E-10	mg/kg-day	7.0E-10	mg/kg-day	4.3E-01
				1,2,3,7,8-PeCDD	5E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-07	--	1.8E-11	mg/kg-day	7.0E-10	mg/kg-day	2.5E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	5.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.5E-09	--	6.6E-12	mg/kg-day	7.0E-09	mg/kg-day	9.4E-04
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	5.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-09	--	6.7E-12	mg/kg-day	7.0E-09	mg/kg-day	9.6E-04
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-09	--	2.8E-12	mg/kg-day	7.0E-09	mg/kg-day	4.0E-04
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	4.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.0E-09	--	4.6E-11	mg/kg-day	7.0E-08	mg/kg-day	6.6E-04
				OCDD	2E-05	mg/kg	4.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--	5.2E-10	mg/kg-day	2.3E-06	mg/kg-day	2.2E-04
				2,3,7,8-TCDF	4E-06	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.8E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	6.1E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-08	--	7.1E-11	mg/kg-day	2.3E-08	mg/kg-day	3.1E-03
				2,3,4,7,8-PeCDF	3E-06	mg/kg	9.0E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.1E-07	--	1.1E-10	mg/kg-day	2.3E-09	mg/kg-day	4.5E-02
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	1.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-08	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	3.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-08	--	3.9E-11	mg/kg-day	7.0E-09	mg/kg-day	5.6E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	3.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-09	--	3.9E-12	mg/kg-day	7.0E-09	mg/kg-day	5.6E-04
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	2.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-09	--	3.2E-12	mg/kg-day	7.0E-09	mg/kg-day	4.5E-04
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	9.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-08	--	1.1E-10	mg/kg-day	7.0E-08	mg/kg-day	1.5E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-10	--	3.5E-12	mg/kg-day	7.0E-08	mg/kg-day	5.0E-05
				OCDF	2E-07	mg/kg	5.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-11	--	6.1E-12	mg/kg-day	2.3E-06	mg/kg-day	2.6E-06
				KM TEQ DF	1E-05	mg/kg	3.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-06	--	3.8E-10	mg/kg-day	7.0E-10	mg/kg-day	5.4E-01
				PCB-77	1E-03	mg/kg	3.5E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.2E-08	--	4.1E-08	mg/kg-day	7.0E-06	mg/kg-day	5.8E-03
				PCB-81	3E-05	mg/kg	8.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-09	--	1.0E-09	mg/kg-day	2.3E-06	mg/kg-day	4.3E-04
				PCB-105	6E-03	mg/kg	1.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-08	--	2.1E-07	mg/kg-day	2.3E-05	mg/kg-day	9.0E-03
				PCB-114	7E-04	mg/kg	2.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.9E-09	--	2.6E-08	mg/kg-day	2.3E-05	mg/kg-day	1.1E-03
				PCB-118	4E-02	mg/kg	1.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-07	--	1.3E-06	mg/kg-day	2.3E-05	mg/kg-day	5.7E-02
				PCB-123	6E-04	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-09	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.6E-04
				PCB-126	2E-04	mg/kg	5.7E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-06	--	6.7E-09	mg/kg-day	7.0E-09	mg/kg-day	9.6E-01
				PCB-156/157	3E-03	mg/kg	1.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-08	--	1.2E-07	mg/kg-day	2.3E-05	mg/kg-day	5.0E-03
				PCB-167	1E-03	mg/kg	4.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-08	--	5.2E-08	mg/kg-day	2.3E-05	mg/kg-day	2.2E-03
				PCB-169	3E-06	mg/kg	1.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.6E-08	--	1.2E-10	mg/kg-day	2.3E-08	mg/kg-day	5.1E-03
				PCB-189	3E-04	mg/kg	8.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-09	--	1.0E-08	mg/kg-day	2.3E-05	mg/kg-day	4.3E-04
				KM TEQ PCB	2E-05	mg/kg	5.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.9E-06	--	6.9E-10	mg/kg-day	7.0E-10	mg/kg-day	9.9E-01
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.2E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.2E-06	--	2.5E-05	mg/kg-day	2.0E-05	mg/kg-day	1.3E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-08	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.7E-04
				Benzo(b)fluoranthene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.5E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-08	M	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-02	mg/kg	9.5E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.3E-08	--	1.1E-06	mg/kg-day	3.0E-05	mg/kg-day	3.7E-02
				2,4'-DDE	1E-02	mg/kg	3.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-08	--	4.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.4E-03
				2,4'-DDT	3E-03	mg/kg	8.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.0E-09	--	1.0E-07	mg/kg-day	5.0E-04	mg/kg-day	2.0E-04
				4,4'-DDD	1E-01	mg/kg	4.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.5E-08	--	4.6E-06	mg/kg-day	3.0E-05	mg/kg-day	1.5E-01
				4,4'-DDE	2E-01	mg/kg	4.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-07	--	5.2E-06	mg/kg-day	3.0E-04	mg/kg-day	1.7E-02
				4,4'-DDT	1E-02	mg/kg	4.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-08	--	5.0E-07	mg/kg-day	5.0E-04	mg/kg-day	1.0E-03
				Benzaldehyde	1E+00	mg/kg	5.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-08	--	6.4E-05	mg/kg-day	1.0E-01	mg/kg-day	6.4E-04
				Chlordane, alpha (cis)	4E-02	mg/kg	9.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.3E-08	--	1.1E-06	mg/kg-day	5.0E-04	mg/kg-day	2.2E-03
				Chlordane, gamma (trans)	6E-03	mg/kg	1.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.3E-09	--	2.1E-07	mg/kg-day	5.0E-04	mg/kg-day	4.2E-04
				Dieldrin	1E-02	mg/kg	3.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.1E-07	--	3.7E-07	mg/kg-day	5.0E-05	mg/kg-day	7.5E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	4.9E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.5E-08	--	5.7E-08	mg/kg-day	1.3E-05	mg/kg-day	4.4E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	4.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.1E-10	--	5.3E-10	mg/kg-day	1.3E-05	mg/kg-day	4.1E-05
				Hexachlorobenzene	1E-03	mg/kg	2.9E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.7E-09	--	3.4E-08	mg/kg-day	8.0E-04	mg/kg-day	4.3E-05
				Mirex	3E-04	mg/kg	5.4E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.7E-09	--	6.3E-09	mg/kg-day	2.0E-04	mg/kg-day	3.1E-05
				Nonachlor, cis-	1E-02	mg/kg	3.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	3.6E-07	mg/kg-day	1.0E-04	mg/kg-day	3.6E-03
				Nonachlor, trans-	3E-02	mg/kg	8.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.8E-08	--	9.4E-07	mg/kg-day	1.6E-05	mg/kg-day	6.1E-02
				Oxychlordane	4E-03	mg/kg	1.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.8E-09	--	1.3E-07	mg/kg-day	8.9E-05	mg/kg-day	1.4E-03
				Pyridine	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.0E-03	mg/kg-day	6.4E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	1.0E+00	mg/kg-day	2.8E-04
				Arsenic, organic	1E+00	mg/kg	4.8E-06	mg/kg-day	--	--	--	--	5.7E-05	mg/kg-day	2.0E-02	mg/kg-day	2.8E-03
				Arsenic, inorganic	1E-01	mg/kg	5.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.1E-07	--	6.3E-06	mg/kg-day	3.0E-04	mg/kg-day	2.1E-02
				Cadmium	5E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.0E-03	mg/kg-day	2.3E-03
				Chromium [as Cr(III)]	1E-01	mg/kg	5.2E-07	mg/kg-day	--	--	--	--	6.1E-06	mg/kg-day	1.5E+00	mg/kg-day	4.0E-06
				Cobalt	2E-02	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-03
				Copper	6E-01	mg/kg	2.4E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	1.0E-03	mg/kg-day	2.8E-02
				Iron	7E+00	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	7.0E-01	mg/kg-day	4.7E-04
				Lead	4E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	1.8E-06	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	9.1E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.4E-01	mg/kg-day	7.6E-05
				Mercury	3E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.6E-02
				Methyl Mercury	3E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.0E-04	mg/kg-day	1.7E-01
				Selenium	4E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	5.0E-03	mg/kg-day	3.7E-03
				Silver	2E-02	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Vanadium	3E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Zinc	7E+00	mg/kg	3.1E-05	mg/kg-day	--	--	--	--	3.6E-04	mg/kg-day	3.0E-01	mg/kg-day	1.2E-03
				Total DLCs (excluding KM TEQs)							1.4E-05						1.6E+00
				Total DLCs (based on KM TEQs)							1.4E-05						1.5E+00
				Total PCDD/Fs (excluding KM TEQ)							4.8E-06						5.4E-01
				Total PCDD/Fs (based on KM TEQ)							4.8E-06						5.4E-01
				Total DL-PCBs (excluding KM TEQ)							9.4E-06						1.0E+00
				Total DL-PCBs (based on KM TEQ)							8.9E-06						9.9E-01
				Total Non-DL PCBs							2.2E-06						1.3E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.2E-05						2.3E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-05						2.2E+00
				Total PAHs							1.0E-07						8.7E-04
				Total Organics							9.8E-07						3.6E-01
				Total Inorganics							8.1E-07						2.8E-01

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
		Striped Bass Total (excluding KM TEQs)									1.8E-05						3.5E+00
		Striped Bass Total (based on KM TEQs)									1.8E-05						3.4E+00
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	5E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-06	--	1.8E-10	mg/kg-day	7.0E-10	mg/kg-day	2.5E-01
				1,2,3,7,8-PeCDD	2E-07	mg/kg	6.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-07	--	7.9E-12	mg/kg-day	7.0E-10	mg/kg-day	1.1E-02
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	2.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-09	--	2.6E-12	mg/kg-day	7.0E-09	mg/kg-day	3.7E-04
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	7.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--	8.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-09	--	3.5E-12	mg/kg-day	7.0E-09	mg/kg-day	5.0E-04
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	8.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-09	--	1.0E-11	mg/kg-day	7.0E-08	mg/kg-day	1.4E-04
				OCDD	5E-07	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.6E-11	--	1.5E-11	mg/kg-day	2.3E-06	mg/kg-day	6.2E-06
				2,3,7,8-TCDF	3E-07	mg/kg	7.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--	8.7E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,7,8-PeCDF	3E-07	mg/kg	9.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.4E-09	--	1.1E-11	mg/kg-day	2.3E-08	mg/kg-day	4.8E-04
				2,3,4,7,8-PeCDF	9E-07	mg/kg	2.5E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.1E-07	--	2.9E-11	mg/kg-day	2.3E-09	mg/kg-day	1.2E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-08	--	2.1E-11	mg/kg-day	7.0E-09	mg/kg-day	3.0E-03
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	7.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--	8.6E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-09	--	4.6E-12	mg/kg-day	7.0E-09	mg/kg-day	6.6E-04
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-09	--	3.5E-12	mg/kg-day	7.0E-09	mg/kg-day	5.0E-04
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	1.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-09	--	1.6E-11	mg/kg-day	7.0E-08	mg/kg-day	2.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-10	--	3.5E-12	mg/kg-day	7.0E-08	mg/kg-day	5.0E-05
				OCDF	2E-07	mg/kg	5.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-11	--	6.4E-12	mg/kg-day	2.3E-06	mg/kg-day	2.8E-06
				KM TEQ DF	6E-06	mg/kg	1.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-06	--	2.0E-10	mg/kg-day	7.0E-10	mg/kg-day	2.8E-01
				PCB-77	1E-04	mg/kg	4.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.5E-09	--	5.1E-09	mg/kg-day	7.0E-06	mg/kg-day	7.2E-04
				PCB-81	1E-05	mg/kg	4.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--	5.3E-10	mg/kg-day	2.3E-06	mg/kg-day	2.3E-04
				PCB-105	3E-03	mg/kg	8.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-08	--	9.8E-08	mg/kg-day	2.3E-05	mg/kg-day	4.2E-03
				PCB-114	2E-04	mg/kg	7.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-09	--	8.4E-09	mg/kg-day	2.3E-05	mg/kg-day	3.6E-04
				PCB-118	1E-02	mg/kg	3.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-07	--	4.2E-07	mg/kg-day	2.3E-05	mg/kg-day	1.8E-02
				PCB-123	2E-04	mg/kg	5.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-09	--	6.3E-09	mg/kg-day	2.3E-05	mg/kg-day	2.7E-04
				PCB-126	4E-05	mg/kg	1.3E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-06	--	1.5E-09	mg/kg-day	7.0E-09	mg/kg-day	2.2E-01
				PCB-156/157	1E-03	mg/kg	3.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-08	--	4.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.8E-03
				PCB-167	5E-04	mg/kg	1.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.3E-09	--	1.9E-08	mg/kg-day	2.3E-05	mg/kg-day	8.1E-04
				PCB-169	2E-06	mg/kg	6.2E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-08	--	7.2E-11	mg/kg-day	2.3E-08	mg/kg-day	3.1E-03
				PCB-189	8E-05	mg/kg	2.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-09	--	2.8E-09	mg/kg-day	2.3E-05	mg/kg-day	1.2E-04
				KM TEQ PCB	5E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-06	--	1.7E-10	mg/kg-day	7.0E-10	mg/kg-day	2.4E-01
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	4.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-07	--	5.3E-06	mg/kg-day	2.0E-05	mg/kg-day	2.6E-01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-08	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	8.7E-04
				Benzo(b)fluoranthene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.5E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.5E-08	M	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-09	M	2.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	9.7E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.3E-09	--	1.1E-07	mg/kg-day	3.0E-05	mg/kg-day	3.8E-03
				2,4'-DDE	3E-03	mg/kg	8.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-09	--	9.3E-08	mg/kg-day	3.0E-04	mg/kg-day	3.1E-04
				2,4'-DDT	2E-04	mg/kg	7.1E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-10	--	8.3E-09	mg/kg-day	5.0E-04	mg/kg-day	1.7E-05
				4,4'-DDD	2E-02	mg/kg	5.5E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-08	--	6.4E-07	mg/kg-day	3.0E-05	mg/kg-day	2.1E-02
				4,4'-DDE	4E-02	mg/kg	1.2E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-08	--	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.5E-03
				4,4'-DDT	1E-03	mg/kg	4.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-09	--	5.5E-08	mg/kg-day	5.0E-04	mg/kg-day	1.1E-04
				Benzaldehyde	1E+00	mg/kg	5.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-08	--	6.4E-05	mg/kg-day	1.0E-01	mg/kg-day	6.4E-04
				Chlordane, alpha (cis)	2E-03	mg/kg	5.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.9E-09	--	6.5E-08	mg/kg-day	5.0E-04	mg/kg-day	1.3E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chlordane, gamma (trans)	7E-04	mg/kg	2.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.9E-10	--	2.3E-08	mg/kg-day	5.0E-04	mg/kg-day	4.6E-05
				Dieldrin	1E-03	mg/kg	4.2E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.7E-08	--	4.9E-08	mg/kg-day	5.0E-05	mg/kg-day	9.8E-04
				Heptachlor epoxide, cis-	3E-04	mg/kg	9.1E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.3E-09	--	1.1E-08	mg/kg-day	1.3E-05	mg/kg-day	8.2E-04
				Heptachlor epoxide, trans-	2E-05	mg/kg	4.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.1E-10	--	5.3E-10	mg/kg-day	1.3E-05	mg/kg-day	4.1E-05
				Hexachlorobenzene	5E-04	mg/kg	1.4E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.2E-09	--	1.6E-08	mg/kg-day	8.0E-04	mg/kg-day	2.0E-05
				Mirex	6E-05	mg/kg	1.1E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.1E-09	--	1.3E-09	mg/kg-day	2.0E-04	mg/kg-day	6.7E-06
				Nonachlor, cis-	1E-03	mg/kg	3.1E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-09	--	3.6E-08	mg/kg-day	1.0E-04	mg/kg-day	3.6E-04
				Nonachlor, trans-	3E-03	mg/kg	8.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-09	--	1.0E-07	mg/kg-day	1.6E-05	mg/kg-day	6.4E-03
				Oxychlordane	1E-03	mg/kg	3.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-09	--	4.1E-08	mg/kg-day	8.9E-05	mg/kg-day	4.6E-04
				Pyridine	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.0E-03	mg/kg-day	6.4E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	2.8E-04	mg/kg-day	1.0E+00	mg/kg-day	2.8E-04
				Arsenic, organic	2E+00	mg/kg	7.0E-06	mg/kg-day	--	--	--	--	8.1E-05	mg/kg-day	2.0E-02	mg/kg-day	4.1E-03
				Arsenic, inorganic	2E-01	mg/kg	7.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-06	--	9.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Cadmium	5E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.0E-03	mg/kg-day	2.3E-03
				Chromium [as Cr(III)]	5E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	1.5E+00	mg/kg-day	1.5E-05
				Cobalt	9E-01	mg/kg	3.6E-06	mg/kg-day	--	--	--	--	4.2E-05	mg/kg-day	3.0E-04	mg/kg-day	1.4E-01
				Copper	2E-01	mg/kg	8.9E-07	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.0E-03	mg/kg-day	1.0E-02
				Iron	5E+00	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	2.5E-04	mg/kg-day	7.0E-01	mg/kg-day	3.6E-04
				Lead	3E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.4E-01	mg/kg-day	1.1E-04
				Mercury	2E-01	mg/kg	7.7E-07	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Methyl Mercury	2E-01	mg/kg	9.0E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.0E-04	mg/kg-day	1.1E-01
				Selenium	6E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	5.0E-03	mg/kg-day	6.3E-03
				Silver	2E-02	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Vanadium	3E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Zinc	7E+00	mg/kg	2.9E-05	mg/kg-day	--	--	--	--	3.4E-04	mg/kg-day	3.0E-01	mg/kg-day	1.1E-03
				Total DLCs (excluding KM TEQs)							4.8E-06						5.4E-01
				Total DLCs (based on KM TEQs)							4.7E-06						5.2E-01
				Total PCDD/Fs (excluding KM TEQ)							2.6E-06						2.9E-01
				Total PCDD/Fs (based on KM TEQ)							2.5E-06						2.8E-01
				Total DL-PCBs (excluding KM TEQ)							2.3E-06						2.5E-01
				Total DL-PCBs (based on KM TEQ)							2.2E-06						2.4E-01
				Total Non-DL PCBs							4.5E-07						2.6E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.7E-06						5.1E-01
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-06						5.1E-01
				Total PAHs							1.0E-07						8.7E-04
				Total Organics							1.7E-07						1.0E-01
				Total Inorganics							1.2E-06						3.3E-01
		Summer Flounder Total (excluding KM TEQs)									6.7E-06						1.2E+00
		Summer Flounder Total (based on KM TEQs)									6.6E-06						1.2E+00
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	2E-05	mg/kg	4.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-06	--	5.2E-10	mg/kg-day	7.0E-10	mg/kg-day	7.4E-01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-07	--	1.4E-11	mg/kg-day	7.0E-10	mg/kg-day	2.0E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	6.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	7.8E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.8E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	3.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-09	--	4.5E-12	mg/kg-day	7.0E-09	mg/kg-day	6.5E-04
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--	1.2E-11	mg/kg-day	7.0E-08	mg/kg-day	1.7E-04
				OCDD	8E-07	mg/kg	2.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-10	--	2.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.2E-05
				2,3,7,8-TCDF	4E-06	mg/kg	1.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.8E-02
				1,2,3,7,8-PeCDF	3E-06	mg/kg	8.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.8E-08	--	9.8E-11	mg/kg-day	2.3E-08	mg/kg-day	4.2E-03

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Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,7,8-PeCDF	3E-06	mg/kg	9.4E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.2E-07	--	1.1E-10	mg/kg-day	2.3E-09	mg/kg-day	4.7E-02
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	4.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-08	--	5.2E-11	mg/kg-day	7.0E-09	mg/kg-day	7.5E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	3.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-08	--	3.8E-11	mg/kg-day	7.0E-09	mg/kg-day	5.5E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-09	--	3.4E-12	mg/kg-day	7.0E-09	mg/kg-day	4.8E-04
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	5.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-09	--	6.9E-12	mg/kg-day	7.0E-09	mg/kg-day	9.9E-04
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	6.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.9E-09	--	7.7E-11	mg/kg-day	7.0E-08	mg/kg-day	1.1E-03
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	2.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-10	--	2.8E-12	mg/kg-day	7.0E-08	mg/kg-day	4.1E-05
				OCDF	2E-07	mg/kg	6.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.7E-11	--	7.0E-12	mg/kg-day	2.3E-06	mg/kg-day	3.0E-06
				KM TEQ DF	2E-05	mg/kg	5.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.5E-06	--	5.9E-10	mg/kg-day	7.0E-10	mg/kg-day	8.4E-01
				PCB-77	1E-03	mg/kg	3.0E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.5E-08	--	3.5E-08	mg/kg-day	7.0E-06	mg/kg-day	5.0E-03
				PCB-81	4E-05	mg/kg	1.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.0E-09	--	1.3E-09	mg/kg-day	2.3E-06	mg/kg-day	5.6E-04
				PCB-105	7E-03	mg/kg	2.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-07	--	2.6E-07	mg/kg-day	2.3E-05	mg/kg-day	1.1E-02
				PCB-114	6E-04	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.7E-09	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.6E-04
				PCB-118	3E-02	mg/kg	8.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-07	--	1.0E-06	mg/kg-day	2.3E-05	mg/kg-day	4.3E-02
				PCB-123	6E-04	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.6E-09	--	2.0E-08	mg/kg-day	2.3E-05	mg/kg-day	8.5E-04
				PCB-126	6E-05	mg/kg	1.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-06	--	2.2E-09	mg/kg-day	7.0E-09	mg/kg-day	3.1E-01
				PCB-156/157	3E-03	mg/kg	8.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-08	--	1.0E-07	mg/kg-day	2.3E-05	mg/kg-day	4.3E-03
				PCB-167	1E-03	mg/kg	3.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-08	--	4.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.8E-03
				PCB-169	7E-06	mg/kg	2.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-07	--	2.7E-10	mg/kg-day	2.3E-08	mg/kg-day	1.1E-02
				PCB-189	2E-04	mg/kg	6.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-09	--	8.0E-09	mg/kg-day	2.3E-05	mg/kg-day	3.4E-04
				KM TEQ PCB	7E-06	mg/kg	2.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-06	--	2.6E-10	mg/kg-day	7.0E-10	mg/kg-day	3.8E-01
				Non-DL PCBs													
				Total Non-DL PCBs	5E-01	mg/kg	1.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-06	--	1.7E-05	mg/kg-day	2.0E-05	mg/kg-day	8.4E-01
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	6.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-07	M	6.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.1E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	6.4E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.1E-10	M	6.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-07	M	6.4E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	5.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-08	M	6.4E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	5E-02	mg/kg	1.5E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.6E-08	--	1.7E-06	mg/kg-day	3.0E-05	mg/kg-day	5.8E-02
				2,4'-DDE	1E-02	mg/kg	3.0E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.0E-08	--	3.5E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				2,4'-DDT	1E-02	mg/kg	4.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-08	--	5.3E-07	mg/kg-day	5.0E-04	mg/kg-day	1.1E-03
				4,4'-DDD	2E-01	mg/kg	4.5E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.1E-07	--	5.3E-06	mg/kg-day	3.0E-05	mg/kg-day	1.8E-01
				4,4'-DDE	1E-01	mg/kg	3.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-07	--	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				4,4'-DDT	3E-02	mg/kg	9.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.1E-08	--	1.1E-06	mg/kg-day	5.0E-04	mg/kg-day	2.1E-03
				Benzaldehyde	1E+00	mg/kg	5.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.2E-08	--	6.4E-05	mg/kg-day	1.0E-01	mg/kg-day	6.4E-04
				Chlordane, alpha (cis)	2E-02	mg/kg	6.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-08	--	7.4E-07	mg/kg-day	5.0E-04	mg/kg-day	1.5E-03
				Chlordane, gamma (trans)	5E-03	mg/kg	1.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.9E-09	--	1.6E-07	mg/kg-day	5.0E-04	mg/kg-day	3.2E-04
				Dieldrin	7E-03	mg/kg	2.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.5E-07	--	2.5E-07	mg/kg-day	5.0E-05	mg/kg-day	5.0E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	5.6E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.1E-08	--	6.6E-08	mg/kg-day	1.3E-05	mg/kg-day	5.0E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	4.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.1E-10	--	5.3E-10	mg/kg-day	1.3E-05	mg/kg-day	4.1E-05
				Hexachlorobenzene	1E-03	mg/kg	3.6E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.7E-09	--	4.2E-08	mg/kg-day	8.0E-04	mg/kg-day	5.2E-05
				Mirex	4E-04	mg/kg	6.5E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.2E-08	--	7.6E-09	mg/kg-day	2.0E-04	mg/kg-day	3.8E-05
				Nonachlor, cis-	8E-03	mg/kg	2.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.3E-09	--	2.4E-07	mg/kg-day	1.0E-04	mg/kg-day	2.4E-03
				Nonachlor, trans-	2E-02	mg/kg	5.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-08	--	6.8E-07	mg/kg-day	1.6E-05	mg/kg-day	4.4E-02
				Oxychlordane	3E-03	mg/kg	8.7E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-09	--	1.0E-07	mg/kg-day	8.9E-05	mg/kg-day	1.1E-03
				Pyridine	1E+00	mg/kg	5.5E-06	mg/kg-day	--	--	--	--	6.4E-05	mg/kg-day	1.0E-03	mg/kg-day	6.4E-02
				Inorganics													
				Aluminum	9E+00	mg/kg	3.7E-05	mg/kg-day	--	--	--	--	4.3E-04	mg/kg-day	1.0E+00	mg/kg-day	4.3E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, organic	7E-01	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	3.4E-05	mg/kg-day	2.0E-02	mg/kg-day	1.7E-03
				Arsenic, inorganic	8E-02	mg/kg	3.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.9E-07	--	3.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Cadmium	5E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.0E-03	mg/kg-day	2.3E-03
				Chromium [as Cr(III)]	1E-01	mg/kg	6.1E-07	mg/kg-day	--	--	--	--	7.1E-06	mg/kg-day	1.5E+00	mg/kg-day	4.7E-06
				Cobalt	2E-02	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-03
				Copper	6E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Iron	6E+00	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	3.0E-04	mg/kg-day	7.0E-01	mg/kg-day	4.3E-04
				Lead	5E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--	--	2.5E-06	mg/kg-day	--	--	--
				Manganese	4E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	1.4E-01	mg/kg-day	1.3E-04
				Mercury	3E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	5.0E-02
				Methyl Mercury	4E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	2.0E-05	mg/kg-day	1.0E-04	mg/kg-day	2.0E-01
				Selenium	7E-01	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	5.0E-03	mg/kg-day	6.4E-03
				Silver	2E-02	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Vanadium	3E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	5.0E-03	mg/kg-day	3.4E-04
				Zinc	1E+01	mg/kg	5.3E-05	mg/kg-day	--	--	--	--	6.2E-04	mg/kg-day	3.0E-01	mg/kg-day	2.1E-03
				Total DLCs (excluding KM TEQs)							1.1E-05						1.2E+00
				Total DLCs (based on KM TEQs)							1.1E-05						1.2E+00
				Total PCDD/Fs (excluding KM TEQ)							7.7E-06						8.5E-01
				Total PCDD/Fs (based on KM TEQ)							7.5E-06						8.4E-01
				Total DL-PCBs (excluding KM TEQ)							3.5E-06						3.9E-01
				Total DL-PCBs (based on KM TEQ)							3.4E-06						3.8E-01
				Total Non-DL PCBs							1.4E-06						8.4E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							4.9E-06						1.2E+00
				Total PCBs (DL & NDL; based on KM TEQ)							4.8E-06						1.2E+00
				Total PAHs							2.5E-07						2.1E-03
				Total Organics							8.1E-07						3.8E-01
				Total Inorganics							4.9E-07						3.2E-01
		White Perch Total (excluding KM TEQs)									1.4E-05						2.8E+00
		White Perch Total (based on KM TEQs)									1.4E-05						2.7E+00
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	3E-05	mg/kg	8.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-05	--	1.0E-09	mg/kg-day	7.0E-10	mg/kg-day	1.4E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	2.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-07	--	2.7E-11	mg/kg-day	7.0E-10	mg/kg-day	3.8E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	6.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.9E-09	--	7.7E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-08	--	2.3E-11	mg/kg-day	7.0E-09	mg/kg-day	3.2E-03
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	6.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	8.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	2.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-09	--	2.6E-11	mg/kg-day	7.0E-08	mg/kg-day	3.7E-04
				OCDD	2E-06	mg/kg	6.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-10	--	7.7E-11	mg/kg-day	2.3E-06	mg/kg-day	3.3E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-07	--	3.7E-10	mg/kg-day	7.0E-09	mg/kg-day	5.3E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	6.9E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-08	--	8.1E-11	mg/kg-day	2.3E-08	mg/kg-day	3.5E-03
				2,3,4,7,8-PeCDF	5E-06	mg/kg	1.6E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.2E-07	--	1.9E-10	mg/kg-day	2.3E-09	mg/kg-day	8.0E-02
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--	1.8E-10	mg/kg-day	7.0E-09	mg/kg-day	2.6E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	4.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-08	--	5.4E-11	mg/kg-day	7.0E-09	mg/kg-day	7.7E-03
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-09	--	3.3E-12	mg/kg-day	7.0E-09	mg/kg-day	4.7E-04
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-08	--	1.4E-11	mg/kg-day	7.0E-09	mg/kg-day	2.0E-03
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.3E-08	--	1.8E-10	mg/kg-day	7.0E-08	mg/kg-day	2.6E-03
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	2.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.3E-10	--	2.6E-12	mg/kg-day	7.0E-08	mg/kg-day	3.7E-05
				OCDF	2E-07	mg/kg	8.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--	9.4E-12	mg/kg-day	2.3E-06	mg/kg-day	4.0E-06
				KM TEQ DF	3E-05	mg/kg	9.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-05	--	1.2E-09	mg/kg-day	7.0E-10	mg/kg-day	1.7E+00
				PCB-77	2E-03	mg/kg	6.4E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.6E-08	--	7.5E-08	mg/kg-day	7.0E-06	mg/kg-day	1.1E-02
				PCB-81	9E-05	mg/kg	2.8E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-08	--	3.3E-09	mg/kg-day	2.3E-06	mg/kg-day	1.4E-03
				PCB-105	1E-02	mg/kg	3.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	4.0E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02

TABLE 7.2 CTE
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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-114	9E-04	mg/kg	2.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-08	--	3.4E-08	mg/kg-day	2.3E-05	mg/kg-day	1.5E-03
				PCB-118	5E-02	mg/kg	1.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-07	--	1.8E-06	mg/kg-day	2.3E-05	mg/kg-day	7.7E-02
				PCB-123	8E-04	mg/kg	2.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-08	--	3.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-126	1E-04	mg/kg	3.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-06	--	3.7E-09	mg/kg-day	7.0E-09	mg/kg-day	5.3E-01
				PCB-156/157	4E-03	mg/kg	1.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-08	--	1.4E-07	mg/kg-day	2.3E-05	mg/kg-day	6.1E-03
				PCB-167	2E-03	mg/kg	5.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-08	--	6.0E-08	mg/kg-day	2.3E-05	mg/kg-day	2.6E-03
				PCB-169	1E-05	mg/kg	3.6E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.6E-07	--	4.2E-10	mg/kg-day	2.3E-08	mg/kg-day	1.8E-02
				PCB-189	3E-04	mg/kg	8.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-09	--	1.0E-08	mg/kg-day	2.3E-05	mg/kg-day	4.4E-04
				KM TEQ PCB	1E-05	mg/kg	3.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.7E-06	--	4.4E-10	mg/kg-day	7.0E-10	mg/kg-day	6.4E-01
				Non-DL PCBs													
				Total Non-DL PCBs	3E-01	mg/kg	1.1E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-06	--	1.2E-05	mg/kg-day	2.0E-05	mg/kg-day	6.2E-01
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	9.3E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	8.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-08	M	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Benzo(b)fluoranthene	3E-03	mg/kg	8.6E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-09	M	1.0E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.4E-11	M	1.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	8.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-08	M	1.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	7.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-08	M	8.2E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-04	mg/kg	7.2E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.7E-10	--	8.4E-09	mg/kg-day	3.0E-05	mg/kg-day	2.8E-04
				2,4'-DDE	4E-04	mg/kg	1.5E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.0E-10	--	1.7E-08	mg/kg-day	3.0E-04	mg/kg-day	5.7E-05
				2,4'-DDT	2E-04	mg/kg	6.5E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.2E-10	--	7.6E-09	mg/kg-day	5.0E-04	mg/kg-day	1.5E-05
				4,4'-DDD	3E-02	mg/kg	1.2E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.8E-08	--	1.3E-06	mg/kg-day	3.0E-05	mg/kg-day	4.5E-02
				4,4'-DDE	9E-02	mg/kg	3.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-07	--	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				4,4'-DDT	1E-03	mg/kg	3.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-09	--	4.2E-08	mg/kg-day	5.0E-04	mg/kg-day	8.3E-05
				Benzaldehyde	1E+00	mg/kg	3.9E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.6E-08	--	4.6E-05	mg/kg-day	1.0E-01	mg/kg-day	4.6E-04
				Chlordane, alpha (cis)	2E-03	mg/kg	6.7E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-09	--	7.8E-08	mg/kg-day	5.0E-04	mg/kg-day	1.6E-04
				Chlordane, gamma (trans)	3E-04	mg/kg	8.4E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-10	--	9.8E-09	mg/kg-day	5.0E-04	mg/kg-day	2.0E-05
				Dieldrin	6E-03	mg/kg	2.0E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.2E-07	--	2.4E-07	mg/kg-day	5.0E-05	mg/kg-day	4.7E-03
				Heptachlor epoxide, cis-	4E-03	mg/kg	1.2E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.1E-07	--	1.4E-07	mg/kg-day	1.3E-05	mg/kg-day	1.1E-02
				Heptachlor epoxide, trans-	1E-03	mg/kg	3.8E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.5E-08	--	4.4E-08	mg/kg-day	1.3E-05	mg/kg-day	3.4E-03
				Hexachlorobenzene	1E-03	mg/kg	3.6E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.8E-09	--	4.2E-08	mg/kg-day	8.0E-04	mg/kg-day	5.3E-05
				Mirex	2E-04	mg/kg	6.6E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.2E-08	--	7.7E-09	mg/kg-day	2.0E-04	mg/kg-day	3.9E-05
				Nonachlor, cis-	5E-03	mg/kg	1.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.1E-09	--	2.0E-07	mg/kg-day	1.0E-04	mg/kg-day	2.0E-03
				Nonachlor, trans-	1E-02	mg/kg	3.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-08	--	4.0E-07	mg/kg-day	1.6E-05	mg/kg-day	2.6E-02
				Oxychlordane	2E-02	mg/kg	5.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.8E-08	--	6.0E-07	mg/kg-day	8.9E-05	mg/kg-day	6.7E-03
				Pyridine	5E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	1.0E-03	mg/kg-day	1.9E-02
				Inorganics													
				Aluminum	9E+00	mg/kg	3.0E-05	mg/kg-day	--	--	--	--	3.5E-04	mg/kg-day	1.0E+00	mg/kg-day	3.5E-04
				Arsenic, organic	3E+00	mg/kg	8.3E-06	mg/kg-day	--	--	--	--	9.7E-05	mg/kg-day	2.0E-02	mg/kg-day	4.9E-03
				Arsenic, inorganic	3E-01	mg/kg	9.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-06	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.6E-02
				Cadmium	4E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	1.0E-03	mg/kg-day	1.5E-02
				Chromium [as Cr(III)]	2E-01	mg/kg	5.5E-07	mg/kg-day	--	--	--	--	6.4E-06	mg/kg-day	1.5E+00	mg/kg-day	4.3E-06
				Cobalt	9E-02	mg/kg	2.9E-07	mg/kg-day	--	--	--	--	3.4E-06	mg/kg-day	3.0E-04	mg/kg-day	1.1E-02
				Copper	3E+01	mg/kg	9.4E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.0E-03	mg/kg-day	1.1E+00
				Iron	4E+01	mg/kg	1.3E-04	mg/kg-day	--	--	--	--	1.5E-03	mg/kg-day	7.0E-01	mg/kg-day	2.1E-03
				Lead	3E-01	mg/kg	9.3E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	--	--	--
				Manganese	1E+01	mg/kg	3.3E-05	mg/kg-day	--	--	--	--	3.8E-04	mg/kg-day	1.4E-01	mg/kg-day	2.7E-03
				Mercury	2E-01	mg/kg	5.0E-07	mg/kg-day	--	--	--	--	5.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Methyl Mercury	2E-01	mg/kg	5.7E-07	mg/kg-day	--	--	--	--	6.6E-06	mg/kg-day	1.0E-04	mg/kg-day	6.6E-02
				Selenium	1E+00	mg/kg	3.7E-06	mg/kg-day	--	--	--	--	4.4E-05	mg/kg-day	5.0E-03	mg/kg-day	8.7E-03

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Silver	8E-01	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	3.0E-05	mg/kg-day	5.0E-03	mg/kg-day	6.0E-03
				Vanadium	7E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	2.8E-06	mg/kg-day	5.0E-03	mg/kg-day	5.6E-04
				Zinc	5E+01	mg/kg	1.5E-04	mg/kg-day	--	--	--	--	1.8E-03	mg/kg-day	3.0E-01	mg/kg-day	6.0E-03
				Total DLCs (excluding KM TEQs)							2.1E-05						2.3E+00
				Total DLCs (based on KM TEQs)							2.1E-05						2.3E+00
				Total PCDD/Fs (excluding KM TEQ)							1.5E-05						1.7E+00
				Total PCDD/Fs (based on KM TEQ)							1.5E-05						1.7E+00
				Total DL-PCBs (excluding KM TEQ)							6.0E-06						6.7E-01
				Total DL-PCBs (based on KM TEQ)							5.7E-06						6.4E-01
				Total Non-DL PCBs							1.1E-06						6.2E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							7.1E-06						1.3E+00
				Total PCBs (DL & NDL; based on KM TEQ)							6.8E-06						1.3E+00
				Total PAHs							5.3E-08						3.4E-04
				Total Organics							6.7E-07						1.3E-01
				Total Inorganics							1.4E-06						1.3E+00
		Crab (H+M) Total (excluding KM TEQs)									2.4E-05						4.4E+00
		Crab (H+M) Total (based on KM TEQs)									2.4E-05						4.3E+00
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	4E-06	mg/kg	1.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-06	--	1.5E-10	mg/kg-day	7.0E-10	mg/kg-day	2.1E-01
				1,2,3,7,8-PeCDD	3E-07	mg/kg	8.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-07	--	9.6E-12	mg/kg-day	7.0E-10	mg/kg-day	1.4E-02
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	9.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-09	--	1.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	2.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-09	--	2.7E-12	mg/kg-day	7.0E-09	mg/kg-day	3.8E-04
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	2.0E-04
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-10	--	5.2E-12	mg/kg-day	7.0E-08	mg/kg-day	7.4E-05
				OCDD	5E-07	mg/kg	1.5E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.8E-11	--	1.8E-11	mg/kg-day	2.3E-06	mg/kg-day	7.6E-06
				2,3,7,8-TCDF	1E-06	mg/kg	3.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-08	--	4.4E-11	mg/kg-day	7.0E-09	mg/kg-day	6.3E-03
				1,2,3,7,8-PeCDF	3E-07	mg/kg	8.9E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-09	--	1.0E-11	mg/kg-day	2.3E-08	mg/kg-day	4.4E-04
				2,3,4,7,8-PeCDF	5E-07	mg/kg	1.6E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.1E-08	--	1.9E-11	mg/kg-day	2.3E-09	mg/kg-day	7.9E-03
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	2.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-08	--	2.7E-11	mg/kg-day	7.0E-09	mg/kg-day	3.9E-03
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	6.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-09	--	6.9E-12	mg/kg-day	7.0E-09	mg/kg-day	9.9E-04
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	2.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--	2.7E-12	mg/kg-day	7.0E-09	mg/kg-day	3.9E-04
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	1.8E-12	mg/kg-day	7.0E-09	mg/kg-day	2.5E-04
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-09	--	1.5E-11	mg/kg-day	7.0E-08	mg/kg-day	2.2E-04
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.7E-10	--	1.3E-12	mg/kg-day	7.0E-08	mg/kg-day	1.9E-05
				OCDF	9E-08	mg/kg	3.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-11	--	3.6E-12	mg/kg-day	2.3E-06	mg/kg-day	1.5E-06
				KM TEQ DF	4E-06	mg/kg	1.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-06	--	1.7E-10	mg/kg-day	7.0E-10	mg/kg-day	2.4E-01
				PCB-77	2E-04	mg/kg	6.6E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.9E-09	--	7.7E-09	mg/kg-day	7.0E-06	mg/kg-day	1.1E-03
				PCB-81	9E-06	mg/kg	3.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-09	--	3.5E-10	mg/kg-day	2.3E-06	mg/kg-day	1.5E-04
				PCB-105	1E-03	mg/kg	3.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-08	--	4.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.7E-03
				PCB-114	9E-05	mg/kg	3.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-09	--	3.6E-09	mg/kg-day	2.3E-05	mg/kg-day	1.5E-04
				PCB-118	4E-03	mg/kg	1.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.5E-03
				PCB-123	8E-05	mg/kg	2.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-09	--	3.0E-09	mg/kg-day	2.3E-05	mg/kg-day	1.3E-04
				PCB-126	8E-06	mg/kg	2.8E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-07	--	3.3E-10	mg/kg-day	7.0E-09	mg/kg-day	4.7E-02
				PCB-156/157	3E-04	mg/kg	1.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-09	--	1.2E-08	mg/kg-day	2.3E-05	mg/kg-day	5.3E-04
				PCB-167	1E-04	mg/kg	4.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-09	--	4.7E-09	mg/kg-day	2.3E-05	mg/kg-day	2.0E-04
				PCB-169	1E-05	mg/kg	3.8E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.7E-07	--	4.4E-10	mg/kg-day	2.3E-08	mg/kg-day	1.9E-02
				PCB-189	2E-05	mg/kg	5.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-10	--	6.0E-10	mg/kg-day	2.3E-05	mg/kg-day	2.6E-05
				KM TEQ PCB	1E-06	mg/kg	3.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-07	--	3.9E-11	mg/kg-day	7.0E-10	mg/kg-day	5.6E-02
				Non-DL PCBs													
				Total Non-DL PCBs	3E-02	mg/kg	9.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.1E-08	--	1.1E-06	mg/kg-day	2.0E-05	mg/kg-day	5.3E-02
				PAHs													

TABLE 7.2 CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	1E-02	mg/kg	4.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.6E-09	M	5.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	4.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.6E-08	M	5.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.7E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	4.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.6E-09	M	5.0E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	4.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.6E-11	M	5.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	4.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.6E-08	M	5.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	4.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.6E-09	M	5.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-05	mg/kg	7.9E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.9E-11	--	9.2E-10	mg/kg-day	3.0E-05	mg/kg-day	3.1E-05
				2,4'-DDE	5E-05	mg/kg	1.6E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.4E-11	--	1.9E-09	mg/kg-day	3.0E-04	mg/kg-day	6.2E-06
				2,4'-DDT	4E-05	mg/kg	1.2E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.2E-11	--	1.4E-09	mg/kg-day	5.0E-04	mg/kg-day	2.9E-06
				4,4'-DDD	5E-03	mg/kg	1.7E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.1E-09	--	2.0E-07	mg/kg-day	3.0E-05	mg/kg-day	6.6E-03
				4,4'-DDE	1E-02	mg/kg	4.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-08	--	5.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.9E-03
				4,4'-DDT	2E-04	mg/kg	5.0E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-10	--	5.8E-09	mg/kg-day	5.0E-04	mg/kg-day	1.2E-05
				Benzaldehyde	1E+00	mg/kg	4.3E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	5.0E-05	mg/kg-day	1.0E-01	mg/kg-day	5.0E-04
				Chlordane, alpha (cis)	6E-04	mg/kg	1.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.7E-10	--	2.2E-08	mg/kg-day	5.0E-04	mg/kg-day	4.5E-05
				Chlordane, gamma (trans)	3E-05	mg/kg	8.7E-11	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-11	--	1.0E-09	mg/kg-day	5.0E-04	mg/kg-day	2.0E-06
				Dieldrin	1E-03	mg/kg	4.5E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.1E-08	--	5.2E-08	mg/kg-day	5.0E-05	mg/kg-day	1.0E-03
				Heptachlor epoxide, cis-	3E-04	mg/kg	1.1E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.8E-09	--	1.3E-08	mg/kg-day	1.3E-05	mg/kg-day	9.7E-04
				Heptachlor epoxide, trans-	2E-04	mg/kg	7.5E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.8E-09	--	8.7E-09	mg/kg-day	1.3E-05	mg/kg-day	6.7E-04
				Hexachlorobenzene	2E-04	mg/kg	7.3E-10	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.2E-09	--	8.5E-09	mg/kg-day	8.0E-04	mg/kg-day	1.1E-05
				Mirex	5E-05	mg/kg	1.7E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.0E-09	--	2.0E-09	mg/kg-day	2.0E-04	mg/kg-day	9.8E-06
				Nonachlor, cis-	7E-04	mg/kg	2.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.6E-10	--	2.5E-08	mg/kg-day	1.0E-04	mg/kg-day	2.5E-04
				Nonachlor, trans-	1E-03	mg/kg	4.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-09	--	4.6E-08	mg/kg-day	1.6E-05	mg/kg-day	3.0E-03
				Oxychlordane	2E-03	mg/kg	5.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.0E-09	--	6.5E-08	mg/kg-day	8.9E-05	mg/kg-day	7.3E-04
				Pyridine	4E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-03	mg/kg-day	1.6E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	2.2E-04	mg/kg-day	1.0E+00	mg/kg-day	2.2E-04
				Arsenic, organic	2E+00	mg/kg	7.8E-06	mg/kg-day	--	--	--	--	9.1E-05	mg/kg-day	2.0E-02	mg/kg-day	4.5E-03
				Arsenic, inorganic	3E-01	mg/kg	8.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-06	--	1.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.4E-02
				Cadmium	2E-01	mg/kg	5.4E-07	mg/kg-day	--	--	--	--	6.3E-06	mg/kg-day	1.0E-03	mg/kg-day	6.3E-03
				Chromium [as Cr(III)]	2E-01	mg/kg	5.0E-07	mg/kg-day	--	--	--	--	5.8E-06	mg/kg-day	1.5E+00	mg/kg-day	3.9E-06
				Cobalt	7E-02	mg/kg	2.3E-07	mg/kg-day	--	--	--	--	2.7E-06	mg/kg-day	3.0E-04	mg/kg-day	9.0E-03
				Copper	2E+01	mg/kg	6.0E-05	mg/kg-day	--	--	--	--	7.0E-04	mg/kg-day	1.0E-03	mg/kg-day	7.0E-01
				Iron	2E+01	mg/kg	6.2E-05	mg/kg-day	--	--	--	--	7.2E-04	mg/kg-day	7.0E-01	mg/kg-day	1.0E-03
				Lead	1E-01	mg/kg	3.2E-07	mg/kg-day	--	--	--	--	3.7E-06	mg/kg-day	--	--	--
				Manganese	6E+00	mg/kg	2.0E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	1.4E-01	mg/kg-day	1.7E-03
				Mercury	2E-01	mg/kg	6.0E-07	mg/kg-day	--	--	--	--	7.0E-06	mg/kg-day	3.0E-04	mg/kg-day	2.3E-02
				Methyl Mercury	2E-01	mg/kg	7.0E-07	mg/kg-day	--	--	--	--	8.2E-06	mg/kg-day	1.0E-04	mg/kg-day	8.2E-02
				Selenium	9E-01	mg/kg	3.1E-06	mg/kg-day	--	--	--	--	3.6E-05	mg/kg-day	5.0E-03	mg/kg-day	7.1E-03
				Silver	5E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	1.8E-05	mg/kg-day	5.0E-03	mg/kg-day	3.7E-03
				Vanadium	4E-02	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	1.6E-06	mg/kg-day	5.0E-03	mg/kg-day	3.3E-04
				Zinc	5E+01	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	1.8E-03	mg/kg-day	3.0E-01	mg/kg-day	6.1E-03
Total DLCs (excluding KM TEQs)											2.9E-06						3.2E-01
Total DLCs (based on KM TEQs)											2.7E-06						3.0E-01
Total PCDD/Fs (excluding KM TEQ)											2.2E-06						2.5E-01
Total PCDD/Fs (based on KM TEQ)											2.2E-06						2.4E-01
Total DL-PCBs (excluding KM TEQ)											6.8E-07						7.6E-02
Total DL-PCBs (based on KM TEQ)											5.0E-07						5.6E-02
Total Non-DL PCBs											9.1E-08						5.3E-02
Total PCBs (DL & NDL; excluding KM TEQ)											7.7E-07						1.3E-01
Total PCBs (DL & NDL; based on KM TEQ)											5.9E-07						1.1E-01

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PAHs							2.0E-07						1.7E-03
				Total Organics							1.3E-07						3.2E-02
				Total Inorganics							1.3E-06						8.8E-01
		Crab (Muscle) Total (excluding KM TEQs)									4.6E-06						1.3E+00
		Crab (Muscle) Total (based on KM TEQs)									4.4E-06						1.3E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-05	mg/kg	3.0E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-05	--	3.5E-09	mg/kg-day	7.0E-10	mg/kg-day	5.0E+00
				1,2,3,7,8-PeCDD	2E-06	mg/kg	7.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-06	--	8.3E-11	mg/kg-day	7.0E-10	mg/kg-day	1.2E-01
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	2.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-08	--	2.7E-11	mg/kg-day	7.0E-09	mg/kg-day	3.8E-03
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	6.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--	8.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	2.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-08	--	2.7E-11	mg/kg-day	7.0E-09	mg/kg-day	3.9E-03
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	7.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--	8.7E-11	mg/kg-day	7.0E-08	mg/kg-day	1.2E-03
				OCDD	6E-06	mg/kg	2.1E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.6E-10	--	2.5E-10	mg/kg-day	2.3E-06	mg/kg-day	1.1E-04
				2,3,7,8-TCDF	3E-05	mg/kg	1.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-06	--	1.3E-09	mg/kg-day	7.0E-09	mg/kg-day	1.9E-01
				1,2,3,7,8-PeCDF	7E-06	mg/kg	2.4E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-07	--	2.8E-10	mg/kg-day	2.3E-08	mg/kg-day	1.2E-02
				2,3,4,7,8-PeCDF	2E-05	mg/kg	5.8E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.6E-06	--	6.7E-10	mg/kg-day	2.3E-09	mg/kg-day	2.9E-01
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	5.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-07	--	6.4E-10	mg/kg-day	7.0E-09	mg/kg-day	9.1E-02
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	1.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.8E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	4.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-09	--	5.2E-12	mg/kg-day	7.0E-09	mg/kg-day	7.5E-04
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-08	--	5.0E-11	mg/kg-day	7.0E-09	mg/kg-day	7.1E-03
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	5.6E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.4E-08	--	6.5E-10	mg/kg-day	7.0E-08	mg/kg-day	9.3E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	4.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-10	--	5.3E-12	mg/kg-day	7.0E-08	mg/kg-day	7.5E-05
				OCDF	8E-07	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-10	--	3.2E-11	mg/kg-day	2.3E-06	mg/kg-day	1.4E-05
				KM TEQ DF	1E-04	mg/kg	3.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.2E-05	--	4.0E-09	mg/kg-day	7.0E-10	mg/kg-day	5.7E+00
				PCB-77	7E-03	mg/kg	2.3E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-07	--	2.6E-07	mg/kg-day	7.0E-06	mg/kg-day	3.8E-02
				PCB-81	3E-04	mg/kg	1.0E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-08	--	1.2E-08	mg/kg-day	2.3E-06	mg/kg-day	5.0E-03
				PCB-105	4E-02	mg/kg	1.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-07	--	1.4E-06	mg/kg-day	2.3E-05	mg/kg-day	6.1E-02
				PCB-114	3E-03	mg/kg	1.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-08	--	1.2E-07	mg/kg-day	2.3E-05	mg/kg-day	5.2E-03
				PCB-118	2E-01	mg/kg	5.6E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-06	--	6.5E-06	mg/kg-day	2.3E-05	mg/kg-day	2.8E-01
				PCB-123	3E-03	mg/kg	9.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-08	--	1.1E-07	mg/kg-day	2.3E-05	mg/kg-day	4.9E-03
				PCB-126	4E-04	mg/kg	1.2E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-05	--	1.3E-08	mg/kg-day	7.0E-09	mg/kg-day	1.9E+00
				PCB-156/157	1E-02	mg/kg	4.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-07	--	5.2E-07	mg/kg-day	2.3E-05	mg/kg-day	2.2E-02
				PCB-167	6E-03	mg/kg	1.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-08	--	2.2E-07	mg/kg-day	2.3E-05	mg/kg-day	9.4E-03
				PCB-169	4E-05	mg/kg	1.2E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.4E-07	--	1.4E-09	mg/kg-day	2.3E-08	mg/kg-day	6.0E-02
				PCB-189	1E-03	mg/kg	3.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-08	--	3.8E-08	mg/kg-day	2.3E-05	mg/kg-day	1.6E-03
				KM TEQ PCB	4E-05	mg/kg	1.4E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-05	--	1.6E-09	mg/kg-day	7.0E-10	mg/kg-day	2.3E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E+00	mg/kg	3.9E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.9E-06	--	4.5E-05	mg/kg-day	2.0E-05	mg/kg-day	2.3E+00
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	1.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-09	M	1.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	9.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	M	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.6E-04
				Benzo(b)fluoranthene	3E-03	mg/kg	8.8E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-09	M	1.0E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.0E-11	M	1.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	9.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-08	M	1.1E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	2.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.0E-08	M	2.9E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	8E-04	mg/kg	2.5E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.0E-10	--	2.9E-08	mg/kg-day	3.0E-05	mg/kg-day	9.7E-04
				2,4'-DDE	2E-03	mg/kg	5.2E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-09	--	6.1E-08	mg/kg-day	3.0E-04	mg/kg-day	2.0E-04
				2,4'-DDT	7E-04	mg/kg	2.2E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.3E-10	--	2.5E-08	mg/kg-day	5.0E-04	mg/kg-day	5.0E-05
				4,4'-DDD	1E-01	mg/kg	4.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.6E-08	--	4.7E-06	mg/kg-day	3.0E-05	mg/kg-day	1.6E-01
				4,4'-DDE	3E-01	mg/kg	1.1E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.6E-07	--	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	4.1E-02

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				4,4'-DDT	4E-03	mg/kg	1.2E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.2E-09	--	1.4E-07	mg/kg-day	5.0E-04	mg/kg-day	2.9E-04
				Benzaldehyde	3E+00	mg/kg	8.4E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.3E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	7E-03	mg/kg	2.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.6E-09	--	2.5E-07	mg/kg-day	5.0E-04	mg/kg-day	5.1E-04
				Chlordane, gamma (trans)	9E-04	mg/kg	3.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-09	--	3.5E-08	mg/kg-day	5.0E-04	mg/kg-day	6.9E-05
				Dieldrin	2E-02	mg/kg	6.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.1E-06	--	7.8E-07	mg/kg-day	5.0E-05	mg/kg-day	1.6E-02
				Heptachlor epoxide, cis-	1E-02	mg/kg	4.3E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.9E-07	--	5.0E-07	mg/kg-day	1.3E-05	mg/kg-day	3.9E-02
				Heptachlor epoxide, trans-	4E-03	mg/kg	1.3E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.2E-07	--	1.5E-07	mg/kg-day	1.3E-05	mg/kg-day	1.1E-02
				Hexachlorobenzene	4E-03	mg/kg	1.2E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.9E-08	--	1.4E-07	mg/kg-day	8.0E-04	mg/kg-day	1.7E-04
				Mirex	7E-04	mg/kg	2.2E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.0E-08	--	2.6E-08	mg/kg-day	2.0E-04	mg/kg-day	1.3E-04
				Nonachlor, cis-	2E-02	mg/kg	6.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.1E-08	--	7.1E-07	mg/kg-day	1.0E-04	mg/kg-day	7.1E-03
				Nonachlor, trans-	4E-02	mg/kg	1.2E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.3E-08	--	1.4E-06	mg/kg-day	1.6E-05	mg/kg-day	9.3E-02
				Oxychlordane	6E-02	mg/kg	1.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.4E-08	--	2.1E-06	mg/kg-day	8.9E-05	mg/kg-day	2.4E-02
				Pyridine	8E-01	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-03	mg/kg-day	3.1E-02
				Inorganics													
				Aluminum	3E+01	mg/kg	9.3E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.0E+00	mg/kg-day	1.1E-03
				Arsenic, organic	3E+00	mg/kg	1.0E-05	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	2.0E-02	mg/kg-day	6.0E-03
				Arsenic, inorganic	3E-01	mg/kg	1.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.7E-06	--	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	4.4E-02
				Cadmium	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	4.9E-05	mg/kg-day	1.0E-03	mg/kg-day	4.9E-02
				Chromium [as Cr(III)]	3E-01	mg/kg	9.4E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.5E+00	mg/kg-day	7.3E-06
				Cobalt	2E-01	mg/kg	7.4E-07	mg/kg-day	--	--	--	--	8.6E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Copper	7E+01	mg/kg	2.5E-04	mg/kg-day	--	--	--	--	2.9E-03	mg/kg-day	1.0E-03	mg/kg-day	2.9E+00
				Iron	1E+02	mg/kg	3.3E-04	mg/kg-day	--	--	--	--	3.9E-03	mg/kg-day	7.0E-01	mg/kg-day	5.6E-03
				Lead	8E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	--	--	--
				Manganese	2E+01	mg/kg	6.1E-05	mg/kg-day	--	--	--	--	7.1E-04	mg/kg-day	1.4E-01	mg/kg-day	5.1E-03
				Mercury	7E-02	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	2.9E-06	mg/kg-day	3.0E-04	mg/kg-day	9.6E-03
				Methyl Mercury	6E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.0E-04	mg/kg-day	2.3E-02
				Selenium	2E+00	mg/kg	6.0E-06	mg/kg-day	--	--	--	--	7.0E-05	mg/kg-day	5.0E-03	mg/kg-day	1.4E-02
				Silver	2E+00	mg/kg	6.3E-06	mg/kg-day	--	--	--	--	7.3E-05	mg/kg-day	5.0E-03	mg/kg-day	1.5E-02
				Vanadium	2E-01	mg/kg	5.6E-07	mg/kg-day	--	--	--	--	6.6E-06	mg/kg-day	5.0E-03	mg/kg-day	1.3E-03
				Zinc	5E+01	mg/kg	1.6E-04	mg/kg-day	--	--	--	--	1.8E-03	mg/kg-day	3.0E-01	mg/kg-day	6.1E-03
				Total DLCs (excluding KM TEQs)							7.4E-05						8.2E+00
				Total DLCs (based on KM TEQs)							7.2E-05						8.0E+00
				Total PCDD/Fs (excluding KM TEQ)							5.2E-05						5.8E+00
				Total PCDD/Fs (based on KM TEQ)							5.2E-05						5.7E+00
				Total DL-PCBs (excluding KM TEQ)							2.2E-05						2.4E+00
				Total DL-PCBs (based on KM TEQ)							2.1E-05						2.3E+00
				Total Non-DL PCBs							3.9E-06						2.3E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-05						4.7E+00
				Total PCBs (DL & NDL; based on KM TEQ)							2.5E-05						4.6E+00
				Total PAHs							9.0E-08						3.6E-04
				Total Organics							2.3E-06						4.2E-01
				Total Inorganics							1.7E-06						3.1E+00
		Crab (Hepatopancreas) Total (excluding KM TEQs)									8.2E-05						1.4E+01
		Crab (Hepatopancreas) Total (based on KM TEQs)									8.0E-05						1.4E+01
Sediment	Sediment	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-08	--	2.4E-12	mg/kg-day	7.0E-10	mg/kg-day	3.5E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-09	--	1.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	9.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-10	--	4.6E-13	mg/kg-day	7.0E-09	mg/kg-day	6.6E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.9E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--	8.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				OCDD	3E-03	mg/kg	7.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-10	--	8.3E-11	mg/kg-day	2.3E-06	mg/kg-day	3.5E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-10	--	4.3E-13	mg/kg-day	7.0E-09	mg/kg-day	6.2E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-10	--	3.0E-13	mg/kg-day	2.3E-08	mg/kg-day	1.3E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.3E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-09	--	5.0E-13	mg/kg-day	2.3E-09	mg/kg-day	2.1E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-09	--	2.3E-12	mg/kg-day	7.0E-09	mg/kg-day	3.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-10	--	5.9E-13	mg/kg-day	7.0E-09	mg/kg-day	8.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-11	--	4.4E-14	mg/kg-day	7.0E-09	mg/kg-day	6.3E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-10	--	3.3E-13	mg/kg-day	7.0E-09	mg/kg-day	4.7E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	8.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-09	--	1.0E-11	mg/kg-day	7.0E-08	mg/kg-day	1.4E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.9E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-11	--	3.4E-13	mg/kg-day	7.0E-08	mg/kg-day	4.9E-06
				OCDF	4E-04	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-11	--	1.4E-11	mg/kg-day	2.3E-06	mg/kg-day	6.1E-06
				KM TEQ DF	1E-04	mg/kg	2.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.2E-08	--	3.3E-12	mg/kg-day	7.0E-10	mg/kg-day	4.7E-03
				PCB-77	8E-03	mg/kg	2.1E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.1E-10	--	2.4E-10	mg/kg-day	7.0E-06	mg/kg-day	3.5E-05
				PCB-81	3E-04	mg/kg	8.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--	9.4E-12	mg/kg-day	2.3E-06	mg/kg-day	4.0E-06
				PCB-105	1E-02	mg/kg	3.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-10	--	3.9E-10	mg/kg-day	2.3E-05	mg/kg-day	1.7E-05
				PCB-114	9E-04	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	2.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-118	4E-02	mg/kg	9.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-10	--	1.1E-09	mg/kg-day	2.3E-05	mg/kg-day	4.9E-05
				PCB-123	1E-03	mg/kg	2.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-11	--	3.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-126	2E-04	mg/kg	6.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.9E-09	--	7.7E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				PCB-156/157	3E-03	mg/kg	8.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-11	--	1.0E-10	mg/kg-day	2.3E-05	mg/kg-day	4.4E-06
				PCB-167	1E-03	mg/kg	3.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--	3.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.6E-06
				PCB-169	3E-04	mg/kg	6.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-09	--	8.0E-12	mg/kg-day	2.3E-08	mg/kg-day	3.4E-04
				PCB-189	2E-04	mg/kg	6.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-12	--	7.7E-12	mg/kg-day	2.3E-05	mg/kg-day	3.3E-07
				KM TEQ PCB	3E-05	mg/kg	8.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-08	--	9.6E-13	mg/kg-day	7.0E-10	mg/kg-day	1.4E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.8E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-09	--	2.1E-08	mg/kg-day	2.0E-05	mg/kg-day	1.0E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	5.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.1E-09	M	6.6E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	5.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-08	M	6.4E-08	mg/kg-day	3.0E-04	mg/kg-day	2.1E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	5.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.9E-10	M	5.8E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	6.4E-11	M	3.8E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.1E-11	M	6.3E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.3E-09	M	1.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.1E-10	M	2.4E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.5E-08	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	4.0E-03	mg/kg-day	4.5E-05
				TPH (C9-C40)	4E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	4.0E-03	mg/kg-day	3.3E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	3.3E-05	mg/kg-day	--	--	--	--	3.8E-04	mg/kg-day	1.0E+00	mg/kg-day	3.8E-04
				Antimony	2E+00	mg/kg	6.3E-09	mg/kg-day	--	--	--	--	7.4E-08	mg/kg-day	4.0E-04	mg/kg-day	1.9E-04
				Arsenic, inorganic	3E+01	mg/kg	5.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.5E-08	--	5.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.9E-03
				Cadmium	3E+00	mg/kg	8.4E-09	mg/kg-day	--	--	--	--	9.7E-08	mg/kg-day	1.0E-03	mg/kg-day	9.7E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	2.9E-07	mg/kg-day	--	--	--	--	3.4E-06	mg/kg-day	1.5E+00	mg/kg-day	2.3E-06
				Cobalt	1E+01	mg/kg	3.8E-08	mg/kg-day	--	--	--	--	4.5E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03
				Copper	2E+02	mg/kg	4.5E-07	mg/kg-day	--	--	--	--	5.3E-06	mg/kg-day	1.0E-03	mg/kg-day	5.3E-03
				Chromium (VI)	1E+00	mg/kg	3.8E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.8E-09	M	4.4E-08	mg/kg-day	3.0E-03	mg/kg-day	1.5E-05
				Iron	4E+04	mg/kg	1.2E-04	mg/kg-day	--	--	--	--	1.4E-03	mg/kg-day	7.0E-01	mg/kg-day	2.0E-03
				Lead	5E+02	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	1.5E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	9.6E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	2.4E-02	mg/kg-day	4.7E-04
				Mercury	2E+00	mg/kg	5.4E-09	mg/kg-day	--	--	--	--	6.3E-08	mg/kg-day	3.0E-04	mg/kg-day	2.1E-04
				Nickel	7E+01	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	2.1E-06	mg/kg-day	2.0E-02	mg/kg-day	1.1E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Thallium	2E-01	mg/kg	6.6E-10	mg/kg-day	--	--	--	--	7.7E-09	mg/kg-day	1.0E-05	mg/kg-day	7.7E-04
				Vanadium	5E+01	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	1.6E-06	mg/kg-day	5.0E-03	mg/kg-day	3.2E-04
				Zinc	1E+03	mg/kg	3.4E-06	mg/kg-day	--	--	--	--	3.9E-05	mg/kg-day	3.0E-01	mg/kg-day	1.3E-04
				Total DLCs (excluding KM TEQs)							5.7E-08						6.4E-03
				Total DLCs (based on KM TEQs)							5.5E-08						6.1E-03
				Total PCDD/Fs (excluding KM TEQ)							4.3E-08						4.8E-03
				Total PCDD/Fs (based on KM TEQ)							4.2E-08						4.7E-03
				Total DL-PCBs (excluding KM TEQ)							1.4E-08						1.6E-03
				Total DL-PCBs (based on KM TEQ)							1.2E-08						1.4E-03
				Total Non-DL PCBs							1.8E-09						1.0E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-08						2.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-08						2.4E-03
				Total PAHs							1.6E-08						2.1E-04
				Total Organics							0.0E+00						3.3E-03
				Total Inorganics							7.9E-08						1.3E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.5E-07						2.4E-02
		Sediment Ingestion Total (based on KM TEQs)									1.5E-07						2.4E-02
Sediment	Sediment	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	2.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-08	--	2.6E-12	mg/kg-day	7.0E-10	mg/kg-day	3.7E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-09	--	1.4E-13	mg/kg-day	7.0E-10	mg/kg-day	1.9E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-10	--	4.9E-13	mg/kg-day	7.0E-09	mg/kg-day	7.0E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.6E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				OCDD	3E-03	mg/kg	7.5E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-10	--	8.8E-11	mg/kg-day	2.3E-06	mg/kg-day	3.8E-05
				2,3,7,8-TCDF	1E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-10	--	4.6E-13	mg/kg-day	7.0E-09	mg/kg-day	6.6E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.7E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-10	--	3.2E-13	mg/kg-day	2.3E-08	mg/kg-day	1.4E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.0E-09	--	5.3E-13	mg/kg-day	2.3E-09	mg/kg-day	2.3E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-09	--	2.4E-12	mg/kg-day	7.0E-09	mg/kg-day	3.5E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-10	--	6.3E-13	mg/kg-day	7.0E-09	mg/kg-day	9.0E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	4.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-11	--	4.7E-14	mg/kg-day	7.0E-09	mg/kg-day	6.8E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-10	--	3.5E-13	mg/kg-day	7.0E-09	mg/kg-day	5.0E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	9.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-09	--	1.1E-11	mg/kg-day	7.0E-08	mg/kg-day	1.5E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.7E-11	--	3.7E-13	mg/kg-day	7.0E-08	mg/kg-day	5.2E-06
				OCDF	4E-04	mg/kg	1.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.8E-11	--	1.5E-11	mg/kg-day	2.3E-06	mg/kg-day	6.4E-06
				KM TEQ DF	1E-04	mg/kg	3.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.5E-08	--	3.5E-12	mg/kg-day	7.0E-10	mg/kg-day	5.0E-03
				PCB-77	8E-03	mg/kg	2.2E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.3E-10	--	2.6E-10	mg/kg-day	7.0E-06	mg/kg-day	3.7E-05
				PCB-81	3E-04	mg/kg	8.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-11	--	1.0E-11	mg/kg-day	2.3E-06	mg/kg-day	4.3E-06
				PCB-105	1E-02	mg/kg	3.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-10	--	4.2E-10	mg/kg-day	2.3E-05	mg/kg-day	1.8E-05
				PCB-114	9E-04	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	2.9E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-118	4E-02	mg/kg	1.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-10	--	1.2E-09	mg/kg-day	2.3E-05	mg/kg-day	5.2E-05
				PCB-123	1E-03	mg/kg	3.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--	3.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.5E-06
				PCB-126	2E-04	mg/kg	7.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--	8.2E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				PCB-156/157	3E-03	mg/kg	9.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-11	--	1.1E-10	mg/kg-day	2.3E-05	mg/kg-day	4.7E-06
				PCB-167	1E-03	mg/kg	3.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--	3.9E-11	mg/kg-day	2.3E-05	mg/kg-day	1.7E-06
				PCB-169	3E-04	mg/kg	7.3E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.3E-09	--	8.5E-12	mg/kg-day	2.3E-08	mg/kg-day	3.6E-04
				PCB-189	2E-04	mg/kg	7.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-12	--	8.2E-12	mg/kg-day	2.3E-05	mg/kg-day	3.5E-07
				KM TEQ PCB	3E-05	mg/kg	8.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-08	--	1.0E-12	mg/kg-day	7.0E-10	mg/kg-day	1.5E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	8.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.9E-09	--	1.0E-07	mg/kg-day	2.0E-05	mg/kg-day	5.2E-03
				PAHs													

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	2E+00	mg/kg	2.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.2E-09	M	3.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	3.0E-07	mg/kg-day	3.0E-04	mg/kg-day	9.9E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	2.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.6E-09	M	2.7E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.5E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.0E-10	M	1.7E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.0E-11	M	2.9E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	5.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-08	M	6.1E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	9.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-09	M	1.1E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	8.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-07	--	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.4E-03
				Cadmium	3E+00	mg/kg	3.0E-10	mg/kg-day	--	--	--	--	3.5E-09	mg/kg-day	2.5E-05	mg/kg-day	1.4E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							6.1E-08						6.8E-03
				Total DLCs (based on KM TEQs)							5.8E-08						6.5E-03
				Total PCDD/Fs (excluding KM TEQ)							4.6E-08						5.1E-03
				Total PCDD/Fs (based on KM TEQ)							4.5E-08						5.0E-03
				Total DL-PCBs (excluding KM TEQ)							1.5E-08						1.7E-03
				Total DL-PCBs (based on KM TEQ)							1.3E-08						1.5E-03
				Total Non-DL PCBs							8.9E-09						5.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.4E-08						6.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							2.2E-08						6.7E-03
				Total PAHs							7.4E-08						9.9E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.3E-07						3.6E-03
		Sediment Dermal Total (excluding KM TEQs)									2.8E-07						1.7E-02
		Sediment Dermal Total (based on KM TEQs)									2.7E-07						1.6E-02
Fishing - Sediment Total (excluding KM TEQs)											4.3E-07						4.1E-02
Fishing - Sediment Total (based on KM TEQs)											4.3E-07						4.0E-02
Surface Water	Surface Water	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-10	--	1.9E-14	mg/kg-day	7.0E-10	mg/kg-day	2.8E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	5.7E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.6E-11	--	6.7E-15	mg/kg-day	7.0E-10	mg/kg-day	9.6E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	4.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-11	--	4.9E-14	mg/kg-day	7.0E-09	mg/kg-day	6.9E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	6.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-11	--	7.8E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	1.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-11	--	1.4E-14	mg/kg-day	7.0E-09	mg/kg-day	2.0E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	8.4E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-11	--	9.8E-14	mg/kg-day	7.0E-08	mg/kg-day	1.4E-06
				OCDD	6E-05	µg/L	8.8E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.9E-12	--	1.0E-12	mg/kg-day	2.3E-06	mg/kg-day	4.4E-07

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,7,8-TCDF	5E-07	µg/L	6.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-12	--	7.5E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	5.1E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.3E-12	--	6.0E-15	mg/kg-day	2.3E-08	mg/kg-day	2.6E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	8.9E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.0E-11	--	1.0E-14	mg/kg-day	2.3E-09	mg/kg-day	4.5E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-11	--	2.9E-14	mg/kg-day	7.0E-09	mg/kg-day	4.1E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	6.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-12	--	7.0E-15	mg/kg-day	7.0E-09	mg/kg-day	1.0E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	3.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-11	--	4.2E-14	mg/kg-day	7.0E-09	mg/kg-day	6.0E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	3.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-12	--	4.4E-15	mg/kg-day	7.0E-09	mg/kg-day	6.3E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	1.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-11	--	1.2E-13	mg/kg-day	7.0E-08	mg/kg-day	1.7E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	6.6E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.9E-13	--	7.7E-15	mg/kg-day	7.0E-08	mg/kg-day	1.1E-07
				OCDF	1E-05	µg/L	2.0E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.9E-13	--	2.3E-13	mg/kg-day	2.3E-06	mg/kg-day	9.8E-08
				KM TEQ DF	2E-06	µg/L	3.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-10	--	3.9E-14	mg/kg-day	7.0E-10	mg/kg-day	5.5E-05
				PCB-77	2E-05	µg/L	2.8E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.2E-13	--	3.3E-13	mg/kg-day	7.0E-06	mg/kg-day	4.6E-08
				PCB-81	7E-07	µg/L	9.3E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.2E-14	--	1.1E-14	mg/kg-day	2.3E-06	mg/kg-day	4.6E-09
				PCB-105	7E-05	µg/L	9.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-13	--	1.2E-12	mg/kg-day	2.3E-05	mg/kg-day	5.0E-08
				PCB-114	4E-06	µg/L	5.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-14	--	6.0E-14	mg/kg-day	2.3E-05	mg/kg-day	2.6E-09
				PCB-118	2E-04	µg/L	2.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-12	--	2.6E-12	mg/kg-day	2.3E-05	mg/kg-day	1.1E-07
				PCB-123	3E-06	µg/L	4.3E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-14	--	5.0E-14	mg/kg-day	2.3E-05	mg/kg-day	2.1E-09
				PCB-126	7E-07	µg/L	9.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.5E-06
				PCB-156/157	2E-05	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	3.1E-13	mg/kg-day	2.3E-05	mg/kg-day	1.3E-08
				PCB-167	7E-06	µg/L	8.9E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-14	--	1.0E-13	mg/kg-day	2.3E-05	mg/kg-day	4.4E-09
				PCB-169	4E-07	µg/L	5.5E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-12	--	6.4E-15	mg/kg-day	2.3E-08	mg/kg-day	2.7E-07
				PCB-189	9E-07	µg/L	1.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-15	--	1.4E-14	mg/kg-day	2.3E-05	mg/kg-day	5.8E-10
				KM TEQ PCB	1E-07	µg/L	1.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-11	--	1.7E-15	mg/kg-day	7.0E-10	mg/kg-day	2.5E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.6E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.2E-12	M	1.9E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	2.1E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.1E-11	M	2.4E-10	mg/kg-day	3.0E-04	mg/kg-day	8.0E-07
				Benzo(b)fluoranthene	2E-02	µg/L	2.8E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-12	M	3.3E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.2E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.5E-13	M	1.5E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	2.7E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.5E-14	M	3.2E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	5.3E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-11	M	6.2E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	1.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.3E-12	M	1.4E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	4.8E-11	mg/kg-day	--	--	--	--	5.6E-10	mg/kg-day	2.0E-02	mg/kg-day	2.8E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.6E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.0E-12	--	1.9E-09	mg/kg-day	1.0E-02	mg/kg-day	1.9E-07
				Trichloroethylene	1E-01	µg/L	1.8E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.6E-11	M	2.1E-09	mg/kg-day	5.0E-04	mg/kg-day	4.1E-06
				Inorganics													
				Antimony	7E-01	µg/L	9.5E-10	mg/kg-day	--	--	--	--	1.1E-08	mg/kg-day	4.0E-04	mg/kg-day	2.8E-05
				Arsenic, inorganic	1E+00	µg/L	1.7E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-09	--	2.0E-08	mg/kg-day	3.0E-04	mg/kg-day	6.7E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.8E-09	mg/kg-day	--	--	--	--	2.0E-08	mg/kg-day	1.5E+00	mg/kg-day	1.4E-08
				Chromium (VI)	2E-01	µg/L	3.0E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.0E-10	M	3.5E-09	mg/kg-day	3.0E-03	mg/kg-day	1.2E-06
				Iron	5E+02	µg/L	7.2E-07	mg/kg-day	--	--	--	--	8.4E-06	mg/kg-day	7.0E-01	mg/kg-day	1.2E-05
				Manganese	7E+01	µg/L	9.4E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	2.4E-02	mg/kg-day	4.6E-05
				Mercury	3E-02	µg/L	3.6E-11	mg/kg-day	--	--	--	--	4.2E-10	mg/kg-day	3.0E-04	mg/kg-day	1.4E-06
				Thallium	1E-02	µg/L	1.7E-11	mg/kg-day	--	--	--	--	2.0E-10	mg/kg-day	1.0E-05	mg/kg-day	2.0E-05
				Titanium	8E+00	µg/L	1.1E-08	mg/kg-day	--	--	--	--	1.3E-07	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											6.3E-10						7.1E-05
Total DLCs (based on KM TEQs)											5.2E-10						5.7E-05
Total PCDD/Fs (excluding KM TEQ)											6.2E-10						6.9E-05

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Total PCDD/Fs (based on KM TEQ)							5.0E-10						5.5E-05
				Total DL-PCBs (excluding KM TEQ)							1.8E-11						2.0E-06
				Total DL-PCBs (based on KM TEQ)							2.2E-11						2.5E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.8E-11						2.0E-06
				Total PCBs (DL & NDL; based on KM TEQ)							2.2E-11						2.5E-06
				Total PAHs							6.3E-11						8.3E-07
				Total Organics							2.1E-11						4.3E-06
				Total Inorganics							2.9E-09						1.7E-04
		Surface Water Ingestion Total (excluding KM TEQs)									3.6E-09						2.5E-04
		Surface Water Ingestion Total (based on KM TEQs)									3.5E-09						2.4E-04
Surface Water	Surface Water	Angler - Fishing	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.2E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	2.0E-02	mg/kg-day	6.7E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	5.4E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.7E-11	--	6.3E-09	mg/kg-day	1.0E-02	mg/kg-day	6.3E-07
				Trichloroethylene	1E-01	µg/L	1.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	9.9E-11	M	1.3E-08	mg/kg-day	5.0E-04	mg/kg-day	2.5E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.7E-10	mg/kg-day	--	--	--	--	2.0E-09	mg/kg-day	6.0E-05	mg/kg-day	3.3E-05
				Arsenic, inorganic	1E+00	µg/L	3.1E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-10	--	3.6E-09	mg/kg-day	3.0E-04	mg/kg-day	1.2E-05
				Chromium [as Cr(III)]	1E+00	µg/L	3.1E-10	mg/kg-day	--	--	--	--	3.6E-09	mg/kg-day	2.0E-02	mg/kg-day	1.9E-07
				Chromium (VI)	2E-01	µg/L	1.1E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	4.3E-09	M	1.2E-09	mg/kg-day	7.5E-05	mg/kg-day	1.7E-05
				Iron	5E+02	µg/L	1.3E-07	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	7.0E-01	mg/kg-day	2.1E-06
				Manganese	7E+01	µg/L	1.7E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	9.6E-04	mg/kg-day	2.0E-04
				Mercury	3E-02	µg/L	6.3E-12	mg/kg-day	--	--	--	--	7.4E-11	mg/kg-day	2.1E-05	mg/kg-day	3.5E-06
				Thallium	1E-02	µg/L	3.0E-12	mg/kg-day	--	--	--	--	3.5E-11	mg/kg-day	1.0E-05	mg/kg-day	3.5E-06
				Titanium	8E+00	µg/L	1.9E-09	mg/kg-day	--	--	--	--	2.2E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						6.7E-07
				Total Organics							1.2E-10						2.6E-05
				Total Inorganics							4.7E-09						2.7E-04
		Surface Water Dermal Total (excluding KM TEQs)									4.9E-09						3.0E-04
		Surface Water Dermal Total (based on KM TEQs)									4.9E-09						3.0E-04
Fishing - Surface Water Total (excluding KM TEQs)											8.5E-09						5.5E-04
Fishing - Surface Water Total (based on KM TEQs)											8.4E-09						5.4E-04
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)											1.2E-05						2.3E+00
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)											1.3E-05						2.4E+00
Sediment	Sediment	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-08	--	1.5E-12	mg/kg-day	7.0E-10	mg/kg-day	2.2E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-09	--	7.9E-14	mg/kg-day	7.0E-10	mg/kg-day	1.1E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.2E-11	--	7.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.0E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-10	--	1.7E-13	mg/kg-day	7.0E-09	mg/kg-day	2.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-10	--	5.1E-12	mg/kg-day	7.0E-08	mg/kg-day	7.2E-05
				OCDD	3E-03	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--	5.2E-11	mg/kg-day	2.3E-06	mg/kg-day	2.2E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.9E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.2E-11	--	1.9E-13	mg/kg-day	2.3E-08	mg/kg-day	8.0E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-09	--	3.1E-13	mg/kg-day	2.3E-09	mg/kg-day	1.3E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	2.0E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-11	--	2.8E-14	mg/kg-day	7.0E-09	mg/kg-day	4.0E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-10	--	2.1E-13	mg/kg-day	7.0E-09	mg/kg-day	3.0E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.1E-10	--	6.3E-12	mg/kg-day	7.0E-08	mg/kg-day	9.0E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-11	--	2.1E-13	mg/kg-day	7.0E-08	mg/kg-day	3.1E-06
				OCDF	4E-04	mg/kg	7.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-11	--	8.8E-12	mg/kg-day	2.3E-06	mg/kg-day	3.8E-06
				KM TEQ DF	1E-04	mg/kg	1.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	2.9E-03
				PCB-77	8E-03	mg/kg	1.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-10	--	1.5E-10	mg/kg-day	7.0E-06	mg/kg-day	2.2E-05
				PCB-81	3E-04	mg/kg	5.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-11	--	5.9E-12	mg/kg-day	2.3E-06	mg/kg-day	2.5E-06
				PCB-105	1E-02	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-11	--	2.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.0E-05
				PCB-114	9E-04	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-12	--	1.7E-11	mg/kg-day	2.3E-05	mg/kg-day	7.2E-07
				PCB-118	4E-02	mg/kg	6.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-10	--	7.2E-10	mg/kg-day	2.3E-05	mg/kg-day	3.1E-05
				PCB-123	1E-03	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-12	--	2.1E-11	mg/kg-day	2.3E-05	mg/kg-day	8.9E-07
				PCB-126	2E-04	mg/kg	4.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-09	--	4.8E-12	mg/kg-day	7.0E-09	mg/kg-day	6.9E-04
				PCB-156/157	3E-03	mg/kg	5.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-11	--	6.4E-11	mg/kg-day	2.3E-05	mg/kg-day	2.7E-06
				PCB-167	1E-03	mg/kg	2.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.8E-12	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	9.8E-07
				PCB-169	3E-04	mg/kg	4.3E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-09	--	5.0E-12	mg/kg-day	2.3E-08	mg/kg-day	2.1E-04
				PCB-189	2E-04	mg/kg	4.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-12	--	4.8E-12	mg/kg-day	2.3E-05	mg/kg-day	2.1E-07
				KM TEQ PCB	3E-05	mg/kg	5.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.8E-09	--	6.0E-13	mg/kg-day	7.0E-10	mg/kg-day	8.6E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-09	--	1.3E-08	mg/kg-day	2.0E-05	mg/kg-day	6.5E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.1E-10	M	4.1E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.9E-09	M	4.0E-08	mg/kg-day	3.0E-04	mg/kg-day	1.3E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	3.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.2E-10	M	3.6E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.0E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	4.0E-11	M	2.3E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	6.8E-12	M	3.9E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.1E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-09	M	8.3E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.3E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.6E-10	M	1.5E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	9.6E-09	mg/kg-day	--	--	--	--	1.1E-07	mg/kg-day	4.0E-03	mg/kg-day	2.8E-05
				TPH (C9-C40)	4E+02	mg/kg	7.0E-07	mg/kg-day	--	--	--	--	8.1E-06	mg/kg-day	4.0E-03	mg/kg-day	2.0E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.1E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	1.0E+00	mg/kg-day	2.4E-04
				Antimony	2E+00	mg/kg	4.0E-09	mg/kg-day	--	--	--	--	4.6E-08	mg/kg-day	4.0E-04	mg/kg-day	1.2E-04
				Arsenic, inorganic	3E+01	mg/kg	3.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.7E-08	--	3.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Cadmium	3E+00	mg/kg	5.2E-09	mg/kg-day	--	--	--	--	6.1E-08	mg/kg-day	1.0E-03	mg/kg-day	6.1E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	2.1E-06	mg/kg-day	1.5E+00	mg/kg-day	1.4E-06
				Cobalt	1E+01	mg/kg	2.4E-08	mg/kg-day	--	--	--	--	2.8E-07	mg/kg-day	3.0E-04	mg/kg-day	9.3E-04
				Copper	2E+02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--	3.3E-06	mg/kg-day	1.0E-03	mg/kg-day	3.3E-03
				Chromium (VI)	1E+00	mg/kg	2.4E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.4E-09	M	2.7E-08	mg/kg-day	3.0E-03	mg/kg-day	9.2E-06
				Iron	4E+04	mg/kg	7.4E-05	mg/kg-day	--	--	--	--	8.6E-04	mg/kg-day	7.0E-01	mg/kg-day	1.2E-03
				Lead	5E+02	mg/kg	7.9E-07	mg/kg-day	--	--	--	--	9.3E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	6.0E-07	mg/kg-day	--	--	--	--	7.0E-06	mg/kg-day	2.4E-02	mg/kg-day	2.9E-04
				Mercury	2E+00	mg/kg	3.4E-09	mg/kg-day	--	--	--	--	3.9E-08	mg/kg-day	3.0E-04	mg/kg-day	1.3E-04
				Nickel	7E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	2.0E-02	mg/kg-day	6.6E-05
				Thallium	2E-01	mg/kg	4.1E-10	mg/kg-day	--	--	--	--	4.8E-09	mg/kg-day	1.0E-05	mg/kg-day	4.8E-04

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD Value	RfD Units	Hazard Quotient
				Vanadium	5E+01	mg/kg	8.5E-08	mg/kg-day	--	--	--	--	9.9E-07	mg/kg-day	5.0E-03	mg/kg-day	2.0E-04
				Zinc	1E+03	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	3.0E-01	mg/kg-day	8.1E-05
				Total DLCs (excluding KM TEQs)							3.6E-08						4.0E-03
				Total DLCs (based on KM TEQs)							3.4E-08						3.8E-03
				Total PCDD/Fs (excluding KM TEQ)							2.7E-08						3.0E-03
				Total PCDD/Fs (based on KM TEQ)							2.6E-08						2.9E-03
				Total DL-PCBs (excluding KM TEQ)							8.8E-09						9.8E-04
				Total DL-PCBs (based on KM TEQ)							7.8E-09						8.6E-04
				Total Non-DL PCBs							1.1E-09						6.5E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							9.9E-09						1.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							8.9E-09						1.5E-03
				Total PAHs							1.0E-08						1.3E-04
				Total Organics							0.0E+00						2.1E-03
				Total Inorganics							4.9E-08						8.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									9.6E-08						1.5E-02
		Sediment Ingestion Total (based on KM TEQs)									9.5E-08						1.5E-02
Sediment	Sediment	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.3E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	7.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-09	--	8.5E-14	mg/kg-day	7.0E-10	mg/kg-day	1.2E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-11	--	7.6E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-10	--	3.1E-13	mg/kg-day	7.0E-09	mg/kg-day	4.4E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.9E-10	--	5.4E-12	mg/kg-day	7.0E-08	mg/kg-day	7.7E-05
				OCDD	3E-03	mg/kg	4.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-10	--	5.5E-11	mg/kg-day	2.3E-06	mg/kg-day	2.4E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.7E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.7E-11	--	2.0E-13	mg/kg-day	2.3E-08	mg/kg-day	8.5E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.8E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.3E-09	--	3.3E-13	mg/kg-day	2.3E-09	mg/kg-day	1.4E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.2E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-11	--	3.0E-14	mg/kg-day	7.0E-09	mg/kg-day	4.2E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.7E-10	--	6.7E-12	mg/kg-day	7.0E-08	mg/kg-day	9.6E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-11	--	2.3E-13	mg/kg-day	7.0E-08	mg/kg-day	3.3E-06
				OCDF	4E-04	mg/kg	8.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--	9.4E-12	mg/kg-day	2.3E-06	mg/kg-day	4.0E-06
				KM TEQ DF	1E-04	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-08	--	2.2E-12	mg/kg-day	7.0E-10	mg/kg-day	3.1E-03
				PCB-77	8E-03	mg/kg	1.4E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-10	--	1.6E-10	mg/kg-day	7.0E-06	mg/kg-day	2.3E-05
				PCB-81	3E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-11	--	6.2E-12	mg/kg-day	2.3E-06	mg/kg-day	2.7E-06
				PCB-105	1E-02	mg/kg	2.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-10	--	2.6E-10	mg/kg-day	2.3E-05	mg/kg-day	1.1E-05
				PCB-114	9E-04	mg/kg	1.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-12	--	1.8E-11	mg/kg-day	2.3E-05	mg/kg-day	7.7E-07
				PCB-118	4E-02	mg/kg	6.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-10	--	7.6E-10	mg/kg-day	2.3E-05	mg/kg-day	3.3E-05
				PCB-123	1E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.5E-12	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.5E-07
				PCB-126	2E-04	mg/kg	4.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-09	--	5.1E-12	mg/kg-day	7.0E-09	mg/kg-day	7.4E-04
				PCB-156/157	3E-03	mg/kg	5.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-11	--	6.8E-11	mg/kg-day	2.3E-05	mg/kg-day	2.9E-06
				PCB-167	1E-03	mg/kg	2.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-12	--	2.4E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-169	3E-04	mg/kg	4.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-09	--	5.3E-12	mg/kg-day	2.3E-08	mg/kg-day	2.3E-04
				PCB-189	2E-04	mg/kg	4.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-12	--	5.1E-12	mg/kg-day	2.3E-05	mg/kg-day	2.2E-07

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ PCB	3E-05	mg/kg	5.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.3E-09	--	6.4E-13	mg/kg-day	7.0E-10	mg/kg-day	9.2E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	5.6E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.6E-09	--	6.5E-08	mg/kg-day	2.0E-05	mg/kg-day	3.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M	1.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.6E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.2E-08	M	1.9E-07	mg/kg-day	3.0E-04	mg/kg-day	6.2E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.9E-09	M	1.7E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	9.3E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.9E-10	M	1.1E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.6E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.1E-11	M	1.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-09	M	3.8E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-09	M	6.9E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	5.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.3E-08	--	6.5E-07	mg/kg-day	3.0E-04	mg/kg-day	2.2E-03
				Cadmium	3E+00	mg/kg	1.9E-10	mg/kg-day	--	--	--	--	2.2E-09	mg/kg-day	2.5E-05	mg/kg-day	8.6E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							3.8E-08						4.2E-03
				Total DLCs (based on KM TEQs)							3.6E-08						4.1E-03
				Total PCDD/Fs (excluding KM TEQ)							2.9E-08						3.2E-03
				Total PCDD/Fs (based on KM TEQ)							2.8E-08						3.1E-03
				Total DL-PCBs (excluding KM TEQ)							9.3E-09						1.0E-03
				Total DL-PCBs (based on KM TEQ)							8.3E-09						9.2E-04
				Total Non-DL PCBs							5.6E-09						3.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-08						4.3E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-08						4.2E-03
				Total PAHs							4.6E-08						6.2E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							8.3E-08						2.2E-03
		Sediment Dermal Total (excluding KM TEQs)									1.7E-07						1.0E-02
		Sediment Dermal Total (based on KM TEQs)									1.7E-07						1.0E-02
Crabbing - Sediment Total (excluding KM TEQs)											2.7E-07						2.6E-02

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Crabbing - Sediment Total (based on KM TEQs)											2.7E-07						2.5E-02
Surface Water	Surface Water	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-10	--	1.2E-14	mg/kg-day	7.0E-10	mg/kg-day	1.7E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	3.6E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.4E-11	--	4.2E-15	mg/kg-day	7.0E-10	mg/kg-day	6.0E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-11	--	3.0E-14	mg/kg-day	7.0E-09	mg/kg-day	4.3E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	4.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-12	--	4.9E-15	mg/kg-day	7.0E-09	mg/kg-day	6.9E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	7.3E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-11	--	8.6E-15	mg/kg-day	7.0E-09	mg/kg-day	1.2E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	5.2E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.9E-12	--	6.1E-14	mg/kg-day	7.0E-08	mg/kg-day	8.7E-07
				OCDD	6E-05	µg/L	5.5E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-12	--	6.4E-13	mg/kg-day	2.3E-06	mg/kg-day	2.7E-07
				2,3,7,8-TCDF	5E-07	µg/L	4.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-12	--	4.7E-15	mg/kg-day	7.0E-09	mg/kg-day	6.7E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	3.2E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.4E-12	--	3.8E-15	mg/kg-day	2.3E-08	mg/kg-day	1.6E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	5.6E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.5E-11	--	6.5E-15	mg/kg-day	2.3E-09	mg/kg-day	2.8E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	2.6E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-12	--	4.4E-15	mg/kg-day	7.0E-09	mg/kg-day	6.3E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-11	--	2.6E-14	mg/kg-day	7.0E-09	mg/kg-day	3.7E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-12	--	2.8E-15	mg/kg-day	7.0E-09	mg/kg-day	4.0E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	6.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.8E-12	--	7.7E-14	mg/kg-day	7.0E-08	mg/kg-day	1.1E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	4.1E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.2E-13	--	4.8E-15	mg/kg-day	7.0E-08	mg/kg-day	6.9E-08
				OCDF	1E-05	µg/L	1.2E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-13	--	1.4E-13	mg/kg-day	2.3E-06	mg/kg-day	6.2E-08
				KM TEQ DF	2E-06	µg/L	2.1E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-10	--	2.4E-14	mg/kg-day	7.0E-10	mg/kg-day	3.4E-05
				PCB-77	2E-05	µg/L	1.7E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-13	--	2.0E-13	mg/kg-day	7.0E-06	mg/kg-day	2.9E-08
				PCB-81	7E-07	µg/L	5.8E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-14	--	6.8E-15	mg/kg-day	2.3E-06	mg/kg-day	2.9E-09
				PCB-105	7E-05	µg/L	6.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-13	--	7.2E-13	mg/kg-day	2.3E-05	mg/kg-day	3.1E-08
				PCB-114	4E-06	µg/L	3.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-14	--	3.8E-14	mg/kg-day	2.3E-05	mg/kg-day	1.6E-09
				PCB-118	2E-04	µg/L	1.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-13	--	1.6E-12	mg/kg-day	2.3E-05	mg/kg-day	6.9E-08
				PCB-123	3E-06	µg/L	2.7E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-14	--	3.1E-14	mg/kg-day	2.3E-05	mg/kg-day	1.3E-09
				PCB-126	7E-07	µg/L	5.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-12	--	6.7E-15	mg/kg-day	7.0E-09	mg/kg-day	9.5E-07
				PCB-156/157	2E-05	µg/L	1.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.4E-14	--	1.9E-13	mg/kg-day	2.3E-05	mg/kg-day	8.2E-09
				PCB-167	7E-06	µg/L	5.5E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-14	--	6.5E-14	mg/kg-day	2.3E-05	mg/kg-day	2.8E-09
				PCB-169	4E-07	µg/L	3.4E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-12	--	4.0E-15	mg/kg-day	2.3E-08	mg/kg-day	1.7E-07
				PCB-189	9E-07	µg/L	7.3E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-15	--	8.5E-15	mg/kg-day	2.3E-05	mg/kg-day	3.6E-10
				KM TEQ PCB	1E-07	µg/L	9.2E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-11	--	1.1E-15	mg/kg-day	7.0E-10	mg/kg-day	1.5E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.0E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-12	M	1.2E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.3E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.6E-11	M	1.5E-10	mg/kg-day	3.0E-04	mg/kg-day	5.0E-07
				Benzo(b)fluoranthene	2E-02	µg/L	1.7E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-12	M	2.0E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	7.8E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.6E-13	M	9.1E-11	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.7E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.4E-14	M	2.0E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	3.3E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-12	M	3.9E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	7.3E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-12	M	8.5E-11	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	3.0E-11	mg/kg-day	--	--	--	--	3.5E-10	mg/kg-day	2.0E-02	mg/kg-day	1.8E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.0E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	3.1E-12	--	1.2E-09	mg/kg-day	1.0E-02	mg/kg-day	1.2E-07
				Trichloroethylene	1E-01	µg/L	1.1E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.0E-11	M	1.3E-09	mg/kg-day	5.0E-04	mg/kg-day	2.6E-06
				Inorganics													
				Antimony	7E-01	µg/L	5.9E-10	mg/kg-day	--	--	--	--	6.9E-09	mg/kg-day	4.0E-04	mg/kg-day	1.7E-05
				Arsenic, inorganic	1E+00	µg/L	1.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-09	--	1.3E-08	mg/kg-day	3.0E-04	mg/kg-day	4.2E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.1E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	1.5E+00	mg/kg-day	8.5E-09

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium (VI)	2E-01	µg/L	1.9E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.9E-10	M	2.2E-09	mg/kg-day	3.0E-03	mg/kg-day	7.3E-07
				Iron	5E+02	µg/L	4.5E-07	mg/kg-day	--	--	--	--	5.3E-06	mg/kg-day	7.0E-01	mg/kg-day	7.5E-06
				Manganese	7E+01	µg/L	5.9E-08	mg/kg-day	--	--	--	--	6.8E-07	mg/kg-day	2.4E-02	mg/kg-day	2.8E-05
				Mercury	3E-02	µg/L	2.2E-11	mg/kg-day	--	--	--	--	2.6E-10	mg/kg-day	3.0E-04	mg/kg-day	8.7E-07
				Thallium	1E-02	µg/L	1.0E-11	mg/kg-day	--	--	--	--	1.2E-10	mg/kg-day	1.0E-05	mg/kg-day	1.2E-05
				Titanium	8E+00	µg/L	6.7E-09	mg/kg-day	--	--	--	--	7.8E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							4.0E-10						4.4E-05
				Total DLCs (based on KM TEQs)							3.2E-10						3.6E-05
				Total PCDD/Fs (excluding KM TEQ)							3.9E-10						4.3E-05
				Total PCDD/Fs (based on KM TEQ)							3.1E-10						3.4E-05
				Total DL-PCBs (excluding KM TEQ)							1.1E-11						1.3E-06
				Total DL-PCBs (based on KM TEQ)							1.4E-11						1.5E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-11						1.3E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-11						1.5E-06
				Total PAHs							3.9E-11						5.2E-07
				Total Organics							1.3E-11						2.7E-06
				Total Inorganics							1.8E-09						1.1E-04
		Surface Water Ingestion Total (excluding KM TEQs)									2.3E-09						1.6E-04
		Surface Water Ingestion Total (based on KM TEQs)									2.2E-09						1.5E-04
Surface Water	Surface Water	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	7.2E-10	mg/kg-day	--	--	--	--	8.4E-09	mg/kg-day	2.0E-02	mg/kg-day	4.2E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	3.4E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.0E-11	--	3.9E-09	mg/kg-day	1.0E-02	mg/kg-day	3.9E-07
				Trichloroethylene	1E-01	µg/L	6.8E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	6.2E-11	M	7.9E-09	mg/kg-day	5.0E-04	mg/kg-day	1.6E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.0E-10	mg/kg-day	--	--	--	--	1.2E-09	mg/kg-day	6.0E-05	mg/kg-day	2.0E-05
				Arsenic, inorganic	1E+00	µg/L	1.9E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.9E-10	--	2.2E-09	mg/kg-day	3.0E-04	mg/kg-day	7.4E-06
				Chromium [as Cr(III)]	1E+00	µg/L	1.9E-10	mg/kg-day	--	--	--	--	2.3E-09	mg/kg-day	2.0E-02	mg/kg-day	1.2E-07
				Chromium (VI)	2E-01	µg/L	6.7E-11	mg/kg-day	2.0E+01	(mg/kg-day)-1	2.7E-09	M	7.8E-10	mg/kg-day	7.5E-05	mg/kg-day	1.0E-05
				Iron	5E+02	µg/L	8.0E-08	mg/kg-day	--	--	--	--	9.3E-07	mg/kg-day	7.0E-01	mg/kg-day	1.3E-06
				Manganese	7E+01	µg/L	1.0E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	9.6E-04	mg/kg-day	1.3E-04
				Mercury	3E-02	µg/L	4.0E-12	mg/kg-day	--	--	--	--	4.6E-11	mg/kg-day	2.1E-05	mg/kg-day	2.2E-06
				Thallium	1E-02	µg/L	1.9E-12	mg/kg-day	--	--	--	--	2.2E-11	mg/kg-day	1.0E-05	mg/kg-day	2.2E-06
				Titanium	8E+00	µg/L	1.2E-09	mg/kg-day	--	--	--	--	1.4E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						4.2E-07
				Total Organics							7.3E-11						1.6E-05
				Total Inorganics							3.0E-09						1.7E-04
		Surface Water Dermal Total (excluding KM TEQs)									3.0E-09						1.9E-04
		Surface Water Dermal Total (based on KM TEQs)									3.0E-09						1.9E-04
Crabbing - Surface Water Total (excluding KM TEQs)											5.3E-09						3.4E-04
Crabbing - Surface Water Total (based on KM TEQs)											5.2E-09						3.4E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											2.4E-05						4.4E+00
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											2.4E-05						4.3E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											4.9E-06						1.3E+00

TABLE 7.2 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											4.7E-06					1.3E+00

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-06	mg/kg	1.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-06	--	4.1E-10	mg/kg-day	7.0E-10	mg/kg-day	5.8E-01
				1,2,3,7,8-PeCDD	4E-07	mg/kg	9.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-07	--	2.2E-11	mg/kg-day	7.0E-10	mg/kg-day	3.1E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	4.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-09	--	1.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-08	--	3.1E-11	mg/kg-day	7.0E-09	mg/kg-day	4.5E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	3.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-09	--	7.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.3E-09	--	3.5E-11	mg/kg-day	7.0E-08	mg/kg-day	5.0E-04
				OCDD	4E-06	mg/kg	8.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.0E-10	--	2.1E-10	mg/kg-day	2.3E-06	mg/kg-day	8.8E-05
				2,3,7,8-TCDF	2E-06	mg/kg	3.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-08	--	8.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	3.2E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-08	--	7.6E-11	mg/kg-day	2.3E-08	mg/kg-day	3.2E-03
				2,3,4,7,8-PeCDF	2E-06	mg/kg	5.2E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.3E-07	--	1.2E-10	mg/kg-day	2.3E-09	mg/kg-day	5.2E-02
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	2.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-08	--	5.4E-11	mg/kg-day	7.0E-09	mg/kg-day	7.7E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	2.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-08	--	4.9E-11	mg/kg-day	7.0E-09	mg/kg-day	7.0E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-09	--	5.6E-12	mg/kg-day	7.0E-09	mg/kg-day	8.0E-04
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	3.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-09	--	8.3E-12	mg/kg-day	7.0E-09	mg/kg-day	1.2E-03
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	4.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.4E-09	--	1.1E-10	mg/kg-day	7.0E-08	mg/kg-day	1.6E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	2.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-10	--	5.3E-12	mg/kg-day	7.0E-08	mg/kg-day	7.6E-05
				OCDF	2E-07	mg/kg	4.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-11	--	1.1E-11	mg/kg-day	2.3E-06	mg/kg-day	4.8E-06
				KM TEQ DF	1E-05	mg/kg	2.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-06	--	4.9E-10	mg/kg-day	7.0E-10	mg/kg-day	6.9E-01
				PCB-77	5E-04	mg/kg	1.1E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-08	--	2.6E-08	mg/kg-day	7.0E-06	mg/kg-day	3.8E-03
				PCB-81	2E-05	mg/kg	4.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-09	--	1.0E-09	mg/kg-day	2.3E-06	mg/kg-day	4.4E-04
				PCB-105	8E-03	mg/kg	1.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-08	--	4.1E-07	mg/kg-day	2.3E-05	mg/kg-day	1.8E-02
				PCB-114	6E-04	mg/kg	1.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-09	--	3.2E-08	mg/kg-day	2.3E-05	mg/kg-day	1.4E-03
				PCB-118	3E-02	mg/kg	7.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-07	--	1.7E-06	mg/kg-day	2.3E-05	mg/kg-day	7.1E-02
				PCB-123	6E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.8E-09	--	3.0E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-126	9E-05	mg/kg	2.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-06	--	4.9E-09	mg/kg-day	7.0E-09	mg/kg-day	7.0E-01
				PCB-156/157	3E-03	mg/kg	6.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.5E-03
				PCB-167	1E-03	mg/kg	2.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-08	--	6.7E-08	mg/kg-day	2.3E-05	mg/kg-day	2.9E-03
				PCB-169	4E-06	mg/kg	8.8E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.0E-08	--	2.1E-10	mg/kg-day	2.3E-08	mg/kg-day	8.8E-03
				PCB-189	2E-04	mg/kg	5.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-09	--	1.2E-08	mg/kg-day	2.3E-05	mg/kg-day	5.2E-04
				KM TEQ PCB	1E-05	mg/kg	2.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.0E-06	--	6.2E-10	mg/kg-day	7.0E-10	mg/kg-day	8.9E-01
				Non-DL PCBs													
				Total Non-DL PCBs	4E-01	mg/kg	9.5E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.5E-07	--	2.2E-05	mg/kg-day	2.0E-05	mg/kg-day	1.1E+00
				PAHs													
				Benz(a)anthracene	8E-03	mg/kg	2.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	6.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8E-03	mg/kg	2.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.1E-08	M	6.3E-07	mg/kg-day	3.0E-04	mg/kg-day	2.1E-03
				Benzo(b)fluoranthene	8E-03	mg/kg	2.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	6.3E-07	mg/kg-day	--	--	--
				Chrysene	8E-03	mg/kg	2.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.1E-11	M	6.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	8E-03	mg/kg	2.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.1E-08	M	6.3E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	2.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-09	M	6.3E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-02	mg/kg	4.1E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.7E-09	--	9.5E-07	mg/kg-day	3.0E-05	mg/kg-day	3.2E-02
				2,4'-DDE	6E-03	mg/kg	1.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-09	--	3.0E-07	mg/kg-day	3.0E-04	mg/kg-day	9.9E-04
				2,4'-DDT	3E-03	mg/kg	8.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.9E-09	--	2.0E-07	mg/kg-day	5.0E-04	mg/kg-day	4.0E-04
				4,4'-DDD	9E-02	mg/kg	2.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.8E-08	--	4.7E-06	mg/kg-day	3.0E-05	mg/kg-day	1.6E-01
				4,4'-DDE	1E-01	mg/kg	2.7E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.3E-08	--	6.4E-06	mg/kg-day	3.0E-04	mg/kg-day	2.1E-02
				4,4'-DDT	1E-02	mg/kg	3.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-08	--	8.2E-07	mg/kg-day	5.0E-04	mg/kg-day	1.6E-03
				Benzaldehyde	1E+00	mg/kg	4.2E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	2E-02	mg/kg	3.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-08	--	7.7E-07	mg/kg-day	5.0E-04	mg/kg-day	1.5E-03
				Chlordane, gamma (trans)	4E-03	mg/kg	7.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.8E-09	--	1.8E-07	mg/kg-day	5.0E-04	mg/kg-day	3.7E-04
				Dieldrin	8E-03	mg/kg	1.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.8E-07	--	4.1E-07	mg/kg-day	5.0E-05	mg/kg-day	8.1E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	3.8E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.4E-08	--	8.8E-08	mg/kg-day	1.3E-05	mg/kg-day	6.8E-03

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Heptachlor epoxide, trans-	9E-05	mg/kg	1.8E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.7E-09	--	4.3E-09	mg/kg-day	1.3E-05	mg/kg-day	3.3E-04
				Hexachlorobenzene	1E-03	mg/kg	3.2E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.1E-09	--	7.5E-08	mg/kg-day	8.0E-04	mg/kg-day	9.4E-05
				Mirex	3E-04	mg/kg	3.5E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	6.4E-09	--	8.2E-09	mg/kg-day	2.0E-04	mg/kg-day	4.1E-05
				Nonachlor, cis-	6E-03	mg/kg	1.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-09	--	3.2E-07	mg/kg-day	1.0E-04	mg/kg-day	3.2E-03
				Nonachlor, trans-	2E-02	mg/kg	3.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.3E-08	--	8.4E-07	mg/kg-day	1.6E-05	mg/kg-day	5.4E-02
				Oxychlordane	5E-03	mg/kg	9.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.4E-09	--	2.3E-07	mg/kg-day	8.9E-05	mg/kg-day	2.6E-03
				Pyridine	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.0E-03	mg/kg-day	9.8E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.1E-05	mg/kg-day	--	--	--	--	4.9E-04	mg/kg-day	1.0E+00	mg/kg-day	4.9E-04
				Arsenic, organic	1E+00	mg/kg	3.4E-06	mg/kg-day	--	--	--	--	7.9E-05	mg/kg-day	2.0E-02	mg/kg-day	3.9E-03
				Arsenic, inorganic	1E-01	mg/kg	3.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.6E-07	--	8.7E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Cadmium	5E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	1.0E-03	mg/kg-day	3.5E-03
				Chromium [as Cr(III)]	6E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	4.9E-05	mg/kg-day	1.5E+00	mg/kg-day	3.3E-05
				Cobalt	2E-01	mg/kg	7.3E-07	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	3.0E-04	mg/kg-day	5.7E-02
				Copper	5E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--	3.6E-05	mg/kg-day	1.0E-03	mg/kg-day	3.6E-02
				Iron	7E+00	mg/kg	2.3E-05	mg/kg-day	--	--	--	--	5.3E-04	mg/kg-day	7.0E-01	mg/kg-day	7.6E-04
				Lead	4E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	2.7E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	9.3E-07	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	1.4E-01	mg/kg-day	1.5E-04
				Mercury	3E-01	mg/kg	9.8E-07	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	3.0E-04	mg/kg-day	7.6E-02
				Methyl Mercury	4E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	2.7E-05	mg/kg-day	1.0E-04	mg/kg-day	2.7E-01
				Selenium	5E-01	mg/kg	1.8E-06	mg/kg-day	--	--	--	--	4.1E-05	mg/kg-day	5.0E-03	mg/kg-day	8.2E-03
				Silver	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Vanadium	3E-02	mg/kg	9.1E-08	mg/kg-day	--	--	--	--	2.1E-06	mg/kg-day	5.0E-03	mg/kg-day	4.2E-04
				Zinc	1E+01	mg/kg	4.7E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	3.0E-01	mg/kg-day	3.7E-03
				Total DLCs (excluding KM TEQs)							6.8E-06						1.5E+00
				Total DLCs (based on KM TEQs)							7.1E-06						1.6E+00
				Total PCDD/Fs (excluding KM TEQ)							3.2E-06						7.1E-01
				Total PCDD/Fs (based on KM TEQ)							3.1E-06						6.9E-01
				Total DL-PCBs (excluding KM TEQ)							3.7E-06						8.1E-01
				Total DL-PCBs (based on KM TEQ)							4.0E-06						8.9E-01
				Total Non-DL PCBs							9.5E-07						1.1E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							4.6E-06						1.9E+00
				Total PCBs (DL & NDL; based on KM TEQ)							5.0E-06						2.0E+00
				Total PAHs							1.9E-07						2.1E-03
				Total Organics							5.5E-07						3.9E-01
				Total Inorganics							5.6E-07						4.9E-01
		Mixed Fish/All Species Total (excluding KM TEQs)									9.1E-06						3.5E+00
		Mixed Fish/All Species Total (based on KM TEQs)									9.4E-06						3.6E+00
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	1.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-06	--	4.3E-10	mg/kg-day	7.0E-10	mg/kg-day	6.2E-01
				1,2,3,7,8-PeCDD	7E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-07	--	3.5E-11	mg/kg-day	7.0E-10	mg/kg-day	4.9E-02
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	8.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--	2.1E-11	mg/kg-day	7.0E-09	mg/kg-day	3.0E-03
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	4.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-08	--	9.4E-11	mg/kg-day	7.0E-09	mg/kg-day	1.3E-02
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	7.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--	1.7E-11	mg/kg-day	7.0E-09	mg/kg-day	2.4E-03
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	2.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-09	--	6.4E-11	mg/kg-day	7.0E-08	mg/kg-day	9.1E-04
				OCDD	3E-06	mg/kg	6.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-10	--	1.6E-10	mg/kg-day	2.3E-06	mg/kg-day	6.7E-05
				2,3,7,8-TCDF	1E-07	mg/kg	2.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-09	--	5.2E-12	mg/kg-day	7.0E-09	mg/kg-day	7.4E-04
				1,2,3,7,8-PeCDF	1E-06	mg/kg	3.0E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-08	--	6.9E-11	mg/kg-day	2.3E-08	mg/kg-day	3.0E-03
				2,3,4,7,8-PeCDF	4E-06	mg/kg	8.2E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.7E-07	--	1.9E-10	mg/kg-day	2.3E-09	mg/kg-day	8.2E-02
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	5.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-08	--	1.3E-10	mg/kg-day	7.0E-09	mg/kg-day	1.9E-02
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-08	--	1.0E-10	mg/kg-day	7.0E-09	mg/kg-day	1.4E-02

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-09	--	5.6E-12	mg/kg-day	7.0E-09	mg/kg-day	8.1E-04
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	7.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-08	--	1.8E-11	mg/kg-day	7.0E-09	mg/kg-day	2.6E-03
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	1.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-08	--	2.4E-10	mg/kg-day	7.0E-08	mg/kg-day	3.4E-03
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	3.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.1E-10	--	8.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.1E-04
				OCDF	4E-07	mg/kg	7.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-11	--	1.8E-11	mg/kg-day	2.3E-06	mg/kg-day	7.6E-06
				KM TEQ DF	1E-05	mg/kg	2.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-06	--	5.6E-10	mg/kg-day	7.0E-10	mg/kg-day	7.9E-01
				PCB-77	7E-05	mg/kg	1.7E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-09	--	4.1E-09	mg/kg-day	7.0E-06	mg/kg-day	5.8E-04
				PCB-81	1E-05	mg/kg	2.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--	6.4E-10	mg/kg-day	2.3E-06	mg/kg-day	2.7E-04
				PCB-105	2E-02	mg/kg	4.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-07	--	1.1E-06	mg/kg-day	2.3E-05	mg/kg-day	4.8E-02
				PCB-114	1E-03	mg/kg	3.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-08	--	7.2E-08	mg/kg-day	2.3E-05	mg/kg-day	3.1E-03
				PCB-118	7E-02	mg/kg	1.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.5E-07	--	3.9E-06	mg/kg-day	2.3E-05	mg/kg-day	1.7E-01
				PCB-123	1E-03	mg/kg	3.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-08	--	7.7E-08	mg/kg-day	2.3E-05	mg/kg-day	3.3E-03
				PCB-126	1E-04	mg/kg	2.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-06	--	6.5E-09	mg/kg-day	7.0E-09	mg/kg-day	9.3E-01
				PCB-156/157	6E-03	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.5E-08	--	3.4E-07	mg/kg-day	2.3E-05	mg/kg-day	1.4E-02
				PCB-167	3E-03	mg/kg	6.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.8E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.3E-03
				PCB-169	4E-06	mg/kg	1.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.6E-08	--	2.4E-10	mg/kg-day	2.3E-08	mg/kg-day	1.0E-02
				PCB-189	5E-04	mg/kg	1.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-09	--	2.6E-08	mg/kg-day	2.3E-05	mg/kg-day	1.1E-03
				KM TEQ PCB	2E-05	mg/kg	5.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.6E-06	--	1.2E-09	mg/kg-day	7.0E-10	mg/kg-day	1.7E+00
				Non-DL PCBs													
				Total Non-DL PCBs	6E-01	mg/kg	1.4E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-06	--	3.2E-05	mg/kg-day	2.0E-05	mg/kg-day	1.6E+00
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M	9.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	M	9.8E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M	9.8E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-10	M	9.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	M	9.8E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M	9.8E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	6.9E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.6E-09	--	1.6E-07	mg/kg-day	3.0E-05	mg/kg-day	5.3E-03
				2,4'-DDE	2E-03	mg/kg	4.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-09	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				2,4'-DDT	4E-04	mg/kg	8.9E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.0E-10	--	2.1E-08	mg/kg-day	5.0E-04	mg/kg-day	4.2E-05
				4,4'-DDD	1E-01	mg/kg	2.9E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.0E-08	--	6.8E-06	mg/kg-day	3.0E-05	mg/kg-day	2.3E-01
				4,4'-DDE	3E-01	mg/kg	6.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.1E-07	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.8E-02
				4,4'-DDT	8E-03	mg/kg	1.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.5E-09	--	4.5E-07	mg/kg-day	5.0E-04	mg/kg-day	8.9E-04
				Benzaldehyde	1E+00	mg/kg	4.2E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	1E-02	mg/kg	2.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-08	--	6.7E-07	mg/kg-day	5.0E-04	mg/kg-day	1.3E-03
				Chlordane, gamma (trans)	4E-03	mg/kg	8.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.0E-09	--	2.0E-07	mg/kg-day	5.0E-04	mg/kg-day	4.0E-04
				Dieldrin	1E-02	mg/kg	3.2E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.2E-07	--	7.6E-07	mg/kg-day	5.0E-05	mg/kg-day	1.5E-02
				Heptachlor epoxide, cis-	4E-03	mg/kg	7.6E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.0E-08	--	1.8E-07	mg/kg-day	1.3E-05	mg/kg-day	1.4E-02
				Heptachlor epoxide, trans-	4E-04	mg/kg	7.8E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.1E-09	--	1.8E-08	mg/kg-day	1.3E-05	mg/kg-day	1.4E-03
				Hexachlorobenzene	4E-03	mg/kg	8.8E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.4E-08	--	2.1E-07	mg/kg-day	8.0E-04	mg/kg-day	2.6E-04
				Mirex	4E-04	mg/kg	5.8E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.0E-08	--	1.4E-08	mg/kg-day	2.0E-04	mg/kg-day	6.8E-05
				Nonachlor, cis-	1E-02	mg/kg	2.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.1E-09	--	5.4E-07	mg/kg-day	1.0E-04	mg/kg-day	5.4E-03
				Nonachlor, trans-	3E-02	mg/kg	6.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.1E-08	--	1.4E-06	mg/kg-day	1.6E-05	mg/kg-day	9.2E-02
				Oxychlordane	1E-02	mg/kg	3.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--	7.1E-07	mg/kg-day	8.9E-05	mg/kg-day	8.0E-03
				Pyridine	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.0E-03	mg/kg-day	9.8E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	2.0E-05	mg/kg-day	--	--	--	--	4.7E-04	mg/kg-day	1.0E+00	mg/kg-day	4.7E-04
				Arsenic, organic	1E+00	mg/kg	3.5E-06	mg/kg-day	--	--	--	--	8.1E-05	mg/kg-day	2.0E-02	mg/kg-day	4.0E-03
				Arsenic, inorganic	1E-01	mg/kg	3.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-07	--	9.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Cadmium	5E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.4E-06	mg/kg-day	1.0E-03	mg/kg-day	3.4E-03

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chromium [as Cr(III)]	2E+00	mg/kg	7.8E-06	mg/kg-day	--	--	--	--	1.8E-04	mg/kg-day	1.5E+00	mg/kg-day	1.2E-04
				Cobalt	7E-03	mg/kg	2.3E-08	mg/kg-day	--	--	--	--	5.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.8E-03
				Copper	2E-01	mg/kg	6.8E-07	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-03	mg/kg-day	1.6E-02
				Iron	8E+00	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	5.7E-04	mg/kg-day	7.0E-01	mg/kg-day	8.1E-04
				Lead	2E-02	mg/kg	7.4E-08	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	2.6E-05	mg/kg-day	1.4E-01	mg/kg-day	1.8E-04
				Mercury	4E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Methyl Mercury	5E-01	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	3.5E-05	mg/kg-day	1.0E-04	mg/kg-day	3.5E-01
				Selenium	5E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	3.9E-05	mg/kg-day	5.0E-03	mg/kg-day	7.7E-03
				Silver	2E-02	mg/kg	6.4E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Vanadium	2E-02	mg/kg	7.3E-08	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	5.0E-03	mg/kg-day	3.4E-04
				Zinc	3E+01	mg/kg	9.5E-05	mg/kg-day	--	--	--	--	2.2E-03	mg/kg-day	3.0E-01	mg/kg-day	7.4E-03
				Total DLCs (excluding KM TEQs)							9.0E-06						2.0E+00
				Total DLCs (based on KM TEQs)							1.1E-05						2.5E+00
				Total PCDD/Fs (excluding KM TEQ)							3.7E-06						8.1E-01
				Total PCDD/Fs (based on KM TEQ)							3.6E-06						7.9E-01
				Total DL-PCBs (excluding KM TEQ)							5.3E-06						1.2E+00
				Total DL-PCBs (based on KM TEQ)							7.6E-06						1.7E+00
				Total Non-DL PCBs							1.4E-06						1.6E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							6.7E-06						2.8E+00
				Total PCBs (DL & NDL; based on KM TEQ)							8.9E-06						3.3E+00
				Total PAHs							2.9E-07						3.3E-03
				Total Organics							9.8E-07						5.2E-01
				Total Inorganics							5.8E-07						5.2E-01
		American Eel Total (excluding KM TEQs)									1.2E-05						4.6E+00
		American Eel Total (based on KM TEQs)									1.4E-05						5.1E+00
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	mg/kg	3.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.7E-07	--	7.3E-11	mg/kg-day	7.0E-10	mg/kg-day	1.0E-01
				1,2,3,7,8-PeCDD	3E-07	mg/kg	6.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-08	--	1.5E-11	mg/kg-day	7.0E-10	mg/kg-day	2.1E-02
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	3.6E-12	mg/kg-day	7.0E-09	mg/kg-day	5.1E-04
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	4.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-09	--	9.9E-12	mg/kg-day	7.0E-09	mg/kg-day	1.4E-03
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--	3.4E-12	mg/kg-day	7.0E-09	mg/kg-day	4.9E-04
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.5E-10	--	7.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-07	mg/kg	5.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-11	--	1.3E-11	mg/kg-day	2.3E-06	mg/kg-day	5.5E-06
				2,3,7,8-TCDF	4E-07	mg/kg	8.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-08	--	1.9E-11	mg/kg-day	7.0E-09	mg/kg-day	2.7E-03
				1,2,3,7,8-PeCDF	7E-07	mg/kg	1.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.3E-09	--	3.3E-11	mg/kg-day	2.3E-08	mg/kg-day	1.4E-03
				2,3,4,7,8-PeCDF	8E-07	mg/kg	1.6E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	7.2E-08	--	3.7E-11	mg/kg-day	2.3E-09	mg/kg-day	1.6E-02
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--	4.6E-12	mg/kg-day	7.0E-09	mg/kg-day	6.6E-04
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	4.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-09	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.6E-03
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--	4.2E-12	mg/kg-day	7.0E-09	mg/kg-day	6.0E-04
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	2.8E-12	mg/kg-day	7.0E-09	mg/kg-day	4.0E-04
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	1.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-09	--	3.3E-11	mg/kg-day	7.0E-08	mg/kg-day	4.7E-04
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	1.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-10	--	3.7E-12	mg/kg-day	7.0E-08	mg/kg-day	5.4E-05
				OCDF	2E-07	mg/kg	3.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-11	--	8.4E-12	mg/kg-day	2.3E-06	mg/kg-day	3.6E-06
				KM TEQ DF	2E-06	mg/kg	4.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.4E-07	--	9.9E-11	mg/kg-day	7.0E-10	mg/kg-day	1.4E-01
				PCB-77	1E-04	mg/kg	2.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-09	--	5.3E-09	mg/kg-day	7.0E-06	mg/kg-day	7.6E-04
				PCB-81	4E-06	mg/kg	8.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.8E-10	--	1.9E-10	mg/kg-day	2.3E-06	mg/kg-day	8.3E-05
				PCB-105	1E-03	mg/kg	2.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-08	--	6.8E-08	mg/kg-day	2.3E-05	mg/kg-day	2.9E-03
				PCB-114	8E-05	mg/kg	1.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-10	--	4.1E-09	mg/kg-day	2.3E-05	mg/kg-day	1.8E-04
				PCB-118	5E-03	mg/kg	1.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-08	--	2.8E-07	mg/kg-day	2.3E-05	mg/kg-day	1.2E-02
				PCB-123	7E-05	mg/kg	1.7E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-10	--	4.0E-09	mg/kg-day	2.3E-05	mg/kg-day	1.7E-04

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-126	4E-05	mg/kg	8.9E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-06	--	2.1E-09	mg/kg-day	7.0E-09	mg/kg-day	3.0E-01
				PCB-156/157	6E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-09	--	3.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-167	3E-04	mg/kg	6.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-09	--	1.6E-08	mg/kg-day	2.3E-05	mg/kg-day	6.8E-04
				PCB-169	2E-06	mg/kg	4.2E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-08	--	9.7E-11	mg/kg-day	2.3E-08	mg/kg-day	4.2E-03
				PCB-189	6E-05	mg/kg	1.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-10	--	3.1E-09	mg/kg-day	2.3E-05	mg/kg-day	1.3E-04
				KM TEQ PCB	4E-06	mg/kg	9.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-06	--	2.2E-10	mg/kg-day	7.0E-10	mg/kg-day	3.1E-01
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	2.8E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.8E-07	--	6.5E-06	mg/kg-day	2.0E-05	mg/kg-day	3.2E-01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.1E-11	M	4.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	4.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03		1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	6E-04	mg/kg	1.3E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.0E-10	--	2.9E-08	mg/kg-day	3.0E-05	mg/kg-day	9.8E-04
				2,4'-DDE	1E-03	mg/kg	2.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.7E-10	--	5.3E-08	mg/kg-day	3.0E-04	mg/kg-day	1.8E-04
				2,4'-DDT	2E-04	mg/kg	5.5E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-10	--	1.3E-08	mg/kg-day	5.0E-04	mg/kg-day	2.5E-05
				4,4'-DDD	6E-03	mg/kg	1.4E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.5E-09	--	3.4E-07	mg/kg-day	3.0E-05	mg/kg-day	1.1E-02
				4,4'-DDE	3E-02	mg/kg	6.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-08	--	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.2E-03
				4,4'-DDT	2E-02	mg/kg	5.2E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-08	--	1.2E-06	mg/kg-day	5.0E-04	mg/kg-day	2.4E-03
				Benzaldehyde	1E+00	mg/kg	4.2E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	6E-03	mg/kg	1.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.2E-09	--	2.8E-07	mg/kg-day	5.0E-04	mg/kg-day	5.6E-04
				Chlordane, gamma (trans)	2E-03	mg/kg	5.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-09	--	1.2E-07	mg/kg-day	5.0E-04	mg/kg-day	2.3E-04
				Dieldrin	5E-03	mg/kg	1.0E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.6E-07	--	2.4E-07	mg/kg-day	5.0E-05	mg/kg-day	4.8E-03
				Heptachlor epoxide, cis-	1E-03	mg/kg	2.5E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.2E-08	--	5.8E-08	mg/kg-day	1.3E-05	mg/kg-day	4.4E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.2E-10	--	8.1E-10	mg/kg-day	1.3E-05	mg/kg-day	6.2E-05
				Hexachlorobenzene	5E-04	mg/kg	1.2E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.9E-09	--	2.7E-08	mg/kg-day	8.0E-04	mg/kg-day	3.4E-05
				Mirex	1E-04	mg/kg	1.9E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.3E-09	--	4.3E-09	mg/kg-day	2.0E-04	mg/kg-day	2.2E-05
				Nonachlor, cis-	2E-03	mg/kg	3.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-09	--	8.3E-08	mg/kg-day	1.0E-04	mg/kg-day	8.3E-04
				Nonachlor, trans-	3E-03	mg/kg	7.1E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-09	--	1.7E-07	mg/kg-day	1.6E-05	mg/kg-day	1.1E-02
				Oxychlordane	3E-04	mg/kg	7.4E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.6E-10	--	1.7E-08	mg/kg-day	8.9E-05	mg/kg-day	1.9E-04
				Pyridine	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.0E-03	mg/kg-day	9.8E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	1.9E-05	mg/kg-day	--	--	--	--	4.5E-04	mg/kg-day	1.0E+00	mg/kg-day	4.5E-04
				Arsenic, organic	6E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	4.9E-05	mg/kg-day	2.0E-02	mg/kg-day	2.4E-03
				Arsenic, inorganic	7E-02	mg/kg	2.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.5E-07	--	5.4E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				Cadmium	5E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	1.0E-03	mg/kg-day	3.5E-03
				Chromium [as Cr(III)]	9E-02	mg/kg	2.9E-07	mg/kg-day	--	--	--	--	6.7E-06	mg/kg-day	1.5E+00	mg/kg-day	4.5E-06
				Cobalt	2E-01		7.2E-07	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	3.0E-04	mg/kg-day	5.6E-02
				Copper	8E-01		2.6E-06	mg/kg-day	--	--	--	--	6.0E-05	mg/kg-day	1.0E-03	mg/kg-day	6.0E-02
				Iron	1E+01		3.2E-05	mg/kg-day	--	--	--	--	7.5E-04	mg/kg-day	7.0E-01	mg/kg-day	1.1E-03
				Lead	4E-02	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	3.2E-06	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	5.9E-07	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	1.4E-01	mg/kg-day	9.8E-05
				Mercury	3E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	8.2E-02
				Methyl Mercury	4E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	2.9E-05	mg/kg-day	1.0E-04	mg/kg-day	2.9E-01
				Selenium	5E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--	4.1E-05	mg/kg-day	5.0E-03	mg/kg-day	8.1E-03
				Silver	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Vanadium	2E-02	mg/kg	7.4E-08	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	5.0E-03	mg/kg-day	3.5E-04
				Zinc	2E+01	mg/kg	5.6E-05	mg/kg-day	--	--	--	--	1.3E-03	mg/kg-day	3.0E-01	mg/kg-day	4.4E-03

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Total DLCs (excluding KM TEQs)							2.1E-06						4.7E-01
				Total DLCs (based on KM TEQs)							2.0E-06						4.6E-01
				Total PCDD/Fs (excluding KM TEQ)							6.8E-07						1.5E-01
				Total PCDD/Fs (based on KM TEQ)							6.4E-07						1.4E-01
				Total DL-PCBs (excluding KM TEQ)							1.4E-06						3.2E-01
				Total DL-PCBs (based on KM TEQ)							1.4E-06						3.1E-01
				Total Non-DL PCBs							2.8E-07						3.2E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							1.7E-06						6.4E-01
				Total PCBs (DL & NDL; based on KM TEQ)							1.7E-06						6.4E-01
				Total PAHs							1.2E-07						1.3E-03
				Total Organics							2.6E-07						1.4E-01
				Total Inorganics							3.5E-07						5.3E-01
		Bluefish Total (excluding KM TEQs)									3.1E-06						1.5E+00
		Bluefish Total (based on KM TEQs)									3.1E-06						1.5E+00
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-06	mg/kg	2.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-06	--	4.6E-10	mg/kg-day	7.0E-10	mg/kg-day	6.6E-01
				1,2,3,7,8-PeCDD	5E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-07	--	2.7E-11	mg/kg-day	7.0E-10	mg/kg-day	3.9E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	4.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-09	--	1.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.4E-03
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	4.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-09	--	1.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.5E-03
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--	4.2E-12	mg/kg-day	7.0E-09	mg/kg-day	6.0E-04
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	3.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.6E-09	--	7.1E-11	mg/kg-day	7.0E-08	mg/kg-day	1.0E-03
				OCDD	2E-05	mg/kg	3.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-09	--	7.9E-10	mg/kg-day	2.3E-06	mg/kg-day	3.4E-04
				2,3,7,8-TCDF	4E-06	mg/kg	8.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	4.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.1E-08	--	1.1E-10	mg/kg-day	2.3E-08	mg/kg-day	4.7E-03
				2,3,4,7,8-PeCDF	3E-06	mg/kg	6.9E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.1E-07	--	1.6E-10	mg/kg-day	2.3E-09	mg/kg-day	6.9E-02
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	8.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--	2.0E-11	mg/kg-day	7.0E-09	mg/kg-day	2.9E-03
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	2.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-08	--	6.0E-11	mg/kg-day	7.0E-09	mg/kg-day	8.6E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-09	--	6.0E-12	mg/kg-day	7.0E-09	mg/kg-day	8.5E-04
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-09	--	4.9E-12	mg/kg-day	7.0E-09	mg/kg-day	6.9E-04
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	7.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-08	--	1.6E-10	mg/kg-day	7.0E-08	mg/kg-day	2.3E-03
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	2.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-10	--	5.4E-12	mg/kg-day	7.0E-08	mg/kg-day	7.7E-05
				OCDF	2E-07	mg/kg	4.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-11	--	9.4E-12	mg/kg-day	2.3E-06	mg/kg-day	4.0E-06
				KM TEQ DF	1E-05	mg/kg	2.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-06	--	5.8E-10	mg/kg-day	7.0E-10	mg/kg-day	8.2E-01
				PCB-77	1E-03	mg/kg	2.7E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.0E-08	--	6.2E-08	mg/kg-day	7.0E-06	mg/kg-day	8.9E-03
				PCB-81	3E-05	mg/kg	6.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-09	--	1.5E-09	mg/kg-day	2.3E-06	mg/kg-day	6.6E-04
				PCB-105	6E-03	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-08	--	3.2E-07	mg/kg-day	2.3E-05	mg/kg-day	1.4E-02
				PCB-114	7E-04	mg/kg	1.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.6E-09	--	3.9E-08	mg/kg-day	2.3E-05	mg/kg-day	1.7E-03
				PCB-118	4E-02	mg/kg	8.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-07	--	2.0E-06	mg/kg-day	2.3E-05	mg/kg-day	8.7E-02
				PCB-123	6E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-09	--	3.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-126	2E-04	mg/kg	4.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-06	--	1.0E-08	mg/kg-day	7.0E-09	mg/kg-day	1.5E+00
				PCB-156/157	3E-03	mg/kg	7.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-08	--	1.8E-07	mg/kg-day	2.3E-05	mg/kg-day	7.6E-03
				PCB-167	1E-03	mg/kg	3.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-08	--	7.9E-08	mg/kg-day	2.3E-05	mg/kg-day	3.4E-03
				PCB-169	3E-06	mg/kg	7.8E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.5E-08	--	1.8E-10	mg/kg-day	2.3E-08	mg/kg-day	7.8E-03
				PCB-189	3E-04	mg/kg	6.6E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-09	--	1.5E-08	mg/kg-day	2.3E-05	mg/kg-day	6.6E-04
				KM TEQ PCB	2E-05	mg/kg	4.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.8E-06	--	1.1E-09	mg/kg-day	7.0E-10	mg/kg-day	1.5E+00
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.7E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-06	--	3.9E-05	mg/kg-day	2.0E-05	mg/kg-day	1.9E+00
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chrysene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.1E-11	M	4.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	4.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-02	mg/kg	7.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.8E-08	--	1.7E-06	mg/kg-day	3.0E-05	mg/kg-day	5.7E-02
				2,4'-DDE	1E-02	mg/kg	2.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.6E-09	--	6.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.2E-03
				2,4'-DDT	3E-03	mg/kg	6.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-09	--	1.6E-07	mg/kg-day	5.0E-04	mg/kg-day	3.1E-04
				4,4'-DDD	1E-01	mg/kg	3.0E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.3E-08	--	7.1E-06	mg/kg-day	3.0E-05	mg/kg-day	2.4E-01
				4,4'-DDE	2E-01	mg/kg	3.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-07	--	8.0E-06	mg/kg-day	3.0E-04	mg/kg-day	2.7E-02
				4,4'-DDT	1E-02	mg/kg	3.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-08	--	7.7E-07	mg/kg-day	5.0E-04	mg/kg-day	1.5E-03
				Benzaldehyde	1E+00	mg/kg	4.2E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	4E-02	mg/kg	7.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.5E-08	--	1.7E-06	mg/kg-day	5.0E-04	mg/kg-day	3.4E-03
				Chlordane, gamma (trans)	6E-03	mg/kg	1.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.9E-09	--	3.2E-07	mg/kg-day	5.0E-04	mg/kg-day	6.5E-04
				Dieldrin	1E-02	mg/kg	2.4E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.9E-07	--	5.7E-07	mg/kg-day	5.0E-05	mg/kg-day	1.1E-02
				Heptachlor epoxide, cis-	2E-03	mg/kg	3.8E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.4E-08	--	8.8E-08	mg/kg-day	1.3E-05	mg/kg-day	6.7E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.2E-10	--	8.1E-10	mg/kg-day	1.3E-05	mg/kg-day	6.2E-05
				Hexachlorobenzene	1E-03	mg/kg	2.3E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	3.6E-09	--	5.3E-08	mg/kg-day	8.0E-04	mg/kg-day	6.6E-05
				Mirex	3E-04	mg/kg	4.1E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	7.4E-09	--	9.6E-09	mg/kg-day	2.0E-04	mg/kg-day	4.8E-05
				Nonachlor, cis-	1E-02	mg/kg	2.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.2E-09	--	5.5E-07	mg/kg-day	1.0E-04	mg/kg-day	5.5E-03
				Nonachlor, trans-	3E-02	mg/kg	6.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-08	--	1.4E-06	mg/kg-day	1.6E-05	mg/kg-day	9.3E-02
				Oxychlordane	4E-03	mg/kg	8.3E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-09	--	1.9E-07	mg/kg-day	8.9E-05	mg/kg-day	2.2E-03
				Pyridine	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.0E-03	mg/kg-day	9.8E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	4.2E-04	mg/kg-day	1.0E+00	mg/kg-day	4.2E-04
				Arsenic, organic	1E+00	mg/kg	3.7E-06	mg/kg-day	--	--	--	--	8.6E-05	mg/kg-day	2.0E-02	mg/kg-day	4.3E-03
				Arsenic, inorganic	1E-01	mg/kg	4.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-07	--	9.6E-06	mg/kg-day	3.0E-04	mg/kg-day	3.2E-02
				Cadmium	5E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	1.0E-03	mg/kg-day	3.5E-03
				Chromium [as Cr(III)]	1E-01	mg/kg	4.0E-07	mg/kg-day	--	--	--	--	9.3E-06	mg/kg-day	1.5E+00	mg/kg-day	6.2E-06
				Cobalt	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	3.0E-04	mg/kg-day	5.0E-03
				Copper	6E-01	mg/kg	1.8E-06	mg/kg-day	--	--	--	--	4.3E-05	mg/kg-day	1.0E-03	mg/kg-day	4.3E-02
				Iron	7E+00	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	5.1E-04	mg/kg-day	7.0E-01	mg/kg-day	7.2E-04
				Lead	4E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	2.7E-06	mg/kg-day	--	--	--
				Manganese	2E-01	mg/kg	7.0E-07	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.4E-01	mg/kg-day	1.2E-04
				Mercury	3E-01	mg/kg	9.1E-07	mg/kg-day	--	--	--	--	2.1E-05	mg/kg-day	3.0E-04	mg/kg-day	7.1E-02
				Methyl Mercury	3E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	2.6E-05	mg/kg-day	1.0E-04	mg/kg-day	2.6E-01
				Selenium	4E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	2.9E-05	mg/kg-day	5.0E-03	mg/kg-day	5.7E-03
				Silver	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Vanadium	3E-02	mg/kg	9.7E-08	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	5.0E-03	mg/kg-day	4.5E-04
				Zinc	7E+00	mg/kg	2.4E-05	mg/kg-day	--	--	--	--	5.5E-04	mg/kg-day	3.0E-01	mg/kg-day	1.8E-03
				Total DLCs (excluding KM TEQs)							1.1E-05						2.4E+00
				Total DLCs (based on KM TEQs)							1.0E-05						2.3E+00
				Total PCDD/Fs (excluding KM TEQ)							3.7E-06						8.2E-01
				Total PCDD/Fs (based on KM TEQ)							3.7E-06						8.2E-01
				Total DL-PCBs (excluding KM TEQ)							7.2E-06						1.6E+00
				Total DL-PCBs (based on KM TEQ)							6.8E-06						1.5E+00
				Total Non-DL PCBs							1.7E-06						1.9E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							8.8E-06						3.5E+00
				Total PCBs (DL & NDL; based on KM TEQ)							8.4E-06						3.4E+00
				Total PAHs							1.2E-07						1.3E-03
				Total Organics							7.5E-07						5.5E-01
				Total Inorganics							6.2E-07						4.2E-01

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
		Striped Bass Total (excluding KM TEQs)									1.4E-05						5.3E+00
		Striped Bass Total (based on KM TEQs)									1.4E-05						5.2E+00
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	5E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-06	--	2.7E-10	mg/kg-day	7.0E-10	mg/kg-day	3.9E-01
				1,2,3,7,8-PeCDD	2E-07	mg/kg	5.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.7E-08	--	1.2E-11	mg/kg-day	7.0E-10	mg/kg-day	1.7E-02
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	4.0E-12	mg/kg-day	7.0E-09	mg/kg-day	5.7E-04
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	5.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-09	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	2.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-09	--	5.3E-12	mg/kg-day	7.0E-09	mg/kg-day	7.6E-04
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	6.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.9E-10	--	1.5E-11	mg/kg-day	7.0E-08	mg/kg-day	2.2E-04
				OCDD	5E-07	mg/kg	9.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.3E-11	--	2.2E-11	mg/kg-day	2.3E-06	mg/kg-day	9.5E-06
				2,3,7,8-TCDF	3E-07	mg/kg	5.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.5E-09	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				1,2,3,7,8-PeCDF	3E-07	mg/kg	7.4E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.3E-09	--	1.7E-11	mg/kg-day	2.3E-08	mg/kg-day	7.4E-04
				2,3,4,7,8-PeCDF	9E-07	mg/kg	1.9E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	8.5E-08	--	4.4E-11	mg/kg-day	2.3E-09	mg/kg-day	1.9E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	1.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-08	--	3.2E-11	mg/kg-day	7.0E-09	mg/kg-day	4.6E-03
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	5.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-09	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.9E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-09	--	7.1E-12	mg/kg-day	7.0E-09	mg/kg-day	1.0E-03
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	2.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-09	--	5.4E-12	mg/kg-day	7.0E-09	mg/kg-day	7.7E-04
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-09	--	2.4E-11	mg/kg-day	7.0E-08	mg/kg-day	3.5E-04
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	2.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-10	--	5.3E-12	mg/kg-day	7.0E-08	mg/kg-day	7.6E-05
				OCDF	2E-07	mg/kg	4.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-11	--	9.8E-12	mg/kg-day	2.3E-06	mg/kg-day	4.2E-06
				KM TEQ DF	6E-06	mg/kg	1.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-06	--	3.0E-10	mg/kg-day	7.0E-10	mg/kg-day	4.3E-01
				PCB-77	1E-04	mg/kg	3.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.0E-09	--	7.8E-09	mg/kg-day	7.0E-06	mg/kg-day	1.1E-03
				PCB-81	1E-05	mg/kg	3.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-09	--	8.1E-10	mg/kg-day	2.3E-06	mg/kg-day	3.5E-04
				PCB-105	3E-03	mg/kg	6.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.4E-03
				PCB-114	2E-04	mg/kg	5.5E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-09	--	1.3E-08	mg/kg-day	2.3E-05	mg/kg-day	5.5E-04
				PCB-118	1E-02	mg/kg	2.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--	6.4E-07	mg/kg-day	2.3E-05	mg/kg-day	2.7E-02
				PCB-123	2E-04	mg/kg	4.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-09	--	9.7E-09	mg/kg-day	2.3E-05	mg/kg-day	4.2E-04
				PCB-126	4E-05	mg/kg	1.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-06	--	2.4E-09	mg/kg-day	7.0E-09	mg/kg-day	3.4E-01
				PCB-156/157	1E-03	mg/kg	2.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-08	--	6.3E-08	mg/kg-day	2.3E-05	mg/kg-day	2.7E-03
				PCB-167	5E-04	mg/kg	1.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-09	--	2.9E-08	mg/kg-day	2.3E-05	mg/kg-day	1.2E-03
				PCB-169	2E-06	mg/kg	4.7E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.1E-08	--	1.1E-10	mg/kg-day	2.3E-08	mg/kg-day	4.7E-03
				PCB-189	8E-05	mg/kg	1.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-10	--	4.3E-09	mg/kg-day	2.3E-05	mg/kg-day	1.8E-04
				KM TEQ PCB	5E-06	mg/kg	1.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-06	--	2.6E-10	mg/kg-day	7.0E-10	mg/kg-day	3.7E-01
				Non-DL PCBs													
				Total Non-DL PCBs	1E-01	mg/kg	3.4E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-07	--	8.0E-06	mg/kg-day	2.0E-05	mg/kg-day	4.0E-01
				PAHs													
				Benz(a)anthracene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Benzo(b)fluoranthene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Chrysene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.1E-11	M	4.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.1E-08	M	4.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	1.7E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-09	M	4.0E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	3E-03	mg/kg	7.4E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.8E-09	--	1.7E-07	mg/kg-day	3.0E-05	mg/kg-day	5.8E-03
				2,4'-DDE	3E-03	mg/kg	6.1E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.1E-09	--	1.4E-07	mg/kg-day	3.0E-04	mg/kg-day	4.7E-04
				2,4'-DDT	2E-04	mg/kg	5.4E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-10	--	1.3E-08	mg/kg-day	5.0E-04	mg/kg-day	2.5E-05
				4,4'-DDD	2E-02	mg/kg	4.2E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.0E-08	--	9.8E-07	mg/kg-day	3.0E-05	mg/kg-day	3.3E-02
				4,4'-DDE	4E-02	mg/kg	8.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.0E-08	--	2.1E-06	mg/kg-day	3.0E-04	mg/kg-day	6.9E-03
				4,4'-DDT	1E-03	mg/kg	3.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-09	--	8.4E-08	mg/kg-day	5.0E-04	mg/kg-day	1.7E-04
				Benzaldehyde	1E+00	mg/kg	4.2E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	2E-03	mg/kg	4.3E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-09	--	9.9E-08	mg/kg-day	5.0E-04	mg/kg-day	2.0E-04

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Chlordane, gamma (trans)	7E-04	mg/kg	1.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.3E-10	--	3.5E-08	mg/kg-day	5.0E-04	mg/kg-day	7.1E-05
				Dieldrin	1E-03	mg/kg	3.2E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.1E-08	--	7.5E-08	mg/kg-day	5.0E-05	mg/kg-day	1.5E-03
				Heptachlor epoxide, cis-	3E-04	mg/kg	7.0E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.3E-09	--	1.6E-08	mg/kg-day	1.3E-05	mg/kg-day	1.3E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.2E-10	--	8.1E-10	mg/kg-day	1.3E-05	mg/kg-day	6.2E-05
				Hexachlorobenzene	5E-04	mg/kg	1.1E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.7E-09	--	2.5E-08	mg/kg-day	8.0E-04	mg/kg-day	3.1E-05
				Mirex	6E-05	mg/kg	8.7E-11	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.6E-09	--	2.0E-09	mg/kg-day	2.0E-04	mg/kg-day	1.0E-05
				Nonachlor, cis-	1E-03	mg/kg	2.4E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.4E-10	--	5.6E-08	mg/kg-day	1.0E-04	mg/kg-day	5.6E-04
				Nonachlor, trans-	3E-03	mg/kg	6.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-09	--	1.5E-07	mg/kg-day	1.6E-05	mg/kg-day	9.8E-03
				Oxychlordane	1E-03	mg/kg	2.7E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.5E-10	--	6.3E-08	mg/kg-day	8.9E-05	mg/kg-day	7.1E-04
				Pyridine	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.0E-03	mg/kg-day	9.8E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	1.8E-05	mg/kg-day	--	--	--	--	4.2E-04	mg/kg-day	1.0E+00	mg/kg-day	4.2E-04
				Arsenic, organic	2E+00	mg/kg	5.3E-06	mg/kg-day	--	--	--	--	1.2E-04	mg/kg-day	2.0E-02	mg/kg-day	6.2E-03
				Arsenic, inorganic	2E-01	mg/kg	5.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.9E-07	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.6E-02
				Cadmium	5E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	1.0E-03	mg/kg-day	3.5E-03
				Chromium [as Cr(III)]	5E-01	mg/kg	1.5E-06	mg/kg-day	--	--	--	--	3.5E-05	mg/kg-day	1.5E+00	mg/kg-day	2.3E-05
				Cobalt	9E-01	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	6.5E-05	mg/kg-day	3.0E-04	mg/kg-day	2.2E-01
				Copper	2E-01	mg/kg	6.8E-07	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-03	mg/kg-day	1.6E-02
				Iron	5E+00	mg/kg	1.7E-05	mg/kg-day	--	--	--	--	3.9E-04	mg/kg-day	7.0E-01	mg/kg-day	5.5E-04
				Lead	3E-02	mg/kg	8.4E-08	mg/kg-day	--	--	--	--	2.0E-06	mg/kg-day	--	--	--
				Manganese	3E-01	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	1.4E-01	mg/kg-day	1.7E-04
				Mercury	2E-01	mg/kg	5.9E-07	mg/kg-day	--	--	--	--	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.6E-02
				Methyl Mercury	2E-01	mg/kg	6.9E-07	mg/kg-day	--	--	--	--	1.6E-05	mg/kg-day	1.0E-04	mg/kg-day	1.6E-01
				Selenium	6E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	4.9E-05	mg/kg-day	5.0E-03	mg/kg-day	9.7E-03
				Silver	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Vanadium	3E-02	mg/kg	9.7E-08	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	5.0E-03	mg/kg-day	4.5E-04
				Zinc	7E+00	mg/kg	2.2E-05	mg/kg-day	--	--	--	--	5.2E-04	mg/kg-day	3.0E-01	mg/kg-day	1.7E-03
				Total DLCs (excluding KM TEQs)							3.7E-06						8.2E-01
				Total DLCs (based on KM TEQs)							3.6E-06						8.0E-01
				Total PCDD/Fs (excluding KM TEQ)							2.0E-06						4.4E-01
				Total PCDD/Fs (based on KM TEQ)							1.9E-06						4.3E-01
				Total DL-PCBs (excluding KM TEQ)							1.7E-06						3.8E-01
				Total DL-PCBs (based on KM TEQ)							1.7E-06						3.7E-01
				Total Non-DL PCBs							3.4E-07						4.0E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							2.1E-06						7.8E-01
				Total PCBs (DL & NDL; based on KM TEQ)							2.0E-06						7.8E-01
				Total PAHs							1.2E-07						1.3E-03
				Total Organics							1.3E-07						1.6E-01
				Total Inorganics							8.9E-07						5.1E-01
		Summer Flounder Total (excluding KM TEQs)									5.2E-06						1.9E+00
		Summer Flounder Total (based on KM TEQs)									5.1E-06						1.9E+00
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	2E-05	mg/kg	3.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.1E-06	--	8.0E-10	mg/kg-day	7.0E-10	mg/kg-day	1.1E+00
				1,2,3,7,8-PeCDD	4E-07	mg/kg	9.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-07	--	2.1E-11	mg/kg-day	7.0E-10	mg/kg-day	3.0E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	5.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-09	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.7E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--	3.0E-11	mg/kg-day	7.0E-09	mg/kg-day	4.3E-03
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	3.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-09	--	6.9E-12	mg/kg-day	7.0E-09	mg/kg-day	9.9E-04
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	7.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-09	--	1.8E-11	mg/kg-day	7.0E-08	mg/kg-day	2.6E-04
				OCDD	8E-07	mg/kg	1.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.1E-11	--	4.2E-11	mg/kg-day	2.3E-06	mg/kg-day	1.8E-05
				2,3,7,8-TCDF	4E-06	mg/kg	8.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-07	--	1.9E-10	mg/kg-day	7.0E-09	mg/kg-day	2.7E-02
				1,2,3,7,8-PeCDF	3E-06	mg/kg	6.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.9E-08	--	1.5E-10	mg/kg-day	2.3E-08	mg/kg-day	6.4E-03

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				2,3,4,7,8-PeCDF	3E-06	mg/kg	7.2E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.2E-07	--	1.7E-10	mg/kg-day	2.3E-09	mg/kg-day	7.2E-02
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	3.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-08	--	8.0E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	2.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-08	--	5.9E-11	mg/kg-day	7.0E-09	mg/kg-day	8.4E-03
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	2.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-09	--	5.2E-12	mg/kg-day	7.0E-09	mg/kg-day	7.4E-04
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	4.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.8E-09	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.5E-03
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	5.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.6E-09	--	1.2E-10	mg/kg-day	7.0E-08	mg/kg-day	1.7E-03
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	1.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-10	--	4.3E-12	mg/kg-day	7.0E-08	mg/kg-day	6.2E-05
				OCDF	2E-07	mg/kg	4.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-11	--	1.1E-11	mg/kg-day	2.3E-06	mg/kg-day	4.6E-06
				KM TEQ DF	2E-05	mg/kg	3.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.8E-06	--	9.0E-10	mg/kg-day	7.0E-10	mg/kg-day	1.3E+00
				PCB-77	1E-03	mg/kg	2.3E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-08	--	5.3E-08	mg/kg-day	7.0E-06	mg/kg-day	7.6E-03
				PCB-81	4E-05	mg/kg	8.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.8E-09	--	2.0E-09	mg/kg-day	2.3E-06	mg/kg-day	8.6E-04
				PCB-105	7E-03	mg/kg	1.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-08	--	4.0E-07	mg/kg-day	2.3E-05	mg/kg-day	1.7E-02
				PCB-114	6E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-09	--	3.1E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-118	3E-02	mg/kg	6.5E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-07	--	1.5E-06	mg/kg-day	2.3E-05	mg/kg-day	6.5E-02
				PCB-123	6E-04	mg/kg	1.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.8E-09	--	3.0E-08	mg/kg-day	2.3E-05	mg/kg-day	1.3E-03
				PCB-126	6E-05	mg/kg	1.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-06	--	3.3E-09	mg/kg-day	7.0E-09	mg/kg-day	4.7E-01
				PCB-156/157	3E-03	mg/kg	6.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-08	--	1.5E-07	mg/kg-day	2.3E-05	mg/kg-day	6.6E-03
				PCB-167	1E-03	mg/kg	2.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-08	--	6.3E-08	mg/kg-day	2.3E-05	mg/kg-day	2.7E-03
				PCB-169	7E-06	mg/kg	1.7E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.8E-08	--	4.1E-10	mg/kg-day	2.3E-08	mg/kg-day	1.7E-02
				PCB-189	2E-04	mg/kg	5.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-09	--	1.2E-08	mg/kg-day	2.3E-05	mg/kg-day	5.2E-04
				KM TEQ PCB	7E-06	mg/kg	1.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-06	--	4.0E-10	mg/kg-day	7.0E-10	mg/kg-day	5.8E-01
				Non-DL PCBs													
				Total Non-DL PCBs	5E-01	mg/kg	1.1E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-06	--	2.6E-05	mg/kg-day	2.0E-05	mg/kg-day	1.3E+00
				PAHs													
				Benz(a)anthracene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M	9.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	M	9.8E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M	9.8E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-10	M	9.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	M	9.8E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	4.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M	9.8E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	5E-02	mg/kg	1.1E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.7E-08	--	2.7E-06	mg/kg-day	3.0E-05	mg/kg-day	8.9E-02
				2,4'-DDE	1E-02	mg/kg	2.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.7E-09	--	5.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.8E-03
				2,4'-DDT	1E-02	mg/kg	3.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-08	--	8.1E-07	mg/kg-day	5.0E-04	mg/kg-day	1.6E-03
				4,4'-DDD	2E-01	mg/kg	3.5E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.3E-08	--	8.1E-06	mg/kg-day	3.0E-05	mg/kg-day	2.7E-01
				4,4'-DDE	1E-01	mg/kg	2.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.9E-08	--	6.1E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				4,4'-DDT	3E-02	mg/kg	6.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.4E-08	--	1.6E-06	mg/kg-day	5.0E-04	mg/kg-day	3.2E-03
				Benzaldehyde	1E+00	mg/kg	4.2E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.7E-08	--	9.8E-05	mg/kg-day	1.0E-01	mg/kg-day	9.8E-04
				Chlordane, alpha (cis)	2E-02	mg/kg	4.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-08	--	1.1E-06	mg/kg-day	5.0E-04	mg/kg-day	2.3E-03
				Chlordane, gamma (trans)	5E-03	mg/kg	1.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.7E-09	--	2.5E-07	mg/kg-day	5.0E-04	mg/kg-day	5.0E-04
				Dieldrin	7E-03	mg/kg	1.7E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.6E-07	--	3.9E-07	mg/kg-day	5.0E-05	mg/kg-day	7.7E-03
				Heptachlor epoxide, cis-	2E-03	mg/kg	4.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.9E-08	--	1.0E-07	mg/kg-day	1.3E-05	mg/kg-day	7.7E-03
				Heptachlor epoxide, trans-	2E-05	mg/kg	3.5E-11	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.2E-10	--	8.1E-10	mg/kg-day	1.3E-05	mg/kg-day	6.2E-05
				Hexachlorobenzene	1E-03	mg/kg	2.7E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.4E-09	--	6.4E-08	mg/kg-day	8.0E-04	mg/kg-day	8.0E-05
				Mirex	4E-04	mg/kg	5.0E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.0E-09	--	1.2E-08	mg/kg-day	2.0E-04	mg/kg-day	5.8E-05
				Nonachlor, cis-	8E-03	mg/kg	1.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.6E-09	--	3.7E-07	mg/kg-day	1.0E-04	mg/kg-day	3.7E-03
				Nonachlor, trans-	2E-02	mg/kg	4.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-08	--	1.0E-06	mg/kg-day	1.6E-05	mg/kg-day	6.7E-02
				Oxychlordane	3E-03	mg/kg	6.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-09	--	1.5E-07	mg/kg-day	8.9E-05	mg/kg-day	1.7E-03
				Pyridine	1E+00	mg/kg	4.2E-06	mg/kg-day	--	--	--	--	9.8E-05	mg/kg-day	1.0E-03	mg/kg-day	9.8E-02
				Inorganics													
				Aluminum	9E+00	mg/kg	2.8E-05	mg/kg-day	--	--	--	--	6.6E-04	mg/kg-day	1.0E+00	mg/kg-day	6.6E-04

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, organic	7E-01	mg/kg	2.2E-06	mg/kg-day	--	--	--	--	5.2E-05	mg/kg-day	2.0E-02	mg/kg-day	2.6E-03
				Arsenic, inorganic	8E-02	mg/kg	2.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.7E-07	--	5.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Cadmium	5E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	1.0E-03	mg/kg-day	3.5E-03
				Chromium [as Cr(III)]	1E-01	mg/kg	4.7E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	1.5E+00	mg/kg-day	7.2E-06
				Cobalt	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	3.0E-04	mg/kg-day	5.0E-03
				Copper	6E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	1.0E-03	mg/kg-day	4.8E-02
				Iron	6E+00	mg/kg	2.0E-05	mg/kg-day	--	--	--	--	4.6E-04	mg/kg-day	7.0E-01	mg/kg-day	6.6E-04
				Lead	5E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--	--	3.8E-06	mg/kg-day	--	--	--
				Manganese	4E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	2.9E-05	mg/kg-day	1.4E-01	mg/kg-day	2.0E-04
				Mercury	3E-01	mg/kg	9.8E-07	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	3.0E-04	mg/kg-day	7.6E-02
				Methyl Mercury	4E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	3.1E-05	mg/kg-day	1.0E-04	mg/kg-day	3.1E-01
				Selenium	7E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	4.9E-05	mg/kg-day	5.0E-03	mg/kg-day	9.8E-03
				Silver	2E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--	--	1.5E-06	mg/kg-day	5.0E-03	mg/kg-day	3.0E-04
				Vanadium	3E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	5.0E-03	mg/kg-day	5.2E-04
				Zinc	1E+01	mg/kg	4.0E-05	mg/kg-day	--	--	--	--	9.4E-04	mg/kg-day	3.0E-01	mg/kg-day	3.1E-03
				Total DLCs (excluding KM TEQs)							8.5E-06						1.9E+00
				Total DLCs (based on KM TEQs)							8.4E-06						1.9E+00
				Total PCDD/Fs (excluding KM TEQ)							5.9E-06						1.3E+00
				Total PCDD/Fs (based on KM TEQ)							5.8E-06						1.3E+00
				Total DL-PCBs (excluding KM TEQ)							2.7E-06						5.9E-01
				Total DL-PCBs (based on KM TEQ)							2.6E-06						5.8E-01
				Total Non-DL PCBs							1.1E-06						1.3E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							3.8E-06						1.9E+00
				Total PCBs (DL & NDL; based on KM TEQ)							3.7E-06						1.9E+00
				Total PAHs							2.9E-07						3.3E-03
				Total Organics							6.2E-07						5.8E-01
				Total Inorganics							3.7E-07						4.8E-01
		White Perch Total (excluding KM TEQs)									1.1E-05						4.2E+00
		White Perch Total (based on KM TEQs)									1.1E-05						4.2E+00
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	3E-05	mg/kg	6.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.9E-06	--	1.5E-09	mg/kg-day	7.0E-10	mg/kg-day	2.2E+00
				1,2,3,7,8-PeCDD	7E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-07	--	4.1E-11	mg/kg-day	7.0E-10	mg/kg-day	5.8E-02
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	5.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-09	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.7E-03
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-08	--	3.5E-11	mg/kg-day	7.0E-09	mg/kg-day	5.0E-03
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	5.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-09	--	1.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.6E-09	--	4.0E-11	mg/kg-day	7.0E-08	mg/kg-day	5.7E-04
				OCDD	2E-06	mg/kg	5.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-10	--	1.2E-10	mg/kg-day	2.3E-06	mg/kg-day	5.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-07	--	5.7E-10	mg/kg-day	7.0E-09	mg/kg-day	8.1E-02
				1,2,3,7,8-PeCDF	2E-06	mg/kg	5.3E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-08	--	1.2E-10	mg/kg-day	2.3E-08	mg/kg-day	5.3E-03
				2,3,4,7,8-PeCDF	5E-06	mg/kg	1.2E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.5E-07	--	2.9E-10	mg/kg-day	2.3E-09	mg/kg-day	1.2E-01
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-07	--	2.8E-10	mg/kg-day	7.0E-09	mg/kg-day	3.9E-02
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	3.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-08	--	8.2E-11	mg/kg-day	7.0E-09	mg/kg-day	1.2E-02
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	2.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-09	--	5.1E-12	mg/kg-day	7.0E-09	mg/kg-day	7.2E-04
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	9.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--	2.2E-11	mg/kg-day	7.0E-09	mg/kg-day	3.1E-03
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.8E-08	--	2.8E-10	mg/kg-day	7.0E-08	mg/kg-day	3.9E-03
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	1.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.5E-10	--	3.9E-12	mg/kg-day	7.0E-08	mg/kg-day	5.6E-05
				OCDF	2E-07	mg/kg	6.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-11	--	1.4E-11	mg/kg-day	2.3E-06	mg/kg-day	6.1E-06
				KM TEQ DF	3E-05	mg/kg	7.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-05	--	1.8E-09	mg/kg-day	7.0E-10	mg/kg-day	2.5E+00
				PCB-77	2E-03	mg/kg	4.9E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.4E-08	--	1.1E-07	mg/kg-day	7.0E-06	mg/kg-day	1.6E-02
				PCB-81	9E-05	mg/kg	2.1E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.7E-09	--	5.0E-09	mg/kg-day	2.3E-06	mg/kg-day	2.1E-03
				PCB-105	1E-02	mg/kg	2.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--	6.1E-07	mg/kg-day	2.3E-05	mg/kg-day	2.6E-02

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-114	9E-04	mg/kg	2.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-08	--	5.2E-08	mg/kg-day	2.3E-05	mg/kg-day	2.2E-03
				PCB-118	5E-02	mg/kg	1.2E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.3E-07	--	2.7E-06	mg/kg-day	2.3E-05	mg/kg-day	1.2E-01
				PCB-123	8E-04	mg/kg	2.1E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-09	--	4.8E-08	mg/kg-day	2.3E-05	mg/kg-day	2.1E-03
				PCB-126	1E-04	mg/kg	2.4E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-06	--	5.7E-09	mg/kg-day	7.0E-09	mg/kg-day	8.1E-01
				PCB-156/157	4E-03	mg/kg	9.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-08	--	2.2E-07	mg/kg-day	2.3E-05	mg/kg-day	9.4E-03
				PCB-167	2E-03	mg/kg	3.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-08	--	9.1E-08	mg/kg-day	2.3E-05	mg/kg-day	3.9E-03
				PCB-169	1E-05	mg/kg	2.7E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-07	--	6.4E-10	mg/kg-day	2.3E-08	mg/kg-day	2.7E-02
				PCB-189	3E-04	mg/kg	6.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-09	--	1.6E-08	mg/kg-day	2.3E-05	mg/kg-day	6.8E-04
				KM TEQ PCB	1E-05	mg/kg	2.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.4E-06	--	6.8E-10	mg/kg-day	7.0E-10	mg/kg-day	9.7E-01
				Non-DL PCBs													
				Total Non-DL PCBs	3E-01	mg/kg	8.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.1E-07	--	1.9E-05	mg/kg-day	2.0E-05	mg/kg-day	9.4E-01
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	7.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-09	M	1.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	6.8E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-08	M	1.6E-07	mg/kg-day	3.0E-04	mg/kg-day	5.3E-04
				Benzo(b)fluoranthene	3E-03	mg/kg	6.6E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-09	M	1.5E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	9.2E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.8E-11	M	2.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	6.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-08	M	1.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	5.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M	1.3E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-04	mg/kg	5.5E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-10	--	1.3E-08	mg/kg-day	3.0E-05	mg/kg-day	4.3E-04
				2,4'-DDE	4E-04	mg/kg	1.1E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.8E-10	--	2.6E-08	mg/kg-day	3.0E-04	mg/kg-day	8.8E-05
				2,4'-DDT	2E-04	mg/kg	5.0E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-10	--	1.2E-08	mg/kg-day	5.0E-04	mg/kg-day	2.3E-05
				4,4'-DDD	3E-02	mg/kg	8.8E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.1E-08	--	2.1E-06	mg/kg-day	3.0E-05	mg/kg-day	6.8E-02
				4,4'-DDE	9E-02	mg/kg	2.4E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.1E-08	--	5.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				4,4'-DDT	1E-03	mg/kg	2.7E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.3E-10	--	6.4E-08	mg/kg-day	5.0E-04	mg/kg-day	1.3E-04
				Benzaldehyde	1E+00	mg/kg	3.0E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.2E-08	--	7.0E-05	mg/kg-day	1.0E-01	mg/kg-day	7.0E-04
				Chlordane, alpha (cis)	2E-03	mg/kg	5.1E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.8E-09	--	1.2E-07	mg/kg-day	5.0E-04	mg/kg-day	2.4E-04
				Chlordane, gamma (trans)	3E-04	mg/kg	6.4E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.2E-10	--	1.5E-08	mg/kg-day	5.0E-04	mg/kg-day	3.0E-05
				Dieldrin	6E-03	mg/kg	1.5E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.5E-07	--	3.6E-07	mg/kg-day	5.0E-05	mg/kg-day	7.2E-03
				Heptachlor epoxide, cis-	4E-03	mg/kg	9.0E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.2E-08	--	2.1E-07	mg/kg-day	1.3E-05	mg/kg-day	1.6E-02
				Heptachlor epoxide, trans-	1E-03	mg/kg	2.9E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.6E-08	--	6.8E-08	mg/kg-day	1.3E-05	mg/kg-day	5.2E-03
				Hexachlorobenzene	1E-03	mg/kg	2.8E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.4E-09	--	6.5E-08	mg/kg-day	8.0E-04	mg/kg-day	8.1E-05
				Mirex	2E-04	mg/kg	5.1E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.1E-09	--	1.2E-08	mg/kg-day	2.0E-04	mg/kg-day	5.9E-05
				Nonachlor, cis-	5E-03	mg/kg	1.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.7E-09	--	3.1E-07	mg/kg-day	1.0E-04	mg/kg-day	3.1E-03
				Nonachlor, trans-	1E-02	mg/kg	2.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.2E-09	--	6.1E-07	mg/kg-day	1.6E-05	mg/kg-day	3.9E-02
				Oxychlordane	2E-02	mg/kg	3.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-08	--	9.2E-07	mg/kg-day	8.9E-05	mg/kg-day	1.0E-02
				Pyridine	5E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--	3.0E-05	mg/kg-day	1.0E-03	mg/kg-day	3.0E-02
				Inorganics													
				Aluminum	9E+00	mg/kg	2.3E-05	mg/kg-day	--	--	--	--	5.4E-04	mg/kg-day	1.0E+00	mg/kg-day	5.4E-04
				Arsenic, organic	3E+00	mg/kg	6.4E-06	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	2.0E-02	mg/kg-day	7.4E-03
				Arsenic, inorganic	3E-01	mg/kg	7.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-06	--	1.7E-05	mg/kg-day	3.0E-04	mg/kg-day	5.5E-02
				Cadmium	4E-01	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	2.3E-05	mg/kg-day	1.0E-03	mg/kg-day	2.3E-02
				Chromium [as Cr(III)]	2E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--	--	9.8E-06	mg/kg-day	1.5E+00	mg/kg-day	6.5E-06
				Cobalt	9E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--	--	5.2E-06	mg/kg-day	3.0E-04	mg/kg-day	1.7E-02
				Copper	3E+01	mg/kg	7.2E-05	mg/kg-day	--	--	--	--	1.7E-03	mg/kg-day	1.0E-03	mg/kg-day	1.7E+00
				Iron	4E+01	mg/kg	9.8E-05	mg/kg-day	--	--	--	--	2.3E-03	mg/kg-day	7.0E-01	mg/kg-day	3.3E-03
				Lead	3E-01	mg/kg	7.1E-07	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	--	--	--
				Manganese	1E+01	mg/kg	2.5E-05	mg/kg-day	--	--	--	--	5.8E-04	mg/kg-day	1.4E-01	mg/kg-day	4.2E-03
				Mercury	2E-01	mg/kg	3.8E-07	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	3.0E-04	mg/kg-day	3.0E-02
				Methyl Mercury	2E-01	mg/kg	4.3E-07	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	1.0E-04	mg/kg-day	1.0E-01
				Selenium	1E+00	mg/kg	2.9E-06	mg/kg-day	--	--	--	--	6.7E-05	mg/kg-day	5.0E-03	mg/kg-day	1.3E-02

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Silver	8E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	4.6E-05	mg/kg-day	5.0E-03	mg/kg-day	9.2E-03
				Vanadium	7E-02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	5.0E-03	mg/kg-day	8.6E-04
				Zinc	5E+01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--	2.7E-03	mg/kg-day	3.0E-01	mg/kg-day	9.1E-03
				Total DLCs (excluding KM TEQs)							1.6E-05						3.6E+00
				Total DLCs (based on KM TEQs)							1.6E-05						3.5E+00
				Total PCDD/Fs (excluding KM TEQ)							1.1E-05						2.5E+00
				Total PCDD/Fs (based on KM TEQ)							1.1E-05						2.5E+00
				Total DL-PCBs (excluding KM TEQ)							4.6E-06						1.0E+00
				Total DL-PCBs (based on KM TEQ)							4.4E-06						9.7E-01
				Total Non-DL PCBs							8.1E-07						9.4E-01
				Total PCBs (DL & NDL; excluding KM TEQ)							5.4E-06						2.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							5.2E-06						1.9E+00
				Total PAHs							6.1E-08						5.3E-04
				Total Organics							5.1E-07						2.0E-01
				Total Inorganics							1.1E-06						2.0E+00
		Crab (H+M) Total (excluding KM TEQs)									1.8E-05						6.7E+00
		Crab (H+M) Total (based on KM TEQs)									1.8E-05						6.6E+00
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	4E-06	mg/kg	9.7E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-06	--	2.3E-10	mg/kg-day	7.0E-10	mg/kg-day	3.2E-01
				1,2,3,7,8-PeCDD	3E-07	mg/kg	6.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-08	--	1.5E-11	mg/kg-day	7.0E-10	mg/kg-day	2.1E-02
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	6.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-09	--	1.6E-12	mg/kg-day	7.0E-09	mg/kg-day	2.3E-04
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	4.1E-12	mg/kg-day	7.0E-09	mg/kg-day	5.8E-04
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	9.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--	2.1E-12	mg/kg-day	7.0E-09	mg/kg-day	3.0E-04
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	3.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.1E-10	--	7.9E-12	mg/kg-day	7.0E-08	mg/kg-day	1.1E-04
				OCDD	5E-07	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-11	--	2.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.2E-05
				2,3,7,8-TCDF	1E-06	mg/kg	2.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-08	--	6.8E-11	mg/kg-day	7.0E-09	mg/kg-day	9.7E-03
				1,2,3,7,8-PeCDF	3E-07	mg/kg	6.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-09	--	1.6E-11	mg/kg-day	2.3E-08	mg/kg-day	6.8E-04
				2,3,4,7,8-PeCDF	5E-07	mg/kg	1.2E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.5E-08	--	2.8E-11	mg/kg-day	2.3E-09	mg/kg-day	1.2E-02
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-08	--	4.2E-11	mg/kg-day	7.0E-09	mg/kg-day	6.0E-03
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	4.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.8E-09	--	1.1E-11	mg/kg-day	7.0E-09	mg/kg-day	1.5E-03
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-09	--	4.2E-12	mg/kg-day	7.0E-09	mg/kg-day	6.0E-04
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-09	--	2.7E-12	mg/kg-day	7.0E-09	mg/kg-day	3.9E-04
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	9.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--	2.3E-11	mg/kg-day	7.0E-08	mg/kg-day	3.3E-04
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	8.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-10	--	2.0E-12	mg/kg-day	7.0E-08	mg/kg-day	2.8E-05
				OCDF	9E-08	mg/kg	2.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-11	--	5.5E-12	mg/kg-day	2.3E-06	mg/kg-day	2.4E-06
				KM TEQ DF	4E-06	mg/kg	1.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-06	--	2.6E-10	mg/kg-day	7.0E-10	mg/kg-day	3.7E-01
				PCB-77	2E-04	mg/kg	5.0E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.5E-09	--	1.2E-08	mg/kg-day	7.0E-06	mg/kg-day	1.7E-03
				PCB-81	9E-06	mg/kg	2.3E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-09	--	5.3E-10	mg/kg-day	2.3E-06	mg/kg-day	2.3E-04
				PCB-105	1E-03	mg/kg	2.7E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-08	--	6.2E-08	mg/kg-day	2.3E-05	mg/kg-day	2.7E-03
				PCB-114	9E-05	mg/kg	2.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-09	--	5.5E-09	mg/kg-day	2.3E-05	mg/kg-day	2.3E-04
				PCB-118	4E-03	mg/kg	1.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-08	--	2.3E-07	mg/kg-day	2.3E-05	mg/kg-day	1.0E-02
				PCB-123	8E-05	mg/kg	2.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-10	--	4.6E-09	mg/kg-day	2.3E-05	mg/kg-day	2.0E-04
				PCB-126	8E-06	mg/kg	2.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-07	--	5.0E-10	mg/kg-day	7.0E-09	mg/kg-day	7.1E-02
				PCB-156/157	3E-04	mg/kg	8.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-09	--	1.9E-08	mg/kg-day	2.3E-05	mg/kg-day	8.1E-04
				PCB-167	1E-04	mg/kg	3.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-09	--	7.2E-09	mg/kg-day	2.3E-05	mg/kg-day	3.1E-04
				PCB-169	1E-05	mg/kg	2.9E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-07	--	6.7E-10	mg/kg-day	2.3E-08	mg/kg-day	2.9E-02
				PCB-189	2E-05	mg/kg	4.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-10	--	9.2E-10	mg/kg-day	2.3E-05	mg/kg-day	4.0E-05
				KM TEQ PCB	1E-06	mg/kg	2.6E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.8E-07	--	6.0E-11	mg/kg-day	7.0E-10	mg/kg-day	8.5E-02
				Non-DL PCBs													
				Total Non-DL PCBs	3E-02	mg/kg	7.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.0E-08	--	1.6E-06	mg/kg-day	2.0E-05	mg/kg-day	8.1E-02
				PAHs													

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Benz(a)anthracene	1E-02	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.8E-09	M	7.6E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1E-02	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.8E-08	M	7.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Benzo(b)fluoranthene	1E-02	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.8E-09	M	7.6E-07	mg/kg-day	--	--	--
				Chrysene	1E-02	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	9.8E-11	M	7.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	1E-02	mg/kg	3.3E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.8E-08	M	7.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	3.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.8E-09	M	7.6E-07	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	2E-05	mg/kg	6.1E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.5E-11	--	1.4E-09	mg/kg-day	3.0E-05	mg/kg-day	4.7E-05
				2,4'-DDE	5E-05	mg/kg	1.2E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.1E-11	--	2.8E-09	mg/kg-day	3.0E-04	mg/kg-day	9.5E-06
				2,4'-DDT	4E-05	mg/kg	9.4E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.2E-11	--	2.2E-09	mg/kg-day	5.0E-04	mg/kg-day	4.4E-06
				4,4'-DDD	5E-03	mg/kg	1.3E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.1E-09	--	3.0E-07	mg/kg-day	3.0E-05	mg/kg-day	1.0E-02
				4,4'-DDE	1E-02	mg/kg	3.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-08	--	8.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.9E-03
				4,4'-DDT	2E-04	mg/kg	3.8E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-10	--	8.9E-09	mg/kg-day	5.0E-04	mg/kg-day	1.8E-05
				Benzaldehyde	1E+00	mg/kg	3.3E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	1.3E-08	--	7.6E-05	mg/kg-day	1.0E-01	mg/kg-day	7.6E-04
				Chlordane, alpha (cis)	6E-04	mg/kg	1.5E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.1E-10	--	3.4E-08	mg/kg-day	5.0E-04	mg/kg-day	6.9E-05
				Chlordane, gamma (trans)	3E-05	mg/kg	6.7E-11	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-11	--	1.6E-09	mg/kg-day	5.0E-04	mg/kg-day	3.1E-06
				Dieldrin	1E-03	mg/kg	3.4E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.4E-08	--	7.9E-08	mg/kg-day	5.0E-05	mg/kg-day	1.6E-03
				Heptachlor epoxide, cis-	3E-04	mg/kg	8.2E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.5E-09	--	1.9E-08	mg/kg-day	1.3E-05	mg/kg-day	1.5E-03
				Heptachlor epoxide, trans-	2E-04	mg/kg	5.7E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	5.2E-09	--	1.3E-08	mg/kg-day	1.3E-05	mg/kg-day	1.0E-03
				Hexachlorobenzene	2E-04	mg/kg	5.6E-10	mg/kg-day	1.6E+00	(mg/kg-day)-1	8.9E-10	--	1.3E-08	mg/kg-day	8.0E-04	mg/kg-day	1.6E-05
				Mirex	5E-05	mg/kg	1.3E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.3E-09	--	3.0E-09	mg/kg-day	2.0E-04	mg/kg-day	1.5E-05
				Nonachlor, cis-	7E-04	mg/kg	1.7E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.8E-10	--	3.9E-08	mg/kg-day	1.0E-04	mg/kg-day	3.9E-04
				Nonachlor, trans-	1E-03	mg/kg	3.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-09	--	7.1E-08	mg/kg-day	1.6E-05	mg/kg-day	4.6E-03
				Oxychlordane	2E-03	mg/kg	4.3E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-09	--	1.0E-07	mg/kg-day	8.9E-05	mg/kg-day	1.1E-03
				Pyridine	4E-01	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	2.4E-05	mg/kg-day	1.0E-03	mg/kg-day	2.4E-02
				Inorganics													
				Aluminum	6E+00	mg/kg	1.4E-05	mg/kg-day	--	--	--	--	3.3E-04	mg/kg-day	1.0E+00	mg/kg-day	3.3E-04
				Arsenic, organic	2E+00	mg/kg	6.0E-06	mg/kg-day	--	--	--	--	1.4E-04	mg/kg-day	2.0E-02	mg/kg-day	6.9E-03
				Arsenic, inorganic	3E-01	mg/kg	6.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.9E-07	--	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	5.1E-02
				Cadmium	2E-01	mg/kg	4.1E-07	mg/kg-day	--	--	--	--	9.6E-06	mg/kg-day	1.0E-03	mg/kg-day	9.6E-03
				Chromium [as Cr(III)]	2E-01	mg/kg	3.8E-07	mg/kg-day	--	--	--	--	8.9E-06	mg/kg-day	1.5E+00	mg/kg-day	6.0E-06
				Cobalt	7E-02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Copper	2E+01	mg/kg	4.6E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.0E-03	mg/kg-day	1.1E+00
				Iron	2E+01	mg/kg	4.7E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	7.0E-01	mg/kg-day	1.6E-03
				Lead	1E-01	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	5.7E-06	mg/kg-day	--	--	--
				Manganese	6E+00	mg/kg	1.5E-05	mg/kg-day	--	--	--	--	3.6E-04	mg/kg-day	1.4E-01	mg/kg-day	2.6E-03
				Mercury	2E-01	mg/kg	4.6E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.5E-02
				Methyl Mercury	2E-01	mg/kg	5.4E-07	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	1.0E-04	mg/kg-day	1.3E-01
				Selenium	9E-01	mg/kg	2.3E-06	mg/kg-day	--	--	--	--	5.5E-05	mg/kg-day	5.0E-03	mg/kg-day	1.1E-02
				Silver	5E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--	2.8E-05	mg/kg-day	5.0E-03	mg/kg-day	5.6E-03
				Vanadium	4E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	2.5E-06	mg/kg-day	5.0E-03	mg/kg-day	5.0E-04
				Zinc	5E+01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--	2.8E-03	mg/kg-day	3.0E-01	mg/kg-day	9.3E-03
Total DLCs (excluding KM TEQs)											2.2E-06						4.9E-01
Total DLCs (based on KM TEQs)											2.0E-06						4.5E-01
Total PCDD/Fs (excluding KM TEQ)											1.7E-06						3.8E-01
Total PCDD/Fs (based on KM TEQ)											1.7E-06						3.7E-01
Total DL-PCBs (excluding KM TEQ)											5.2E-07						1.2E-01
Total DL-PCBs (based on KM TEQ)											3.8E-07						8.5E-02
Total Non-DL PCBs											7.0E-08						8.1E-02
Total PCBs (DL & NDL; excluding KM TEQ)											5.9E-07						2.0E-01
Total PCBs (DL & NDL; based on KM TEQ)											4.5E-07						1.7E-01

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentratio Value	Intake/Exposure Concentratio Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD Value	RfD Units	Hazard Quotient
				Total PAHs							2.3E-07						2.5E-03
				Total Organics							1.0E-07						4.8E-02
				Total Inorganics							9.9E-07						1.3E+00
		Crab (Muscle) Total (excluding KM TEQs)									3.6E-06						2.0E+00
		Crab (Muscle) Total (based on KM TEQs)									3.4E-06						1.9E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	9E-05	mg/kg	2.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-05	--	5.4E-09	mg/kg-day	7.0E-10	mg/kg-day	7.7E+00
				1,2,3,7,8-PeCDD	2E-06	mg/kg	5.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-07	--	1.3E-10	mg/kg-day	7.0E-10	mg/kg-day	1.8E-01
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-08	--	4.1E-11	mg/kg-day	7.0E-09	mg/kg-day	5.8E-03
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	5.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-08	--	1.2E-10	mg/kg-day	7.0E-09	mg/kg-day	1.8E-02
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-08	--	4.2E-11	mg/kg-day	7.0E-09	mg/kg-day	6.0E-03
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	5.7E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-09	--	1.3E-10	mg/kg-day	7.0E-08	mg/kg-day	1.9E-03
				OCDD	6E-06	mg/kg	1.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.3E-10	--	3.8E-10	mg/kg-day	2.3E-06	mg/kg-day	1.6E-04
				2,3,7,8-TCDF	3E-05	mg/kg	8.6E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-06	--	2.0E-09	mg/kg-day	7.0E-09	mg/kg-day	2.9E-01
				1,2,3,7,8-PeCDF	7E-06	mg/kg	1.9E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.4E-08	--	4.3E-10	mg/kg-day	2.3E-08	mg/kg-day	1.9E-02
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.4E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.0E-06	--	1.0E-09	mg/kg-day	2.3E-09	mg/kg-day	4.4E-01
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	4.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-07	--	9.7E-10	mg/kg-day	7.0E-09	mg/kg-day	1.4E-01
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	1.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--	2.9E-10	mg/kg-day	7.0E-09	mg/kg-day	4.2E-02
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--	8.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.1E-03
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	3.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-08	--	7.6E-11	mg/kg-day	7.0E-09	mg/kg-day	1.1E-02
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	4.3E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.4E-08	--	1.0E-09	mg/kg-day	7.0E-08	mg/kg-day	1.4E-02
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	3.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-10	--	8.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				OCDF	8E-07	mg/kg	2.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.5E-11	--	4.9E-11	mg/kg-day	2.3E-06	mg/kg-day	2.1E-05
				KM TEQ DF	1E-04	mg/kg	2.6E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.0E-05	--	6.2E-09	mg/kg-day	7.0E-10	mg/kg-day	8.8E+00
				PCB-77	7E-03	mg/kg	1.7E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-07	--	4.0E-07	mg/kg-day	7.0E-06	mg/kg-day	5.8E-02
				PCB-81	3E-04	mg/kg	7.7E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-08	--	1.8E-08	mg/kg-day	2.3E-06	mg/kg-day	7.7E-03
				PCB-105	4E-02	mg/kg	9.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-07	--	2.2E-06	mg/kg-day	2.3E-05	mg/kg-day	9.4E-02
				PCB-114	3E-03	mg/kg	8.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-08	--	1.9E-07	mg/kg-day	2.3E-05	mg/kg-day	8.0E-03
				PCB-118	2E-01	mg/kg	4.3E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-06	--	9.9E-06	mg/kg-day	2.3E-05	mg/kg-day	4.3E-01
				PCB-123	3E-03	mg/kg	7.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-08	--	1.7E-07	mg/kg-day	2.3E-05	mg/kg-day	7.4E-03
				PCB-126	4E-04	mg/kg	8.8E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-05	--	2.1E-08	mg/kg-day	7.0E-09	mg/kg-day	2.9E+00
				PCB-156/157	1E-02	mg/kg	3.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-07	--	7.9E-07	mg/kg-day	2.3E-05	mg/kg-day	3.4E-02
				PCB-167	6E-03	mg/kg	1.4E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-08	--	3.3E-07	mg/kg-day	2.3E-05	mg/kg-day	1.4E-02
				PCB-169	4E-05	mg/kg	9.1E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.1E-07	--	2.1E-09	mg/kg-day	2.3E-08	mg/kg-day	9.1E-02
				PCB-189	1E-03	mg/kg	2.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--	5.8E-08	mg/kg-day	2.3E-05	mg/kg-day	2.5E-03
				KM TEQ PCB	4E-05	mg/kg	1.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-05	--	2.5E-09	mg/kg-day	7.0E-10	mg/kg-day	3.5E+00
				Non-DL PCBs													
				Total Non-DL PCBs	1E+00	mg/kg	3.0E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-06	--	6.9E-05	mg/kg-day	2.0E-05	mg/kg-day	3.4E+00
				PAHs													
				Benz(a)anthracene	3E-03	mg/kg	8.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.4E-09	M	1.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	3E-03	mg/kg	7.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-08	M	1.7E-07	mg/kg-day	3.0E-04	mg/kg-day	5.6E-04
				Benzo(b)fluoranthene	3E-03	mg/kg	6.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-09	M	1.6E-07	mg/kg-day	--	--	--
				Chrysene	4E-03	mg/kg	1.1E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.4E-11	M	2.6E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3E-03	mg/kg	7.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-08	M	1.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	1.9E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.7E-08	M	4.4E-06	mg/kg-day	--	--	--
				Pesticides & Organics													
				2,4'-DDD	8E-04	mg/kg	1.9E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.6E-10	--	4.5E-08	mg/kg-day	3.0E-05	mg/kg-day	1.5E-03
				2,4'-DDE	2E-03	mg/kg	4.0E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.4E-09	--	9.4E-08	mg/kg-day	3.0E-04	mg/kg-day	3.1E-04
				2,4'-DDT	7E-04	mg/kg	1.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.6E-10	--	3.8E-08	mg/kg-day	5.0E-04	mg/kg-day	7.7E-05
				4,4'-DDD	1E-01	mg/kg	3.1E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.3E-08	--	7.1E-06	mg/kg-day	3.0E-05	mg/kg-day	2.4E-01
				4,4'-DDE	3E-01	mg/kg	8.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.8E-07	--	1.9E-05	mg/kg-day	3.0E-04	mg/kg-day	6.3E-02

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentratio		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				4,4'-DDT	4E-03	mg/kg	9.4E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.2E-09	--	2.2E-07	mg/kg-day	5.0E-04	mg/kg-day	4.4E-04
				Benzaldehyde	3E+00	mg/kg	6.4E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	2.6E-08	--	1.5E-04	mg/kg-day	1.0E-01	mg/kg-day	1.5E-03
				Chlordane, alpha (cis)	7E-03	mg/kg	1.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.8E-09	--	3.9E-07	mg/kg-day	5.0E-04	mg/kg-day	7.8E-04
				Chlordane, gamma (trans)	9E-04	mg/kg	2.3E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.0E-10	--	5.3E-08	mg/kg-day	5.0E-04	mg/kg-day	1.1E-04
				Dieldrin	2E-02	mg/kg	5.1E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	8.1E-07	--	1.2E-06	mg/kg-day	5.0E-05	mg/kg-day	2.4E-02
				Heptachlor epoxide, cis-	1E-02	mg/kg	3.3E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	3.0E-07	--	7.7E-07	mg/kg-day	1.3E-05	mg/kg-day	5.9E-02
				Heptachlor epoxide, trans-	4E-03	mg/kg	9.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.8E-08	--	2.3E-07	mg/kg-day	1.3E-05	mg/kg-day	1.7E-02
				Hexachlorobenzene	4E-03	mg/kg	9.2E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.5E-08	--	2.1E-07	mg/kg-day	8.0E-04	mg/kg-day	2.7E-04
				Mirex	7E-04	mg/kg	1.7E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.0E-08	--	3.9E-08	mg/kg-day	2.0E-04	mg/kg-day	2.0E-04
				Nonachlor, cis-	2E-02	mg/kg	4.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-08	--	1.1E-06	mg/kg-day	1.0E-04	mg/kg-day	1.1E-02
				Nonachlor, trans-	4E-02	mg/kg	9.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.3E-08	--	2.2E-06	mg/kg-day	1.6E-05	mg/kg-day	1.4E-01
				Oxychlordane	6E-02	mg/kg	1.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.9E-08	--	3.3E-06	mg/kg-day	8.9E-05	mg/kg-day	3.7E-02
				Pyridine	8E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--	4.7E-05	mg/kg-day	1.0E-03	mg/kg-day	4.7E-02
				Inorganics													
				Aluminum	3E+01	mg/kg	7.1E-05	mg/kg-day	--	--	--	--	1.7E-03	mg/kg-day	1.0E+00	mg/kg-day	1.7E-03
				Arsenic, organic	3E+00	mg/kg	7.9E-06	mg/kg-day	--	--	--	--	1.8E-04	mg/kg-day	2.0E-02	mg/kg-day	9.2E-03
				Arsenic, inorganic	3E-01	mg/kg	8.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-06	--	2.0E-05	mg/kg-day	3.0E-04	mg/kg-day	6.8E-02
				Cadmium	1E+00	mg/kg	3.2E-06	mg/kg-day	--	--	--	--	7.5E-05	mg/kg-day	1.0E-03	mg/kg-day	7.5E-02
				Chromium [as Cr(III)]	3E-01	mg/kg	7.2E-07	mg/kg-day	--	--	--	--	1.7E-05	mg/kg-day	1.5E+00	mg/kg-day	1.1E-05
				Cobalt	2E-01	mg/kg	5.6E-07	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	4.4E-02
				Copper	7E+01	mg/kg	1.9E-04	mg/kg-day	--	--	--	--	4.4E-03	mg/kg-day	1.0E-03	mg/kg-day	4.4E+00
				Iron	1E+02	mg/kg	2.5E-04	mg/kg-day	--	--	--	--	5.9E-03	mg/kg-day	7.0E-01	mg/kg-day	8.5E-03
				Lead	8E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--	4.8E-05	mg/kg-day	--	--	--
				Manganese	2E+01	mg/kg	4.7E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	1.4E-01	mg/kg-day	7.8E-03
				Mercury	7E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--	4.4E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
				Methyl Mercury	6E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	1.0E-04	mg/kg-day	3.5E-02
				Selenium	2E+00	mg/kg	4.6E-06	mg/kg-day	--	--	--	--	1.1E-04	mg/kg-day	5.0E-03	mg/kg-day	2.1E-02
				Silver	2E+00	mg/kg	4.8E-06	mg/kg-day	--	--	--	--	1.1E-04	mg/kg-day	5.0E-03	mg/kg-day	2.2E-02
				Vanadium	2E-01	mg/kg	4.3E-07	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	5.0E-03	mg/kg-day	2.0E-03
				Zinc	5E+01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--	2.8E-03	mg/kg-day	3.0E-01	mg/kg-day	9.3E-03
				Total DLCs (excluding KM TEQs)							5.6E-05						1.3E+01
				Total DLCs (based on KM TEQs)							5.5E-05						1.2E+01
				Total PCDD/Fs (excluding KM TEQ)							4.0E-05						8.8E+00
				Total PCDD/Fs (based on KM TEQ)							4.0E-05						8.8E+00
				Total DL-PCBs (excluding KM TEQ)							1.7E-05						3.7E+00
				Total DL-PCBs (based on KM TEQ)							1.6E-05						3.5E+00
				Total Non-DL PCBs							3.0E-06						3.4E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							2.0E-05						7.1E+00
				Total PCBs (DL & NDL; based on KM TEQ)							1.9E-05						7.0E+00
				Total PAHs							1.0E-07						5.6E-04
				Total Organics							1.7E-06						6.4E-01
				Total Inorganics							1.3E-06						4.7E+00
		Crab (Hepatopancreas) Total (excluding KM TEQs)									6.2E-05						2.1E+01
		Crab (Hepatopancreas) Total (based on KM TEQs)									6.1E-05						2.1E+01

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

TABLE 7.3 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentratio Value	Units	CSF/Unit Risk Value	Units	Cancer Risk[a]	Intake/Exposure Concentration Value	Units	RfD Value	Units	Hazard Quotient

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
Fish	Mixed Fish/All Species	Mixed Fish/All Species	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-06	mg/kg	5.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.6E-06	--
				1,2,3,7,8-PeCDD	4E-07	mg/kg	2.7E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.1E-07	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	3.9E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-08	--
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	9.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	4.4E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.6E-09	--
				OCDD	4E-06	mg/kg	2.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-09	--
				2,3,7,8-TCDF	2E-06	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-07	--
				1,2,3,7,8-PeCDF	2E-06	mg/kg	9.4E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.2E-08	--
				2,3,4,7,8-PeCDF	2E-06	mg/kg	1.5E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	6.8E-07	--
				1,2,3,4,7,8-HxCDF	1E-06	mg/kg	6.8E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-07	--
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	6.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-08	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	7.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-08	--
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	1.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-08	--
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--
				OCDF	2E-07	mg/kg	1.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.3E-11	--
				KM TEQ DF	1E-05	mg/kg	6.1E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.1E-06	--
				PCB-77	5E-04	mg/kg	3.3E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.0E-08	--
				PCB-81	2E-05	mg/kg	1.3E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.8E-09	--
				PCB-105	8E-03	mg/kg	5.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-07	--
				PCB-114	6E-04	mg/kg	4.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-08	--
				PCB-118	3E-02	mg/kg	2.1E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.4E-07	--
				PCB-123	6E-04	mg/kg	3.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--
				PCB-126	9E-05	mg/kg	6.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.2E-06	--
				PCB-156/157	3E-03	mg/kg	1.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-08	--
				PCB-167	1E-03	mg/kg	8.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-08	--
				PCB-169	4E-06	mg/kg	2.6E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-07	--
				PCB-189	2E-04	mg/kg	1.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.9E-09	--
				KM TEQ PCB	1E-05	mg/kg	7.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-05	--
				Non-DL PCBs								
				Total Non-DL PCBs	4E-01	mg/kg	2.8E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.8E-06	--
				PAHs								
				Benz(a)anthracene	8E-03	mg/kg	7.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M
				Benzo(a)pyrene	8E-03	mg/kg	7.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	M
				Benzo(b)fluoranthene	8E-03	mg/kg	7.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M
				Chrysene	8E-03	mg/kg	7.9E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-10	M
				Dibenz(a,h)anthracene	8E-03	mg/kg	7.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-07	M
				Indeno(1,2,3-c,d)-pyrene	8E-03	mg/kg	7.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-08	M
				Pesticides & Organics								
				2,4'-DDD	2E-02	mg/kg	1.2E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.8E-08	--
				2,4'-DDE	6E-03	mg/kg	3.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-08	--
				2,4'-DDT	3E-03	mg/kg	2.5E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.6E-09	--
				4,4'-DDD	9E-02	mg/kg	5.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-07	--
				4,4'-DDE	1E-01	mg/kg	8.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-07	--
				4,4'-DDT	1E-02	mg/kg	1.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.5E-08	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Benzaldehyde	1E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--
				Chlordane, alpha (cis)	2E-02	mg/kg	9.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.4E-08	--
				Chlordane, gamma (trans)	4E-03	mg/kg	2.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.1E-09	--
				Dieldrin	8E-03	mg/kg	5.1E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	8.1E-07	--
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.1E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.0E-07	--
				Heptachlor epoxide, trans-	9E-05	mg/kg	5.3E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	4.8E-09	--
				Hexachlorobenzene	1E-03	mg/kg	9.3E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.5E-08	--
				Mirex	3E-04	mg/kg	1.0E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	1.8E-08	--
				Nonachlor, cis-	6E-03	mg/kg	4.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-08	--
				Nonachlor, trans-	2E-02	mg/kg	1.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.7E-08	--
				Oxychlordane	5E-03	mg/kg	2.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.0E-08	--
				Pyridine	1E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	6.1E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	1E+00	mg/kg	9.8E-06	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E-01	mg/kg	1.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-06	--
				Cadmium	5E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	6E-01	mg/kg	6.1E-06	mg/kg-day	--	--	--	--
				Cobalt	2E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--
				Copper	5E-01	mg/kg	4.5E-06	mg/kg-day	--	--	--	--
				Iron	7E+00	mg/kg	6.7E-05	mg/kg-day	--	--	--	--
				Lead	4E-02	mg/kg	3.3E-07	mg/kg-day	--	--	--	--
				Manganese	3E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	2.8E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	4E-01	mg/kg	3.4E-06	mg/kg-day	--	--	--	--
				Selenium	5E-01	mg/kg	5.1E-06	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--	--
				Zinc	1E+01	mg/kg	1.4E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.0E-05	
				Total DLCs (based on KM TEQs)							2.1E-05	
				Total PCDD/Fs (excluding KM TEQ)							9.2E-06	
				Total PCDD/Fs (based on KM TEQ)							9.1E-06	
				Total DL-PCBs (excluding KM TEQ)							1.1E-05	
				Total DL-PCBs (based on KM TEQ)							1.2E-05	
				Total Non-DL PCBs							2.8E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-05	
				Total PAHs							3.1E-07	
				Total Organics							1.6E-06	
				Total Inorganics							1.6E-06	
		Mixed Fish/All Species Total (excluding KM TEQs)									2.6E-05	
		Mixed Fish/All Species Total (based on KM TEQs)									2.7E-05	
Fish	American Eel	American Eel	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	9E-06	mg/kg	5.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.1E-06	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				1,2,3,7,8-PeCDD	7E-07	mg/kg	4.3E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.5E-07	--
				1,2,3,4,7,8-HxCDD	4E-07	mg/kg	2.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-08	--
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-07	--
				1,2,3,7,8,9-HxCDD	3E-07	mg/kg	2.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-08	--
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	8.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-08	--
				OCDD	3E-06	mg/kg	2.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.8E-10	--
				2,3,7,8-TCDF	1E-07	mg/kg	6.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-09	--
				1,2,3,7,8-PeCDF	1E-06	mg/kg	8.6E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.9E-08	--
				2,3,4,7,8-PeCDF	4E-06	mg/kg	2.4E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.1E-06	--
				1,2,3,4,7,8-HxCDF	3E-06	mg/kg	1.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-07	--
				1,2,3,6,7,8-HxCDF	2E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-07	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	7.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	2.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-08	--
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	2.9E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-08	--
				1,2,3,4,7,8,9-HpCDF	2E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--
				OCDF	4E-07	mg/kg	2.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-10	--
				KM TEQ DF	1E-05	mg/kg	6.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-05	--
				PCB-77	7E-05	mg/kg	5.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.6E-09	--
				PCB-81	1E-05	mg/kg	7.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-09	--
				PCB-105	2E-02	mg/kg	1.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-07	--
				PCB-114	1E-03	mg/kg	9.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-08	--
				PCB-118	7E-02	mg/kg	4.8E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-06	--
				PCB-123	1E-03	mg/kg	9.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-08	--
				PCB-126	1E-04	mg/kg	8.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-05	--
				PCB-156/157	6E-03	mg/kg	4.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--
				PCB-167	3E-03	mg/kg	1.8E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-08	--
				PCB-169	4E-06	mg/kg	3.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-07	--
				PCB-189	5E-04	mg/kg	3.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-08	--
				KM TEQ PCB	2E-05	mg/kg	1.5E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-05	--
				Non-DL PCBs								
				Total Non-DL PCBs	6E-01	mg/kg	4.0E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.0E-06	--
				PAHs								
				Benz(a)anthracene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M
				Benzo(a)pyrene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M
				Benzo(b)fluoranthene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M
				Chrysene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.1E-10	M
				Dibenz(a,h)anthracene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M
				Pesticides & Organics								
				2,4'-DDD	3E-03	mg/kg	2.0E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.8E-09	--
				2,4'-DDE	2E-03	mg/kg	1.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-09	--
				2,4'-DDT	4E-04	mg/kg	2.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.8E-10	--
				4,4'-DDD	1E-01	mg/kg	8.5E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.0E-07	--
				4,4'-DDE	3E-01	mg/kg	1.8E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.1E-07	--
				4,4'-DDT	8E-03	mg/kg	5.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-08	--
				Benzaldehyde	1E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--
				Chlordane, alpha (cis)	1E-02	mg/kg	8.3E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.9E-08	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Chlordane, gamma (trans)	4E-03	mg/kg	2.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.7E-09	--
				Dieldrin	1E-02	mg/kg	9.4E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.5E-06	--
				Heptachlor epoxide, cis-	4E-03	mg/kg	2.2E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.0E-07	--
				Heptachlor epoxide, trans-	4E-04	mg/kg	2.3E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.1E-08	--
				Hexachlorobenzene	4E-03	mg/kg	2.6E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.1E-08	--
				Mirex	4E-04	mg/kg	1.7E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	3.0E-08	--
				Nonachlor, cis-	1E-02	mg/kg	6.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.4E-08	--
				Nonachlor, trans-	3E-02	mg/kg	1.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.2E-08	--
				Oxychlordane	1E-02	mg/kg	8.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.1E-08	--
				Pyridine	1E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	5.9E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	1E+00	mg/kg	1.0E-05	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E-01	mg/kg	1.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.7E-06	--
				Cadmium	5E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	2E+00	mg/kg	2.3E-05	mg/kg-day	--	--	--	--
				Cobalt	7E-03	mg/kg	6.6E-08	mg/kg-day	--	--	--	--
				Copper	2E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--
				Iron	8E+00	mg/kg	7.1E-05	mg/kg-day	--	--	--	--
				Lead	2E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--	--
				Manganese	3E-01	mg/kg	3.2E-06	mg/kg-day	--	--	--	--
				Mercury	4E-01	mg/kg	3.9E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	5E-01	mg/kg	4.3E-06	mg/kg-day	--	--	--	--
				Selenium	5E-01	mg/kg	4.8E-06	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Vanadium	2E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--	--
				Zinc	3E+01	mg/kg	2.8E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.6E-05	
				Total DLCs (based on KM TEQs)							3.2E-05	
				Total PCDD/Fs (excluding KM TEQ)							1.1E-05	
				Total PCDD/Fs (based on KM TEQ)							1.0E-05	
				Total DL-PCBs (excluding KM TEQ)							1.5E-05	
				Total DL-PCBs (based on KM TEQ)							2.2E-05	
				Total Non-DL PCBs							4.0E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-05	
				Total PAHs							4.8E-07	
				Total Organics							2.8E-06	
				Total Inorganics							1.7E-06	
		American Eel Total (excluding KM TEQs)									3.5E-05	
		American Eel Total (based on KM TEQs)									4.1E-05	
Fish	Bluefish	Bluefish	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	mg/kg	9.2E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-06	--
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--
				1,2,3,4,7,8-HxCDD	7E-08	mg/kg	4.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-09	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	1.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-08	--
				1,2,3,7,8,9-HxCDD	7E-08	mg/kg	4.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-09	--
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	8.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-09	--
				OCDD	3E-07	mg/kg	1.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.1E-11	--
				2,3,7,8-TCDF	4E-07	mg/kg	2.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-08	--
				1,2,3,7,8-PeCDF	7E-07	mg/kg	4.1E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.8E-08	--
				2,3,4,7,8-PeCDF	8E-07	mg/kg	4.6E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.1E-07	--
				1,2,3,4,7,8-HxCDF	9E-08	mg/kg	5.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.7E-09	--
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	1.4E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-08	--
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	5.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-09	--
				2,3,4,6,7,8-HxCDF	6E-08	mg/kg	3.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-09	--
				1,2,3,4,6,7,8-HpCDF	7E-07	mg/kg	4.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.1E-09	--
				1,2,3,4,7,8,9-HpCDF	8E-08	mg/kg	4.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.0E-10	--
				OCDF	2E-07	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-11	--
				KM TEQ DF	2E-06	mg/kg	1.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-06	--
				PCB-77	1E-04	mg/kg	6.6E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.9E-09	--
				PCB-81	4E-06	mg/kg	2.4E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-09	--
				PCB-105	1E-03	mg/kg	8.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-08	--
				PCB-114	8E-05	mg/kg	5.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-09	--
				PCB-118	5E-03	mg/kg	3.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-07	--
				PCB-123	7E-05	mg/kg	5.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-09	--
				PCB-126	4E-05	mg/kg	2.6E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-06	--
				PCB-156/157	6E-04	mg/kg	3.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--
				PCB-167	3E-04	mg/kg	2.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-09	--
				PCB-169	2E-06	mg/kg	1.2E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.4E-08	--
				PCB-189	6E-05	mg/kg	3.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-09	--
				KM TEQ PCB	4E-06	mg/kg	2.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.1E-06	--
				Non-DL PCBs								
				Total Non-DL PCBs	1E-01	mg/kg	8.1E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.1E-07	--
				PAHs								
				Benz(a)anthracene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Benzo(a)pyrene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-08	M
				Benzo(b)fluoranthene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Chrysene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.4E-11	M
				Dibenz(a,h)anthracene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-08	M
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Pesticides & Organics								
				2,4'-DDD	6E-04	mg/kg	3.7E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.8E-10	--
				2,4'-DDE	1E-03	mg/kg	6.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.2E-09	--
				2,4'-DDT	2E-04	mg/kg	1.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.4E-10	--
				4,4'-DDD	6E-03	mg/kg	4.2E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.0E-08	--
				4,4'-DDE	3E-02	mg/kg	1.9E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.6E-08	--
				4,4'-DDT	2E-02	mg/kg	1.5E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.1E-08	--
				Benzaldehyde	1E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--
				Chlordane, alpha (cis)	6E-03	mg/kg	3.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.2E-08	--
				Chlordane, gamma (trans)	2E-03	mg/kg	1.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.1E-09	--
				Dieldrin	5E-03	mg/kg	3.0E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.8E-07	--

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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Heptachlor epoxide, cis-	1E-03	mg/kg	7.2E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	6.5E-08	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.0E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.2E-10	--
				Hexachlorobenzene	5E-04	mg/kg	3.4E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	5.4E-09	--
				Mirex	1E-04	mg/kg	5.4E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	9.7E-09	--
				Nonachlor, cis-	2E-03	mg/kg	1.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.6E-09	--
				Nonachlor, trans-	3E-03	mg/kg	2.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.3E-09	--
				Oxychlordane	3E-04	mg/kg	2.2E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.6E-10	--
				Pyridine	1E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	5.6E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	6E-01	mg/kg	6.1E-06	mg/kg-day	--	--	--	--
				Arsenic, inorganic	7E-02	mg/kg	6.8E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-06	--
				Cadmium	5E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	9E-02	mg/kg	8.3E-07	mg/kg-day	--	--	--	--
				Cobalt	2E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--
				Copper	8E-01	mg/kg	7.4E-06	mg/kg-day	--	--	--	--
				Iron	1E+01	mg/kg	9.3E-05	mg/kg-day	--	--	--	--
				Lead	4E-02	mg/kg	4.0E-07	mg/kg-day	--	--	--	--
				Manganese	2E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	3.1E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	4E-01	mg/kg	3.7E-06	mg/kg-day	--	--	--	--
				Selenium	5E-01	mg/kg	5.1E-06	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Vanadium	2E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--	--
				Zinc	2E+01	mg/kg	1.6E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							6.2E-06	
				Total DLCs (based on KM TEQs)							6.0E-06	
				Total PCDD/Fs (excluding KM TEQ)							2.0E-06	
				Total PCDD/Fs (based on KM TEQ)							1.9E-06	
				Total DL-PCBs (excluding KM TEQ)							4.2E-06	
				Total DL-PCBs (based on KM TEQ)							4.1E-06	
				Total Non-DL PCBs							8.1E-07	
				Total PCBs (DL & NDL; excluding KM TEQ)							5.0E-06	
				Total PCBs (DL & NDL; based on KM TEQ)							4.9E-06	
				Total PAHs							1.9E-07	
				Total Organics							7.7E-07	
				Total Inorganics							1.0E-06	
		Bluefish Total (excluding KM TEQs)									9.0E-06	
		Bluefish Total (based on KM TEQs)									8.8E-06	
Fish	Striped Bass	Striped Bass	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	9E-06	mg/kg	5.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.7E-06	--
				1,2,3,7,8-PeCDD	5E-07	mg/kg	3.4E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.1E-07	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--
				1,2,3,6,7,8-HxCDD	2E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-08	--
				1,2,3,7,8,9-HxCDD	9E-08	mg/kg	5.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-09	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,4,6,7,8-HpCDD	1E-06	mg/kg	8.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-08	--
				OCDD	2E-05	mg/kg	9.9E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-09	--
				2,3,7,8-TCDF	4E-06	mg/kg	2.3E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-07	--
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.4E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.1E-08	--
				2,3,4,7,8-PeCDF	3E-06	mg/kg	2.0E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.1E-07	--
				1,2,3,4,7,8-HxCDF	4E-07	mg/kg	2.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-08	--
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	7.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	7.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	6.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-09	--
				1,2,3,4,6,7,8-HpCDF	3E-06	mg/kg	2.0E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.1E-08	--
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--
				OCDF	2E-07	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.3E-11	--
				KM TEQ DF	1E-05	mg/kg	7.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-05	--
				PCB-77	1E-03	mg/kg	7.7E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.2E-07	--
				PCB-81	3E-05	mg/kg	1.9E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.6E-09	--
				PCB-105	6E-03	mg/kg	4.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-07	--
				PCB-114	7E-04	mg/kg	4.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-08	--
				PCB-118	4E-02	mg/kg	2.5E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-06	--
				PCB-123	6E-04	mg/kg	3.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--
				PCB-126	2E-04	mg/kg	1.3E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.9E-05	--
				PCB-156/157	3E-03	mg/kg	2.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-07	--
				PCB-167	1E-03	mg/kg	9.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-08	--
				PCB-169	3E-06	mg/kg	2.3E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-07	--
				PCB-189	3E-04	mg/kg	1.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-09	--
				KM TEQ PCB	2E-05	mg/kg	1.3E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-05	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	4.8E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.8E-06	--
				PAHs								
				Benz(a)anthracene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Benzo(a)pyrene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-08	M
				Benzo(b)fluoranthene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Chrysene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.4E-11	M
				Dibenz(a,h)anthracene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-08	M
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Pesticides & Organics								
				2,4'-DDD	3E-02	mg/kg	2.1E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.1E-08	--
				2,4'-DDE	1E-02	mg/kg	8.3E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.8E-08	--
				2,4'-DDT	3E-03	mg/kg	1.9E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.6E-09	--
				4,4'-DDD	1E-01	mg/kg	8.8E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.1E-07	--
				4,4'-DDE	2E-01	mg/kg	9.9E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.4E-07	--
				4,4'-DDT	1E-02	mg/kg	9.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.3E-08	--
				Benzaldehyde	1E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--
				Chlordane, alpha (cis)	4E-02	mg/kg	2.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	7.3E-08	--
				Chlordane, gamma (trans)	6E-03	mg/kg	4.0E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-08	--
				Dieldrin	1E-02	mg/kg	7.1E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.1E-06	--
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.1E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.9E-08	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.0E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.2E-10	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Hexachlorobenzene	1E-03	mg/kg	6.6E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.1E-08	--
				Mirex	3E-04	mg/kg	1.2E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.2E-08	--
				Nonachlor, cis-	1E-02	mg/kg	6.8E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.4E-08	--
				Nonachlor, trans-	3E-02	mg/kg	1.8E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.3E-08	--
				Oxychlordane	4E-03	mg/kg	2.4E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	8.5E-09	--
				Pyridine	1E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	5.3E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	1E+00	mg/kg	1.1E-05	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E-01	mg/kg	1.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-06	--
				Cadmium	5E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Cobalt	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Copper	6E-01	mg/kg	5.3E-06	mg/kg-day	--	--	--	--
				Iron	7E+00	mg/kg	6.3E-05	mg/kg-day	--	--	--	--
				Lead	4E-02	mg/kg	3.4E-07	mg/kg-day	--	--	--	--
				Manganese	2E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	2.7E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	3E-01	mg/kg	3.2E-06	mg/kg-day	--	--	--	--
				Selenium	4E-01	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--
				Zinc	7E+00	mg/kg	6.9E-05	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							3.2E-05	
				Total DLCs (based on KM TEQs)							3.1E-05	
				Total PCDD/Fs (excluding KM TEQ)							1.1E-05	
				Total PCDD/Fs (based on KM TEQ)							1.1E-05	
				Total DL-PCBs (excluding KM TEQ)							2.1E-05	
				Total DL-PCBs (based on KM TEQ)							2.0E-05	
				Total Non-DL PCBs							4.8E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							2.5E-05	
				Total PAHs							1.9E-07	
				Total Organics							2.2E-06	
				Total Inorganics							1.8E-06	
		Striped Bass Total (excluding KM TEQs)									4.1E-05	
		Striped Bass Total (based on KM TEQs)									4.0E-05	
Fish	Summer Flounder	Summer Flounder	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	5E-06	mg/kg	3.4E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.1E-06	--
				1,2,3,7,8-PeCDD	2E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-07	--
				1,2,3,4,7,8-HxCDD	8E-08	mg/kg	5.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.5E-09	--
				1,2,3,6,7,8-HxCDD	3E-07	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-08	--
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	6.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--
				1,2,3,4,6,7,8-HpCDD	3E-07	mg/kg	1.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-09	--
				OCDD	5E-07	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.3E-10	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				2,3,7,8-TCDF	3E-07	mg/kg	1.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--
				1,2,3,7,8-PeCDF	3E-07	mg/kg	2.2E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.7E-09	--
				2,3,4,7,8-PeCDF	9E-07	mg/kg	5.5E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.5E-07	--
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	4.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-08	--
				1,2,3,6,7,8-HxCDF	3E-07	mg/kg	1.6E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-08	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	8.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--
				2,3,4,6,7,8-HxCDF	1E-07	mg/kg	6.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--
				1,2,3,4,6,7,8-HpCDF	5E-07	mg/kg	3.1E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.6E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	6.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--
				OCDF	2E-07	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-11	--
				KM TEQ DF	6E-06	mg/kg	3.7E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.6E-06	--
				PCB-77	1E-04	mg/kg	9.7E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.5E-08	--
				PCB-81	1E-05	mg/kg	1.0E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-09	--
				PCB-105	3E-03	mg/kg	1.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-08	--
				PCB-114	2E-04	mg/kg	1.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-09	--
				PCB-118	1E-02	mg/kg	7.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-07	--
				PCB-123	2E-04	mg/kg	1.2E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.5E-09	--
				PCB-126	4E-05	mg/kg	3.0E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-06	--
				PCB-156/157	1E-03	mg/kg	7.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-08	--
				PCB-167	5E-04	mg/kg	3.6E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-08	--
				PCB-169	2E-06	mg/kg	1.4E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.2E-08	--
				PCB-189	8E-05	mg/kg	5.3E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-09	--
				KM TEQ PCB	5E-06	mg/kg	3.3E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.9E-06	--
				Non-DL PCBs								
				Total Non-DL PCBs	1E-01	mg/kg	1.0E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.0E-06	--
				PAHs								
				Benz(a)anthracene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Benzo(a)pyrene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-08	M
				Benzo(b)fluoranthene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Chrysene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.4E-11	M
				Dibenz(a,h)anthracene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-08	M
				Indeno(1,2,3-c,d)-pyrene	5E-03	mg/kg	5.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.4E-09	M
				Pesticides & Organics								
				2,4'-DDD	3E-03	mg/kg	2.2E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.2E-09	--
				2,4'-DDE	3E-03	mg/kg	1.8E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.0E-09	--
				2,4'-DDT	2E-04	mg/kg	1.6E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.4E-10	--
				4,4'-DDD	2E-02	mg/kg	1.2E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.9E-08	--
				4,4'-DDE	4E-02	mg/kg	2.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.8E-08	--
				4,4'-DDT	1E-03	mg/kg	1.1E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.6E-09	--
				Benzaldehyde	1E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--
				Chlordane, alpha (cis)	2E-03	mg/kg	1.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.3E-09	--
				Chlordane, gamma (trans)	7E-04	mg/kg	4.4E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-09	--
				Dieldrin	1E-03	mg/kg	9.4E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.5E-07	--
				Heptachlor epoxide, cis-	3E-04	mg/kg	2.0E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.8E-08	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.0E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.2E-10	--
				Hexachlorobenzene	5E-04	mg/kg	3.1E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.9E-09	--
				Mirex	6E-05	mg/kg	2.5E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	4.6E-09	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Riska	
							Value	Units	Value	Units		
				Nonachlor, cis-	1E-03	mg/kg	7.0E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.4E-09	--
				Nonachlor, trans-	3E-03	mg/kg	1.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.6E-09	--
				Oxychlordane	1E-03	mg/kg	7.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.8E-09	--
				Pyridine	1E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	5.3E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	2E+00	mg/kg	1.6E-05	mg/kg-day	--	--	--	--
				Arsenic, inorganic	2E-01	mg/kg	1.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-06	--
				Cadmium	5E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	5E-01	mg/kg	4.3E-06	mg/kg-day	--	--	--	--
				Cobalt	9E-01	mg/kg	8.1E-06	mg/kg-day	--	--	--	--
				Copper	2E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--
				Iron	5E+00	mg/kg	4.8E-05	mg/kg-day	--	--	--	--
				Lead	3E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--
				Manganese	3E-01	mg/kg	3.0E-06	mg/kg-day	--	--	--	--
				Mercury	2E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	2E-01	mg/kg	2.0E-06	mg/kg-day	--	--	--	--
				Selenium	6E-01	mg/kg	6.1E-06	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--
				Zinc	7E+00	mg/kg	6.4E-05	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.1E-05	
				Total DLCs (based on KM TEQs)							1.0E-05	
				Total PCDD/Fs (excluding KM TEQ)							5.7E-06	
				Total PCDD/Fs (based on KM TEQ)							5.6E-06	
				Total DL-PCBs (excluding KM TEQ)							5.0E-06	
				Total DL-PCBs (based on KM TEQ)							4.9E-06	
				Total Non-DL PCBs							1.0E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							6.0E-06	
				Total PCBs (DL & NDL; based on KM TEQ)							5.9E-06	
				Total PAHs							1.9E-07	
				Total Organics							3.8E-07	
				Total Inorganics							2.6E-06	
		Summer Flounder Total (excluding KM TEQs)									1.5E-05	
		Summer Flounder Total (based on KM TEQs)									1.5E-05	
Fish	White Perch	White Perch	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	2E-05	mg/kg	9.9E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-05	--
				1,2,3,7,8-PeCDD	4E-07	mg/kg	2.6E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.9E-07	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-08	--
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	3.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-08	--
				1,2,3,7,8,9-HxCDD	1E-07	mg/kg	8.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-08	--
				1,2,3,4,6,7,8-HpCDD	4E-07	mg/kg	2.3E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-09	--
				OCDD	8E-07	mg/kg	5.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.3E-10	--
				2,3,7,8-TCDF	4E-06	mg/kg	2.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-07	--
				1,2,3,7,8-PeCDF	3E-06	mg/kg	1.9E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.4E-08	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				2,3,4,7,8-PeCDF	3E-06	mg/kg	2.1E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	9.4E-07	--
				1,2,3,4,7,8-HxCDF	2E-06	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	7.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-07	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	6.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-09	--
				2,3,4,6,7,8-HxCDF	2E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-08	--
				1,2,3,4,6,7,8-HpCDF	2E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.2E-08	--
				1,2,3,4,7,8,9-HpCDF	9E-08	mg/kg	5.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.1E-10	--
				OCDF	2E-07	mg/kg	1.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.1E-11	--
				KM TEQ DF	2E-05	mg/kg	1.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.7E-05	--
				PCB-77	1E-03	mg/kg	6.6E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.0E-07	--
				PCB-81	4E-05	mg/kg	2.5E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-08	--
				PCB-105	7E-03	mg/kg	5.0E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-07	--
				PCB-114	6E-04	mg/kg	3.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--
				PCB-118	3E-02	mg/kg	1.9E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.5E-07	--
				PCB-123	6E-04	mg/kg	3.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-08	--
				PCB-126	6E-05	mg/kg	4.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-06	--
				PCB-156/157	3E-03	mg/kg	1.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-08	--
				PCB-167	1E-03	mg/kg	7.9E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-08	--
				PCB-169	7E-06	mg/kg	5.1E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.3E-07	--
				PCB-189	2E-04	mg/kg	1.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.8E-09	--
				KM TEQ PCB	7E-06	mg/kg	5.0E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.5E-06	--
				Non-DL PCBs								
				Total Non-DL PCBs	5E-01	mg/kg	3.2E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.2E-06	--
				PAHs								
				Benz(a)anthracene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M
				Benzo(a)pyrene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M
				Benzo(b)fluoranthene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M
				Chrysene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.1E-10	M
				Dibenz(a,h)anthracene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.1E-07	M
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	1.2E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-08	M
				Pesticides & Organics								
				2,4'-DDD	5E-02	mg/kg	3.3E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.0E-08	--
				2,4'-DDE	1E-02	mg/kg	6.6E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.2E-08	--
				2,4'-DDT	1E-02	mg/kg	1.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.4E-08	--
				4,4'-DDD	2E-01	mg/kg	1.0E-06	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.4E-07	--
				4,4'-DDE	1E-01	mg/kg	7.6E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.6E-07	--
				4,4'-DDT	3E-02	mg/kg	2.0E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.9E-08	--
				Benzaldehyde	1E+00	mg/kg	1.2E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	4.9E-08	--
				Chlordane, alpha (cis)	2E-02	mg/kg	1.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.9E-08	--
				Chlordane, gamma (trans)	5E-03	mg/kg	3.1E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.1E-08	--
				Dieldrin	7E-03	mg/kg	4.8E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.7E-07	--
				Heptachlor epoxide, cis-	2E-03	mg/kg	1.3E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.1E-07	--
				Heptachlor epoxide, trans-	2E-05	mg/kg	1.0E-10	mg/kg-day	9.1E+00	(mg/kg-day)-1	9.2E-10	--
				Hexachlorobenzene	1E-03	mg/kg	8.0E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.3E-08	--
				Mirex	4E-04	mg/kg	1.4E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.6E-08	--
				Nonachlor, cis-	8E-03	mg/kg	4.7E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.6E-08	--
				Nonachlor, trans-	2E-02	mg/kg	1.3E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.6E-08	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Oxychlordane	3E-03	mg/kg	1.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.7E-09	--
				Pyridine	1E+00	mg/kg	1.2E-05	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	9E+00	mg/kg	8.2E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	7E-01	mg/kg	6.5E-06	mg/kg-day	--	--	--	--
				Arsenic, inorganic	8E-02	mg/kg	7.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-06	--
				Cadmium	5E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E-01	mg/kg	1.4E-06	mg/kg-day	--	--	--	--
				Cobalt	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Copper	6E-01	mg/kg	6.0E-06	mg/kg-day	--	--	--	--
				Iron	6E+00	mg/kg	5.8E-05	mg/kg-day	--	--	--	--
				Lead	5E-02	mg/kg	4.7E-07	mg/kg-day	--	--	--	--
				Manganese	4E-01	mg/kg	3.6E-06	mg/kg-day	--	--	--	--
				Mercury	3E-01	mg/kg	2.9E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	4E-01	mg/kg	3.9E-06	mg/kg-day	--	--	--	--
				Selenium	7E-01	mg/kg	6.1E-06	mg/kg-day	--	--	--	--
				Silver	2E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--	--
				Vanadium	3E-02	mg/kg	3.2E-07	mg/kg-day	--	--	--	--
				Zinc	1E+01	mg/kg	1.2E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.5E-05	
				Total DLCs (based on KM TEQs)							2.4E-05	
				Total PCDD/Fs (excluding KM TEQ)							1.7E-05	
				Total PCDD/Fs (based on KM TEQ)							1.7E-05	
				Total DL-PCBs (excluding KM TEQ)							7.7E-06	
				Total DL-PCBs (based on KM TEQ)							7.5E-06	
				Total Non-DL PCBs							3.2E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-05	
				Total PAHs							4.8E-07	
				Total Organics							1.8E-06	
				Total Inorganics							1.1E-06	
		White Perch Total (excluding KM TEQs)									3.1E-05	
		White Perch Total (based on KM TEQs)									3.1E-05	
Crab	Crab (H+M)	Crab (H+M)	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	3E-05	mg/kg	1.9E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-05	--
				1,2,3,7,8-PeCDD	7E-07	mg/kg	5.1E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.6E-07	--
				1,2,3,4,7,8-HxCDD	2E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-08	--
				1,2,3,6,7,8-HxCDD	6E-07	mg/kg	4.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-08	--
				1,2,3,7,8,9-HxCDD	2E-07	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--
				1,2,3,4,6,7,8-HpCDD	7E-07	mg/kg	5.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.5E-09	--
				OCDD	2E-06	mg/kg	1.5E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.6E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	7.1E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-06	--
				1,2,3,7,8-PeCDF	2E-06	mg/kg	1.5E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.9E-08	--
				2,3,4,7,8-PeCDF	5E-06	mg/kg	3.6E-11	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-06	--
				1,2,3,4,7,8-HxCDF	5E-06	mg/kg	3.4E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.2E-07	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				1,2,3,6,7,8-HxCDF	1E-06	mg/kg	1.0E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-07	--
				1,2,3,7,8,9-HxCDF	9E-08	mg/kg	6.3E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.5E-09	--
				2,3,4,6,7,8-HxCDF	4E-07	mg/kg	2.7E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-08	--
				1,2,3,4,6,7,8-HpCDF	5E-06	mg/kg	3.4E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-08	--
				1,2,3,4,7,8,9-HpCDF	7E-08	mg/kg	4.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.3E-10	--
				OCDF	2E-07	mg/kg	1.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.1E-11	--
				KM TEQ DF	3E-05	mg/kg	2.2E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-05	--
				PCB-77	2E-03	mg/kg	1.4E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.1E-07	--
				PCB-81	9E-05	mg/kg	6.3E-10	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-08	--
				PCB-105	1E-02	mg/kg	7.6E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-07	--
				PCB-114	9E-04	mg/kg	6.5E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-08	--
				PCB-118	5E-02	mg/kg	3.4E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-06	--
				PCB-123	8E-04	mg/kg	6.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-08	--
				PCB-126	1E-04	mg/kg	7.1E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-05	--
				PCB-156/157	4E-03	mg/kg	2.7E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-07	--
				PCB-167	2E-03	mg/kg	1.1E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-08	--
				PCB-169	1E-05	mg/kg	8.0E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.6E-07	--
				PCB-189	3E-04	mg/kg	2.0E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.8E-09	--
				KM TEQ PCB	1E-05	mg/kg	8.5E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-05	--
				Non-DL PCBs								
				Total Non-DL PCBs	3E-01	mg/kg	2.3E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.3E-06	--
				PAHs								
				Benz(a)anthracene	3E-03	mg/kg	2.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-09	M
				Benzo(a)pyrene	3E-03	mg/kg	2.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M
				Benzo(b)fluoranthene	3E-03	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.2E-09	M
				Chrysene	4E-03	mg/kg	2.7E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.5E-11	M
				Dibenz(a,h)anthracene	3E-03	mg/kg	1.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-08	M
				Indeno(1,2,3-c,d)-pyrene	2E-02	mg/kg	1.6E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.7E-08	M
				Pesticides & Organics								
				2,4'-DDD	2E-04	mg/kg	1.6E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.8E-10	--
				2,4'-DDE	4E-04	mg/kg	3.3E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-09	--
				2,4'-DDT	2E-04	mg/kg	1.4E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.9E-10	--
				4,4'-DDD	3E-02	mg/kg	2.6E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	6.2E-08	--
				4,4'-DDE	9E-02	mg/kg	6.9E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.3E-07	--
				4,4'-DDT	1E-03	mg/kg	7.9E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-09	--
				Benzaldehyde	1E+00	mg/kg	8.8E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.5E-08	--
				Chlordane, alpha (cis)	2E-03	mg/kg	1.5E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	5.2E-09	--
				Chlordane, gamma (trans)	3E-04	mg/kg	1.9E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.5E-10	--
				Dieldrin	6E-03	mg/kg	4.5E-08	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.2E-07	--
				Heptachlor epoxide, cis-	4E-03	mg/kg	2.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.4E-07	--
				Heptachlor epoxide, trans-	1E-03	mg/kg	8.4E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	7.7E-08	--
				Hexachlorobenzene	1E-03	mg/kg	8.1E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	1.3E-08	--
				Mirex	2E-04	mg/kg	1.5E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	2.7E-08	--
				Nonachlor, cis-	5E-03	mg/kg	3.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-08	--
				Nonachlor, trans-	1E-02	mg/kg	7.6E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.7E-08	--
				Oxychlordane	2E-02	mg/kg	1.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.0E-08	--
				Pyridine	5E-01	mg/kg	3.7E-06	mg/kg-day	--	--	--	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Inorganics								
				Aluminum	9E+00	mg/kg	6.7E-05	mg/kg-day	--	--	--	--
				Arsenic, organic	3E+00	mg/kg	1.9E-05	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E-01	mg/kg	2.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.1E-06	--
				Cadmium	4E-01	mg/kg	2.9E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	2E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Cobalt	9E-02	mg/kg	6.5E-07	mg/kg-day	--	--	--	--
				Copper	3E+01	mg/kg	2.1E-04	mg/kg-day	--	--	--	--
				Iron	4E+01	mg/kg	2.8E-04	mg/kg-day	--	--	--	--
				Lead	3E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--
				Manganese	1E+01	mg/kg	7.3E-05	mg/kg-day	--	--	--	--
				Mercury	2E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--
				Selenium	1E+00	mg/kg	8.3E-06	mg/kg-day	--	--	--	--
				Silver	8E-01	mg/kg	5.7E-06	mg/kg-day	--	--	--	--
				Vanadium	7E-02	mg/kg	5.4E-07	mg/kg-day	--	--	--	--
				Zinc	5E+01	mg/kg	3.4E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							4.7E-05	
				Total DLCs (based on KM TEQs)							4.6E-05	
				Total PCDD/Fs (excluding KM TEQ)							3.3E-05	
				Total PCDD/Fs (based on KM TEQ)							3.3E-05	
				Total DL-PCBs (excluding KM TEQ)							1.3E-05	
				Total DL-PCBs (based on KM TEQ)							1.3E-05	
				Total Non-DL PCBs							2.3E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							1.5E-05	
				Total PAHs							9.9E-08	
				Total Organics							1.5E-06	
				Total Inorganics							3.1E-06	
		Crab (H+M) Total (excluding KM TEQs)									5.4E-05	
		Crab (H+M) Total (based on KM TEQs)									5.3E-05	
Crab	Crab (Muscle)	Crab (Muscle)	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	4E-06	mg/kg	2.8E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-06	--
				1,2,3,7,8-PeCDD	3E-07	mg/kg	1.8E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-07	--
				1,2,3,4,7,8-HxCDD	3E-08	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-09	--
				1,2,3,6,7,8-HxCDD	7E-08	mg/kg	5.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-09	--
				1,2,3,7,8,9-HxCDD	4E-08	mg/kg	2.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-09	--
				1,2,3,4,6,7,8-HpCDD	1E-07	mg/kg	9.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--
				OCDD	5E-07	mg/kg	3.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.5E-10	--
				2,3,7,8-TCDF	1E-06	mg/kg	8.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-07	--
				1,2,3,7,8-PeCDF	3E-07	mg/kg	2.0E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.9E-09	--
				2,3,4,7,8-PeCDF	5E-07	mg/kg	3.5E-12	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-07	--
				1,2,3,4,7,8-HxCDF	7E-07	mg/kg	5.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-08	--
				1,2,3,6,7,8-HxCDF	2E-07	mg/kg	1.3E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-08	--
				1,2,3,7,8,9-HxCDF	7E-08	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-09	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				2,3,4,6,7,8-HxCDF	5E-08	mg/kg	3.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-09	--
				1,2,3,4,6,7,8-HpCDF	4E-07	mg/kg	2.9E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-09	--
				1,2,3,4,7,8,9-HpCDF	3E-08	mg/kg	2.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.7E-10	--
				OCDF	9E-08	mg/kg	6.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--
				KM TEQ DF	4E-06	mg/kg	3.2E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.8E-06	--
				PCB-77	2E-04	mg/kg	1.5E-09	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.2E-08	--
				PCB-81	9E-06	mg/kg	6.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-09	--
				PCB-105	1E-03	mg/kg	7.8E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-08	--
				PCB-114	9E-05	mg/kg	6.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-09	--
				PCB-118	4E-03	mg/kg	2.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-07	--
				PCB-123	8E-05	mg/kg	5.8E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-09	--
				PCB-126	8E-06	mg/kg	6.2E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-07	--
				PCB-156/157	3E-04	mg/kg	2.4E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-08	--
				PCB-167	1E-04	mg/kg	9.0E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-09	--
				PCB-169	1E-05	mg/kg	8.4E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.8E-07	--
				PCB-189	2E-05	mg/kg	1.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-10	--
				KM TEQ PCB	1E-06	mg/kg	7.5E-12	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-06	--
				Non-DL PCBs								
				Total Non-DL PCBs	3E-02	mg/kg	2.0E-07	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-07	--
				PAHs								
				Benz(a)anthracene	1E-02	mg/kg	9.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M
				Benzo(a)pyrene	1E-02	mg/kg	9.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-07	M
				Benzo(b)fluoranthene	1E-02	mg/kg	9.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M
				Chrysene	1E-02	mg/kg	9.5E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-10	M
				Dibenz(a,h)anthracene	1E-02	mg/kg	9.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-07	M
				Indeno(1,2,3-c,d)-pyrene	1E-02	mg/kg	9.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-08	M
				Pesticides & Organics								
				2,4'-DDD	2E-05	mg/kg	1.8E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.2E-11	--
				2,4'-DDE	5E-05	mg/kg	3.6E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-10	--
				2,4'-DDT	4E-05	mg/kg	2.7E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.3E-11	--
				4,4'-DDD	5E-03	mg/kg	3.8E-08	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.1E-09	--
				4,4'-DDE	1E-02	mg/kg	1.1E-07	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.6E-08	--
				4,4'-DDT	2E-04	mg/kg	1.1E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.8E-10	--
				Benzaldehyde	1E+00	mg/kg	9.5E-06	mg/kg-day	4.0E-03	(mg/kg-day)-1	3.8E-08	--
				Chlordane, alpha (cis)	6E-04	mg/kg	4.3E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.5E-09	--
				Chlordane, gamma (trans)	3E-05	mg/kg	1.9E-10	mg/kg-day	3.5E-01	(mg/kg-day)-1	6.8E-11	--
				Dieldrin	1E-03	mg/kg	9.9E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.6E-07	--
				Heptachlor epoxide, cis-	3E-04	mg/kg	2.4E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.2E-08	--
				Heptachlor epoxide, trans-	2E-04	mg/kg	1.7E-09	mg/kg-day	9.1E+00	(mg/kg-day)-1	1.5E-08	--
				Hexachlorobenzene	2E-04	mg/kg	1.6E-09	mg/kg-day	1.6E+00	(mg/kg-day)-1	2.6E-09	--
				Mirex	5E-05	mg/kg	3.7E-10	mg/kg-day	1.8E+01	(mg/kg-day)-1	6.7E-09	--
				Nonachlor, cis-	7E-04	mg/kg	4.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-09	--
				Nonachlor, trans-	1E-03	mg/kg	8.8E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	3.1E-09	--
				Oxychlordane	2E-03	mg/kg	1.2E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.4E-09	--
				Pyridine	4E-01	mg/kg	3.0E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	6E+00	mg/kg	4.1E-05	mg/kg-day	--	--	--	--

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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Arsenic, organic	2E+00	mg/kg	1.7E-05	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E-01	mg/kg	1.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.9E-06	--
				Cadmium	2E-01	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	2E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--	--
				Cobalt	7E-02	mg/kg	5.2E-07	mg/kg-day	--	--	--	--
				Copper	2E+01	mg/kg	1.3E-04	mg/kg-day	--	--	--	--
				Iron	2E+01	mg/kg	1.4E-04	mg/kg-day	--	--	--	--
				Lead	1E-01	mg/kg	7.1E-07	mg/kg-day	--	--	--	--
				Manganese	6E+00	mg/kg	4.5E-05	mg/kg-day	--	--	--	--
				Mercury	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--
				Methyl Mercury	2E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Selenium	9E-01	mg/kg	6.8E-06	mg/kg-day	--	--	--	--
				Silver	5E-01	mg/kg	3.5E-06	mg/kg-day	--	--	--	--
				Vanadium	4E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--	--
				Zinc	5E+01	mg/kg	3.5E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							6.5E-06	
				Total DLCs (based on KM TEQs)							6.0E-06	
				Total PCDD/Fs (excluding KM TEQ)							5.0E-06	
				Total PCDD/Fs (based on KM TEQ)							4.8E-06	
				Total DL-PCBs (excluding KM TEQ)							1.5E-06	
				Total DL-PCBs (based on KM TEQ)							1.1E-06	
				Total Non-DL PCBs							2.0E-07	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.7E-06	
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-06	
				Total PAHs							3.7E-07	
				Total Organics							3.0E-07	
				Total Inorganics							2.9E-06	
		Crab (Muscle) Total (excluding KM TEQs)									1.0E-05	
		Crab (Muscle) Total (based on KM TEQs)									9.7E-06	
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	9E-05	mg/kg	6.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-04	--
				1,2,3,7,8-PeCDD	2E-06	mg/kg	1.6E-11	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.4E-06	--
				1,2,3,4,7,8-HxCDD	7E-07	mg/kg	5.1E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-08	--
				1,2,3,6,7,8-HxCDD	2E-06	mg/kg	1.5E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-07	--
				1,2,3,7,8,9-HxCDD	7E-07	mg/kg	5.2E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-08	--
				1,2,3,4,6,7,8-HpCDD	2E-06	mg/kg	1.7E-11	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.5E-08	--
				OCDD	6E-06	mg/kg	4.7E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.1E-09	--
				2,3,7,8-TCDF	3E-05	mg/kg	2.5E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-06	--
				1,2,3,7,8-PeCDF	7E-06	mg/kg	5.4E-11	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-07	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.3E-10	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.8E-06	--
				1,2,3,4,7,8-HxCDF	2E-05	mg/kg	1.2E-10	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-06	--
				1,2,3,6,7,8-HxCDF	5E-06	mg/kg	3.7E-11	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-07	--
				1,2,3,7,8,9-HxCDF	1E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-08	--
				2,3,4,6,7,8-HxCDF	1E-06	mg/kg	9.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-07	--
				1,2,3,4,6,7,8-HpCDF	2E-05	mg/kg	1.2E-10	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-07	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				1,2,3,4,7,8,9-HpCDF	1E-07	mg/kg	1.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--
				OCDF	8E-07	mg/kg	6.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-10	--
				KM TEQ DF	1E-04	mg/kg	7.7E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-04	--
				PCB-77	7E-03	mg/kg	5.1E-08	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.6E-07	--
				PCB-81	3E-04	mg/kg	2.2E-09	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-07	--
				PCB-105	4E-02	mg/kg	2.7E-07	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-06	--
				PCB-114	3E-03	mg/kg	2.3E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-07	--
				PCB-118	2E-01	mg/kg	1.2E-06	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-06	--
				PCB-123	3E-03	mg/kg	2.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.7E-08	--
				PCB-126	4E-04	mg/kg	2.6E-09	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-05	--
				PCB-156/157	1E-02	mg/kg	9.9E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.5E-07	--
				PCB-167	6E-03	mg/kg	4.2E-08	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-07	--
				PCB-169	4E-05	mg/kg	2.7E-10	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-06	--
				PCB-189	1E-03	mg/kg	7.3E-09	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-08	--
				KM TEQ PCB	4E-05	mg/kg	3.1E-10	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.6E-05	--
				Non-DL PCBs								
				Total Non-DL PCBs	1E+00	mg/kg	8.6E-06	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.6E-06	--
				PAHs								
				Benz(a)anthracene	3E-03	mg/kg	2.4E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.0E-09	M
				Benzo(a)pyrene	3E-03	mg/kg	2.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.5E-08	M
				Benzo(b)fluoranthene	3E-03	mg/kg	2.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-09	M
				Chrysene	4E-03	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.5E-11	M
				Dibenz(a,h)anthracene	3E-03	mg/kg	2.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-02	mg/kg	5.5E-07	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.3E-08	M
				Pesticides & Organics								
				2,4'-DDD	8E-04	mg/kg	5.6E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-09	--
				2,4'-DDE	2E-03	mg/kg	1.2E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-09	--
				2,4'-DDT	7E-04	mg/kg	4.8E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-09	--
				4,4'-DDD	1E-01	mg/kg	8.9E-07	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.1E-07	--
				4,4'-DDE	3E-01	mg/kg	2.4E-06	mg/kg-day	3.4E-01	(mg/kg-day)-1	8.1E-07	--
				4,4'-DDT	4E-03	mg/kg	2.7E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.3E-09	--
				Benzaldehyde	3E+00	mg/kg	1.9E-05	mg/kg-day	4.0E-03	(mg/kg-day)-1	7.5E-08	--
				Chlordane, alpha (cis)	7E-03	mg/kg	4.9E-08	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.7E-08	--
				Chlordane, gamma (trans)	9E-04	mg/kg	6.6E-09	mg/kg-day	3.5E-01	(mg/kg-day)-1	2.3E-09	--
				Dieldrin	2E-02	mg/kg	1.5E-07	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.4E-06	--
				Heptachlor epoxide, cis-	1E-02	mg/kg	9.6E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	8.8E-07	--
				Heptachlor epoxide, trans-	4E-03	mg/kg	2.8E-08	mg/kg-day	9.1E+00	(mg/kg-day)-1	2.6E-07	--
				Hexachlorobenzene	4E-03	mg/kg	2.7E-08	mg/kg-day	1.6E+00	(mg/kg-day)-1	4.3E-08	--
				Mirex	7E-04	mg/kg	4.9E-09	mg/kg-day	1.8E+01	(mg/kg-day)-1	8.8E-08	--
				Nonachlor, cis-	2E-02	mg/kg	1.4E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	4.8E-08	--
				Nonachlor, trans-	4E-02	mg/kg	2.7E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	9.6E-08	--
				Oxychlordane	6E-02	mg/kg	4.1E-07	mg/kg-day	3.5E-01	(mg/kg-day)-1	1.4E-07	--
				Pyridine	8E-01	mg/kg	5.8E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	3E+01	mg/kg	2.1E-04	mg/kg-day	--	--	--	--
				Arsenic, organic	3E+00	mg/kg	2.3E-05	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E-01	mg/kg	2.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.8E-06	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Cadmium	1E+00	mg/kg	9.3E-06	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	3E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--	--
				Cobalt	2E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--	--
				Copper	7E+01	mg/kg	5.5E-04	mg/kg-day	--	--	--	--
				Iron	1E+02	mg/kg	7.4E-04	mg/kg-day	--	--	--	--
				Lead	8E-01	mg/kg	6.0E-06	mg/kg-day	--	--	--	--
				Manganese	2E+01	mg/kg	1.4E-04	mg/kg-day	--	--	--	--
				Mercury	7E-02	mg/kg	5.5E-07	mg/kg-day	--	--	--	--
				Methyl Mercury	6E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--	--
				Selenium	2E+00	mg/kg	1.3E-05	mg/kg-day	--	--	--	--
				Silver	2E+00	mg/kg	1.4E-05	mg/kg-day	--	--	--	--
				Vanadium	2E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--	--
				Zinc	5E+01	mg/kg	3.5E-04	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.6E-04	
				Total DLCs (based on KM TEQs)							1.6E-04	
				Total PCDD/Fs (excluding KM TEQ)							1.2E-04	
				Total PCDD/Fs (based on KM TEQ)							1.2E-04	
				Total DL-PCBs (excluding KM TEQ)							4.8E-05	
				Total PCDD/Fs (based on KM TEQ)							1.2E-04	
				Total DL-PCBs (excluding KM TEQ)							4.8E-05	
				Total DL-PCBs (based on KM TEQ)							4.6E-05	
				Total Non-DL PCBs							8.6E-06	
				Total PCBs (DL & NDL; excluding KM TEQ)							5.7E-05	
				Total PCBs (DL & NDL; based on KM TEQ)							5.5E-05	
				Total PAHs							1.7E-07	
				Total Organics							5.1E-06	
				Total Inorganics							3.8E-06	
		Crab (Hepatopancreas) Total (excluding KM TEQs)									1.8E-04	
		Crab (Hepatopancreas) Total (based on KM TEQs)									1.8E-04	
Sediment	Sediment	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.0E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	9.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--
				OCDD	3E-03	mg/kg	6.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.5E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.2E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.5E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	8.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.9E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-11	--
				OCDF	4E-04	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.3E-11	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				KM TEQ DF	1E-04	mg/kg	2.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.1E-08	--
				PCB-77	8E-03	mg/kg	2.0E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.1E-10	--
				PCB-81	3E-04	mg/kg	7.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-11	--
				PCB-105	1E-02	mg/kg	3.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-10	--
				PCB-114	9E-04	mg/kg	2.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--
				PCB-118	4E-02	mg/kg	9.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-10	--
				PCB-123	1E-03	mg/kg	2.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--
				PCB-126	2E-04	mg/kg	6.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-09	--
				PCB-156/157	3E-03	mg/kg	8.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-11	--
				PCB-167	1E-03	mg/kg	3.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--
				PCB-169	3E-04	mg/kg	6.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.0E-09	--
				PCB-189	2E-04	mg/kg	6.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-12	--
				KM TEQ PCB	3E-05	mg/kg	8.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.7E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.7E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	5.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.5E-10	M
				Benzo(a)pyrene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.4E-09	M
				Benzo(b)fluoranthene	2E+00	mg/kg	4.8E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.8E-10	M
				Benzo(k)fluoranthene	1E+00	mg/kg	3.1E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.1E-11	M
				Chrysene	2E+00	mg/kg	5.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.3E-12	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	1.5E-08	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	3.2E-05	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	6.2E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	4.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.3E-08	--
				Cadmium	3E+00	mg/kg	8.1E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	3.7E-08	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	4.4E-07	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	3.7E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.8E-09	M
				Iron	4E+04	mg/kg	1.1E-04	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	9.4E-07	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	5.3E-09	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	1.8E-07	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	6.5E-10	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	1.3E-07	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	3.3E-06	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							5.6E-08	
				Total DLCs (based on KM TEQs)							5.3E-08	
				Total PCDD/Fs (excluding KM TEQ)							4.2E-08	
				Total PCDD/Fs (based on KM TEQ)							4.1E-08	

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Total DL-PCBs (excluding KM TEQ)							1.4E-08	
				Total DL-PCBs (based on KM TEQ)							1.2E-08	
				Total Non-DL PCBs							1.7E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							1.4E-08	
				Total PAHs							7.8E-09	
				Total Organics							0.0E+00	
				Total Inorganics							7.5E-08	
		Sediment Ingestion Total (excluding KM TEQs)									1.4E-07	
		Sediment Ingestion Total (based on KM TEQs)									1.4E-07	
Sediment	Sediment	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	4.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.1E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	9.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	5.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.6E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-09	--
				OCDD	3E-03	mg/kg	1.6E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.3E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	8.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-09	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	5.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	9.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.4E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	4.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	8.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	6.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.7E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.0E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.0E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-10	--
				OCDF	4E-04	mg/kg	2.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-10	--
				KM TEQ DF	1E-04	mg/kg	6.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.7E-08	--
				PCB-77	8E-03	mg/kg	4.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.1E-10	--
				PCB-81	3E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.3E-11	--
				PCB-105	1E-02	mg/kg	7.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-10	--
				PCB-114	9E-04	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--
				PCB-118	4E-02	mg/kg	2.2E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-09	--
				PCB-123	1E-03	mg/kg	6.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-11	--
				PCB-126	2E-04	mg/kg	1.5E-12	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-08	--
				PCB-156/157	3E-03	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-11	--
				PCB-167	1E-03	mg/kg	7.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-11	--
				PCB-169	3E-04	mg/kg	1.6E-12	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.0E-09	--
				PCB-189	2E-04	mg/kg	1.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.8E-12	--
				KM TEQ PCB	3E-05	mg/kg	1.9E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.9E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	5.6E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.6E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	5.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.5E-08	M

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk	a
				Benzo(b)fluoranthene	2E+00	mg/kg	4.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.9E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	3.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.2E-10	M
				Chrysene	2E+00	mg/kg	5.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.3E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-08	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	1.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-07	--
				Cadmium	3E+00	mg/kg	6.3E-10	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.3E-07	
				Total DLCs (based on KM TEQs)							1.2E-07	
				Total PCDD/Fs (excluding KM TEQ)							9.9E-08	
				Total PCDD/Fs (based on KM TEQ)							9.7E-08	
				Total DL-PCBs (excluding KM TEQ)							3.2E-08	
				Total DL-PCBs (based on KM TEQ)							2.8E-08	
				Total Non-DL PCBs							1.9E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							5.1E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							4.7E-08	
				Total PAHs							7.9E-08	
				Total Organics							0.0E+00	
				Total Inorganics							2.8E-07	
		Sediment Dermal Total (excluding KM TEQs)									5.1E-07	
		Sediment Dermal Total (based on KM TEQs)									5.1E-07	
Fishing - Sediment Total (excluding KM TEQs)											6.5E-07	
Fishing - Sediment Total (based on KM TEQs)											6.5E-07	
Surface Water	Surface Water	Angler - Fishing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	7.1E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-10	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-11	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-11	--

TABLE 7.A CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-12	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	5.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-12	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.4E-12	--
				OCDD	6E-05	µg/L	3.8E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-12	--
				2,3,7,8-TCDF	5E-07	µg/L	2.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-12	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.2E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.9E-13	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.8E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-11	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-11	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-12	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-12	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-12	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.8E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-13	--
				OCDF	1E-05	µg/L	8.5E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.8E-13	--
				KM TEQ DF	2E-06	µg/L	1.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-10	--
				PCB-77	2E-05	µg/L	1.2E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.8E-13	--
				PCB-81	7E-07	µg/L	4.0E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-14	--
				PCB-105	7E-05	µg/L	4.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-13	--
				PCB-114	4E-06	µg/L	2.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-14	--
				PCB-118	2E-04	µg/L	9.5E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-13	--
				PCB-123	3E-06	µg/L	1.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-15	--
				PCB-126	7E-07	µg/L	3.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-12	--
				PCB-156/157	2E-05	µg/L	1.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-14	--
				PCB-167	7E-06	µg/L	3.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-14	--
				PCB-169	4E-07	µg/L	2.3E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-12	--
				PCB-189	9E-07	µg/L	5.0E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-15	--
				KM TEQ PCB	1E-07	µg/L	6.3E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-12	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	6.9E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.9E-13	M
				Benzo(a)pyrene	2E-02	µg/L	8.8E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.8E-12	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-12	M
				Benzo(k)fluoranthene	9E-03	µg/L	5.4E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.4E-14	M
				Chrysene	2E-02	µg/L	1.2E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.2E-14	M
				Dibenz(a,h)anthracene	4E-03	µg/L	2.3E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.3E-12	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	5.0E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.0E-13	M
				Naphthalene	4E-02	µg/L	2.1E-11	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	7.0E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.2E-12	--
				Trichloroethylene	1E-01	µg/L	7.6E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	3.5E-12	M
				Inorganics								
				Antimony	7E-01	µg/L	4.1E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	7.4E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	7.5E-10	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.3E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	6.5E-11	M
				Iron	5E+02	µg/L	3.1E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	4.0E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	1.5E-11	mg/kg-day	--	--	--	--

TABLE 7.A CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Thallium	1E-02	µg/L	7.2E-12	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	4.6E-09	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							2.7E-10	
				Total DLCs (based on KM TEQs)							2.2E-10	
				Total PCDD/Fs (excluding KM TEQ)							2.6E-10	
				Total PCDD/Fs (based on KM TEQ)							2.1E-10	
				Total DL-PCBs (excluding KM TEQ)							7.8E-12	
				Total DL-PCBs (based on KM TEQ)							9.5E-12	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							7.8E-12	
				Total PCBs (DL & NDL; based on KM TEQ)							9.5E-12	
				Total PAHs							1.4E-11	
				Total Organics							5.7E-12	
				Total Inorganics							1.2E-09	
		Surface Water Ingestion Total (excluding KM TEQs)									1.5E-09	
		Surface Water Ingestion Total (based on KM TEQs)									1.4E-09	
Surface Water	Surface Water	Angler - Fishing	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	1.6E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	7.7E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.4E-11	--
				Trichloroethylene	1E-01	µg/L	1.5E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	7.1E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	2.4E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	4.4E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.6E-10	--
				Chromium [as Cr(III)]	1E+00	µg/L	4.4E-10	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.5E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	3.1E-09	M
				Iron	5E+02	µg/L	1.8E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	2.4E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	9.0E-12	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	4.2E-12	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	2.7E-09	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							9.5E-11	
				Total Inorganics							3.7E-09	
		Surface Water Dermal Total (excluding KM TEQs)									3.8E-09	
		Surface Water Dermal Total (based on KM TEQs)									3.8E-09	
Fishing - Surface Water Total (excluding KM TEQs)											5.3E-09	
Fishing - Surface Water Total (based on KM TEQs)											5.2E-09	
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)											2.7E-05	
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)											2.8E-05	
Sediment	Sediment	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.6E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-09	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.9E-11	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.4E-10	--
				OCDD	3E-03	mg/kg	4.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.9E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.0E-11	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.6E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.9E-10	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-11	--
				OCDF	4E-04	mg/kg	7.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-11	--
				KM TEQ DF	1E-04	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--
				PCB-77	8E-03	mg/kg	1.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.9E-10	--
				PCB-81	3E-04	mg/kg	4.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-11	--
				PCB-105	1E-02	mg/kg	2.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.2E-11	--
				PCB-114	9E-04	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-12	--
				PCB-118	4E-02	mg/kg	6.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-10	--
				PCB-123	1E-03	mg/kg	1.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-12	--
				PCB-126	2E-04	mg/kg	4.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-09	--
				PCB-156/157	3E-03	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--
				PCB-167	1E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-12	--
				PCB-169	3E-04	mg/kg	4.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-09	--
				PCB-189	2E-04	mg/kg	4.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-12	--
				KM TEQ PCB	3E-05	mg/kg	5.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.6E-09	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.1E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.4E-10	M
				Benzo(a)pyrene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-09	M
				Benzo(b)fluoranthene	2E+00	mg/kg	3.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.0E-10	M
				Benzo(k)fluoranthene	1E+00	mg/kg	2.0E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.0E-11	M
				Chrysene	2E+00	mg/kg	3.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-12	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	6.9E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.9E-10	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	9.3E-09	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	6.8E-07	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	2.0E-05	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	3.9E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	3.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-08	--
				Cadmium	3E+00	mg/kg	5.1E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Cobalt	1E+01	mg/kg	2.3E-08	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	2.8E-07	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	2.3E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.1E-09	M
				Iron	4E+04	mg/kg	7.2E-05	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	7.7E-07	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	5.9E-07	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	3.3E-09	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	4.0E-10	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	8.3E-08	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	2.0E-06	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							3.5E-08	
				Total DLCs (based on KM TEQs)							3.3E-08	
				Total PCDD/Fs (excluding KM TEQ)							2.6E-08	
				Total PCDD/Fs (based on KM TEQ)							2.6E-08	
				Total DL-PCBs (excluding KM TEQ)							8.6E-09	
				Total DL-PCBs (based on KM TEQ)							7.6E-09	
				Total Non-DL PCBs							1.1E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							9.6E-09	
				Total PCBs (DL & NDL; based on KM TEQ)							8.6E-09	
				Total PAHs							4.9E-09	
				Total Organics							0.0E+00	
				Total Inorganics							4.7E-08	
		Sediment Ingestion Total (excluding KM TEQs)									8.8E-08	
		Sediment Ingestion Total (based on KM TEQs)									8.6E-08	
Sediment	Sediment	Angler - Crabbing	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	3.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.4E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.1E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	5.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	9.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-09	--
				OCDD	3E-03	mg/kg	1.0E-11	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	5.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.0E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	3.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.6E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.1E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.7E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	7.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-09	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	5.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.2E-12	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.9E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.3E-11	--
				OCDF	4E-04	mg/kg	1.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.8E-11	--
				KM TEQ DF	1E-04	mg/kg	4.0E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.0E-08	--
				PCB-77	8E-03	mg/kg	3.0E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.5E-10	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				PCB-81	3E-04	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-11	--
				PCB-105	1E-02	mg/kg	4.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-10	--
				PCB-114	9E-04	mg/kg	3.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--
				PCB-118	4E-02	mg/kg	1.4E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.3E-10	--
				PCB-123	1E-03	mg/kg	4.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-11	--
				PCB-126	2E-04	mg/kg	9.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-08	--
				PCB-156/157	3E-03	mg/kg	1.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.6E-11	--
				PCB-167	1E-03	mg/kg	4.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-11	--
				PCB-169	3E-04	mg/kg	9.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.4E-09	--
				PCB-189	2E-04	mg/kg	9.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-12	--
				KM TEQ PCB	3E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.2E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.2E-08	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	3.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	3.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.4E-08	M
				Benzo(b)fluoranthene	2E+00	mg/kg	3.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.0E-10	M
				Chrysene	2E+00	mg/kg	3.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.3E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.0E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	1.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-07	--
				Cadmium	3E+00	mg/kg	4.0E-10	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							8.2E-08	
				Total DLCs (based on KM TEQs)							7.8E-08	
				Total PCDD/Fs (excluding KM TEQ)							6.2E-08	
				Total PCDD/Fs (based on KM TEQ)							6.0E-08	
				Total DL-PCBs (excluding KM TEQ)							2.0E-08	

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			
							Value	Units	Value	Units	Cancer Risk[a]	
				Total DL-PCBs (based on KM TEQ)							1.8E-08	
				Total Non-DL PCBs							1.2E-08	
				Total PCBs (DL & NDL; excluding KM TEQ)							3.2E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							3.0E-08	
				Total PAHs							4.9E-08	
				Total Organics							0.0E+00	
				Total Inorganics							1.8E-07	
		Sediment Dermal Total (excluding KM TEQs)									3.2E-07	
		Sediment Dermal Total (based on KM TEQs)									3.2E-07	
Crabbing - Sediment Total (excluding KM TEQs)											4.1E-07	
Crabbing - Sediment Total (based on KM TEQs)											4.0E-07	
Surface Water	Surface Water	Angler - Crabbing	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	4.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-11	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	1.5E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.3E-11	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-11	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	1.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-12	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	3.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-12	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	2.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-12	--
				OCDD	6E-05	µg/L	2.4E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-12	--
				2,3,7,8-TCDF	5E-07	µg/L	1.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-12	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	1.4E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.2E-13	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	2.4E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.1E-11	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	6.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-11	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	1.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-12	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	9.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-12	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	2.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.2E-12	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	1.8E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-13	--
				OCDF	1E-05	µg/L	5.3E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-13	--
				KM TEQ DF	2E-06	µg/L	8.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-10	--
				PCB-77	2E-05	µg/L	7.5E-15	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-13	--
				PCB-81	7E-07	µg/L	2.5E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.1E-14	--
				PCB-105	7E-05	µg/L	2.7E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--
				PCB-114	4E-06	µg/L	1.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-15	--
				PCB-118	2E-04	µg/L	6.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-13	--
				PCB-123	3E-06	µg/L	1.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-15	--
				PCB-126	7E-07	µg/L	2.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-12	--
				PCB-156/157	2E-05	µg/L	7.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-14	--
				PCB-167	7E-06	µg/L	2.4E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-14	--
				PCB-169	4E-07	µg/L	1.5E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.6E-13	--
				PCB-189	9E-07	µg/L	3.1E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-15	--
				KM TEQ PCB	1E-07	µg/L	4.0E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.9E-12	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	4.3E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.3E-13	M
				Benzo(a)pyrene	2E-02	µg/L	5.5E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.5E-12	M
				Benzo(b)fluoranthene	2E-02	µg/L	7.5E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.5E-13	M

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				Benzo(k)fluoranthene	9E-03	µg/L	3.3E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.3E-14	M
				Chrysene	2E-02	µg/L	7.3E-12	mg/kg-day	1.0E-03	(mg/kg-day)-1	7.3E-15	M
				Dibenz(a,h)anthracene	4E-03	µg/L	1.4E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-12	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	3.1E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.1E-13	M
				Naphthalene	4E-02	µg/L	1.3E-11	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	4.3E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.3E-12	--
				Trichloroethylene	1E-01	µg/L	4.8E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.2E-12	M
				Inorganics								
				Antimony	7E-01	µg/L	2.5E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	4.6E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.9E-10	--
				Chromium [as Cr(III)]	1E+00	µg/L	4.7E-10	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	8.1E-11	mg/kg-day	5.0E-01	(mg/kg-day)-1	4.0E-11	M
				Iron	5E+02	µg/L	1.9E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	2.5E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	9.6E-12	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	4.5E-12	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	2.9E-09	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							1.7E-10	
				Total DLCs (based on KM TEQs)							1.4E-10	
				Total PCDD/Fs (excluding KM TEQ)							1.7E-10	
				Total PCDD/Fs (based on KM TEQ)							1.3E-10	
				Total DL-PCBs (excluding KM TEQ)							4.9E-12	
				Total DL-PCBs (based on KM TEQ)							5.9E-12	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							4.9E-12	
				Total PCBs (DL & NDL; based on KM TEQ)							5.9E-12	
				Total PAHs							8.5E-12	
				Total Organics							3.5E-12	
				Total Inorganics							7.3E-10	
		Surface Water Ingestion Total (excluding KM TEQs)									9.2E-10	
		Surface Water Ingestion Total (based on KM TEQs)									8.9E-10	
Surface Water	Surface Water	Angler - Crabbing	Dermal	**Dioxin-like Compounds**								
			Contact	2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	
							Value	Units	Value	Units		
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	1.0E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	4.8E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.5E-11	--
				Trichloroethylene	1E-01	µg/L	9.6E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.4E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	1.5E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	2.7E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.1E-10	--
				Chromium [as Cr(III)]	1E+00	µg/L	2.8E-10	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	9.5E-11	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.9E-09	M
				Iron	5E+02	µg/L	1.1E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	1.5E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	5.7E-12	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	2.7E-12	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	1.7E-09	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	

TABLE 7.A CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		
							Value	Units	Value	Units	Cancer Risk[a]
				Total Non-DL PCBs							0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00
				Total PAHs							0.0E+00
				Total Organics							5.9E-11
				Total Inorganics							2.3E-09
		Surface Water Dermal Total (excluding KM TEQs)									2.4E-09
		Surface Water Dermal Total (based on KM TEQs)									2.4E-09
Crabbing - Surface Water Total (excluding KM TEQs)											3.3E-09
Crabbing - Surface Water Total (based on KM TEQs)											3.3E-09
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											5.4E-05
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											5.3E-05
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)											1.1E-05
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)											1.0E-05

Note: Sediment and surface water risks are for adult only, since the child is not assumed to accompany the adult angler on fishing or crabbing trips.

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.4 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Worker	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.3E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.6E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--	8.6E-14	mg/kg-day	7.0E-10	mg/kg-day	1.2E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--	3.1E-13	mg/kg-day	7.0E-09	mg/kg-day	4.5E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.2E-10	--	5.5E-12	mg/kg-day	7.0E-08	mg/kg-day	7.8E-05
				OCDD	3E-03	mg/kg	5.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-10	--	5.6E-11	mg/kg-day	2.3E-06	mg/kg-day	2.4E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.2E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.0E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.1E-11	--	2.0E-13	mg/kg-day	2.3E-08	mg/kg-day	8.7E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.4E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.5E-09	--	3.4E-13	mg/kg-day	2.3E-09	mg/kg-day	1.4E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-09	--	1.5E-12	mg/kg-day	7.0E-09	mg/kg-day	2.2E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.8E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-11	--	3.0E-14	mg/kg-day	7.0E-09	mg/kg-day	4.3E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	6.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--	6.9E-12	mg/kg-day	7.0E-08	mg/kg-day	9.8E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.5E-11	--	2.3E-13	mg/kg-day	7.0E-08	mg/kg-day	3.3E-06
				OCDF	4E-04	mg/kg	9.6E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.3E-11	--	9.6E-12	mg/kg-day	2.3E-06	mg/kg-day	4.1E-06
				KM TEQ DF	1E-04	mg/kg	2.2E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-08	--	2.2E-12	mg/kg-day	7.0E-10	mg/kg-day	3.2E-03
				PCB-77	8E-03	mg/kg	1.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10	--	1.7E-10	mg/kg-day	7.0E-06	mg/kg-day	2.4E-05
				PCB-81	3E-04	mg/kg	6.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--	6.4E-12	mg/kg-day	2.3E-06	mg/kg-day	2.7E-06
				PCB-105	1E-02	mg/kg	2.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	2.7E-10	mg/kg-day	2.3E-05	mg/kg-day	1.1E-05
				PCB-114	9E-04	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.2E-12	--	1.8E-11	mg/kg-day	2.3E-05	mg/kg-day	7.8E-07
				PCB-118	4E-02	mg/kg	7.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-10	--	7.7E-10	mg/kg-day	2.3E-05	mg/kg-day	3.3E-05
				PCB-123	1E-03	mg/kg	2.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.6E-07
				PCB-126	2E-04	mg/kg	5.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-09	--	5.2E-12	mg/kg-day	7.0E-09	mg/kg-day	7.5E-04
				PCB-156/157	3E-03	mg/kg	6.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-11	--	6.9E-11	mg/kg-day	2.3E-05	mg/kg-day	3.0E-06
				PCB-167	1E-03	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	2.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.1E-06
				PCB-169	3E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.4E-09	--	5.4E-12	mg/kg-day	2.3E-08	mg/kg-day	2.3E-04
				PCB-189	2E-04	mg/kg	5.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--	5.2E-12	mg/kg-day	2.3E-05	mg/kg-day	2.2E-07
				KM TEQ PCB	3E-05	mg/kg	6.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.8E-09	--	6.5E-13	mg/kg-day	7.0E-10	mg/kg-day	9.3E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-09	--	1.4E-08	mg/kg-day	2.0E-05	mg/kg-day	7.1E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-10	M	4.5E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.4E-09	M	4.4E-08	mg/kg-day	3.0E-04	mg/kg-day	1.5E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	3.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.9E-10	M	3.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.5E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.5E-11	M	2.5E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.3E-12	M	4.3E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.0E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-10	M	9.0E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.6E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.6E-10	M	1.6E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.2E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	4.0E-03	mg/kg-day	3.0E-05
				TPH (C9-C40)	4E+02	mg/kg	8.8E-07	mg/kg-day	--	--	--	--	8.8E-06	mg/kg-day	4.0E-03	mg/kg-day	2.2E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.6E-05	mg/kg-day	--	--	--	--	2.6E-04	mg/kg-day	1.0E+00	mg/kg-day	2.6E-04
				Antimony	2E+00	mg/kg	5.0E-09	mg/kg-day	--	--	--	--	5.0E-08	mg/kg-day	4.0E-04	mg/kg-day	1.3E-04

TABLE 7.4 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				Arsenic, inorganic	3E+01	mg/kg	3.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.9E-08	--	3.9E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Cadmium	3E+00	mg/kg	6.6E-09	mg/kg-day	--	--	--	--	6.6E-08	mg/kg-day	1.0E-03	mg/kg-day	6.6E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	2.3E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	1.5E+00	mg/kg-day	1.5E-06
				Cobalt	1E+01	mg/kg	3.0E-08	mg/kg-day	--	--	--	--	3.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.0E-03
				Copper	2E+02	mg/kg	3.6E-07	mg/kg-day	--	--	--	--	3.6E-06	mg/kg-day	1.0E-03	mg/kg-day	3.6E-03
				Chromium (VI)	1E+00	mg/kg	3.0E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.5E-09	M	3.0E-08	mg/kg-day	3.0E-03	mg/kg-day	9.9E-06
				Iron	4E+04	mg/kg	9.3E-05	mg/kg-day	--	--	--	--	9.3E-04	mg/kg-day	7.0E-01	mg/kg-day	1.3E-03
				Lead	5E+02	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	1.0E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	7.6E-07	mg/kg-day	--	--	--	--	7.6E-06	mg/kg-day	2.4E-02	mg/kg-day	3.2E-04
				Mercury	2E+00	mg/kg	4.3E-09	mg/kg-day	--	--	--	--	4.3E-08	mg/kg-day	3.0E-04	mg/kg-day	1.4E-04
				Nickel	7E+01	mg/kg	1.4E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	2.0E-02	mg/kg-day	7.2E-05
				Thallium	2E-01	mg/kg	5.2E-10	mg/kg-day	--	--	--	--	5.2E-09	mg/kg-day	1.0E-05	mg/kg-day	5.2E-04
				Vanadium	5E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	2.1E-04
				Zinc	1E+03	mg/kg	2.6E-06	mg/kg-day	--	--	--	--	2.6E-05	mg/kg-day	3.0E-01	mg/kg-day	8.8E-05
				Total DLCs (excluding KM TEQs)							4.5E-08						4.3E-03
				Total DLCs (based on KM TEQs)							4.3E-08						4.1E-03
				Total PCDD/Fs (excluding KM TEQ)							3.4E-08						3.3E-03
				Total PCDD/Fs (based on KM TEQ)							3.3E-08						3.2E-03
				Total DL-PCBs (excluding KM TEQ)							1.1E-08						1.1E-03
				Total DL-PCBs (based on KM TEQ)							9.8E-09						9.3E-04
				Total Non-DL PCBs							1.4E-09						7.1E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-08						1.8E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.1E-08						1.6E-03
				Total PAHs							6.3E-09						1.5E-04
				Total Organics							0.0E+00						2.2E-03
				Total Inorganics							6.1E-08						9.0E-03
		Sediment Ingestion Total (excluding KM TEQs)									1.1E-07						1.6E-02
		Sediment Ingestion Total (based on KM TEQs)									1.1E-07						1.6E-02
Sediment	Sediment	Worker	Dermal	**Dioxin-like Compounds**													
			Contact	2,3,7,8-TCDD	8E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.1E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	3.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.6E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	9.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	9.8E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.3E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-09	--	7.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-03	mg/kg	7.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-10	--	7.1E-11	mg/kg-day	2.3E-06	mg/kg-day	3.0E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.6E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.2E-10	--	2.6E-13	mg/kg-day	2.3E-08	mg/kg-day	1.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.3E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.9E-09	--	4.3E-13	mg/kg-day	2.3E-09	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-09	--	2.0E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.7E-10	--	5.1E-13	mg/kg-day	7.0E-09	mg/kg-day	7.3E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-11	--	3.8E-14	mg/kg-day	7.0E-09	mg/kg-day	5.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-10	--	2.8E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	8.7E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-09	--	8.7E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.4E-11	--	3.0E-13	mg/kg-day	7.0E-08	mg/kg-day	4.2E-06

TABLE 7.4 CTE
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NEWARK BAY STUDY AREA

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Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
				OCDF	4E-04	mg/kg	1.2E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.5E-11	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.2E-06
				KM TEQ DF	1E-04	mg/kg	2.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-08	--	2.8E-12	mg/kg-day	7.0E-10	mg/kg-day	4.0E-03
				PCB-77	8E-03	mg/kg	2.1E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.1E-10	--	2.1E-10	mg/kg-day	7.0E-06	mg/kg-day	3.0E-05
				PCB-81	3E-04	mg/kg	8.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-11	--	8.1E-12	mg/kg-day	2.3E-06	mg/kg-day	3.5E-06
				PCB-105	1E-02	mg/kg	3.4E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-10	--	3.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-114	9E-04	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	9.9E-07
				PCB-118	4E-02	mg/kg	9.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-10	--	9.8E-10	mg/kg-day	2.3E-05	mg/kg-day	4.2E-05
				PCB-123	1E-03	mg/kg	2.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-11	--	2.9E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	6.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-08	--	6.7E-12	mg/kg-day	7.0E-09	mg/kg-day	9.5E-04
				PCB-156/157	3E-03	mg/kg	8.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-11	--	8.8E-11	mg/kg-day	2.3E-05	mg/kg-day	3.8E-06
				PCB-167	1E-03	mg/kg	3.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--	3.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-169	3E-04	mg/kg	6.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.1E-09	--	6.8E-12	mg/kg-day	2.3E-08	mg/kg-day	2.9E-04
				PCB-189	2E-04	mg/kg	6.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.0E-12	--	6.6E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07
				KM TEQ PCB	3E-05	mg/kg	8.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.2E-08	--	8.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	8.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.4E-09	--	8.4E-08	mg/kg-day	2.0E-05	mg/kg-day	4.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.5E-09	M	2.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.4E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.4E-08	M	2.4E-07	mg/kg-day	3.0E-04	mg/kg-day	8.0E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	2.2E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-09	M	2.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.4E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.4E-10	M	1.4E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.3E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.3E-11	M	2.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.9E-09	M	4.9E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	8.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.9E-10	M	8.9E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	8.4E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-07	--	8.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.8E-03
				Cadmium	3E+00	mg/kg	2.8E-10	mg/kg-day	--	--	--	--	2.8E-09	mg/kg-day	2.5E-05	mg/kg-day	1.1E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.8E-08						5.5E-03
				Total DLCs (based on KM TEQs)							5.5E-08						5.2E-03
				Total PCDD/Fs (excluding KM TEQ)							4.3E-08						4.1E-03

TABLE 7.4 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
				Total PCDD/Fs (based on KM TEQ)							4.3E-08					4.0E-03
				Total DL-PCBs (excluding KM TEQ)							1.4E-08					1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.2E-08					1.2E-03
				Total Non-DL PCBs							8.4E-09					4.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							2.2E-08					5.5E-03
				Total PCBs (DL & NDL; based on KM TEQ)							2.1E-08					5.4E-03
				Total PAHs							3.5E-08					8.0E-04
				Total Organics							0.0E+00					0.0E+00
				Total Inorganics							1.3E-07					2.9E-03
		Sediment Dermal Total (excluding KM TEQs)									2.3E-07					1.3E-02
		Sediment Dermal Total (based on KM TEQs)									2.2E-07					1.3E-02
Sediment Total (excluding KM TEQs)											3.4E-07					3.0E-02
Sediment Total (based on KM TEQs)											3.3E-07					2.9E-02

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	5.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-09	--	4.3E-13	mg/kg-day	7.0E-10	mg/kg-day	6.1E-04
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-10	--	2.2E-14	mg/kg-day	7.0E-10	mg/kg-day	3.2E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-11	--	2.0E-14	mg/kg-day	7.0E-09	mg/kg-day	2.9E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	8.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.2E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	6.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.2E-11	--	4.8E-14	mg/kg-day	7.0E-09	mg/kg-day	6.8E-06
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-10	--	1.4E-12	mg/kg-day	7.0E-08	mg/kg-day	2.0E-05
				OCDD	3E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.4E-11	--	1.5E-11	mg/kg-day	2.3E-06	mg/kg-day	6.2E-06
				2,3,7,8-TCDF	1E-05	mg/kg	9.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	6.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.0E-11	--	5.3E-14	mg/kg-day	2.3E-08	mg/kg-day	2.3E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.1E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.1E-10	--	8.8E-14	mg/kg-day	2.3E-09	mg/kg-day	3.8E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	5.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--	1.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-11	--	7.8E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	7.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-10	--	5.8E-14	mg/kg-day	7.0E-09	mg/kg-day	8.3E-06
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-10	--	1.8E-12	mg/kg-day	7.0E-08	mg/kg-day	2.5E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	7.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-11	--	6.1E-14	mg/kg-day	7.0E-08	mg/kg-day	8.6E-07
				OCDF	4E-04	mg/kg	3.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-11	--	2.5E-12	mg/kg-day	2.3E-06	mg/kg-day	1.1E-06
				KM TEQ DF	1E-04	mg/kg	7.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	5.8E-13	mg/kg-day	7.0E-10	mg/kg-day	8.3E-04
				PCB-77	8E-03	mg/kg	5.5E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.3E-11	--	4.3E-11	mg/kg-day	7.0E-06	mg/kg-day	6.1E-06
				PCB-81	3E-04	mg/kg	2.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.6E-12	--	1.7E-12	mg/kg-day	2.3E-06	mg/kg-day	7.1E-07
				PCB-105	1E-02	mg/kg	8.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-11	--	6.9E-11	mg/kg-day	2.3E-05	mg/kg-day	3.0E-06
				PCB-114	9E-04	mg/kg	6.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-12	--	4.7E-12	mg/kg-day	2.3E-05	mg/kg-day	2.0E-07
				PCB-118	4E-02	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	2.0E-10	mg/kg-day	2.3E-05	mg/kg-day	8.6E-06
				PCB-123	1E-03	mg/kg	7.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-12	--	5.8E-12	mg/kg-day	2.3E-05	mg/kg-day	2.5E-07
				PCB-126	2E-04	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.9E-04
				PCB-156/157	3E-03	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	1.8E-11	mg/kg-day	2.3E-05	mg/kg-day	7.7E-07
				PCB-167	1E-03	mg/kg	8.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-12	--	6.5E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07
				PCB-169	3E-04	mg/kg	1.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.1E-10	--	1.4E-12	mg/kg-day	2.3E-08	mg/kg-day	6.0E-05
				PCB-189	2E-04	mg/kg	1.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-13	--	1.4E-12	mg/kg-day	2.3E-05	mg/kg-day	5.8E-08
				KM TEQ PCB	3E-05	mg/kg	2.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-09	--	1.7E-13	mg/kg-day	7.0E-10	mg/kg-day	2.4E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	4.7E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.7E-10	--	3.7E-09	mg/kg-day	2.0E-05	mg/kg-day	1.8E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-10	M	1.2E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	M	1.1E-08	mg/kg-day	3.0E-04	mg/kg-day	3.8E-05
				Benzo(b)fluoranthene	2E+00	mg/kg	1.3E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-10	M	1.0E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	8.5E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.5E-12	M	6.6E-09	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.4E-12	M	1.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.0E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-10	M	2.3E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.4E-11	M	4.2E-09	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	4.1E-09	mg/kg-day	--	--	--	--	3.2E-08	mg/kg-day	4.0E-03	mg/kg-day	7.9E-06
				TPH (C9-C40)	4E+02	mg/kg	2.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	4.0E-03	mg/kg-day	5.7E-04
				Inorganics													
				Aluminum	1E+04	mg/kg	8.7E-06	mg/kg-day	--	--	--	--	6.8E-05	mg/kg-day	1.0E+00	mg/kg-day	6.8E-05
				Antimony	2E+00	mg/kg	1.7E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	4.0E-04	mg/kg-day	3.3E-05
				Arsenic, inorganic	3E+01	mg/kg	1.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-08	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Cadmium	3E+00	mg/kg	2.2E-09	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	1.0E-03	mg/kg-day	1.7E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	7.7E-08	mg/kg-day	--	--	--	--	6.0E-07	mg/kg-day	1.5E+00	mg/kg-day	4.0E-07
				Cobalt	1E+01	mg/kg	1.0E-08	mg/kg-day	--	--	--	--	7.8E-08	mg/kg-day	3.0E-04	mg/kg-day	2.6E-04
				Copper	2E+02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.3E-07	mg/kg-day	1.0E-03	mg/kg-day	9.3E-04

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Chromium (VI)	1E+00	mg/kg	1.0E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.0E-10	M	7.7E-09	mg/kg-day	3.0E-03	mg/kg-day	2.6E-06
				Iron	4E+04	mg/kg	3.1E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	7.0E-01	mg/kg-day	3.5E-04
				Lead	5E+02	mg/kg	3.4E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	2.0E-06	mg/kg-day	2.4E-02	mg/kg-day	8.2E-05
				Mercury	2E+00	mg/kg	1.4E-09	mg/kg-day	--	--	--	--	1.1E-08	mg/kg-day	3.0E-04	mg/kg-day	3.7E-05
				Nickel	7E+01	mg/kg	4.8E-08	mg/kg-day	--	--	--	--	3.7E-07	mg/kg-day	2.0E-02	mg/kg-day	1.9E-05
				Thallium	2E-01	mg/kg	1.8E-10	mg/kg-day	--	--	--	--	1.4E-09	mg/kg-day	1.0E-05	mg/kg-day	1.4E-04
				Vanadium	5E+01	mg/kg	3.6E-08	mg/kg-day	--	--	--	--	2.8E-07	mg/kg-day	5.0E-03	mg/kg-day	5.6E-05
				Zinc	1E+03	mg/kg	8.9E-07	mg/kg-day	--	--	--	--	6.9E-06	mg/kg-day	3.0E-01	mg/kg-day	2.3E-05
				Total DLCs (excluding KM TEQs)							1.5E-08						1.1E-03
				Total DLCs (based on KM TEQs)							1.4E-08						1.1E-03
				Total PCDD/Fs (excluding KM TEQ)							1.1E-08						8.5E-04
				Total PCDD/Fs (based on KM TEQ)							1.1E-08						8.3E-04
				Total DL-PCBs (excluding KM TEQ)							3.7E-09						2.7E-04
				Total DL-PCBs (based on KM TEQ)							3.3E-09						2.4E-04
				Total Non-DL PCBs							4.7E-10						1.8E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							4.2E-09						4.6E-04
				Total PCBs (DL & NDL; based on KM TEQ)							3.7E-09						4.3E-04
				Total PAHs							2.1E-09						3.8E-05
				Total Organics							0.0E+00						5.8E-04
				Total Inorganics							2.0E-08						2.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									3.8E-08						4.3E-03
		Sediment Ingestion Total (based on KM TEQs)									3.7E-08						4.2E-03
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-08	--	9.9E-13	mg/kg-day	7.0E-10	mg/kg-day	1.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-09	--	5.2E-14	mg/kg-day	7.0E-10	mg/kg-day	7.5E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-11	--	4.7E-14	mg/kg-day	7.0E-09	mg/kg-day	6.7E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.4E-10	--	3.3E-12	mg/kg-day	7.0E-08	mg/kg-day	4.8E-05
				OCDD	3E-03	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--	3.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.5E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.1E-11	--	1.2E-13	mg/kg-day	2.3E-08	mg/kg-day	5.3E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.6E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-09	--	2.1E-13	mg/kg-day	2.3E-09	mg/kg-day	8.8E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	9.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	2.6E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.0E-10	--	4.2E-12	mg/kg-day	7.0E-08	mg/kg-day	5.9E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-11	--	1.4E-13	mg/kg-day	7.0E-08	mg/kg-day	2.0E-06
				OCDF	4E-04	mg/kg	7.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-11	--	5.8E-12	mg/kg-day	2.3E-06	mg/kg-day	2.5E-06
				KM TEQ DF	1E-04	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--	1.4E-12	mg/kg-day	7.0E-10	mg/kg-day	1.9E-03
				PCB-77	8E-03	mg/kg	1.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.9E-10	--	1.0E-10	mg/kg-day	7.0E-06	mg/kg-day	1.4E-05
				PCB-81	3E-04	mg/kg	5.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-11	--	3.9E-12	mg/kg-day	2.3E-06	mg/kg-day	1.7E-06
				PCB-105	1E-02	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-11	--	1.6E-10	mg/kg-day	2.3E-05	mg/kg-day	6.9E-06
				PCB-114	9E-04	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-12	--	1.1E-11	mg/kg-day	2.3E-05	mg/kg-day	4.7E-07
				PCB-118	4E-02	mg/kg	6.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-10	--	4.7E-10	mg/kg-day	2.3E-05	mg/kg-day	2.0E-05
				PCB-123	1E-03	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.9E-12	--	1.4E-11	mg/kg-day	2.3E-05	mg/kg-day	5.9E-07
				PCB-126	2E-04	mg/kg	4.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-09	--	3.2E-12	mg/kg-day	7.0E-09	mg/kg-day	4.5E-04
				PCB-156/157	3E-03	mg/kg	5.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	4.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-167	1E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-12	--	1.5E-11	mg/kg-day	2.3E-05	mg/kg-day	6.5E-07

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-169	3E-04	mg/kg	4.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-09	--	3.3E-12	mg/kg-day	2.3E-08	mg/kg-day	1.4E-04
				PCB-189	2E-04	mg/kg	4.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-12	--	3.2E-12	mg/kg-day	2.3E-05	mg/kg-day	1.4E-07
				KM TEQ PCB	3E-05	mg/kg	5.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.7E-09	--	4.0E-13	mg/kg-day	7.0E-10	mg/kg-day	5.7E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	5.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.2E-09	--	4.0E-08	mg/kg-day	2.0E-05	mg/kg-day	2.0E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	1.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-08	M	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.8E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	1.0E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	8.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.6E-11	M	6.7E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.4E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.4E-11	M	1.1E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-09	M	2.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.5E-10	M	4.3E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	5.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.7E-08	--	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Cadmium	3E+00	mg/kg	1.7E-10	mg/kg-day	--	--	--	--	1.3E-09	mg/kg-day	2.5E-05	mg/kg-day	5.3E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							3.5E-08						2.6E-03
				Total DLCs (based on KM TEQs)							3.4E-08						2.5E-03
				Total PCDD/Fs (excluding KM TEQ)							2.7E-08						2.0E-03
				Total PCDD/Fs (based on KM TEQ)							2.6E-08						1.9E-03
				Total DL-PCBs (excluding KM TEQ)							8.7E-09						6.4E-04
				Total DL-PCBs (based on KM TEQ)							7.7E-09						5.7E-04
				Total Non-DL PCBs							5.2E-09						2.0E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.4E-08						2.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-08						2.6E-03
				Total PAHs							2.1E-08						3.8E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							7.7E-08						1.4E-03
		Sediment Dermal Total (excluding KM TEQs)									1.4E-07						6.4E-03
		Sediment Dermal Total (based on KM TEQs)									1.4E-07						6.3E-03
Wader Sediment Total (excluding KM TEQs)											1.8E-07						1.1E-02
Wader Sediment Total (based on KM TEQs)											1.7E-07						1.1E-02
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	5.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	8.2E-09	--	4.3E-13	mg/kg-day	7.0E-10	mg/kg-day	6.1E-04

TABLE 7.5 CTE
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Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-10	--	2.2E-14	mg/kg-day	7.0E-10	mg/kg-day	3.2E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-11	--	2.0E-14	mg/kg-day	7.0E-09	mg/kg-day	2.9E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	8.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.2E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	6.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.2E-11	--	4.8E-14	mg/kg-day	7.0E-09	mg/kg-day	6.8E-06
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.8E-10	--	1.4E-12	mg/kg-day	7.0E-08	mg/kg-day	2.0E-05
				OCDD	3E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.4E-11	--	1.5E-11	mg/kg-day	2.3E-06	mg/kg-day	6.2E-06
				2,3,7,8-TCDF	1E-05	mg/kg	9.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	7.7E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	6.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.0E-11	--	5.3E-14	mg/kg-day	2.3E-08	mg/kg-day	2.3E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	1.1E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	5.1E-10	--	8.8E-14	mg/kg-day	2.3E-09	mg/kg-day	3.8E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	5.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.8E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-10	--	1.0E-13	mg/kg-day	7.0E-09	mg/kg-day	1.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	1.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-11	--	7.8E-15	mg/kg-day	7.0E-09	mg/kg-day	1.1E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	7.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-10	--	5.8E-14	mg/kg-day	7.0E-09	mg/kg-day	8.3E-06
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.4E-10	--	1.8E-12	mg/kg-day	7.0E-08	mg/kg-day	2.5E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	7.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-11	--	6.1E-14	mg/kg-day	7.0E-08	mg/kg-day	8.6E-07
				OCDF	4E-04	mg/kg	3.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.4E-11	--	2.5E-12	mg/kg-day	2.3E-06	mg/kg-day	1.1E-06
				KM TEQ DF	1E-04	mg/kg	7.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	5.8E-13	mg/kg-day	7.0E-10	mg/kg-day	8.3E-04
				PCB-77	8E-03	mg/kg	5.5E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.3E-11	--	4.3E-11	mg/kg-day	7.0E-06	mg/kg-day	6.1E-06
				PCB-81	3E-04	mg/kg	2.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	9.6E-12	--	1.7E-12	mg/kg-day	2.3E-06	mg/kg-day	7.1E-07
				PCB-105	1E-02	mg/kg	8.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.0E-11	--	6.9E-11	mg/kg-day	2.3E-05	mg/kg-day	3.0E-06
				PCB-114	9E-04	mg/kg	6.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-12	--	4.7E-12	mg/kg-day	2.3E-05	mg/kg-day	2.0E-07
				PCB-118	4E-02	mg/kg	2.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	2.0E-10	mg/kg-day	2.3E-05	mg/kg-day	8.6E-06
				PCB-123	1E-03	mg/kg	7.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-12	--	5.8E-12	mg/kg-day	2.3E-05	mg/kg-day	2.5E-07
				PCB-126	2E-04	mg/kg	1.8E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-09	--	1.4E-12	mg/kg-day	7.0E-09	mg/kg-day	1.9E-04
				PCB-156/157	3E-03	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	1.8E-11	mg/kg-day	2.3E-05	mg/kg-day	7.7E-07
				PCB-167	1E-03	mg/kg	8.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-12	--	6.5E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07
				PCB-169	3E-04	mg/kg	1.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	8.1E-10	--	1.4E-12	mg/kg-day	2.3E-08	mg/kg-day	6.0E-05
				PCB-189	2E-04	mg/kg	1.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.8E-13	--	1.4E-12	mg/kg-day	2.3E-05	mg/kg-day	5.8E-08
				KM TEQ PCB	3E-05	mg/kg	2.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.3E-09	--	1.7E-13	mg/kg-day	7.0E-10	mg/kg-day	2.4E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	4.7E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.7E-10	--	3.7E-09	mg/kg-day	2.0E-05	mg/kg-day	1.8E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-10	M	1.2E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	M	1.1E-08	mg/kg-day	3.0E-04	mg/kg-day	3.8E-05
				Benzo(b)fluoranthene	2E+00	mg/kg	1.3E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-10	M	1.0E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	8.5E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.5E-12	M	6.6E-09	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.4E-12	M	1.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.0E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-10	M	2.3E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.4E-11	M	4.2E-09	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	4.1E-09	mg/kg-day	--	--	--	--	3.2E-08	mg/kg-day	4.0E-03	mg/kg-day	7.9E-06
				TPH (C9-C40)	4E+02	mg/kg	2.9E-07	mg/kg-day	--	--	--	--	2.3E-06	mg/kg-day	4.0E-03	mg/kg-day	5.7E-04
				Inorganics													
				Aluminum	1E+04	mg/kg	8.7E-06	mg/kg-day	--	--	--	--	6.8E-05	mg/kg-day	1.0E+00	mg/kg-day	6.8E-05
				Antimony	2E+00	mg/kg	1.7E-09	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	4.0E-04	mg/kg-day	3.3E-05
				Arsenic, inorganic	3E+01	mg/kg	1.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-08	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Cadmium	3E+00	mg/kg	2.2E-09	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	1.0E-03	mg/kg-day	1.7E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	7.7E-08	mg/kg-day	--	--	--	--	6.0E-07	mg/kg-day	1.5E+00	mg/kg-day	4.0E-07
				Cobalt	1E+01	mg/kg	1.0E-08	mg/kg-day	--	--	--	--	7.8E-08	mg/kg-day	3.0E-04	mg/kg-day	2.6E-04
				Copper	2E+02	mg/kg	1.2E-07	mg/kg-day	--	--	--	--	9.3E-07	mg/kg-day	1.0E-03	mg/kg-day	9.3E-04
				Chromium (VI)	1E+00	mg/kg	1.0E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	5.0E-10	M	7.7E-09	mg/kg-day	3.0E-03	mg/kg-day	2.6E-06

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Iron	4E+04	mg/kg	3.1E-05	mg/kg-day	--	--	--	--	2.4E-04	mg/kg-day	7.0E-01	mg/kg-day	3.5E-04
				Lead	5E+02	mg/kg	3.4E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	2.5E-07	mg/kg-day	--	--	--	--	2.0E-06	mg/kg-day	2.4E-02	mg/kg-day	8.2E-05
				Mercury	2E+00	mg/kg	1.4E-09	mg/kg-day	--	--	--	--	1.1E-08	mg/kg-day	3.0E-04	mg/kg-day	3.7E-05
				Nickel	7E+01	mg/kg	4.8E-08	mg/kg-day	--	--	--	--	3.7E-07	mg/kg-day	2.0E-02	mg/kg-day	1.9E-05
				Thallium	2E-01	mg/kg	1.8E-10	mg/kg-day	--	--	--	--	1.4E-09	mg/kg-day	1.0E-05	mg/kg-day	1.4E-04
				Vanadium	5E+01	mg/kg	3.6E-08	mg/kg-day	--	--	--	--	2.8E-07	mg/kg-day	5.0E-03	mg/kg-day	5.6E-05
				Zinc	1E+03	mg/kg	8.9E-07	mg/kg-day	--	--	--	--	6.9E-06	mg/kg-day	3.0E-01	mg/kg-day	2.3E-05
				Total DLCs (excluding KM TEQs)							1.5E-08						1.1E-03
				Total DLCs (based on KM TEQs)							1.4E-08						1.1E-03
				Total PCDD/Fs (excluding KM TEQ)							1.1E-08						8.5E-04
				Total PCDD/Fs (based on KM TEQ)							1.1E-08						8.3E-04
				Total DL-PCBs (excluding KM TEQ)							3.7E-09						2.7E-04
				Total DL-PCBs (based on KM TEQ)							3.3E-09						2.4E-04
				Total Non-DL PCBs							4.7E-10						1.8E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							4.2E-09						4.6E-04
				Total PCBs (DL & NDL; based on KM TEQ)							3.7E-09						4.3E-04
				Total PAHs							2.1E-09						3.8E-05
				Total Organics							0.0E+00						5.8E-04
				Total Inorganics							2.0E-08						2.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									3.8E-08						4.3E-03
		Sediment Ingestion Total (based on KM TEQs)									3.7E-08						4.2E-03
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-08	--	9.9E-13	mg/kg-day	7.0E-10	mg/kg-day	1.4E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	6.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-09	--	5.2E-14	mg/kg-day	7.0E-10	mg/kg-day	7.5E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	6.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-11	--	4.7E-14	mg/kg-day	7.0E-09	mg/kg-day	6.7E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.6E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	4.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.4E-10	--	3.3E-12	mg/kg-day	7.0E-08	mg/kg-day	4.8E-05
				OCDD	3E-03	mg/kg	4.4E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.0E-10	--	3.4E-11	mg/kg-day	2.3E-06	mg/kg-day	1.5E-05
				2,3,7,8-TCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	1.8E-13	mg/kg-day	7.0E-09	mg/kg-day	2.6E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	1.6E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	7.1E-11	--	1.2E-13	mg/kg-day	2.3E-08	mg/kg-day	5.3E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	2.6E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.2E-09	--	2.1E-13	mg/kg-day	2.3E-09	mg/kg-day	8.8E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.8E-09	--	9.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.3E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	2.6E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	1.7E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-10	--	1.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.9E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	5.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.0E-10	--	4.2E-12	mg/kg-day	7.0E-08	mg/kg-day	5.9E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	1.8E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.7E-11	--	1.4E-13	mg/kg-day	7.0E-08	mg/kg-day	2.0E-06
				OCDF	4E-04	mg/kg	7.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-11	--	5.8E-12	mg/kg-day	2.3E-06	mg/kg-day	2.5E-06
				KM TEQ DF	1E-04	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--	1.4E-12	mg/kg-day	7.0E-10	mg/kg-day	1.9E-03
				PCB-77	8E-03	mg/kg	1.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.9E-10	--	1.0E-10	mg/kg-day	7.0E-06	mg/kg-day	1.4E-05
				PCB-81	3E-04	mg/kg	5.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.2E-11	--	3.9E-12	mg/kg-day	2.3E-06	mg/kg-day	1.7E-06
				PCB-105	1E-02	mg/kg	2.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.3E-11	--	1.6E-10	mg/kg-day	2.3E-05	mg/kg-day	6.9E-06
				PCB-114	9E-04	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-12	--	1.1E-11	mg/kg-day	2.3E-05	mg/kg-day	4.7E-07
				PCB-118	4E-02	mg/kg	6.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-10	--	4.7E-10	mg/kg-day	2.3E-05	mg/kg-day	2.0E-05
				PCB-123	1E-03	mg/kg	1.8E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.9E-12	--	1.4E-11	mg/kg-day	2.3E-05	mg/kg-day	5.9E-07
				PCB-126	2E-04	mg/kg	4.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-09	--	3.2E-12	mg/kg-day	7.0E-09	mg/kg-day	4.5E-04
				PCB-156/157	3E-03	mg/kg	5.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	4.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-167	1E-03	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-12	--	1.5E-11	mg/kg-day	2.3E-05	mg/kg-day	6.5E-07
				PCB-169	3E-04	mg/kg	4.2E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-09	--	3.3E-12	mg/kg-day	2.3E-08	mg/kg-day	1.4E-04

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-189	2E-04	mg/kg	4.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.8E-12	--	3.2E-12	mg/kg-day	2.3E-05	mg/kg-day	1.4E-07
				KM TEQ PCB	3E-05	mg/kg	5.1E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.7E-09	--	4.0E-13	mg/kg-day	7.0E-10	mg/kg-day	5.7E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	5.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	5.2E-09	--	4.0E-08	mg/kg-day	2.0E-05	mg/kg-day	2.0E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	1.5E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	1.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	1.5E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-08	M	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.8E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.3E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.3E-09	M	1.0E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	8.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.6E-11	M	6.7E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	1.4E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.4E-11	M	1.1E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	3.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.0E-09	M	2.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	5.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.5E-10	M	4.3E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	5.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.7E-08	--	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
				Cadmium	3E+00	mg/kg	1.7E-10	mg/kg-day	--	--	--	--	1.3E-09	mg/kg-day	2.5E-05	mg/kg-day	5.3E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							3.5E-08						2.6E-03
				Total DLCs (based on KM TEQs)							3.4E-08						2.5E-03
				Total PCDD/Fs (excluding KM TEQ)							2.7E-08						2.0E-03
				Total PCDD/Fs (based on KM TEQ)							2.6E-08						1.9E-03
				Total DL-PCBs (excluding KM TEQ)							8.7E-09						6.4E-04
				Total DL-PCBs (based on KM TEQ)							7.7E-09						5.7E-04
				Total Non-DL PCBs							5.2E-09						2.0E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.4E-08						2.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-08						2.6E-03
				Total PAHs							2.1E-08						3.8E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							7.7E-08						1.4E-03
		Sediment Dermal Total (excluding KM TEQs)									1.4E-07						6.4E-03
		Sediment Dermal Total (based on KM TEQs)									1.4E-07						6.3E-03
Swimmer Sediment Total (excluding KM TEQs)											1.8E-07						1.1E-02
Swimmer Sediment Total (based on KM TEQs)											1.7E-07						1.1E-02
Sediment	Sediment	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-09	--	2.6E-13	mg/kg-day	7.0E-10	mg/kg-day	3.7E-04
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-10	--	1.4E-14	mg/kg-day	7.0E-10	mg/kg-day	2.0E-05

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-11	--	1.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.8E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	6.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-11	--	5.0E-14	mg/kg-day	7.0E-09	mg/kg-day	7.1E-06
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-11	--	2.9E-14	mg/kg-day	7.0E-09	mg/kg-day	4.2E-06
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.7E-10	--	8.8E-13	mg/kg-day	7.0E-08	mg/kg-day	1.3E-05
				OCDD	3E-03	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-11	--	8.9E-12	mg/kg-day	2.3E-06	mg/kg-day	3.8E-06
				2,3,7,8-TCDF	1E-05	mg/kg	6.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-11	--	4.7E-14	mg/kg-day	7.0E-09	mg/kg-day	6.7E-06
				1,2,3,7,8-PeCDF	9E-06	mg/kg	4.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-11	--	3.2E-14	mg/kg-day	2.3E-08	mg/kg-day	1.4E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.9E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.1E-10	--	5.4E-14	mg/kg-day	2.3E-09	mg/kg-day	2.3E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	2.5E-13	mg/kg-day	7.0E-09	mg/kg-day	3.5E-05
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	8.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	6.4E-14	mg/kg-day	7.0E-09	mg/kg-day	9.2E-06
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	6.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-12	--	4.8E-15	mg/kg-day	7.0E-09	mg/kg-day	6.9E-07
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-11	--	3.6E-14	mg/kg-day	7.0E-09	mg/kg-day	5.1E-06
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-10	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.6E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.2E-12	--	3.7E-14	mg/kg-day	7.0E-08	mg/kg-day	5.3E-07
				OCDF	4E-04	mg/kg	2.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.9E-12	--	1.5E-12	mg/kg-day	2.3E-06	mg/kg-day	6.6E-07
				KM TEQ DF	1E-04	mg/kg	4.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-09	--	3.6E-13	mg/kg-day	7.0E-10	mg/kg-day	5.1E-04
				PCB-77	8E-03	mg/kg	3.4E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.1E-11	--	2.6E-11	mg/kg-day	7.0E-06	mg/kg-day	3.8E-06
				PCB-81	3E-04	mg/kg	1.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.9E-12	--	1.0E-12	mg/kg-day	2.3E-06	mg/kg-day	4.4E-07
				PCB-105	1E-02	mg/kg	5.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-11	--	4.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-114	9E-04	mg/kg	3.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-12	--	2.9E-12	mg/kg-day	2.3E-05	mg/kg-day	1.2E-07
				PCB-118	4E-02	mg/kg	1.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-11	--	1.2E-10	mg/kg-day	2.3E-05	mg/kg-day	5.3E-06
				PCB-123	1E-03	mg/kg	4.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-12	--	3.6E-12	mg/kg-day	2.3E-05	mg/kg-day	1.5E-07
				PCB-126	2E-04	mg/kg	1.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--	8.4E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				PCB-156/157	3E-03	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-12	--	1.1E-11	mg/kg-day	2.3E-05	mg/kg-day	4.8E-07
				PCB-167	1E-03	mg/kg	5.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--	4.0E-12	mg/kg-day	2.3E-05	mg/kg-day	1.7E-07
				PCB-169	3E-04	mg/kg	1.1E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.0E-10	--	8.6E-13	mg/kg-day	2.3E-08	mg/kg-day	3.7E-05
				PCB-189	2E-04	mg/kg	1.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-13	--	8.3E-13	mg/kg-day	2.3E-05	mg/kg-day	3.6E-08
				KM TEQ PCB	3E-05	mg/kg	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.5E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.9E-10	--	2.3E-09	mg/kg-day	2.0E-05	mg/kg-day	1.1E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	9.2E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-11	M	7.2E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	9.0E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-10	M	7.0E-09	mg/kg-day	3.0E-04	mg/kg-day	2.3E-05
				Benzo(b)fluoranthene	2E+00	mg/kg	8.1E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-11	M	6.3E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	5.2E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-12	M	4.1E-09	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	8.8E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-13	M	6.8E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.8E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-10	M	1.4E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.3E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-11	M	2.6E-09	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	2.5E-09	mg/kg-day	--	--	--	--	1.9E-08	mg/kg-day	4.0E-03	mg/kg-day	4.8E-06
				TPH (C9-C40)	4E+02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	4.0E-03	mg/kg-day	3.5E-04
				Inorganics													
				Aluminum	1E+04	mg/kg	5.4E-06	mg/kg-day	--	--	--	--	4.2E-05	mg/kg-day	1.0E+00	mg/kg-day	4.2E-05
				Antimony	2E+00	mg/kg	1.0E-09	mg/kg-day	--	--	--	--	8.0E-09	mg/kg-day	4.0E-04	mg/kg-day	2.0E-05
				Arsenic, inorganic	3E+01	mg/kg	8.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-08	--	6.3E-08	mg/kg-day	3.0E-04	mg/kg-day	2.1E-04
				Cadmium	3E+00	mg/kg	1.4E-09	mg/kg-day	--	--	--	--	1.1E-08	mg/kg-day	1.0E-03	mg/kg-day	1.1E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	4.7E-08	mg/kg-day	--	--	--	--	3.7E-07	mg/kg-day	1.5E+00	mg/kg-day	2.5E-07
				Cobalt	1E+01	mg/kg	6.2E-09	mg/kg-day	--	--	--	--	4.8E-08	mg/kg-day	3.0E-04	mg/kg-day	1.6E-04
				Copper	2E+02	mg/kg	7.4E-08	mg/kg-day	--	--	--	--	5.7E-07	mg/kg-day	1.0E-03	mg/kg-day	5.7E-04
				Chromium (VI)	1E+00	mg/kg	6.1E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-10	M	4.8E-09	mg/kg-day	3.0E-03	mg/kg-day	1.6E-06
				Iron	4E+04	mg/kg	1.9E-05	mg/kg-day	--	--	--	--	1.5E-04	mg/kg-day	7.0E-01	mg/kg-day	2.1E-04

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake Units	CSF/Unit Risk Value	CSF Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake Units	RfD Value	RfD Units	Hazard Quotient
				Lead	5E+02	mg/kg	2.1E-07	mg/kg-day	--	--	--	--	1.6E-06	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	1.6E-07	mg/kg-day	--	--	--	--	1.2E-06	mg/kg-day	2.4E-02	mg/kg-day	5.1E-05
				Mercury	2E+00	mg/kg	8.8E-10	mg/kg-day	--	--	--	--	6.8E-09	mg/kg-day	3.0E-04	mg/kg-day	2.3E-05
				Nickel	7E+01	mg/kg	3.0E-08	mg/kg-day	--	--	--	--	2.3E-07	mg/kg-day	2.0E-02	mg/kg-day	1.2E-05
				Thallium	2E-01	mg/kg	1.1E-10	mg/kg-day	--	--	--	--	8.4E-10	mg/kg-day	1.0E-05	mg/kg-day	8.4E-05
				Vanadium	5E+01	mg/kg	2.2E-08	mg/kg-day	--	--	--	--	1.7E-07	mg/kg-day	5.0E-03	mg/kg-day	3.4E-05
				Zinc	1E+03	mg/kg	5.4E-07	mg/kg-day	--	--	--	--	4.2E-06	mg/kg-day	3.0E-01	mg/kg-day	1.4E-05
				Total DLCs (excluding KM TEQs)							9.3E-09						6.9E-04
				Total DLCs (based on KM TEQs)							8.9E-09						6.6E-04
				Total PCDD/Fs (excluding KM TEQ)							7.0E-09						5.2E-04
				Total PCDD/Fs (based on KM TEQ)							6.9E-09						5.1E-04
				Total DL-PCBs (excluding KM TEQ)							2.3E-09						1.7E-04
				Total DL-PCBs (based on KM TEQ)							2.0E-09						1.5E-04
				Total Non-DL PCBs							2.9E-10						1.1E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-09						2.8E-04
				Total PCBs (DL & NDL; based on KM TEQ)							2.3E-09						2.6E-04
				Total PAHs							1.3E-09						2.3E-05
				Total Organics							0.0E+00						3.6E-04
				Total Inorganics							1.2E-08						1.4E-03
		Sediment Ingestion Total (excluding KM TEQs)									2.3E-08						2.6E-03
		Sediment Ingestion Total (based on KM TEQs)									2.3E-08						2.6E-03
Sediment	Sediment	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	3.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.9E-09	--	2.5E-13	mg/kg-day	7.0E-10	mg/kg-day	3.6E-04
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-10	--	1.3E-14	mg/kg-day	7.0E-10	mg/kg-day	1.9E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--	1.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.7E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	6.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-11	--	4.8E-14	mg/kg-day	7.0E-09	mg/kg-day	6.9E-06
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-11	--	2.9E-14	mg/kg-day	7.0E-09	mg/kg-day	4.1E-06
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-10	--	8.5E-13	mg/kg-day	7.0E-08	mg/kg-day	1.2E-05
				OCDD	3E-03	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.0E-11	--	8.7E-12	mg/kg-day	2.3E-06	mg/kg-day	3.7E-06
				2,3,7,8-TCDF	1E-05	mg/kg	5.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.8E-11	--	4.6E-14	mg/kg-day	7.0E-09	mg/kg-day	6.5E-06
				1,2,3,7,8-PeCDF	9E-06	mg/kg	4.0E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.8E-11	--	3.1E-14	mg/kg-day	2.3E-08	mg/kg-day	1.3E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.7E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.0E-10	--	5.2E-14	mg/kg-day	2.3E-09	mg/kg-day	2.2E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3.4E-05
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	8.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	6.2E-14	mg/kg-day	7.0E-09	mg/kg-day	8.9E-06
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	6.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-12	--	4.7E-15	mg/kg-day	7.0E-09	mg/kg-day	6.7E-07
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-11	--	3.5E-14	mg/kg-day	7.0E-09	mg/kg-day	5.0E-06
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-10	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.5E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.0E-12	--	3.6E-14	mg/kg-day	7.0E-08	mg/kg-day	5.2E-07
				OCDF	4E-04	mg/kg	1.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.6E-12	--	1.5E-12	mg/kg-day	2.3E-06	mg/kg-day	6.4E-07
				KM TEQ DF	1E-04	mg/kg	4.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-09	--	3.5E-13	mg/kg-day	7.0E-10	mg/kg-day	4.9E-04
				PCB-77	8E-03	mg/kg	3.3E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.9E-11	--	2.6E-11	mg/kg-day	7.0E-06	mg/kg-day	3.7E-06
				PCB-81	3E-04	mg/kg	1.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.7E-12	--	9.9E-13	mg/kg-day	2.3E-06	mg/kg-day	4.2E-07
				PCB-105	1E-02	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--	4.1E-11	mg/kg-day	2.3E-05	mg/kg-day	1.8E-06
				PCB-114	9E-04	mg/kg	3.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-12	--	2.8E-12	mg/kg-day	2.3E-05	mg/kg-day	1.2E-07
				PCB-118	4E-02	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-11	--	1.2E-10	mg/kg-day	2.3E-05	mg/kg-day	5.1E-06
				PCB-123	1E-03	mg/kg	4.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-12	--	3.5E-12	mg/kg-day	2.3E-05	mg/kg-day	1.5E-07
				PCB-126	2E-04	mg/kg	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--	8.1E-13	mg/kg-day	7.0E-09	mg/kg-day	1.2E-04
				PCB-156/157	3E-03	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-12	--	1.1E-11	mg/kg-day	2.3E-05	mg/kg-day	4.6E-07
				PCB-167	1E-03	mg/kg	4.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-12	--	3.8E-12	mg/kg-day	2.3E-05	mg/kg-day	1.6E-07
				PCB-169	3E-04	mg/kg	1.1E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.8E-10	--	8.4E-13	mg/kg-day	2.3E-08	mg/kg-day	3.6E-05
				PCB-189	2E-04	mg/kg	1.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-13	--	8.1E-13	mg/kg-day	2.3E-05	mg/kg-day	3.5E-08

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ PCB	3E-05	mg/kg	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.4E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-09	--	1.0E-08	mg/kg-day	2.0E-05	mg/kg-day	5.1E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	3.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.9E-10	M	3.0E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	3.8E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.8E-09	M	2.9E-08	mg/kg-day	3.0E-04	mg/kg-day	9.8E-05
				Benzo(b)fluoranthene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.4E-10	M	2.6E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.2E-11	M	1.7E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	3.7E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.7E-12	M	2.9E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.8E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.8E-10	M	6.0E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-10	M	1.1E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	1.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-08	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Cadmium	3E+00	mg/kg	4.4E-11	mg/kg-day	--	--	--	--	3.4E-10	mg/kg-day	2.5E-05	mg/kg-day	1.4E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							9.0E-09						6.7E-04
				Total DLCs (based on KM TEQs)							8.6E-09						6.4E-04
				Total PCDD/Fs (excluding KM TEQ)							6.8E-09						5.1E-04
				Total PCDD/Fs (based on KM TEQ)							6.7E-09						4.9E-04
				Total DL-PCBs (excluding KM TEQ)							2.2E-09						1.6E-04
				Total DL-PCBs (based on KM TEQ)							2.0E-09						1.4E-04
				Total Non-DL PCBs							1.3E-09						5.1E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							3.5E-09						6.7E-04
				Total PCBs (DL & NDL; based on KM TEQ)							3.3E-09						6.6E-04
				Total PAHs							5.4E-09						9.8E-05
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							2.0E-08						3.5E-04
		Sediment Dermal Total (excluding KM TEQs)									3.5E-08						1.6E-03
		Sediment Dermal Total (based on KM TEQs)									3.5E-08						1.6E-03
Boater Sediment Total (excluding KM TEQs)											5.9E-08						4.3E-03
Boater Sediment Total (based on KM TEQs)											5.8E-08						4.2E-03
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-11	--	1.5E-15	mg/kg-day	7.0E-10	mg/kg-day	2E-06
				1,2,3,7,8-PeCDD	4E-07	µg/L	6.7E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-11	--	5.2E-16	mg/kg-day	7.0E-10	mg/kg-day	7E-07
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	4.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-12	--	3.8E-15	mg/kg-day	7.0E-09	mg/kg-day	5E-07

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	7.7E-17	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-12	--	6.0E-16	mg/kg-day	7.0E-09	mg/kg-day	9E-08
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	1.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-12	--	1.1E-15	mg/kg-day	7.0E-09	mg/kg-day	2E-07
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	9.8E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-12	--	7.6E-15	mg/kg-day	7.0E-08	mg/kg-day	1E-07
				OCDD	6E-05	µg/L	1.0E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.6E-13	--	7.9E-14	mg/kg-day	2.3E-06	mg/kg-day	3E-08
				2,3,7,8-TCDF	5E-07	µg/L	7.5E-17	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-12	--	5.8E-16	mg/kg-day	7.0E-09	mg/kg-day	8E-08
				1,2,3,7,8-PeCDF	4E-07	µg/L	6.0E-17	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-13	--	4.7E-16	mg/kg-day	2.3E-08	mg/kg-day	2E-08
				2,3,4,7,8-PeCDF	7E-07	µg/L	1.0E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.7E-12	--	8.1E-16	mg/kg-day	2.3E-09	mg/kg-day	3E-07
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-12	--	2.2E-15	mg/kg-day	7.0E-09	mg/kg-day	3E-07
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	7.0E-17	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-12	--	5.4E-16	mg/kg-day	7.0E-09	mg/kg-day	8E-08
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	4.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-12	--	3.2E-15	mg/kg-day	7.0E-09	mg/kg-day	5E-07
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	4.4E-17	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-13	--	3.4E-16	mg/kg-day	7.0E-09	mg/kg-day	5E-08
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	1.2E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.8E-12	--	9.5E-15	mg/kg-day	7.0E-08	mg/kg-day	1E-07
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	7.7E-17	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.2E-13	--	6.0E-16	mg/kg-day	7.0E-08	mg/kg-day	9E-09
				OCDF	1E-05	µg/L	2.3E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-13	--	1.8E-14	mg/kg-day	2.3E-06	mg/kg-day	8E-09
				KM TEQ DF	2E-06	µg/L	3.8E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.8E-11	--	3.0E-15	mg/kg-day	7.0E-10	mg/kg-day	4E-06
				PCB-77	2E-05	µg/L	3.2E-15	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.9E-14	--	2.5E-14	mg/kg-day	7.0E-06	mg/kg-day	4E-09
				PCB-81	7E-07	µg/L	1.1E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.8E-15	--	8.4E-16	mg/kg-day	2.3E-06	mg/kg-day	4E-10
				PCB-105	7E-05	µg/L	1.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-14	--	9.0E-14	mg/kg-day	2.3E-05	mg/kg-day	4E-09
				PCB-114	4E-06	µg/L	6.0E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-15	--	4.7E-15	mg/kg-day	2.3E-05	mg/kg-day	2E-10
				PCB-118	2E-04	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	2.0E-13	mg/kg-day	2.3E-05	mg/kg-day	9E-09
				PCB-123	3E-06	µg/L	5.0E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-15	--	3.9E-15	mg/kg-day	2.3E-05	mg/kg-day	2E-10
				PCB-126	7E-07	µg/L	1.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-12	--	8.3E-16	mg/kg-day	7.0E-09	mg/kg-day	1E-07
				PCB-156/157	2E-05	µg/L	3.1E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-14	--	2.4E-14	mg/kg-day	2.3E-05	mg/kg-day	1E-09
				PCB-167	7E-06	µg/L	1.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-15	--	8.0E-15	mg/kg-day	2.3E-05	mg/kg-day	3E-10
				PCB-169	4E-07	µg/L	6.3E-17	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.9E-13	--	4.9E-16	mg/kg-day	2.3E-08	mg/kg-day	2E-08
				PCB-189	9E-07	µg/L	1.3E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.1E-16	--	1.0E-15	mg/kg-day	2.3E-05	mg/kg-day	4E-11
				KM TEQ PCB	1E-07	µg/L	1.7E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-12	--	1.3E-16	mg/kg-day	7.0E-10	mg/kg-day	2E-07
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.9E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-13	M	1.4E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	2.4E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.4E-12	M	1.9E-11	mg/kg-day	3.0E-04	mg/kg-day	6E-08
				Benzo(b)fluoranthene	2E-02	µg/L	3.2E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.2E-13	M	2.5E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.4E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.4E-14	M	1.1E-11	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	3.2E-12	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.2E-15	M	2.5E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	6.1E-13	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.1E-13	M	4.8E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	1.4E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-13	M	1.1E-11	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	5.6E-12	mg/kg-day	--	--	--	--	4.3E-11	mg/kg-day	2.0E-02	mg/kg-day	2E-09
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.9E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.8E-13	--	1.5E-10	mg/kg-day	1.0E-02	mg/kg-day	1E-08
				Trichloroethylene	1E-01	µg/L	2.1E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	9.5E-13	M	1.6E-10	mg/kg-day	5.0E-04	mg/kg-day	3E-07
				Inorganics													
				Antimony	7E-01	µg/L	1.1E-10	mg/kg-day	--	--	--	--	8.5E-10	mg/kg-day	4.0E-04	mg/kg-day	2E-06
				Arsenic, inorganic	1E+00	µg/L	2.0E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-10	--	1.6E-09	mg/kg-day	3.0E-04	mg/kg-day	5E-06
				Chromium [as Cr(III)]	1E+00	µg/L	2.0E-10	mg/kg-day	--	--	--	--	1.6E-09	mg/kg-day	1.5E+00	mg/kg-day	1E-09
				Chromium (VI)	2E-01	µg/L	3.5E-11	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.8E-11	M	2.7E-10	mg/kg-day	3.0E-03	mg/kg-day	9E-08
				Iron	5E+02	µg/L	8.4E-08	mg/kg-day	--	--	--	--	6.5E-07	mg/kg-day	7.0E-01	mg/kg-day	9E-07
				Manganese	7E+01	µg/L	1.1E-08	mg/kg-day	--	--	--	--	8.5E-08	mg/kg-day	2.4E-02	mg/kg-day	4E-06
				Mercury	3E-02	µg/L	4.2E-12	mg/kg-day	--	--	--	--	3.2E-11	mg/kg-day	3.0E-04	mg/kg-day	1E-07
				Thallium	1E-02	µg/L	1.9E-12	mg/kg-day	--	--	--	--	1.5E-11	mg/kg-day	1.0E-05	mg/kg-day	2E-06
				Titanium	8E+00	µg/L	1.2E-09	mg/kg-day	--	--	--	--	9.7E-09	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											7.4E-11						5.5E-06
Total DLCs (based on KM TEQs)											6.0E-11						4.5E-06

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD Value	RfD Units	Hazard Quotient
				Total PCDD/Fs (excluding KM TEQ)							7.2E-11						5.3E-06
				Total PCDD/Fs (based on KM TEQ)							5.8E-11						4.3E-06
				Total DL-PCBs (excluding KM TEQ)							2.1E-12						1.6E-07
				Total DL-PCBs (based on KM TEQ)							2.6E-12						1.9E-07
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							2.1E-12						1.6E-07
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-12						1.9E-07
				Total PAHs							3.7E-12						6.4E-08
				Total Organics							1.5E-12						3.4E-07
				Total Inorganics							3.2E-10						1.4E-05
		Surface Water Ingestion Total (excluding KM TEQs)									4.0E-10						1.9E-05
		Surface Water Ingestion Total (based on KM TEQs)									3.8E-10						1.8E-05
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Naphthalene	4E-02	µg/L	4.5E-10	mg/kg-day	--	--	--	--	3.5E-09	mg/kg-day	2.0E-02	mg/kg-day	2E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	2.1E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	6.4E-12	--	1.6E-09	mg/kg-day	1.0E-02	mg/kg-day	2E-07
				Trichloroethylene	1E-01	µg/L	4.2E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.9E-11	M	3.2E-09	mg/kg-day	5.0E-04	mg/kg-day	6E-06
				Inorganics													
				Antimony	7E-01	µg/L	6.5E-11	mg/kg-day	--	--	--	--	5.0E-10	mg/kg-day	6.0E-05	mg/kg-day	8E-06
				Arsenic, inorganic	1E+00	µg/L	1.2E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.8E-10	--	9.2E-10	mg/kg-day	3.0E-04	mg/kg-day	3E-06
				Chromium [as Cr(III)]	1E+00	µg/L	1.2E-10	mg/kg-day	--	--	--	--	9.3E-10	mg/kg-day	2.0E-02	mg/kg-day	5E-08
				Chromium (VI)	2E-01	µg/L	4.1E-11	mg/kg-day	2.0E+01	(mg/kg-day)-1	8.3E-10	M	3.2E-10	mg/kg-day	7.5E-05	mg/kg-day	4E-06
				Iron	5E+02	µg/L	4.9E-08	mg/kg-day	--	--	--	--	3.8E-07	mg/kg-day	7.0E-01	mg/kg-day	5E-07
				Manganese	7E+01	µg/L	6.4E-09	mg/kg-day	--	--	--	--	5.0E-08	mg/kg-day	9.6E-04	mg/kg-day	5E-05
				Mercury	3E-02	µg/L	2.4E-12	mg/kg-day	--	--	--	--	1.9E-11	mg/kg-day	2.1E-05	mg/kg-day	9E-07
				Thallium	1E-02	µg/L	1.1E-12	mg/kg-day	--	--	--	--	8.9E-12	mg/kg-day	1.0E-05	mg/kg-day	9E-07
				Titanium	8E+00	µg/L	7.4E-10	mg/kg-day	--	--	--	--	5.7E-09	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.7E-07
				Total Organics							2.6E-11						6.7E-06
				Total Inorganics							1.0E-09						7.0E-05
		Surface Water Dermal Total (excluding KM TEQs)									1.0E-09						7.7E-05
		Surface Water Dermal Total (based on KM TEQs)									1.0E-09						7.7E-05
Wader Surface Water Total (excluding KM TEQs)											1.4E-09						9.6E-05
Wader Surface Water Total (based on KM TEQs)											1.4E-09						9.5E-05
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											1.8E-07						1.1E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)											1.8E-07						1.1E-02
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-10	--	1.5E-14	mg/kg-day	7.0E-10	mg/kg-day	2E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	6.6E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.9E-11	--	5.1E-15	mg/kg-day	7.0E-10	mg/kg-day	7E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	4.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.2E-11	--	3.7E-14	mg/kg-day	7.0E-09	mg/kg-day	5E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	7.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-11	--	6.0E-15	mg/kg-day	7.0E-09	mg/kg-day	9E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	1.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.0E-11	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	2E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	9.7E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.5E-11	--	7.5E-14	mg/kg-day	7.0E-08	mg/kg-day	1E-06
				OCDD	6E-05	µg/L	1.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.6E-12	--	7.9E-13	mg/kg-day	2.3E-06	mg/kg-day	3E-07
				2,3,7,8-TCDF	5E-07	µg/L	7.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-11	--	5.8E-15	mg/kg-day	7.0E-09	mg/kg-day	8E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	5.9E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-12	--	4.6E-15	mg/kg-day	2.3E-08	mg/kg-day	2E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	1.0E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.6E-11	--	8.0E-15	mg/kg-day	2.3E-09	mg/kg-day	3E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-11	--	2.2E-14	mg/kg-day	7.0E-09	mg/kg-day	3E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	6.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-11	--	5.4E-15	mg/kg-day	7.0E-09	mg/kg-day	8E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	4.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-11	--	3.2E-14	mg/kg-day	7.0E-09	mg/kg-day	5E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	4.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-12	--	3.4E-15	mg/kg-day	7.0E-09	mg/kg-day	5E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	1.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.8E-11	--	9.4E-14	mg/kg-day	7.0E-08	mg/kg-day	1E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	7.6E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-12	--	5.9E-15	mg/kg-day	7.0E-08	mg/kg-day	8E-08
				OCDF	1E-05	µg/L	2.3E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.0E-12	--	1.8E-13	mg/kg-day	2.3E-06	mg/kg-day	8E-08
				KM TEQ DF	2E-06	µg/L	3.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.7E-10	--	3.0E-14	mg/kg-day	7.0E-10	mg/kg-day	4E-05

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-77	2E-05	µg/L	3.2E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.8E-13	--	2.5E-13	mg/kg-day	7.0E-06	mg/kg-day	4E-08
				PCB-81	7E-07	µg/L	1.1E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.8E-14	--	8.3E-15	mg/kg-day	2.3E-06	mg/kg-day	4E-09
				PCB-105	7E-05	µg/L	1.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.2E-13	--	8.9E-13	mg/kg-day	2.3E-05	mg/kg-day	4E-08
				PCB-114	4E-06	µg/L	6.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-14	--	4.6E-14	mg/kg-day	2.3E-05	mg/kg-day	2E-09
				PCB-118	2E-04	µg/L	2.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-12	--	2.0E-12	mg/kg-day	2.3E-05	mg/kg-day	9E-08
				PCB-123	3E-06	µg/L	5.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-14	--	3.9E-14	mg/kg-day	2.3E-05	mg/kg-day	2E-09
				PCB-126	7E-07	µg/L	1.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-11	--	8.2E-15	mg/kg-day	7.0E-09	mg/kg-day	1E-06
				PCB-156/157	2E-05	µg/L	3.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-13	--	2.4E-13	mg/kg-day	2.3E-05	mg/kg-day	1E-08
				PCB-167	7E-06	µg/L	1.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-14	--	8.0E-14	mg/kg-day	2.3E-05	mg/kg-day	3E-09
				PCB-169	4E-07	µg/L	6.3E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.8E-12	--	4.9E-15	mg/kg-day	2.3E-08	mg/kg-day	2E-07
				PCB-189	9E-07	µg/L	1.3E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.0E-15	--	1.0E-14	mg/kg-day	2.3E-05	mg/kg-day	4E-10
				KM TEQ PCB	1E-07	µg/L	1.7E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-11	--	1.3E-15	mg/kg-day	7.0E-10	mg/kg-day	2E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.8E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-12	M	1.4E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	2.4E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.4E-11	M	1.8E-10	mg/kg-day	3.0E-04	mg/kg-day	6E-07
				Benzo(b)fluoranthene	2E-02	µg/L	3.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.2E-12	M	2.5E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.4E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.4E-13	M	1.1E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	3.1E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.1E-14	M	2.4E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	6.1E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.1E-12	M	4.7E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	1.4E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-12	M	1.1E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	5.5E-11	mg/kg-day	--	--	--	--	4.3E-10	mg/kg-day	2.0E-02	mg/kg-day	2E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.9E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.8E-12	--	1.5E-09	mg/kg-day	1.0E-02	mg/kg-day	1E-07
				Trichloroethylene	1E-01	µg/L	2.0E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	9.4E-12	M	1.6E-09	mg/kg-day	5.0E-04	mg/kg-day	3E-06
				Inorganics													
				Antimony	7E-01	µg/L	1.1E-09	mg/kg-day	--	--	--	--	8.5E-09	mg/kg-day	4.0E-04	mg/kg-day	2E-05
				Arsenic, inorganic	1E+00	µg/L	2.0E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-09	--	1.5E-08	mg/kg-day	3.0E-04	mg/kg-day	5E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.0E-09	mg/kg-day	--	--	--	--	1.6E-08	mg/kg-day	1.5E+00	mg/kg-day	1E-08
				Chromium (VI)	2E-01	µg/L	3.5E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.7E-10	M	2.7E-09	mg/kg-day	3.0E-03	mg/kg-day	9E-07
				Iron	5E+02	µg/L	8.3E-07	mg/kg-day	--	--	--	--	6.5E-06	mg/kg-day	7.0E-01	mg/kg-day	9E-06
				Manganese	7E+01	µg/L	1.1E-07	mg/kg-day	--	--	--	--	8.4E-07	mg/kg-day	2.4E-02	mg/kg-day	4E-05
				Mercury	3E-02	µg/L	4.1E-11	mg/kg-day	--	--	--	--	3.2E-10	mg/kg-day	3.0E-04	mg/kg-day	1E-06
				Thallium	1E-02	µg/L	1.9E-11	mg/kg-day	--	--	--	--	1.5E-10	mg/kg-day	1.0E-05	mg/kg-day	2E-05
				Titanium	8E+00	µg/L	1.2E-08	mg/kg-day	--	--	--	--	9.6E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							7.3E-10						5.4E-05
				Total DLCs (based on KM TEQs)							6.0E-10						4.4E-05
				Total PCDD/Fs (excluding KM TEQ)							7.1E-10						5.3E-05
				Total PCDD/Fs (based on KM TEQ)							5.7E-10						4.2E-05
				Total DL-PCBs (excluding KM TEQ)							2.1E-11						1.6E-06
				Total DL-PCBs (based on KM TEQ)							2.6E-11						1.9E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							2.1E-11						1.6E-06
				Total PCBs (DL & NDL; based on KM TEQ)							2.6E-11						1.9E-06
				Total PAHs							3.6E-11						6.4E-07
				Total Organics							1.5E-11						3.3E-06
				Total Inorganics							3.2E-09						1.3E-04
		Surface Water Ingestion Total (excluding KM TEQs)									3.9E-09						1.9E-04
		Surface Water Ingestion Total (based on KM TEQs)									3.8E-09						1.8E-04
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	3.4E-09	mg/kg-day	--	--	--	--	2.7E-08	mg/kg-day	2.0E-02	mg/kg-day	1E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	5.4E-11	--	1.3E-08	mg/kg-day	1.0E-02	mg/kg-day	1E-06
				Trichloroethylene	1E-01	µg/L	3.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.5E-10	M	2.6E-08	mg/kg-day	5.0E-04	mg/kg-day	5E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.1E-09	mg/kg-day	--	--	--	--	8.4E-09	mg/kg-day	6.0E-05	mg/kg-day	1E-04
				Arsenic, inorganic	1E+00	µg/L	2.0E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-09	--	1.5E-08	mg/kg-day	3.0E-04	mg/kg-day	5E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.0E-09	mg/kg-day	--	--	--	--	1.6E-08	mg/kg-day	2.0E-02	mg/kg-day	8E-07
				Chromium (VI)	2E-01	µg/L	6.9E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.4E-08	M	5.4E-09	mg/kg-day	7.5E-05	mg/kg-day	7E-05
				Iron	5E+02	µg/L	8.3E-07	mg/kg-day	--	--	--	--	6.4E-06	mg/kg-day	7.0E-01	mg/kg-day	9E-06
				Manganese	7E+01	µg/L	1.1E-07	mg/kg-day	--	--	--	--	8.4E-07	mg/kg-day	9.6E-04	mg/kg-day	9E-04
				Mercury	3E-02	µg/L	4.1E-11	mg/kg-day	--	--	--	--	3.2E-10	mg/kg-day	2.1E-05	mg/kg-day	2E-05
				Thallium	1E-02	µg/L	1.9E-11	mg/kg-day	--	--	--	--	1.5E-10	mg/kg-day	1.0E-05	mg/kg-day	1E-05
				Titanium	8E+00	µg/L	1.2E-08	mg/kg-day	--	--	--	--	9.6E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD Value	RfD Units	Hazard Quotient
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						1.3E-06
				Total Organics							2.1E-10						5.3E-05
				Total Inorganics							1.7E-08						1.2E-03
		Surface Water Dermal Total (excluding KM TEQs)									1.7E-08						1.2E-03
		Surface Water Dermal Total (based on KM TEQs)									1.7E-08						1.2E-03
Swimmer Surface Water Total (excluding KM TEQs)											2.1E-08						1.4E-03
Swimmer Surface Water Total (based on KM TEQs)											2.1E-08						1.4E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											2.0E-07						1.2E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											2.0E-07						1.2E-02
Surface Water	Surface Water	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	9.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.5E-09	--	7.7E-14	mg/kg-day	7.0E-10	mg/kg-day	1E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	3.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.1E-10	--	2.7E-14	mg/kg-day	7.0E-10	mg/kg-day	4E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	3E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	4.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.0E-11	--	3.1E-14	mg/kg-day	7.0E-09	mg/kg-day	4E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	7.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.0E-10	--	5.4E-14	mg/kg-day	7.0E-09	mg/kg-day	8E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	5.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.5E-11	--	3.9E-13	mg/kg-day	7.0E-08	mg/kg-day	6E-06
				OCDD	6E-05	µg/L	5.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.4E-11	--	4.1E-12	mg/kg-day	2.3E-06	mg/kg-day	2E-06
				2,3,7,8-TCDF	5E-07	µg/L	3.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.8E-11	--	3.0E-14	mg/kg-day	7.0E-09	mg/kg-day	4E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	3.1E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.4E-11	--	2.4E-14	mg/kg-day	2.3E-08	mg/kg-day	1E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	5.3E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.4E-10	--	4.1E-14	mg/kg-day	2.3E-09	mg/kg-day	2E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-10	--	1.1E-13	mg/kg-day	7.0E-09	mg/kg-day	2E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.4E-11	--	2.8E-14	mg/kg-day	7.0E-09	mg/kg-day	4E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-10	--	1.7E-13	mg/kg-day	7.0E-09	mg/kg-day	2E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.4E-11	--	1.8E-14	mg/kg-day	7.0E-09	mg/kg-day	3E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	6.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.4E-11	--	4.9E-13	mg/kg-day	7.0E-08	mg/kg-day	7E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	3.9E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.9E-12	--	3.1E-14	mg/kg-day	7.0E-08	mg/kg-day	4E-07
				OCDF	1E-05	µg/L	1.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.3E-12	--	9.1E-13	mg/kg-day	2.3E-06	mg/kg-day	4E-07
				KM TEQ DF	2E-06	µg/L	2.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.9E-09	--	1.5E-13	mg/kg-day	7.0E-10	mg/kg-day	2E-04
				PCB-77	2E-05	µg/L	1.7E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-12	--	1.3E-12	mg/kg-day	7.0E-06	mg/kg-day	2E-07
				PCB-81	7E-07	µg/L	5.5E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.5E-13	--	4.3E-14	mg/kg-day	2.3E-06	mg/kg-day	2E-08
				PCB-105	7E-05	µg/L	5.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.7E-12	--	4.6E-12	mg/kg-day	2.3E-05	mg/kg-day	2E-07
				PCB-114	4E-06	µg/L	3.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-13	--	2.4E-13	mg/kg-day	2.3E-05	mg/kg-day	1E-08
				PCB-118	2E-04	µg/L	1.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.9E-12	--	1.0E-11	mg/kg-day	2.3E-05	mg/kg-day	4E-07
				PCB-123	3E-06	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-13	--	2.0E-13	mg/kg-day	2.3E-05	mg/kg-day	9E-09
				PCB-126	7E-07	µg/L	5.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-11	--	4.2E-14	mg/kg-day	7.0E-09	mg/kg-day	6E-06
				PCB-156/157	2E-05	µg/L	1.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-13	--	1.2E-12	mg/kg-day	2.3E-05	mg/kg-day	5E-08
				PCB-167	7E-06	µg/L	5.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-13	--	4.1E-13	mg/kg-day	2.3E-05	mg/kg-day	2E-08
				PCB-169	4E-07	µg/L	3.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.5E-11	--	2.5E-14	mg/kg-day	2.3E-08	mg/kg-day	1E-06
				PCB-189	9E-07	µg/L	6.9E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.1E-14	--	5.4E-14	mg/kg-day	2.3E-05	mg/kg-day	2E-09
				KM TEQ PCB	1E-07	µg/L	8.8E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-10	--	6.8E-15	mg/kg-day	7.0E-10	mg/kg-day	1E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	9.5E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.5E-12	M	7.4E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.2E-10	M	9.5E-10	mg/kg-day	3.0E-04	mg/kg-day	3E-06

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Benzo(b)fluoranthene	2E-02	µg/L	1.7E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-11	M	1.3E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	7.4E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	7.4E-13	M	5.8E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.6E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-13	M	1.3E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	3.1E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.1E-11	M	2.4E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	7.0E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.0E-12	M	5.4E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.9E-10	mg/kg-day	--	--	--	--	2.2E-09	mg/kg-day	2.0E-02	mg/kg-day	1E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	9.6E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	3.0E-11	--	7.5E-09	mg/kg-day	1.0E-02	mg/kg-day	8E-07
				Trichloroethylene	1E-01	µg/L	1.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	4.9E-11	M	8.2E-09	mg/kg-day	5.0E-04	mg/kg-day	2E-05
				Inorganics													
				Antimony	7E-01	µg/L	5.6E-09	mg/kg-day	--	--	--	--	4.4E-08	mg/kg-day	4.0E-04	mg/kg-day	1E-04
				Arsenic, inorganic	1E+00	µg/L	1.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.5E-08	--	8.0E-08	mg/kg-day	3.0E-04	mg/kg-day	3E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.0E-08	mg/kg-day	--	--	--	--	8.1E-08	mg/kg-day	1.5E+00	mg/kg-day	5E-08
				Chromium (VI)	2E-01	µg/L	1.8E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	9.0E-10	M	1.4E-08	mg/kg-day	3.0E-03	mg/kg-day	5E-06
				Iron	5E+02	µg/L	4.3E-06	mg/kg-day	--	--	--	--	3.3E-05	mg/kg-day	7.0E-01	mg/kg-day	5E-05
				Manganese	7E+01	µg/L	5.6E-07	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	2.4E-02	mg/kg-day	2E-04
				Mercury	3E-02	µg/L	2.1E-10	mg/kg-day	--	--	--	--	1.7E-09	mg/kg-day	3.0E-04	mg/kg-day	6E-06
				Thallium	1E-02	µg/L	1.0E-10	mg/kg-day	--	--	--	--	7.8E-10	mg/kg-day	1.0E-05	mg/kg-day	8E-05
				Titanium	8E+00	µg/L	6.4E-08	mg/kg-day	--	--	--	--	5.0E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							3.8E-09						2.8E-04
				Total DLCs (based on KM TEQs)							3.1E-09						2.3E-04
				Total PCDD/Fs (excluding KM TEQ)							3.7E-09						2.7E-04
				Total PCDD/Fs (based on KM TEQ)							2.9E-09						2.2E-04
				Total DL-PCBs (excluding KM TEQ)							1.1E-10						8.1E-06
				Total DL-PCBs (based on KM TEQ)							1.3E-10						9.8E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-10						8.1E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-10						9.8E-06
				Total PAHs							1.9E-10						3.3E-06
				Total Organics							7.9E-11						1.7E-05
				Total Inorganics							1.6E-08						6.9E-04
		Surface Water Ingestion Total (excluding KM TEQs)									2.0E-08						9.9E-04
		Surface Water Ingestion Total (based on KM TEQs)									2.0E-08						9.4E-04
Surface Water	Surface Water	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	5.6E-09	mg/kg-day	--	--	--	--	4.3E-08	mg/kg-day	2.0E-02	mg/kg-day	2E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	2.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	8.2E-11	--	2.1E-08	mg/kg-day	1.0E-02	mg/kg-day	2E-06
				Trichloroethylene	1E-01	µg/L	5.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.4E-10	M	4.1E-08	mg/kg-day	5.0E-04	mg/kg-day	8E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.4E-09	mg/kg-day	--	--	--	--	1.1E-08	mg/kg-day	6.0E-05	mg/kg-day	2E-04
				Arsenic, inorganic	1E+00	µg/L	2.5E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.8E-09	--	2.0E-08	mg/kg-day	3.0E-04	mg/kg-day	7E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.5E-09	mg/kg-day	--	--	--	--	2.0E-08	mg/kg-day	2.0E-02	mg/kg-day	1E-06
				Chromium (VI)	2E-01	µg/L	8.8E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	1.8E-08	M	6.8E-09	mg/kg-day	7.5E-05	mg/kg-day	9E-05
				Iron	5E+02	µg/L	1.1E-06	mg/kg-day	--	--	--	--	8.2E-06	mg/kg-day	7.0E-01	mg/kg-day	1E-05
				Manganese	7E+01	µg/L	1.4E-07	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	9.6E-04	mg/kg-day	1E-03
				Mercury	3E-02	µg/L	5.2E-11	mg/kg-day	--	--	--	--	4.0E-10	mg/kg-day	2.1E-05	mg/kg-day	2E-05
				Thallium	1E-02	µg/L	2.4E-11	mg/kg-day	--	--	--	--	1.9E-10	mg/kg-day	1.0E-05	mg/kg-day	2E-05
				Titanium	8E+00	µg/L	1.6E-08	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						2.2E-06
				Total Organics							3.2E-10						8.4E-05
				Total Inorganics							2.1E-08						1.5E-03
		Surface Water Dermal Total (excluding KM TEQs)									2.2E-08						1.6E-03
		Surface Water Dermal Total (based on KM TEQs)									2.2E-08						1.6E-03

TABLE 7.5 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]	Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Boater Surface Water Total (excluding KM TEQs)											4.2E-08					2.6E-03
Boater Surface Water Total (based on KM TEQs)											4.1E-08					2.5E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)											1.0E-07					6.8E-03
Boater Sediment Total + Surface Water Total (based on KM TEQs)											9.9E-08					6.7E-03

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-08	--	2.0E-12	mg/kg-day	7.0E-10	mg/kg-day	2.8E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.5E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	9.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-10	--	6.6E-12	mg/kg-day	7.0E-08	mg/kg-day	9.4E-05
				OCDD	3E-03	mg/kg	5.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-10	--	6.7E-11	mg/kg-day	2.3E-06	mg/kg-day	2.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-10	--	3.5E-13	mg/kg-day	7.0E-09	mg/kg-day	5.0E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.4E-11	--	2.4E-13	mg/kg-day	2.3E-08	mg/kg-day	1.0E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--	4.0E-13	mg/kg-day	2.3E-09	mg/kg-day	1.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.7E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-10	--	4.8E-13	mg/kg-day	7.0E-09	mg/kg-day	6.9E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-11	--	3.6E-14	mg/kg-day	7.0E-09	mg/kg-day	5.2E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.8E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.2E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-11	--	2.8E-13	mg/kg-day	7.0E-08	mg/kg-day	4.0E-06
				OCDF	4E-04	mg/kg	9.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.4E-11	--	1.1E-11	mg/kg-day	2.3E-06	mg/kg-day	4.9E-06
				KM TEQ DF	1E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--	2.7E-12	mg/kg-day	7.0E-10	mg/kg-day	3.8E-03
				PCB-77	8E-03	mg/kg	1.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10	--	2.0E-10	mg/kg-day	7.0E-06	mg/kg-day	2.8E-05
				PCB-81	3E-04	mg/kg	6.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--	7.6E-12	mg/kg-day	2.3E-06	mg/kg-day	3.3E-06
				PCB-105	1E-02	mg/kg	2.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	3.2E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-12	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.4E-07
				PCB-118	4E-02	mg/kg	8.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-10	--	9.3E-10	mg/kg-day	2.3E-05	mg/kg-day	4.0E-05
				PCB-123	1E-03	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	2.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	5.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-09	--	6.3E-12	mg/kg-day	7.0E-09	mg/kg-day	9.0E-04
				PCB-156/157	3E-03	mg/kg	7.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-11	--	8.3E-11	mg/kg-day	2.3E-05	mg/kg-day	3.6E-06
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-169	3E-04	mg/kg	5.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-09	--	6.5E-12	mg/kg-day	2.3E-08	mg/kg-day	2.8E-04
				PCB-189	2E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-12	--	6.2E-12	mg/kg-day	2.3E-05	mg/kg-day	2.7E-07
				KM TEQ PCB	3E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	7.8E-13	mg/kg-day	7.0E-10	mg/kg-day	1.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	--	1.7E-08	mg/kg-day	2.0E-05	mg/kg-day	8.5E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.6E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-10	M	5.4E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-09	M	5.2E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-10	M	4.7E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-11	M	3.1E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-12	M	5.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-09	M	1.1E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-10	M	1.9E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.2E-08	mg/kg-day	--	--	--	--	1.5E-07	mg/kg-day	4.0E-03	mg/kg-day	3.6E-05
				TPH (C9-C40)	4E+02	mg/kg	9.1E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	4.0E-03	mg/kg-day	2.6E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.0E+00	mg/kg-day	3.1E-04
				Antimony	2E+00	mg/kg	5.2E-09	mg/kg-day	--	--	--	--	6.0E-08	mg/kg-day	4.0E-04	mg/kg-day	1.5E-04
				Arsenic, inorganic	3E+01	mg/kg	4.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.1E-08	--	4.7E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Cadmium	3E+00	mg/kg	6.8E-09	mg/kg-day	--	--	--	--	7.9E-08	mg/kg-day	1.0E-03	mg/kg-day	7.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	2.8E-06	mg/kg-day	1.5E+00	mg/kg-day	1.8E-06
				Cobalt	1E+01	mg/kg	3.1E-08	mg/kg-day	--	--	--	--	3.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Copper	2E+02	mg/kg	3.7E-07	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	1.0E-03	mg/kg-day	4.3E-03

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Chromium (VI)	1E+00	mg/kg	3.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-09	M	3.6E-08	mg/kg-day	3.0E-03	mg/kg-day	1.2E-05
				Iron	4E+04	mg/kg	9.6E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	7.0E-01	mg/kg-day	1.6E-03
				Lead	5E+02	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	1.2E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	7.8E-07	mg/kg-day	--	--	--	--	9.1E-06	mg/kg-day	2.4E-02	mg/kg-day	3.8E-04
				Mercury	2E+00	mg/kg	4.4E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Nickel	7E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	2.0E-02	mg/kg-day	8.6E-05
				Thallium	2E-01	mg/kg	5.4E-10	mg/kg-day	--	--	--	--	6.3E-09	mg/kg-day	1.0E-05	mg/kg-day	6.3E-04
				Vanadium	5E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	5.0E-03	mg/kg-day	2.6E-04
				Zinc	1E+03	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	3.0E-01	mg/kg-day	1.1E-04
				Total DLCs (excluding KM TEQs)							4.7E-08						5.2E-03
				Total DLCs (based on KM TEQs)							4.5E-08						4.9E-03
				Total PCDD/Fs (excluding KM TEQ)							3.5E-08						3.9E-03
				Total PCDD/Fs (based on KM TEQ)							3.4E-08						3.8E-03
				Total DL-PCBs (excluding KM TEQ)							1.1E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.0E-08						1.1E-03
				Total Non-DL PCBs							1.5E-09						8.5E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-08						2.1E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-08						2.0E-03
				Total PAHs							1.3E-08						1.7E-04
				Total Organics							0.0E+00						2.7E-03
				Total Inorganics							6.4E-08						1.1E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.2E-07						2.0E-02
		Sediment Ingestion Total (based on KM TEQs)									1.2E-07						2.0E-02
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	3.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	9.9E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-10	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.0E-10	--	7.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-03	mg/kg	6.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-10	--	7.1E-11	mg/kg-day	2.3E-06	mg/kg-day	3.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.8E-13	mg/kg-day	7.0E-09	mg/kg-day	5.4E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--	2.6E-13	mg/kg-day	2.3E-08	mg/kg-day	1.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--	4.3E-13	mg/kg-day	2.3E-09	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--	2.0E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-10	--	5.1E-13	mg/kg-day	7.0E-09	mg/kg-day	7.3E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-11	--	3.8E-14	mg/kg-day	7.0E-09	mg/kg-day	5.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.8E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-11	--	3.0E-13	mg/kg-day	7.0E-08	mg/kg-day	4.2E-06
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-11	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.2E-06
				KM TEQ DF	1E-04	mg/kg	2.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-08	--	2.9E-12	mg/kg-day	7.0E-10	mg/kg-day	4.1E-03
				PCB-77	8E-03	mg/kg	1.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-10	--	2.1E-10	mg/kg-day	7.0E-06	mg/kg-day	3.0E-05
				PCB-81	3E-04	mg/kg	7.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--	8.1E-12	mg/kg-day	2.3E-06	mg/kg-day	3.5E-06
				PCB-105	1E-02	mg/kg	2.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--	3.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.5E-05
				PCB-114	9E-04	mg/kg	2.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-12	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-118	4E-02	mg/kg	8.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-10	--	9.9E-10	mg/kg-day	2.3E-05	mg/kg-day	4.2E-05
				PCB-123	1E-03	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	2.9E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	5.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-09	--	6.7E-12	mg/kg-day	7.0E-09	mg/kg-day	9.6E-04
				PCB-156/157	3E-03	mg/kg	7.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	8.9E-11	mg/kg-day	2.3E-05	mg/kg-day	3.8E-06
				PCB-167	1E-03	mg/kg	2.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	3.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-169	3E-04	mg/kg	5.9E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-09	--	6.9E-12	mg/kg-day	2.3E-08	mg/kg-day	3.0E-04
				PCB-189	2E-04	mg/kg	5.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-12	--	6.6E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07
				KM TEQ PCB	3E-05	mg/kg	7.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	7.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.2E-09	--	8.4E-08	mg/kg-day	2.0E-05	mg/kg-day	4.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.2E-09	M	2.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.1E-08	M	2.4E-07	mg/kg-day	3.0E-04	mg/kg-day	8.1E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.7E-09	M	2.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.4E-10	M	1.4E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.1E-11	M	2.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.5E-09	M	5.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	9.0E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	7.2E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--	8.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.8E-03
				Cadmium	3E+00	mg/kg	2.4E-10	mg/kg-day	--	--	--	--	2.8E-09	mg/kg-day	2.5E-05	mg/kg-day	1.1E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.0E-08						5.5E-03
				Total DLCs (based on KM TEQs)							4.7E-08						5.3E-03
				Total PCDD/Fs (excluding KM TEQ)							3.7E-08						4.2E-03
				Total PCDD/Fs (based on KM TEQ)							3.7E-08						4.1E-03
				Total DL-PCBs (excluding KM TEQ)							1.2E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.1E-08						1.2E-03
				Total Non-DL PCBs							7.2E-09						4.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-08						5.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-08						5.4E-03
				Total PAHs							6.0E-08						8.1E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.1E-07						2.9E-03
		Sediment Dermal Total (excluding KM TEQs)									2.2E-07						1.3E-02
		Sediment Dermal Total (based on KM TEQs)									2.2E-07						1.3E-02
Wader Sediment Total (excluding KM TEQs)											3.5E-07						3.3E-02
Wader Sediment Total (based on KM TEQs)											3.5E-07						3.3E-02
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-08	--	2.0E-12	mg/kg-day	7.0E-10	mg/kg-day	2.8E-03

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.5E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	9.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-10	--	6.6E-12	mg/kg-day	7.0E-08	mg/kg-day	9.4E-05
				OCDD	3E-03	mg/kg	5.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-10	--	6.7E-11	mg/kg-day	2.3E-06	mg/kg-day	2.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-10	--	3.5E-13	mg/kg-day	7.0E-09	mg/kg-day	5.0E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.4E-11	--	2.4E-13	mg/kg-day	2.3E-08	mg/kg-day	1.0E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--	4.0E-13	mg/kg-day	2.3E-09	mg/kg-day	1.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.7E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-10	--	4.8E-13	mg/kg-day	7.0E-09	mg/kg-day	6.9E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-11	--	3.6E-14	mg/kg-day	7.0E-09	mg/kg-day	5.2E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.8E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.2E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-11	--	2.8E-13	mg/kg-day	7.0E-08	mg/kg-day	4.0E-06
				OCDF	4E-04	mg/kg	9.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.4E-11	--	1.1E-11	mg/kg-day	2.3E-06	mg/kg-day	4.9E-06
				KM TEQ DF	1E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--	2.7E-12	mg/kg-day	7.0E-10	mg/kg-day	3.8E-03
				PCB-77	8E-03	mg/kg	1.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10	--	2.0E-10	mg/kg-day	7.0E-06	mg/kg-day	2.8E-05
				PCB-81	3E-04	mg/kg	6.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--	7.6E-12	mg/kg-day	2.3E-06	mg/kg-day	3.3E-06
				PCB-105	1E-02	mg/kg	2.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	3.2E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-12	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.4E-07
				PCB-118	4E-02	mg/kg	8.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-10	--	9.3E-10	mg/kg-day	2.3E-05	mg/kg-day	4.0E-05
				PCB-123	1E-03	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	2.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	5.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-09	--	6.3E-12	mg/kg-day	7.0E-09	mg/kg-day	9.0E-04
				PCB-156/157	3E-03	mg/kg	7.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-11	--	8.3E-11	mg/kg-day	2.3E-05	mg/kg-day	3.6E-06
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-169	3E-04	mg/kg	5.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-09	--	6.5E-12	mg/kg-day	2.3E-08	mg/kg-day	2.8E-04
				PCB-189	2E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-12	--	6.2E-12	mg/kg-day	2.3E-05	mg/kg-day	2.7E-07
				KM TEQ PCB	3E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	7.8E-13	mg/kg-day	7.0E-10	mg/kg-day	1.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	--	1.7E-08	mg/kg-day	2.0E-05	mg/kg-day	8.5E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.6E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-10	M	5.4E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-09	M	5.2E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-10	M	4.7E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-11	M	3.1E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-12	M	5.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-09	M	1.1E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-10	M	1.9E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.2E-08	mg/kg-day	--	--	--	--	1.5E-07	mg/kg-day	4.0E-03	mg/kg-day	3.6E-05
				TPH (C9-C40)	4E+02	mg/kg	9.1E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	4.0E-03	mg/kg-day	2.6E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.0E+00	mg/kg-day	3.1E-04
				Antimony	2E+00	mg/kg	5.2E-09	mg/kg-day	--	--	--	--	6.0E-08	mg/kg-day	4.0E-04	mg/kg-day	1.5E-04
				Arsenic, inorganic	3E+01	mg/kg	4.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.1E-08	--	4.7E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Cadmium	3E+00	mg/kg	6.8E-09	mg/kg-day	--	--	--	--	7.9E-08	mg/kg-day	1.0E-03	mg/kg-day	7.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	2.8E-06	mg/kg-day	1.5E+00	mg/kg-day	1.8E-06
				Cobalt	1E+01	mg/kg	3.1E-08	mg/kg-day	--	--	--	--	3.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Copper	2E+02	mg/kg	3.7E-07	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	1.0E-03	mg/kg-day	4.3E-03
				Chromium (VI)	1E+00	mg/kg	3.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-09	M	3.6E-08	mg/kg-day	3.0E-03	mg/kg-day	1.2E-05

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Iron	4E+04	mg/kg	9.6E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	7.0E-01	mg/kg-day	1.6E-03
				Lead	5E+02	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	1.2E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	7.8E-07	mg/kg-day	--	--	--	--	9.1E-06	mg/kg-day	2.4E-02	mg/kg-day	3.8E-04
				Mercury	2E+00	mg/kg	4.4E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Nickel	7E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	2.0E-02	mg/kg-day	8.6E-05
				Thallium	2E-01	mg/kg	5.4E-10	mg/kg-day	--	--	--	--	6.3E-09	mg/kg-day	1.0E-05	mg/kg-day	6.3E-04
				Vanadium	5E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	5.0E-03	mg/kg-day	2.6E-04
				Zinc	1E+03	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	3.0E-01	mg/kg-day	1.1E-04
				Total DLCs (excluding KM TEQs)							4.7E-08						5.2E-03
				Total DLCs (based on KM TEQs)							4.5E-08						4.9E-03
				Total PCDD/Fs (excluding KM TEQ)							3.5E-08						3.9E-03
				Total PCDD/Fs (based on KM TEQ)							3.4E-08						3.8E-03
				Total DL-PCBs (excluding KM TEQ)							1.1E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.0E-08						1.1E-03
				Total Non-DL PCBs							1.5E-09						8.5E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-08						2.1E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-08						2.0E-03
				Total PAHs							1.3E-08						1.7E-04
				Total Organics							0.0E+00						2.7E-03
				Total Inorganics							6.4E-08						1.1E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.2E-07						2.0E-02
		Sediment Ingestion Total (based on KM TEQs)									1.2E-07						2.0E-02
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	3.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	9.9E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-10	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.0E-10	--	7.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-03	mg/kg	6.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-10	--	7.1E-11	mg/kg-day	2.3E-06	mg/kg-day	3.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.8E-13	mg/kg-day	7.0E-09	mg/kg-day	5.4E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--	2.6E-13	mg/kg-day	2.3E-08	mg/kg-day	1.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--	4.3E-13	mg/kg-day	2.3E-09	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--	2.0E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-10	--	5.1E-13	mg/kg-day	7.0E-09	mg/kg-day	7.3E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-11	--	3.8E-14	mg/kg-day	7.0E-09	mg/kg-day	5.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.8E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-11	--	3.0E-13	mg/kg-day	7.0E-08	mg/kg-day	4.2E-06
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-11	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.2E-06
				KM TEQ DF	1E-04	mg/kg	2.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-08	--	2.9E-12	mg/kg-day	7.0E-10	mg/kg-day	4.1E-03
				PCB-77	8E-03	mg/kg	1.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-10	--	2.1E-10	mg/kg-day	7.0E-06	mg/kg-day	3.0E-05
				PCB-81	3E-04	mg/kg	7.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--	8.1E-12	mg/kg-day	2.3E-06	mg/kg-day	3.5E-06
				PCB-105	1E-02	mg/kg	2.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--	3.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.5E-05
				PCB-114	9E-04	mg/kg	2.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-12	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-118	4E-02	mg/kg	8.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-10	--	9.9E-10	mg/kg-day	2.3E-05	mg/kg-day	4.2E-05
				PCB-123	1E-03	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	2.9E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	5.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-09	--	6.7E-12	mg/kg-day	7.0E-09	mg/kg-day	9.6E-04
				PCB-156/157	3E-03	mg/kg	7.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	8.9E-11	mg/kg-day	2.3E-05	mg/kg-day	3.8E-06
				PCB-167	1E-03	mg/kg	2.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	3.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-169	3E-04	mg/kg	5.9E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-09	--	6.9E-12	mg/kg-day	2.3E-08	mg/kg-day	3.0E-04

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-189	2E-04	mg/kg	5.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-12	--	6.6E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07
				KM TEQ PCB	3E-05	mg/kg	7.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	7.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.2E-09	--	8.4E-08	mg/kg-day	2.0E-05	mg/kg-day	4.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.2E-09	M	2.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.1E-08	M	2.4E-07	mg/kg-day	3.0E-04	mg/kg-day	8.1E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.7E-09	M	2.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.4E-10	M	1.4E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.1E-11	M	2.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.5E-09	M	5.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	9.0E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	7.2E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--	8.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.8E-03
				Cadmium	3E+00	mg/kg	2.4E-10	mg/kg-day	--	--	--	--	2.8E-09	mg/kg-day	2.5E-05	mg/kg-day	1.1E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.0E-08						5.5E-03
				Total DLCs (based on KM TEQs)							4.7E-08						5.3E-03
				Total PCDD/Fs (excluding KM TEQ)							3.7E-08						4.2E-03
				Total PCDD/Fs (based on KM TEQ)							3.7E-08						4.1E-03
				Total DL-PCBs (excluding KM TEQ)							1.2E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.1E-08						1.2E-03
				Total Non-DL PCBs							7.2E-09						4.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-08						5.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-08						5.4E-03
				Total PAHs							6.0E-08						8.1E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.1E-07						2.9E-03
		Sediment Dermal Total (excluding KM TEQs)									2.2E-07						1.3E-02
		Sediment Dermal Total (based on KM TEQs)									2.2E-07						1.3E-02
Swimmer Sediment Total (excluding KM TEQs)											3.5E-07						3.3E-02
Swimmer Sediment Total (based on KM TEQs)											3.5E-07						3.3E-02
Sediment	Sediment	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.5E-08	--	2.0E-12	mg/kg-day	7.0E-10	mg/kg-day	2.8E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	8.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.3E-09	--	1.0E-13	mg/kg-day	7.0E-10	mg/kg-day	1.5E-04

TABLE 7.6 CTE
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NEWARK BAY STUDY AREA

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Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	7.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	9.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5.3E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.8E-10	--	2.2E-13	mg/kg-day	7.0E-09	mg/kg-day	3.2E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.5E-10	--	6.6E-12	mg/kg-day	7.0E-08	mg/kg-day	9.4E-05
				OCDD	3E-03	mg/kg	5.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-10	--	6.7E-11	mg/kg-day	2.3E-06	mg/kg-day	2.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-10	--	3.5E-13	mg/kg-day	7.0E-09	mg/kg-day	5.0E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.4E-11	--	2.4E-13	mg/kg-day	2.3E-08	mg/kg-day	1.0E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--	4.0E-13	mg/kg-day	2.3E-09	mg/kg-day	1.7E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-09	--	1.9E-12	mg/kg-day	7.0E-09	mg/kg-day	2.7E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-10	--	4.8E-13	mg/kg-day	7.0E-09	mg/kg-day	6.9E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-11	--	3.6E-14	mg/kg-day	7.0E-09	mg/kg-day	5.2E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.8E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.2E-12	mg/kg-day	7.0E-08	mg/kg-day	1.2E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.6E-11	--	2.8E-13	mg/kg-day	7.0E-08	mg/kg-day	4.0E-06
				OCDF	4E-04	mg/kg	9.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.4E-11	--	1.1E-11	mg/kg-day	2.3E-06	mg/kg-day	4.9E-06
				KM TEQ DF	1E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--	2.7E-12	mg/kg-day	7.0E-10	mg/kg-day	3.8E-03
				PCB-77	8E-03	mg/kg	1.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10	--	2.0E-10	mg/kg-day	7.0E-06	mg/kg-day	2.8E-05
				PCB-81	3E-04	mg/kg	6.5E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.9E-11	--	7.6E-12	mg/kg-day	2.3E-06	mg/kg-day	3.3E-06
				PCB-105	1E-02	mg/kg	2.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-10	--	3.2E-10	mg/kg-day	2.3E-05	mg/kg-day	1.4E-05
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-12	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.4E-07
				PCB-118	4E-02	mg/kg	8.0E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-10	--	9.3E-10	mg/kg-day	2.3E-05	mg/kg-day	4.0E-05
				PCB-123	1E-03	mg/kg	2.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-11	--	2.7E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	5.4E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-09	--	6.3E-12	mg/kg-day	7.0E-09	mg/kg-day	9.0E-04
				PCB-156/157	3E-03	mg/kg	7.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-11	--	8.3E-11	mg/kg-day	2.3E-05	mg/kg-day	3.6E-06
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	3.0E-11	mg/kg-day	2.3E-05	mg/kg-day	1.3E-06
				PCB-169	3E-04	mg/kg	5.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-09	--	6.5E-12	mg/kg-day	2.3E-08	mg/kg-day	2.8E-04
				PCB-189	2E-04	mg/kg	5.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-12	--	6.2E-12	mg/kg-day	2.3E-05	mg/kg-day	2.7E-07
				KM TEQ PCB	3E-05	mg/kg	6.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	7.8E-13	mg/kg-day	7.0E-10	mg/kg-day	1.1E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	--	1.7E-08	mg/kg-day	2.0E-05	mg/kg-day	8.5E-04
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.6E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-10	M	5.4E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-09	M	5.2E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-10	M	4.7E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.6E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-11	M	3.1E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.4E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-12	M	5.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-09	M	1.1E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-10	M	1.9E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.2E-08	mg/kg-day	--	--	--	--	1.5E-07	mg/kg-day	4.0E-03	mg/kg-day	3.6E-05
				TPH (C9-C40)	4E+02	mg/kg	9.1E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	4.0E-03	mg/kg-day	2.6E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	3.1E-04	mg/kg-day	1.0E+00	mg/kg-day	3.1E-04
				Antimony	2E+00	mg/kg	5.2E-09	mg/kg-day	--	--	--	--	6.0E-08	mg/kg-day	4.0E-04	mg/kg-day	1.5E-04
				Arsenic, inorganic	3E+01	mg/kg	4.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.1E-08	--	4.7E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Cadmium	3E+00	mg/kg	6.8E-09	mg/kg-day	--	--	--	--	7.9E-08	mg/kg-day	1.0E-03	mg/kg-day	7.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	2.8E-06	mg/kg-day	1.5E+00	mg/kg-day	1.8E-06
				Cobalt	1E+01	mg/kg	3.1E-08	mg/kg-day	--	--	--	--	3.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.2E-03
				Copper	2E+02	mg/kg	3.7E-07	mg/kg-day	--	--	--	--	4.3E-06	mg/kg-day	1.0E-03	mg/kg-day	4.3E-03
				Chromium (VI)	1E+00	mg/kg	3.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-09	M	3.6E-08	mg/kg-day	3.0E-03	mg/kg-day	1.2E-05
				Iron	4E+04	mg/kg	9.6E-05	mg/kg-day	--	--	--	--	1.1E-03	mg/kg-day	7.0E-01	mg/kg-day	1.6E-03

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units			Value	Units	Value	Units	
				Lead	5E+02	mg/kg	1.0E-06	mg/kg-day	--	--	--	--	1.2E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	7.8E-07	mg/kg-day	--	--	--	--	9.1E-06	mg/kg-day	2.4E-02	mg/kg-day	3.8E-04
				Mercury	2E+00	mg/kg	4.4E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1.7E-04
				Nickel	7E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	2.0E-02	mg/kg-day	8.6E-05
				Thallium	2E-01	mg/kg	5.4E-10	mg/kg-day	--	--	--	--	6.3E-09	mg/kg-day	1.0E-05	mg/kg-day	6.3E-04
				Vanadium	5E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	1.3E-06	mg/kg-day	5.0E-03	mg/kg-day	2.6E-04
				Zinc	1E+03	mg/kg	2.7E-06	mg/kg-day	--	--	--	--	3.2E-05	mg/kg-day	3.0E-01	mg/kg-day	1.1E-04
				Total DLCs (excluding KM TEQs)							4.7E-08						5.2E-03
				Total DLCs (based on KM TEQs)							4.5E-08						4.9E-03
				Total PCDD/Fs (excluding KM TEQ)							3.5E-08						3.9E-03
				Total PCDD/Fs (based on KM TEQ)							3.4E-08						3.8E-03
				Total DL-PCBs (excluding KM TEQ)							1.1E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.0E-08						1.1E-03
				Total Non-DL PCBs							1.5E-09						8.5E-04
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-08						2.1E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-08						2.0E-03
				Total PAHs							1.3E-08						1.7E-04
				Total Organics							0.0E+00						2.7E-03
				Total Inorganics							6.4E-08						1.1E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.2E-07						2.0E-02
		Sediment Ingestion Total (based on KM TEQs)									1.2E-07						2.0E-02
Sediment	Sediment	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.8E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-08	--	2.1E-12	mg/kg-day	7.0E-10	mg/kg-day	3.0E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--	1.1E-13	mg/kg-day	7.0E-10	mg/kg-day	1.6E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	9.9E-14	mg/kg-day	7.0E-09	mg/kg-day	1.4E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-10	--	4.0E-13	mg/kg-day	7.0E-09	mg/kg-day	5.7E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-10	--	2.3E-13	mg/kg-day	7.0E-09	mg/kg-day	3.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	6.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	9.0E-10	--	7.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1.0E-04
				OCDD	3E-03	mg/kg	6.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.8E-10	--	7.1E-11	mg/kg-day	2.3E-06	mg/kg-day	3.1E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--	3.8E-13	mg/kg-day	7.0E-09	mg/kg-day	5.4E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-10	--	2.6E-13	mg/kg-day	2.3E-08	mg/kg-day	1.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-09	--	4.3E-13	mg/kg-day	2.3E-09	mg/kg-day	1.8E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--	2.0E-12	mg/kg-day	7.0E-09	mg/kg-day	2.8E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-10	--	5.1E-13	mg/kg-day	7.0E-09	mg/kg-day	7.3E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-11	--	3.8E-14	mg/kg-day	7.0E-09	mg/kg-day	5.5E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-10	--	2.9E-13	mg/kg-day	7.0E-09	mg/kg-day	4.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	8.8E-12	mg/kg-day	7.0E-08	mg/kg-day	1.3E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.8E-11	--	3.0E-13	mg/kg-day	7.0E-08	mg/kg-day	4.2E-06
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.7E-11	--	1.2E-11	mg/kg-day	2.3E-06	mg/kg-day	5.2E-06
				KM TEQ DF	1E-04	mg/kg	2.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-08	--	2.9E-12	mg/kg-day	7.0E-10	mg/kg-day	4.1E-03
				PCB-77	8E-03	mg/kg	1.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-10	--	2.1E-10	mg/kg-day	7.0E-06	mg/kg-day	3.0E-05
				PCB-81	3E-04	mg/kg	7.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--	8.1E-12	mg/kg-day	2.3E-06	mg/kg-day	3.5E-06
				PCB-105	1E-02	mg/kg	2.9E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--	3.4E-10	mg/kg-day	2.3E-05	mg/kg-day	1.5E-05
				PCB-114	9E-04	mg/kg	2.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.0E-12	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1.0E-06
				PCB-118	4E-02	mg/kg	8.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-10	--	9.9E-10	mg/kg-day	2.3E-05	mg/kg-day	4.2E-05
				PCB-123	1E-03	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	2.9E-11	mg/kg-day	2.3E-05	mg/kg-day	1.2E-06
				PCB-126	2E-04	mg/kg	5.7E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.6E-09	--	6.7E-12	mg/kg-day	7.0E-09	mg/kg-day	9.6E-04
				PCB-156/157	3E-03	mg/kg	7.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	8.9E-11	mg/kg-day	2.3E-05	mg/kg-day	3.8E-06
				PCB-167	1E-03	mg/kg	2.7E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	3.2E-11	mg/kg-day	2.3E-05	mg/kg-day	1.4E-06
				PCB-169	3E-04	mg/kg	5.9E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.7E-09	--	6.9E-12	mg/kg-day	2.3E-08	mg/kg-day	3.0E-04
				PCB-189	2E-04	mg/kg	5.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.6E-12	--	6.6E-12	mg/kg-day	2.3E-05	mg/kg-day	2.8E-07

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ PCB	3E-05	mg/kg	7.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-08	--	8.3E-13	mg/kg-day	7.0E-10	mg/kg-day	1.2E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	7.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.2E-09	--	8.4E-08	mg/kg-day	2.0E-05	mg/kg-day	4.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.2E-09	M	2.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.1E-08	M	2.4E-07	mg/kg-day	3.0E-04	mg/kg-day	8.1E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	1.9E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.7E-09	M	2.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.4E-10	M	1.4E-07	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.1E-11	M	2.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.5E-09	M	5.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	9.0E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	7.2E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--	8.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.8E-03
				Cadmium	3E+00	mg/kg	2.4E-10	mg/kg-day	--	--	--	--	2.8E-09	mg/kg-day	2.5E-05	mg/kg-day	1.1E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							5.0E-08						5.5E-03
				Total DLCs (based on KM TEQs)							4.7E-08						5.3E-03
				Total PCDD/Fs (excluding KM TEQ)							3.7E-08						4.2E-03
				Total PCDD/Fs (based on KM TEQ)							3.7E-08						4.1E-03
				Total DL-PCBs (excluding KM TEQ)							1.2E-08						1.3E-03
				Total DL-PCBs (based on KM TEQ)							1.1E-08						1.2E-03
				Total Non-DL PCBs							7.2E-09						4.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-08						5.6E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-08						5.4E-03
				Total PAHs							6.0E-08						8.1E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							1.1E-07						2.9E-03
		Sediment Dermal Total (excluding KM TEQs)									2.2E-07						1.3E-02
		Sediment Dermal Total (based on KM TEQs)									2.2E-07						1.3E-02
Boater Sediment Total (excluding KM TEQs)											3.5E-07						3.3E-02
Boater Sediment Total (based on KM TEQs)											3.5E-07						3.3E-02
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-10	--	1.6E-14	mg/kg-day	7.0E-10	mg/kg-day	2E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	4.7E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.0E-11	--	5.4E-15	mg/kg-day	7.0E-10	mg/kg-day	8E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	3.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.1E-11	--	3.9E-14	mg/kg-day	7.0E-09	mg/kg-day	6E-06

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	5.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.1E-12	--	6.3E-15	mg/kg-day	7.0E-09	mg/kg-day	9E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	9.5E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.4E-11	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	2E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	6.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-11	--	8.0E-14	mg/kg-day	7.0E-08	mg/kg-day	1E-06
				OCDD	6E-05	µg/L	7.1E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.2E-12	--	8.3E-13	mg/kg-day	2.3E-06	mg/kg-day	4E-07
				2,3,7,8-TCDF	5E-07	µg/L	5.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-12	--	6.1E-15	mg/kg-day	7.0E-09	mg/kg-day	9E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	4.2E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-12	--	4.9E-15	mg/kg-day	2.3E-08	mg/kg-day	2E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	7.3E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.3E-11	--	8.5E-15	mg/kg-day	2.3E-09	mg/kg-day	4E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.0E-11	--	2.4E-14	mg/kg-day	7.0E-09	mg/kg-day	3E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	4.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-12	--	5.7E-15	mg/kg-day	7.0E-09	mg/kg-day	8E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.4E-11	--	3.4E-14	mg/kg-day	7.0E-09	mg/kg-day	5E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	3.1E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-12	--	3.6E-15	mg/kg-day	7.0E-09	mg/kg-day	5E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	8.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-11	--	9.9E-14	mg/kg-day	7.0E-08	mg/kg-day	1E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	5.4E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.1E-13	--	6.3E-15	mg/kg-day	7.0E-08	mg/kg-day	9E-08
				OCDF	1E-05	µg/L	1.6E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.2E-13	--	1.9E-13	mg/kg-day	2.3E-06	mg/kg-day	8E-08
				KM TEQ DF	2E-06	µg/L	2.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.0E-10	--	3.1E-14	mg/kg-day	7.0E-10	mg/kg-day	4E-05
				PCB-77	2E-05	µg/L	2.3E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-13	--	2.6E-13	mg/kg-day	7.0E-06	mg/kg-day	4E-08
				PCB-81	7E-07	µg/L	7.5E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.4E-14	--	8.8E-15	mg/kg-day	2.3E-06	mg/kg-day	4E-09
				PCB-105	7E-05	µg/L	8.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.6E-13	--	9.4E-13	mg/kg-day	2.3E-05	mg/kg-day	4E-08
				PCB-114	4E-06	µg/L	4.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-14	--	4.9E-14	mg/kg-day	2.3E-05	mg/kg-day	2E-09
				PCB-118	2E-04	µg/L	1.8E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.1E-13	--	2.1E-12	mg/kg-day	2.3E-05	mg/kg-day	9E-08
				PCB-123	3E-06	µg/L	3.5E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-14	--	4.1E-14	mg/kg-day	2.3E-05	mg/kg-day	2E-09
				PCB-126	7E-07	µg/L	7.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-11	--	8.7E-15	mg/kg-day	7.0E-09	mg/kg-day	1E-06
				PCB-156/157	2E-05	µg/L	2.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-14	--	2.5E-13	mg/kg-day	2.3E-05	mg/kg-day	1E-08
				PCB-167	7E-06	µg/L	7.2E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-14	--	8.4E-14	mg/kg-day	2.3E-05	mg/kg-day	4E-09
				PCB-169	4E-07	µg/L	4.4E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-12	--	5.2E-15	mg/kg-day	2.3E-08	mg/kg-day	2E-07
				PCB-189	9E-07	µg/L	9.4E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.2E-15	--	1.1E-14	mg/kg-day	2.3E-05	mg/kg-day	5E-10
				KM TEQ PCB	1E-07	µg/L	1.2E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-11	--	1.4E-15	mg/kg-day	7.0E-10	mg/kg-day	2E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.3E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.6E-12	M	1.5E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.7E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-11	M	1.9E-10	mg/kg-day	3.0E-04	mg/kg-day	6E-07
				Benzo(b)fluoranthene	2E-02	µg/L	2.3E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.5E-12	M	2.7E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.0E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.0E-13	M	1.2E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	2.2E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.4E-14	M	2.6E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	4.3E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.6E-12	M	5.0E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	9.5E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.9E-12	M	1.1E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	3.9E-11	mg/kg-day	--	--	--	--	4.6E-10	mg/kg-day	2.0E-02	mg/kg-day	2E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.3E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	4.1E-12	--	1.5E-09	mg/kg-day	1.0E-02	mg/kg-day	2E-07
				Trichloroethylene	1E-01	µg/L	1.4E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.3E-11	M	1.7E-09	mg/kg-day	5.0E-04	mg/kg-day	3E-06
				Inorganics													
				Antimony	7E-01	µg/L	7.7E-10	mg/kg-day	--	--	--	--	9.0E-09	mg/kg-day	4.0E-04	mg/kg-day	2E-05
				Arsenic, inorganic	1E+00	µg/L	1.4E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-09	--	1.6E-08	mg/kg-day	3.0E-04	mg/kg-day	5E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.4E-09	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	1.5E+00	mg/kg-day	1E-08
				Chromium (VI)	2E-01	µg/L	2.5E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.5E-10	M	2.9E-09	mg/kg-day	3.0E-03	mg/kg-day	1E-06
				Iron	5E+02	µg/L	5.9E-07	mg/kg-day	--	--	--	--	6.8E-06	mg/kg-day	7.0E-01	mg/kg-day	1E-05
				Manganese	7E+01	µg/L	7.6E-08	mg/kg-day	--	--	--	--	8.9E-07	mg/kg-day	2.4E-02	mg/kg-day	4E-05
				Mercury	3E-02	µg/L	2.9E-11	mg/kg-day	--	--	--	--	3.4E-10	mg/kg-day	3.0E-04	mg/kg-day	1E-06
				Thallium	1E-02	µg/L	1.4E-11	mg/kg-day	--	--	--	--	1.6E-10	mg/kg-day	1.0E-05	mg/kg-day	2E-05
				Titanium	8E+00	µg/L	8.7E-09	mg/kg-day	--	--	--	--	1.0E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							5.2E-10						5.7E-05
				Total DLCs (based on KM TEQs)							4.2E-10						4.7E-05

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake Units	CSF/Unit Risk Value	CSF Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake Units	RfD Value	RfD Units	Hazard Quotient
				Total PCDD/Fs (excluding KM TEQ)							5.0E-10						5.6E-05
				Total PCDD/Fs (based on KM TEQ)							4.0E-10						4.5E-05
				Total DL-PCBs (excluding KM TEQ)							1.5E-11						1.6E-06
				Total DL-PCBs (based on KM TEQ)							1.8E-11						2.0E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-11						1.6E-06
				Total PCBs (DL & NDL; based on KM TEQ)							1.8E-11						2.0E-06
				Total PAHs							5.1E-11						6.7E-07
				Total Organics							1.7E-11						3.5E-06
				Total Inorganics							2.3E-09						1.4E-04
		Surface Water Ingestion Total (excluding KM TEQs)									2.9E-09						2.0E-04
		Surface Water Ingestion Total (based on KM TEQs)									2.8E-09						1.9E-04
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD Value	RfD Units	Hazard Quotient
				Naphthalene	4E-02	µg/L	9.4E-10	mg/kg-day	--	--	--	--	1.1E-08	mg/kg-day	2.0E-02	mg/kg-day	5E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	4.4E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.4E-11	--	5.1E-09	mg/kg-day	1.0E-02	mg/kg-day	5E-07
				Trichloroethylene	1E-01	µg/L	8.8E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	8.1E-11	M	1.0E-08	mg/kg-day	5.0E-04	mg/kg-day	2E-05
				Inorganics													
				Antimony	7E-01	µg/L	1.4E-10	mg/kg-day	--	--	--	--	1.6E-09	mg/kg-day	6.0E-05	mg/kg-day	3E-05
				Arsenic, inorganic	1E+00	µg/L	2.5E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.7E-10	--	2.9E-09	mg/kg-day	3.0E-04	mg/kg-day	1E-05
				Chromium [as Cr(III)]	1E+00	µg/L	2.5E-10	mg/kg-day	--	--	--	--	2.9E-09	mg/kg-day	2.0E-02	mg/kg-day	2E-07
				Chromium (VI)	2E-01	µg/L	8.7E-11	mg/kg-day	2.0E+01	(mg/kg-day)-1	3.5E-09	M	1.0E-09	mg/kg-day	7.5E-05	mg/kg-day	1E-05
				Iron	5E+02	µg/L	1.0E-07	mg/kg-day	--	--	--	--	1.2E-06	mg/kg-day	7.0E-01	mg/kg-day	2E-06
				Manganese	7E+01	µg/L	1.4E-08	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	9.6E-04	mg/kg-day	2E-04
				Mercury	3E-02	µg/L	5.2E-12	mg/kg-day	--	--	--	--	6.0E-11	mg/kg-day	2.1E-05	mg/kg-day	3E-06
				Thallium	1E-02	µg/L	2.4E-12	mg/kg-day	--	--	--	--	2.8E-11	mg/kg-day	1.0E-05	mg/kg-day	3E-06
				Titanium	8E+00	µg/L	1.5E-09	mg/kg-day	--	--	--	--	1.8E-08	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						5.5E-07
				Total Organics							9.4E-11						2.1E-05
				Total Inorganics							3.9E-09						2.2E-04
		Surface Water Dermal Total (excluding KM TEQs)									3.9E-09						2.4E-04
		Surface Water Dermal Total (based on KM TEQs)									3.9E-09						2.4E-04
Wader Surface Water Total (excluding KM TEQs)											6.9E-09						4.5E-04
Wader Surface Water Total (based on KM TEQs)											6.8E-09						4.4E-04
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											3.6E-07						3.4E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)											3.5E-07						3.3E-02
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-09	--	1.6E-13	mg/kg-day	7.0E-10	mg/kg-day	2E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	4.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.3E-10	--	5.6E-14	mg/kg-day	7.0E-10	mg/kg-day	8E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	3.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.3E-10	--	4.1E-13	mg/kg-day	7.0E-09	mg/kg-day	6E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	5.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-11	--	6.6E-14	mg/kg-day	7.0E-09	mg/kg-day	9E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	9.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	2E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	7.1E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-10	--	8.3E-13	mg/kg-day	7.0E-08	mg/kg-day	1E-05
				OCDD	6E-05	µg/L	7.4E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.3E-11	--	8.7E-12	mg/kg-day	2.3E-06	mg/kg-day	4E-06
				2,3,7,8-TCDF	5E-07	µg/L	5.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-11	--	6.4E-14	mg/kg-day	7.0E-09	mg/kg-day	9E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	4.4E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-11	--	5.1E-14	mg/kg-day	2.3E-08	mg/kg-day	2E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	7.5E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.4E-10	--	8.8E-14	mg/kg-day	2.3E-09	mg/kg-day	4E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.1E-10	--	2.4E-13	mg/kg-day	7.0E-09	mg/kg-day	3E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	5.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-11	--	5.9E-14	mg/kg-day	7.0E-09	mg/kg-day	8E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	3.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.5E-10	--	3.5E-13	mg/kg-day	7.0E-09	mg/kg-day	5E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	3.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-11	--	3.8E-14	mg/kg-day	7.0E-09	mg/kg-day	5E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	8.9E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.3E-10	--	1.0E-12	mg/kg-day	7.0E-08	mg/kg-day	1E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	5.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.4E-12	--	6.5E-14	mg/kg-day	7.0E-08	mg/kg-day	9E-07
				OCDF	1E-05	µg/L	1.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.5E-12	--	1.9E-12	mg/kg-day	2.3E-06	mg/kg-day	8E-07
				KM TEQ DF	2E-06	µg/L	2.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.2E-09	--	3.3E-13	mg/kg-day	7.0E-10	mg/kg-day	5E-04

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				PCB-77	2E-05	µg/L	2.4E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.5E-12	--	2.7E-12	mg/kg-day	7.0E-06	mg/kg-day	4E-07
				PCB-81	7E-07	µg/L	7.8E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-13	--	9.1E-14	mg/kg-day	2.3E-06	mg/kg-day	4E-08
				PCB-105	7E-05	µg/L	8.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.8E-12	--	9.8E-12	mg/kg-day	2.3E-05	mg/kg-day	4E-07
				PCB-114	4E-06	µg/L	4.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-13	--	5.1E-13	mg/kg-day	2.3E-05	mg/kg-day	2E-08
				PCB-118	2E-04	µg/L	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.4E-12	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9E-07
				PCB-123	3E-06	µg/L	3.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-13	--	4.2E-13	mg/kg-day	2.3E-05	mg/kg-day	2E-08
				PCB-126	7E-07	µg/L	7.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	9.0E-14	mg/kg-day	7.0E-09	mg/kg-day	1E-05
				PCB-156/157	2E-05	µg/L	2.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-12	--	2.6E-12	mg/kg-day	2.3E-05	mg/kg-day	1E-07
				PCB-167	7E-06	µg/L	7.5E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-13	--	8.7E-13	mg/kg-day	2.3E-05	mg/kg-day	4E-08
				PCB-169	4E-07	µg/L	4.6E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.1E-11	--	5.4E-14	mg/kg-day	2.3E-08	mg/kg-day	2E-06
				PCB-189	9E-07	µg/L	9.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.4E-14	--	1.1E-13	mg/kg-day	2.3E-05	mg/kg-day	5E-09
				KM TEQ PCB	1E-07	µg/L	1.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-10	--	1.5E-14	mg/kg-day	7.0E-10	mg/kg-day	2E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.7E-11	M	1.6E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.7E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.5E-10	M	2.0E-09	mg/kg-day	3.0E-04	mg/kg-day	7E-06
				Benzo(b)fluoranthene	2E-02	µg/L	2.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.7E-11	M	2.8E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.1E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.1E-12	M	1.2E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	2.3E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.6E-13	M	2.7E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	4.5E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	8.9E-11	M	5.2E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	9.9E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-11	M	1.2E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	4.1E-10	mg/kg-day	--	--	--	--	4.7E-09	mg/kg-day	2.0E-02	mg/kg-day	2E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.4E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	4.2E-11	--	1.6E-08	mg/kg-day	1.0E-02	mg/kg-day	2E-06
				Trichloroethylene	1E-01	µg/L	1.5E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.4E-10	M	1.8E-08	mg/kg-day	5.0E-04	mg/kg-day	4E-05
				Inorganics													
				Antimony	7E-01	µg/L	8.0E-09	mg/kg-day	--	--	--	--	9.3E-08	mg/kg-day	4.0E-04	mg/kg-day	2E-04
				Arsenic, inorganic	1E+00	µg/L	1.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.2E-08	--	1.7E-07	mg/kg-day	3.0E-04	mg/kg-day	6E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.5E-08	mg/kg-day	--	--	--	--	1.7E-07	mg/kg-day	1.5E+00	mg/kg-day	1E-07
				Chromium (VI)	2E-01	µg/L	2.5E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.5E-09	M	3.0E-08	mg/kg-day	3.0E-03	mg/kg-day	1E-05
				Iron	5E+02	µg/L	6.1E-06	mg/kg-day	--	--	--	--	7.1E-05	mg/kg-day	7.0E-01	mg/kg-day	1E-04
				Manganese	7E+01	µg/L	7.9E-07	mg/kg-day	--	--	--	--	9.2E-06	mg/kg-day	2.4E-02	mg/kg-day	4E-04
				Mercury	3E-02	µg/L	3.0E-10	mg/kg-day	--	--	--	--	3.5E-09	mg/kg-day	3.0E-04	mg/kg-day	1E-05
				Thallium	1E-02	µg/L	1.4E-10	mg/kg-day	--	--	--	--	1.7E-09	mg/kg-day	1.0E-05	mg/kg-day	2E-04
				Titanium	8E+00	µg/L	9.1E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							5.4E-09						6.0E-04
				Total DLCs (based on KM TEQs)							4.4E-09						4.9E-04
				Total PCDD/Fs (excluding KM TEQ)							5.2E-09						5.8E-04
				Total PCDD/Fs (based on KM TEQ)							4.2E-09						4.6E-04
				Total DL-PCBs (excluding KM TEQ)							1.5E-10						1.7E-05
				Total DL-PCBs (based on KM TEQ)							1.9E-10						2.1E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.5E-10						1.7E-05
				Total PCBs (DL & NDL; based on KM TEQ)							1.9E-10						2.1E-05
				Total PAHs							5.3E-10						7.0E-06
				Total Organics							1.8E-10						3.7E-05
				Total Inorganics							2.4E-08						1.5E-03
		Surface Water Ingestion Total (excluding KM TEQs)									3.1E-08						2.1E-03
		Surface Water Ingestion Total (based on KM TEQs)									3.0E-08						2.0E-03
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	7.5E-09	mg/kg-day	--	--	--	--	8.8E-08	mg/kg-day	2.0E-02	mg/kg-day	4E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	3.8E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.2E-10	--	4.4E-08	mg/kg-day	1.0E-02	mg/kg-day	4E-06
				Trichloroethylene	1E-01	µg/L	7.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	6.7E-10	M	8.5E-08	mg/kg-day	5.0E-04	mg/kg-day	2E-04
				Inorganics													
				Antimony	7E-01	µg/L	2.4E-09	mg/kg-day	--	--	--	--	2.8E-08	mg/kg-day	6.0E-05	mg/kg-day	5E-04
				Arsenic, inorganic	1E+00	µg/L	4.3E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.5E-09	--	5.0E-08	mg/kg-day	3.0E-04	mg/kg-day	2E-04
				Chromium [as Cr(III)]	1E+00	µg/L	4.4E-09	mg/kg-day	--	--	--	--	5.1E-08	mg/kg-day	2.0E-02	mg/kg-day	3E-06
				Chromium (VI)	2E-01	µg/L	1.5E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	6.0E-08	M	1.8E-08	mg/kg-day	7.5E-05	mg/kg-day	2E-04
				Iron	5E+02	µg/L	1.8E-06	mg/kg-day	--	--	--	--	2.1E-05	mg/kg-day	7.0E-01	mg/kg-day	3E-05
				Manganese	7E+01	µg/L	2.3E-07	mg/kg-day	--	--	--	--	2.7E-06	mg/kg-day	9.6E-04	mg/kg-day	3E-03
				Mercury	3E-02	µg/L	9.0E-11	mg/kg-day	--	--	--	--	1.0E-09	mg/kg-day	2.1E-05	mg/kg-day	5E-05
				Thallium	1E-02	µg/L	4.2E-11	mg/kg-day	--	--	--	--	4.9E-10	mg/kg-day	1.0E-05	mg/kg-day	5E-05
				Titanium	8E+00	µg/L	2.7E-08	mg/kg-day	--	--	--	--	3.1E-07	mg/kg-day	--	--	--
Total DLCs (excluding KM TEQs)											0.0E+00						0.0E+00

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake Units	CSF/Unit Risk Value	CSF Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake Units	RfD Value	RfD Units	Hazard Quotient
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						4.4E-06
				Total Organics							7.9E-10						1.7E-04
				Total Inorganics							6.7E-08						3.8E-03
		Surface Water Dermal Total (excluding KM TEQs)									6.8E-08						4.0E-03
		Surface Water Dermal Total (based on KM TEQs)									6.8E-08						4.0E-03
Swimmer Surface Water Total (excluding KM TEQs)											9.8E-08						6.1E-03
Swimmer Surface Water Total (based on KM TEQs)											9.7E-08						6.0E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											4.5E-07						3.9E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											4.4E-07						3.9E-02
Surface Water	Surface Water	Boater	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	1.5E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.2E-09	--	1.7E-13	mg/kg-day	7.0E-10	mg/kg-day	2E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	5.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.5E-10	--	5.9E-14	mg/kg-day	7.0E-10	mg/kg-day	8E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	3.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-10	--	4.2E-13	mg/kg-day	7.0E-09	mg/kg-day	6E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	5.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.7E-11	--	6.8E-14	mg/kg-day	7.0E-09	mg/kg-day	1E-05
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	1.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-10	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	2E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	7.3E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-10	--	8.6E-13	mg/kg-day	7.0E-08	mg/kg-day	1E-05
				OCDD	6E-05	µg/L	7.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-11	--	9.0E-12	mg/kg-day	2.3E-06	mg/kg-day	4E-06
				2,3,7,8-TCDF	5E-07	µg/L	5.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.5E-11	--	6.6E-14	mg/kg-day	7.0E-09	mg/kg-day	9E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	4.5E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.0E-11	--	5.3E-14	mg/kg-day	2.3E-08	mg/kg-day	2E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	7.8E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.5E-10	--	9.1E-14	mg/kg-day	2.3E-09	mg/kg-day	4E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	2.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-10	--	2.5E-13	mg/kg-day	7.0E-09	mg/kg-day	4E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	5.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-11	--	6.1E-14	mg/kg-day	7.0E-09	mg/kg-day	9E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--	3.7E-13	mg/kg-day	7.0E-09	mg/kg-day	5E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-11	--	3.9E-14	mg/kg-day	7.0E-09	mg/kg-day	6E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	9.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-10	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	2E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	5.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.7E-12	--	6.7E-14	mg/kg-day	7.0E-08	mg/kg-day	1E-06
				OCDF	1E-05	µg/L	1.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.8E-12	--	2.0E-12	mg/kg-day	2.3E-06	mg/kg-day	9E-07
				KM TEQ DF	2E-06	µg/L	2.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.3E-09	--	3.4E-13	mg/kg-day	7.0E-10	mg/kg-day	5E-04
				PCB-77	2E-05	µg/L	2.4E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.7E-12	--	2.8E-12	mg/kg-day	7.0E-06	mg/kg-day	4E-07
				PCB-81	7E-07	µg/L	8.1E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.6E-13	--	9.5E-14	mg/kg-day	2.3E-06	mg/kg-day	4E-08
				PCB-105	7E-05	µg/L	8.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.9E-12	--	1.0E-11	mg/kg-day	2.3E-05	mg/kg-day	4E-07
				PCB-114	4E-06	µg/L	4.5E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-13	--	5.3E-13	mg/kg-day	2.3E-05	mg/kg-day	2E-08
				PCB-118	2E-04	µg/L	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-12	--	2.3E-11	mg/kg-day	2.3E-05	mg/kg-day	1E-06
				PCB-123	3E-06	µg/L	3.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-13	--	4.4E-13	mg/kg-day	2.3E-05	mg/kg-day	2E-08
				PCB-126	7E-07	µg/L	8.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	9.3E-14	mg/kg-day	7.0E-09	mg/kg-day	1E-05
				PCB-156/157	2E-05	µg/L	2.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-12	--	2.7E-12	mg/kg-day	2.3E-05	mg/kg-day	1E-07
				PCB-167	7E-06	µg/L	7.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.5E-13	--	9.1E-13	mg/kg-day	2.3E-05	mg/kg-day	4E-08
				PCB-169	4E-07	µg/L	4.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.1E-11	--	5.6E-14	mg/kg-day	2.3E-08	mg/kg-day	2E-06
				PCB-189	9E-07	µg/L	1.0E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.6E-14	--	1.2E-13	mg/kg-day	2.3E-05	mg/kg-day	5E-09
				KM TEQ PCB	1E-07	µg/L	1.3E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.9E-10	--	1.5E-14	mg/kg-day	7.0E-10	mg/kg-day	2E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	1.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.8E-11	M	1.6E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	1.8E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.6E-10	M	2.1E-09	mg/kg-day	3.0E-04	mg/kg-day	7E-06

TABLE 7.6 CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value	Units	Value	Units	Hazard Quotient
				Benzo(b)fluoranthene	2E-02	µg/L	2.4E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	4.9E-11	M	2.9E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	1.1E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.2E-12	M	1.3E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	2.4E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	4.8E-13	M	2.8E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	4.6E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.2E-11	M	5.4E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	1.0E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-11	M	1.2E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	4.2E-10	mg/kg-day	--	--	--	--	4.9E-09	mg/kg-day	2.0E-02	mg/kg-day	2E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	1.4E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	4.4E-11	--	1.7E-08	mg/kg-day	1.0E-02	mg/kg-day	2E-06
				Trichloroethylene	1E-01	µg/L	1.6E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.4E-10	M	1.8E-08	mg/kg-day	5.0E-04	mg/kg-day	4E-05
				Inorganics													
				Antimony	7E-01	µg/L	8.3E-09	mg/kg-day	--	--	--	--	9.7E-08	mg/kg-day	4.0E-04	mg/kg-day	2E-04
				Arsenic, inorganic	1E+00	µg/L	1.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.3E-08	--	1.8E-07	mg/kg-day	3.0E-04	mg/kg-day	6E-04
				Chromium [as Cr(III)]	1E+00	µg/L	1.5E-08	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	1.5E+00	mg/kg-day	1E-07
				Chromium (VI)	2E-01	µg/L	2.6E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.6E-09	M	3.1E-08	mg/kg-day	3.0E-03	mg/kg-day	1E-05
				Iron	5E+02	µg/L	6.3E-06	mg/kg-day	--	--	--	--	7.4E-05	mg/kg-day	7.0E-01	mg/kg-day	1E-04
				Manganese	7E+01	µg/L	8.2E-07	mg/kg-day	--	--	--	--	9.6E-06	mg/kg-day	2.4E-02	mg/kg-day	4E-04
				Mercury	3E-02	µg/L	3.1E-10	mg/kg-day	--	--	--	--	3.6E-09	mg/kg-day	3.0E-04	mg/kg-day	1E-05
				Thallium	1E-02	µg/L	1.5E-10	mg/kg-day	--	--	--	--	1.7E-09	mg/kg-day	1.0E-05	mg/kg-day	2E-04
				Titanium	8E+00	µg/L	9.4E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							5.6E-09						6.2E-04
				Total DLCs (based on KM TEQs)							4.5E-09						5.0E-04
				Total PCDD/Fs (excluding KM TEQ)							5.4E-09						6.0E-04
				Total PCDD/Fs (based on KM TEQ)							4.3E-09						4.8E-04
				Total DL-PCBs (excluding KM TEQ)							1.6E-10						1.8E-05
				Total DL-PCBs (based on KM TEQ)							1.9E-10						2.2E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							1.6E-10						1.8E-05
				Total PCBs (DL & NDL; based on KM TEQ)							1.9E-10						2.2E-05
				Total PAHs							5.5E-10						7.2E-06
				Total Organics							1.9E-10						3.8E-05
				Total Inorganics							2.5E-08						1.5E-03
		Surface Water Ingestion Total (excluding KM TEQs)									3.2E-08						2.2E-03
		Surface Water Ingestion Total (based on KM TEQs)									3.1E-08						2.1E-03
Surface Water	Surface Water	Boater	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value	Units	Value	Units	Hazard Quotient
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	5.9E-09	mg/kg-day	--	--	--	--	6.9E-08	mg/kg-day	2.0E-02	mg/kg-day	3E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	2.8E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	8.8E-11	--	3.3E-08	mg/kg-day	1.0E-02	mg/kg-day	3E-06
				Trichloroethylene	1E-01	µg/L	5.6E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	5.2E-10	M	6.5E-08	mg/kg-day	5.0E-04	mg/kg-day	1E-04
				Inorganics													
				Antimony	7E-01	µg/L	1.5E-09	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	6.0E-05	mg/kg-day	3E-04
				Arsenic, inorganic	1E+00	µg/L	2.7E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.0E-09	--	3.1E-08	mg/kg-day	3.0E-04	mg/kg-day	1E-04
				Chromium [as Cr(III)]	1E+00	µg/L	2.7E-09	mg/kg-day	--	--	--	--	3.2E-08	mg/kg-day	2.0E-02	mg/kg-day	2E-06
				Chromium (VI)	2E-01	µg/L	9.4E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	3.7E-08	M	1.1E-08	mg/kg-day	7.5E-05	mg/kg-day	1E-04
				Iron	5E+02	µg/L	1.1E-06	mg/kg-day	--	--	--	--	1.3E-05	mg/kg-day	7.0E-01	mg/kg-day	2E-05
				Manganese	7E+01	µg/L	1.5E-07	mg/kg-day	--	--	--	--	1.7E-06	mg/kg-day	9.6E-04	mg/kg-day	2E-03
				Mercury	3E-02	µg/L	5.5E-11	mg/kg-day	--	--	--	--	6.5E-10	mg/kg-day	2.1E-05	mg/kg-day	3E-05
				Thallium	1E-02	µg/L	2.6E-11	mg/kg-day	--	--	--	--	3.0E-10	mg/kg-day	1.0E-05	mg/kg-day	3E-05
				Titanium	8E+00	µg/L	1.7E-08	mg/kg-day	--	--	--	--	1.9E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						3.5E-06
				Total Organics							6.0E-10						1.3E-04
				Total Inorganics							4.1E-08						2.4E-03
		Surface Water Dermal Total (excluding KM TEQs)									4.2E-08						2.5E-03
		Surface Water Dermal Total (based on KM TEQs)									4.2E-08						2.5E-03

TABLE 7.6 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value	Units	Value	Units	Hazard Quotient
Boater Surface Water Total (excluding KM TEQs)											7.4E-08					4.7E-03
Boater Surface Water Total (based on KM TEQs)											7.3E-08					4.6E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)											4.2E-07					3.8E-02
Boater Sediment Total + Surface Water Total (based on KM TEQs)											4.2E-07					3.7E-02

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--	4.0E-12	mg/kg-day	7.0E-10	mg/kg-day	5.7E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--	2.1E-13	mg/kg-day	7.0E-10	mg/kg-day	3.0E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-10	--	7.6E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-10	--	4.5E-13	mg/kg-day	7.0E-09	mg/kg-day	6.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-10	--	1.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.9E-04
				OCDD	3E-03	mg/kg	5.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-10	--	1.4E-10	mg/kg-day	2.3E-06	mg/kg-day	5.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--	7.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.5E-11	--	4.9E-13	mg/kg-day	2.3E-08	mg/kg-day	2.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--	8.3E-13	mg/kg-day	2.3E-09	mg/kg-day	3.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-09	--	3.8E-12	mg/kg-day	7.0E-09	mg/kg-day	5.4E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-10	--	9.9E-13	mg/kg-day	7.0E-09	mg/kg-day	1.4E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-11	--	7.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	5.5E-13	mg/kg-day	7.0E-09	mg/kg-day	7.8E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	1.7E-11	mg/kg-day	7.0E-08	mg/kg-day	2.4E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.7E-11	--	5.7E-13	mg/kg-day	7.0E-08	mg/kg-day	8.1E-06
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-11	--	2.3E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	1E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.5E-08	--	5.5E-12	mg/kg-day	7.0E-10	mg/kg-day	7.8E-03
				PCB-77	8E-03	mg/kg	1.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-10	--	4.0E-10	mg/kg-day	7.0E-06	mg/kg-day	5.8E-05
				PCB-81	3E-04	mg/kg	6.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-11	--	1.6E-11	mg/kg-day	2.3E-06	mg/kg-day	6.7E-06
				PCB-105	1E-02	mg/kg	2.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--	6.5E-10	mg/kg-day	2.3E-05	mg/kg-day	2.8E-05
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-12	--	4.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.9E-06
				PCB-118	4E-02	mg/kg	8.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-10	--	1.9E-09	mg/kg-day	2.3E-05	mg/kg-day	8.1E-05
				PCB-123	1E-03	mg/kg	2.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	5.5E-11	mg/kg-day	2.3E-05	mg/kg-day	2.4E-06
				PCB-126	2E-04	mg/kg	5.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-09	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				PCB-156/157	3E-03	mg/kg	7.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--	1.7E-10	mg/kg-day	2.3E-05	mg/kg-day	7.3E-06
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	6.1E-11	mg/kg-day	2.3E-05	mg/kg-day	2.6E-06
				PCB-169	3E-04	mg/kg	5.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-09	--	1.3E-11	mg/kg-day	2.3E-08	mg/kg-day	5.7E-04
				PCB-189	2E-04	mg/kg	5.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-12	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.5E-07
				KM TEQ PCB	3E-05	mg/kg	6.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.3E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	--	3.5E-08	mg/kg-day	2.0E-05	mg/kg-day	1.7E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.6E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-08	M	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.6E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-09	M	9.6E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.7E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.0E-11	M	6.2E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.5E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-11	M	1.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.4E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.8E-09	M	2.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-10	M	4.0E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.3E-08	mg/kg-day	--	--	--	--	3.0E-07	mg/kg-day	4.0E-03	mg/kg-day	7.4E-05
				TPH (C9-C40)	4E+02	mg/kg	9.2E-07	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	4.0E-03	mg/kg-day	5.4E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	6.4E-04	mg/kg-day	1.0E+00	mg/kg-day	6.4E-04
				Antimony	2E+00	mg/kg	5.3E-09	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	4.0E-04	mg/kg-day	3.1E-04
				Arsenic, inorganic	3E+01	mg/kg	4.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-08	--	9.7E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
				Cadmium	3E+00	mg/kg	6.9E-09	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	1.0E-03	mg/kg-day	1.6E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	5.6E-06	mg/kg-day	1.5E+00	mg/kg-day	3.8E-06
				Cobalt	1E+01	mg/kg	3.2E-08	mg/kg-day	--	--	--	--	7.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Copper	2E+02	mg/kg	3.8E-07	mg/kg-day	--	--	--	--	8.8E-06	mg/kg-day	1.0E-03	mg/kg-day	8.8E-03
				Chromium (VI)	1E+00	mg/kg	3.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	4.7E-09	M	7.3E-08	mg/kg-day	3.0E-03	mg/kg-day	2.4E-05

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value		RfD Value	RfD Units	Hazard Quotient
				Iron	4E+04	mg/kg	9.8E-05	mg/kg-day	--	--	--	--	2.3E-03	mg/kg-day	7.0E-01	mg/kg-day	3.3E-03
				Lead	5E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	8.0E-07	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	2.4E-02	mg/kg-day	7.7E-04
				Mercury	2E+00	mg/kg	4.5E-09	mg/kg-day	--	--	--	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.5E-04
				Nickel	7E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	2.0E-02	mg/kg-day	1.8E-04
				Thallium	2E-01	mg/kg	5.5E-10	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	1.0E-05	mg/kg-day	1.3E-03
				Vanadium	5E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	5.0E-03	mg/kg-day	5.2E-04
				Zinc	1E+03	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	6.5E-05	mg/kg-day	3.0E-01	mg/kg-day	2.2E-04
				Total DLCs (excluding KM TEQs)							4.8E-08						1.1E-02
				Total DLCs (based on KM TEQs)							4.5E-08						1.0E-02
				Total PCDD/Fs (excluding KM TEQ)							3.6E-08						8.0E-03
				Total PCDD/Fs (based on KM TEQ)							3.5E-08						7.8E-03
				Total DL-PCBs (excluding KM TEQ)							1.2E-08						2.6E-03
				Total DL-PCBs (based on KM TEQ)							1.0E-08						2.3E-03
				Total Non-DL PCBs							1.5E-09						1.7E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-08						4.3E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-08						4.0E-03
				Total PAHs							2.0E-08						3.6E-04
				Total Organics							0.0E+00						5.5E-03
				Total Inorganics							6.7E-08						2.2E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.4E-07						4.0E-02
		Sediment Ingestion Total (based on KM TEQs)									1.3E-07						4.0E-02
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	4.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.0E-09	--	1.1E-12	mg/kg-day	7.0E-10	mg/kg-day	1.6E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-10	--	5.7E-14	mg/kg-day	7.0E-10	mg/kg-day	8.2E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-11	--	5.1E-14	mg/kg-day	7.0E-09	mg/kg-day	7.4E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	8.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	2.1E-13	mg/kg-day	7.0E-09	mg/kg-day	3.0E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	5.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-11	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.8E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-10	--	3.7E-12	mg/kg-day	7.0E-08	mg/kg-day	5.2E-05
				OCDD	3E-03	mg/kg	1.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.2E-11	--	3.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.6E-05
				2,3,7,8-TCDF	1E-05	mg/kg	8.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	2.0E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	5.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-11	--	1.3E-13	mg/kg-day	2.3E-08	mg/kg-day	5.8E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	9.6E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.3E-10	--	2.3E-13	mg/kg-day	2.3E-09	mg/kg-day	9.6E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	4.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-10	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.8E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	8.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-11	--	2.0E-14	mg/kg-day	7.0E-09	mg/kg-day	2.9E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	6.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-11	--	1.5E-13	mg/kg-day	7.0E-09	mg/kg-day	2.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	4.6E-12	mg/kg-day	7.0E-08	mg/kg-day	6.5E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	6.7E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-11	--	1.6E-13	mg/kg-day	7.0E-08	mg/kg-day	2.2E-06
				OCDF	4E-04	mg/kg	2.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-11	--	6.4E-12	mg/kg-day	2.3E-06	mg/kg-day	2.7E-06
				KM TEQ DF	1E-04	mg/kg	6.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.6E-09	--	1.5E-12	mg/kg-day	7.0E-10	mg/kg-day	2.1E-03
				PCB-77	8E-03	mg/kg	4.7E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.1E-11	--	1.1E-10	mg/kg-day	7.0E-06	mg/kg-day	1.6E-05
				PCB-81	3E-04	mg/kg	1.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.2E-12	--	4.2E-12	mg/kg-day	2.3E-06	mg/kg-day	1.8E-06
				PCB-105	1E-02	mg/kg	7.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-114	9E-04	mg/kg	5.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--	1.2E-11	mg/kg-day	2.3E-05	mg/kg-day	5.2E-07
				PCB-118	4E-02	mg/kg	2.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-10	--	5.2E-10	mg/kg-day	2.3E-05	mg/kg-day	2.2E-05
				PCB-123	1E-03	mg/kg	6.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-12	--	1.5E-11	mg/kg-day	2.3E-05	mg/kg-day	6.4E-07
				PCB-126	2E-04	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--	3.5E-12	mg/kg-day	7.0E-09	mg/kg-day	5.0E-04
				PCB-156/157	3E-03	mg/kg	2.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-12	--	4.6E-11	mg/kg-day	2.3E-05	mg/kg-day	2.0E-06
				PCB-167	1E-03	mg/kg	7.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-12	--	1.7E-11	mg/kg-day	2.3E-05	mg/kg-day	7.1E-07
				PCB-169	3E-04	mg/kg	1.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.9E-10	--	3.6E-12	mg/kg-day	2.3E-08	mg/kg-day	1.5E-04
				PCB-189	2E-04	mg/kg	1.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.7E-13	--	3.5E-12	mg/kg-day	2.3E-05	mg/kg-day	1.5E-07
				KM TEQ PCB	3E-05	mg/kg	1.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-09	--	4.4E-13	mg/kg-day	7.0E-10	mg/kg-day	6.2E-04

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-09	--	4.4E-08	mg/kg-day	2.0E-05	mg/kg-day	2.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	5.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-09	M	1.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-08	M	1.3E-07	mg/kg-day	3.0E-04	mg/kg-day	4.2E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.5E-11	M	7.4E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	5.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-11	M	1.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-09	M	2.6E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.0E-10	M	4.7E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	1.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-08	--	4.4E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03
				Cadmium	3E+00	mg/kg	6.3E-11	mg/kg-day	--	--	--	--	1.5E-09	mg/kg-day	2.5E-05	mg/kg-day	5.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							1.3E-08						2.9E-03
				Total DLCs (based on KM TEQs)							1.2E-08						2.7E-03
				Total PCDD/Fs (excluding KM TEQ)							9.8E-09						2.2E-03
				Total PCDD/Fs (based on KM TEQ)							9.6E-09						2.1E-03
				Total DL-PCBs (excluding KM TEQ)							3.2E-09						7.0E-04
				Total DL-PCBs (based on KM TEQ)							2.8E-09						6.2E-04
				Total Non-DL PCBs							1.9E-09						2.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							5.1E-09						2.9E-03
				Total PCBs (DL & NDL; based on KM TEQ)							4.7E-09						2.8E-03
				Total PAHs							2.3E-08						4.2E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							2.8E-08						1.5E-03
		Sediment Dermal Total (excluding KM TEQs)									6.6E-08						7.0E-03
		Sediment Dermal Total (based on KM TEQs)									6.6E-08						6.9E-03
	Wader Sediment Total (excluding KM TEQs)										2.0E-07						4.7E-02
	Wader Sediment Total (based on KM TEQs)										2.0E-07						4.7E-02
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--	4.0E-12	mg/kg-day	7.0E-10	mg/kg-day	5.7E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.0E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--	2.1E-13	mg/kg-day	7.0E-10	mg/kg-day	3.0E-04
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--	1.9E-13	mg/kg-day	7.0E-09	mg/kg-day	2.7E-05
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.9E-10	--	7.6E-13	mg/kg-day	7.0E-09	mg/kg-day	1.1E-04
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	1.9E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-10	--	4.5E-13	mg/kg-day	7.0E-09	mg/kg-day	6.4E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.8E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.6E-10	--	1.3E-11	mg/kg-day	7.0E-08	mg/kg-day	1.9E-04

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				OCDD	3E-03	mg/kg	5.9E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.6E-10	--	1.4E-10	mg/kg-day	2.3E-06	mg/kg-day	5.9E-05
				2,3,7,8-TCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--	7.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.0E-04
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.1E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.5E-11	--	4.9E-13	mg/kg-day	2.3E-08	mg/kg-day	2.1E-05
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.5E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--	8.3E-13	mg/kg-day	2.3E-09	mg/kg-day	3.5E-04
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-09	--	3.8E-12	mg/kg-day	7.0E-09	mg/kg-day	5.4E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.3E-10	--	9.9E-13	mg/kg-day	7.0E-09	mg/kg-day	1.4E-04
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-11	--	7.4E-14	mg/kg-day	7.0E-09	mg/kg-day	1.1E-05
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.5E-10	--	5.5E-13	mg/kg-day	7.0E-09	mg/kg-day	7.8E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.2E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--	1.7E-11	mg/kg-day	7.0E-08	mg/kg-day	2.4E-04
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.7E-11	--	5.7E-13	mg/kg-day	7.0E-08	mg/kg-day	8.1E-06
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.5E-11	--	2.3E-11	mg/kg-day	2.3E-06	mg/kg-day	1.0E-05
				KM TEQ DF	1E-04	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.5E-08	--	5.5E-12	mg/kg-day	7.0E-10	mg/kg-day	7.8E-03
				PCB-77	8E-03	mg/kg	1.7E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-10	--	4.0E-10	mg/kg-day	7.0E-06	mg/kg-day	5.8E-05
				PCB-81	3E-04	mg/kg	6.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.0E-11	--	1.6E-11	mg/kg-day	2.3E-06	mg/kg-day	6.7E-06
				PCB-105	1E-02	mg/kg	2.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--	6.5E-10	mg/kg-day	2.3E-05	mg/kg-day	2.8E-05
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.6E-12	--	4.5E-11	mg/kg-day	2.3E-05	mg/kg-day	1.9E-06
				PCB-118	4E-02	mg/kg	8.1E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-10	--	1.9E-09	mg/kg-day	2.3E-05	mg/kg-day	8.1E-05
				PCB-123	1E-03	mg/kg	2.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--	5.5E-11	mg/kg-day	2.3E-05	mg/kg-day	2.4E-06
				PCB-126	2E-04	mg/kg	5.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.2E-09	--	1.3E-11	mg/kg-day	7.0E-09	mg/kg-day	1.8E-03
				PCB-156/157	3E-03	mg/kg	7.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--	1.7E-10	mg/kg-day	2.3E-05	mg/kg-day	7.3E-06
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--	6.1E-11	mg/kg-day	2.3E-05	mg/kg-day	2.6E-06
				PCB-169	3E-04	mg/kg	5.7E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.5E-09	--	1.3E-11	mg/kg-day	2.3E-08	mg/kg-day	5.7E-04
				PCB-189	2E-04	mg/kg	5.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-12	--	1.3E-11	mg/kg-day	2.3E-05	mg/kg-day	5.5E-07
				KM TEQ PCB	3E-05	mg/kg	6.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--	1.6E-12	mg/kg-day	7.0E-10	mg/kg-day	2.3E-03
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.5E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.5E-09	--	3.5E-08	mg/kg-day	2.0E-05	mg/kg-day	1.7E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	4.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	4.6E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.4E-08	M	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.6E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.1E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.2E-09	M	9.6E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	2.7E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	8.0E-11	M	6.2E-08	mg/kg-day	--	--	--
				Chrysene	2E+00	mg/kg	4.5E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.3E-11	M	1.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	9.4E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.8E-09	M	2.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.7E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.1E-10	M	4.0E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	1.3E-08	mg/kg-day	--	--	--	--	3.0E-07	mg/kg-day	4.0E-03	mg/kg-day	7.4E-05
				TPH (C9-C40)	4E+02	mg/kg	9.2E-07	mg/kg-day	--	--	--	--	2.2E-05	mg/kg-day	4.0E-03	mg/kg-day	5.4E-03
				Inorganics													
				Aluminum	1E+04	mg/kg	2.7E-05	mg/kg-day	--	--	--	--	6.4E-04	mg/kg-day	1.0E+00	mg/kg-day	6.4E-04
				Antimony	2E+00	mg/kg	5.3E-09	mg/kg-day	--	--	--	--	1.2E-07	mg/kg-day	4.0E-04	mg/kg-day	3.1E-04
				Arsenic, inorganic	3E+01	mg/kg	4.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-08	--	9.7E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
				Cadmium	3E+00	mg/kg	6.9E-09	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	1.0E-03	mg/kg-day	1.6E-04
				Chromium [as Cr(III)]	1E+02	mg/kg	2.4E-07	mg/kg-day	--	--	--	--	5.6E-06	mg/kg-day	1.5E+00	mg/kg-day	3.8E-06
				Cobalt	1E+01	mg/kg	3.2E-08	mg/kg-day	--	--	--	--	7.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Copper	2E+02	mg/kg	3.8E-07	mg/kg-day	--	--	--	--	8.8E-06	mg/kg-day	1.0E-03	mg/kg-day	8.8E-03
				Chromium (VI)	1E+00	mg/kg	3.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	4.7E-09	M	7.3E-08	mg/kg-day	3.0E-03	mg/kg-day	2.4E-05
				Iron	4E+04	mg/kg	9.8E-05	mg/kg-day	--	--	--	--	2.3E-03	mg/kg-day	7.0E-01	mg/kg-day	3.3E-03
				Lead	5E+02	mg/kg	1.1E-06	mg/kg-day	--	--	--	--	2.5E-05	mg/kg-day	--	--	--
				Manganese	4E+02	mg/kg	8.0E-07	mg/kg-day	--	--	--	--	1.9E-05	mg/kg-day	2.4E-02	mg/kg-day	7.7E-04
				Mercury	2E+00	mg/kg	4.5E-09	mg/kg-day	--	--	--	--	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.5E-04
				Nickel	7E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--	3.5E-06	mg/kg-day	2.0E-02	mg/kg-day	1.8E-04
				Thallium	2E-01	mg/kg	5.5E-10	mg/kg-day	--	--	--	--	1.3E-08	mg/kg-day	1.0E-05	mg/kg-day	1.3E-03
				Vanadium	5E+01	mg/kg	1.1E-07	mg/kg-day	--	--	--	--	2.6E-06	mg/kg-day	5.0E-03	mg/kg-day	5.2E-04

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				Zinc	1E+03	mg/kg	2.8E-06	mg/kg-day	--	--	--	--	6.5E-05	mg/kg-day	3.0E-01	mg/kg-day	2.2E-04
				Total DLCs (excluding KM TEQs)							4.8E-08						1.1E-02
				Total DLCs (based on KM TEQs)							4.5E-08						1.0E-02
				Total PCDD/Fs (excluding KM TEQ)							3.6E-08						8.0E-03
				Total PCDD/Fs (based on KM TEQ)							3.5E-08						7.8E-03
				Total DL-PCBs (excluding KM TEQ)							1.2E-08						2.6E-03
				Total DL-PCBs (based on KM TEQ)							1.0E-08						2.3E-03
				Total Non-DL PCBs							1.5E-09						1.7E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							1.3E-08						4.3E-03
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-08						4.0E-03
				Total PAHs							2.0E-08						3.6E-04
				Total Organics							0.0E+00						5.5E-03
				Total Inorganics							6.7E-08						2.2E-02
		Sediment Ingestion Total (excluding KM TEQs)									1.4E-07						4.0E-02
		Sediment Ingestion Total (based on KM TEQs)									1.3E-07						4.0E-02
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	8E-05	mg/kg	4.7E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	7.0E-09	--	1.1E-12	mg/kg-day	7.0E-10	mg/kg-day	1.6E-03
				1,2,3,7,8-PeCDD	4E-06	mg/kg	2.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-10	--	5.7E-14	mg/kg-day	7.0E-10	mg/kg-day	8.2E-05
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.3E-11	--	5.1E-14	mg/kg-day	7.0E-09	mg/kg-day	7.4E-06
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	8.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	2.1E-13	mg/kg-day	7.0E-09	mg/kg-day	3.0E-05
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	5.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.9E-11	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.8E-05
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.4E-10	--	3.7E-12	mg/kg-day	7.0E-08	mg/kg-day	5.2E-05
				OCDD	3E-03	mg/kg	1.6E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	7.2E-11	--	3.7E-11	mg/kg-day	2.3E-06	mg/kg-day	1.6E-05
				2,3,7,8-TCDF	1E-05	mg/kg	8.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-10	--	2.0E-13	mg/kg-day	7.0E-09	mg/kg-day	2.8E-05
				1,2,3,7,8-PeCDF	9E-06	mg/kg	5.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-11	--	1.3E-13	mg/kg-day	2.3E-08	mg/kg-day	5.8E-06
				2,3,4,7,8-PeCDF	2E-05	mg/kg	9.6E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	4.3E-10	--	2.3E-13	mg/kg-day	2.3E-09	mg/kg-day	9.6E-05
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	4.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.6E-10	--	1.0E-12	mg/kg-day	7.0E-09	mg/kg-day	1.5E-04
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	1.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.7E-10	--	2.7E-13	mg/kg-day	7.0E-09	mg/kg-day	3.8E-05
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	8.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.3E-11	--	2.0E-14	mg/kg-day	7.0E-09	mg/kg-day	2.9E-06
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	6.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-11	--	1.5E-13	mg/kg-day	7.0E-09	mg/kg-day	2.1E-05
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	2.0E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.9E-10	--	4.6E-12	mg/kg-day	7.0E-08	mg/kg-day	6.5E-05
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	6.7E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.0E-11	--	1.6E-13	mg/kg-day	7.0E-08	mg/kg-day	2.2E-06
				OCDF	4E-04	mg/kg	2.7E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.2E-11	--	6.4E-12	mg/kg-day	2.3E-06	mg/kg-day	2.7E-06
				KM TEQ DF	1E-04	mg/kg	6.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.6E-09	--	1.5E-12	mg/kg-day	7.0E-10	mg/kg-day	2.1E-03
				PCB-77	8E-03	mg/kg	4.7E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.1E-11	--	1.1E-10	mg/kg-day	7.0E-06	mg/kg-day	1.6E-05
				PCB-81	3E-04	mg/kg	1.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.2E-12	--	4.2E-12	mg/kg-day	2.3E-06	mg/kg-day	1.8E-06
				PCB-105	1E-02	mg/kg	7.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.4E-11	--	1.8E-10	mg/kg-day	2.3E-05	mg/kg-day	7.6E-06
				PCB-114	9E-04	mg/kg	5.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--	1.2E-11	mg/kg-day	2.3E-05	mg/kg-day	5.2E-07
				PCB-118	4E-02	mg/kg	2.2E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-10	--	5.2E-10	mg/kg-day	2.3E-05	mg/kg-day	2.2E-05
				PCB-123	1E-03	mg/kg	6.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.9E-12	--	1.5E-11	mg/kg-day	2.3E-05	mg/kg-day	6.4E-07
				PCB-126	2E-04	mg/kg	1.5E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-09	--	3.5E-12	mg/kg-day	7.0E-09	mg/kg-day	5.0E-04
				PCB-156/157	3E-03	mg/kg	2.0E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.9E-12	--	4.6E-11	mg/kg-day	2.3E-05	mg/kg-day	2.0E-06
				PCB-167	1E-03	mg/kg	7.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-12	--	1.7E-11	mg/kg-day	2.3E-05	mg/kg-day	7.1E-07
				PCB-169	3E-04	mg/kg	1.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	6.9E-10	--	3.6E-12	mg/kg-day	2.3E-08	mg/kg-day	1.5E-04
				PCB-189	2E-04	mg/kg	1.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.7E-13	--	3.5E-12	mg/kg-day	2.3E-05	mg/kg-day	1.5E-07
				KM TEQ PCB	3E-05	mg/kg	1.9E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.8E-09	--	4.4E-13	mg/kg-day	7.0E-10	mg/kg-day	6.2E-04
				Non-DL PCBs													
				Total Non-DL PCBs	7E-01	mg/kg	1.9E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.9E-09	--	4.4E-08	mg/kg-day	2.0E-05	mg/kg-day	2.2E-03
				PAHs													
				Benz(a)anthracene	2E+00	mg/kg	5.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.7E-09	M	1.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.6E-08	M	1.3E-07	mg/kg-day	3.0E-04	mg/kg-day	4.2E-04
				Benzo(b)fluoranthene	2E+00	mg/kg	4.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-09	M	1.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1E+00	mg/kg	3.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	9.5E-11	M	7.4E-08	mg/kg-day	--	--	--

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration	RfD Value	RfD Units	Hazard Quotient
				Chrysene	2E+00	mg/kg	5.3E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	1.6E-11	M	1.2E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.1E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.3E-09	M	2.6E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.0E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.0E-10	M	4.7E-08	mg/kg-day	--	--	--
				Pesticides & Organics													
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--	--	--	4.0E-03	mg/kg-day	--
				Inorganics													
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--	--	--	1.0E+00	mg/kg-day	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--	--	--	6.0E-05	mg/kg-day	--
				Arsenic, inorganic	3E+01	mg/kg	1.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-08	--	4.4E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03
				Cadmium	3E+00	mg/kg	6.3E-11	mg/kg-day	--	--	--	--	1.5E-09	mg/kg-day	2.5E-05	mg/kg-day	5.9E-05
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--	--	--	2.0E-02	mg/kg-day	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--	--	--	3.0E-04	mg/kg-day	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--	--	--	1.0E-03	mg/kg-day	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M	--	--	7.5E-05	mg/kg-day	--
				Iron	4E+04	mg/kg	--	--	--	--	--	--	--	--	7.0E-01	mg/kg-day	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--	--	--	9.6E-04	mg/kg-day	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--	--	--	2.1E-05	mg/kg-day	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--	--	--	8.0E-04	mg/kg-day	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--	--	--	1.0E-05	mg/kg-day	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--	--	--	1.3E-04	mg/kg-day	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--	--	--	3.0E-01	mg/kg-day	--
				Total DLCs (excluding KM TEQs)							1.3E-08						2.9E-03
				Total DLCs (based on KM TEQs)							1.2E-08						2.7E-03
				Total PCDD/Fs (excluding KM TEQ)							9.8E-09						2.2E-03
				Total PCDD/Fs (based on KM TEQ)							9.6E-09						2.1E-03
				Total DL-PCBs (excluding KM TEQ)							3.2E-09						7.0E-04
				Total DL-PCBs (based on KM TEQ)							2.8E-09						6.2E-04
				Total Non-DL PCBs							1.9E-09						2.2E-03
				Total PCBs (DL & NDL; excluding KM TEQ)							5.1E-09						2.9E-03
				Total PCBs (DL & NDL; based on KM TEQ)							4.7E-09						2.8E-03
				Total PAHs							2.3E-08						4.2E-04
				Total Organics							0.0E+00						0.0E+00
				Total Inorganics							2.8E-08						1.5E-03
		Sediment Dermal Total (excluding KM TEQs)									6.6E-08						7.0E-03
		Sediment Dermal Total (based on KM TEQs)									6.6E-08						6.9E-03
	Swimmer Sediment Total (excluding KM TEQs)										2.0E-07						4.7E-02
	Swimmer Sediment Total (based on KM TEQs)										2.0E-07						4.7E-02
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	6.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-10	--	1.6E-14	mg/kg-day	7.0E-10	mg/kg-day	2.3E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-11	--	5.5E-15	mg/kg-day	7.0E-10	mg/kg-day	7.9E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-11	--	4.0E-14	mg/kg-day	7.0E-09	mg/kg-day	5.7E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-12	--	6.4E-15	mg/kg-day	7.0E-09	mg/kg-day	9.2E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-12	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.6E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-12	--	8.1E-14	mg/kg-day	7.0E-08	mg/kg-day	1.2E-06
				OCDD	6E-05	µg/L	3.6E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-12	--	8.5E-13	mg/kg-day	2.3E-06	mg/kg-day	3.6E-07
				2,3,7,8-TCDF	5E-07	µg/L	2.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-12	--	6.2E-15	mg/kg-day	7.0E-09	mg/kg-day	8.9E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.1E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.6E-13	--	5.0E-15	mg/kg-day	2.3E-08	mg/kg-day	2.1E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.7E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-11	--	8.6E-15	mg/kg-day	2.3E-09	mg/kg-day	3.7E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-11	--	2.4E-14	mg/kg-day	7.0E-09	mg/kg-day	3.4E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.5E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-12	--	5.8E-15	mg/kg-day	7.0E-09	mg/kg-day	8.3E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-11	--	3.5E-14	mg/kg-day	7.0E-09	mg/kg-day	4.9E-06

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk[a]		Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units			Value		Value	Units	Hazard Quotient
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-12	--	3.7E-15	mg/kg-day	7.0E-09	mg/kg-day	5.3E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-12	--	1.0E-13	mg/kg-day	7.0E-08	mg/kg-day	1.4E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.7E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-13	--	6.4E-15	mg/kg-day	7.0E-08	mg/kg-day	9.1E-08
				OCDF	1E-05	µg/L	8.2E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.7E-13	--	1.9E-13	mg/kg-day	2.3E-06	mg/kg-day	8.2E-08
				KM TEQ DF	2E-06	µg/L	1.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-10	--	3.2E-14	mg/kg-day	7.0E-10	mg/kg-day	4.6E-05
				PCB-77	2E-05	µg/L	1.2E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-13	--	2.7E-13	mg/kg-day	7.0E-06	mg/kg-day	3.8E-08
				PCB-81	7E-07	µg/L	3.8E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-14	--	9.0E-15	mg/kg-day	2.3E-06	mg/kg-day	3.8E-09
				PCB-105	7E-05	µg/L	4.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-13	--	9.6E-13	mg/kg-day	2.3E-05	mg/kg-day	4.1E-08
				PCB-114	4E-06	µg/L	2.1E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-15	--	5.0E-14	mg/kg-day	2.3E-05	mg/kg-day	2.1E-09
				PCB-118	2E-04	µg/L	9.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-13	--	2.1E-12	mg/kg-day	2.3E-05	mg/kg-day	9.2E-08
				PCB-123	3E-06	µg/L	1.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-15	--	4.2E-14	mg/kg-day	2.3E-05	mg/kg-day	1.8E-09
				PCB-126	7E-07	µg/L	3.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-12	--	8.8E-15	mg/kg-day	7.0E-09	mg/kg-day	1.3E-06
				PCB-156/157	2E-05	µg/L	1.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-14	--	2.5E-13	mg/kg-day	2.3E-05	mg/kg-day	1.1E-08
				PCB-167	7E-06	µg/L	3.7E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-14	--	8.6E-14	mg/kg-day	2.3E-05	mg/kg-day	3.7E-09
				PCB-169	4E-07	µg/L	2.3E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-12	--	5.3E-15	mg/kg-day	2.3E-08	mg/kg-day	2.3E-07
				PCB-189	9E-07	µg/L	4.8E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-15	--	1.1E-14	mg/kg-day	2.3E-05	mg/kg-day	4.8E-10
				KM TEQ PCB	1E-07	µg/L	6.1E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.2E-12	--	1.4E-15	mg/kg-day	7.0E-10	mg/kg-day	2.0E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	6.6E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-12	M	1.5E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	8.5E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.6E-11	M	2.0E-10	mg/kg-day	3.0E-04	mg/kg-day	6.6E-07
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-12	M	2.7E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	5.2E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.6E-13	M	1.2E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.1E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.4E-14	M	2.6E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.2E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-12	M	5.1E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.9E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-12	M	1.1E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.0E-11	mg/kg-day	--	--	--	--	4.6E-10	mg/kg-day	2.0E-02	mg/kg-day	2.3E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	6.7E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.1E-12	--	1.6E-09	mg/kg-day	1.0E-02	mg/kg-day	1.6E-07
				Trichloroethylene	1E-01	µg/L	7.4E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.0E-11	M	1.7E-09	mg/kg-day	5.0E-04	mg/kg-day	3.4E-06
				Inorganics													
				Antimony	7E-01	µg/L	3.9E-10	mg/kg-day	--	--	--	--	9.1E-09	mg/kg-day	4.0E-04	mg/kg-day	2.3E-05
				Arsenic, inorganic	1E+00	µg/L	7.2E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-09	--	1.7E-08	mg/kg-day	3.0E-04	mg/kg-day	5.6E-05
				Chromium [as Cr(III)]	1E+00	µg/L	7.3E-10	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	1.5E+00	mg/kg-day	1.1E-08
				Chromium (VI)	2E-01	µg/L	1.2E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.9E-10	M	2.9E-09	mg/kg-day	3.0E-03	mg/kg-day	9.7E-07
				Iron	5E+02	µg/L	3.0E-07	mg/kg-day	--	--	--	--	7.0E-06	mg/kg-day	7.0E-01	mg/kg-day	1.0E-05
				Manganese	7E+01	µg/L	3.9E-08	mg/kg-day	--	--	--	--	9.1E-07	mg/kg-day	2.4E-02	mg/kg-day	3.8E-05
				Mercury	3E-02	µg/L	1.5E-11	mg/kg-day	--	--	--	--	3.5E-10	mg/kg-day	3.0E-04	mg/kg-day	1.2E-06
				Thallium	1E-02	µg/L	6.9E-12	mg/kg-day	--	--	--	--	1.6E-10	mg/kg-day	1.0E-05	mg/kg-day	1.6E-05
				Titanium	8E+00	µg/L	4.4E-09	mg/kg-day	--	--	--	--	1.0E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							2.6E-10						5.8E-05
				Total DLCs (based on KM TEQs)							2.1E-10						4.8E-05
				Total PCDD/Fs (excluding KM TEQ)							2.6E-10						5.7E-05
				Total PCDD/Fs (based on KM TEQ)							2.1E-10						4.6E-05
				Total DL-PCBs (excluding KM TEQ)							7.6E-12						1.7E-06
				Total DL-PCBs (based on KM TEQ)							9.2E-12						2.0E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.6E-12						1.7E-06
				Total PCBs (DL & NDL; based on KM TEQ)							9.2E-12						2.0E-06
				Total PAHs							3.9E-11						6.9E-07
				Total Organics							1.2E-11						3.6E-06
				Total Inorganics							1.3E-09						1.4E-04
		Surface Water Ingestion Total (excluding KM TEQs)									1.6E-09						2.1E-04
		Surface Water Ingestion Total (based on KM TEQs)									1.5E-09						2.0E-04

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	6.9E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-10	--	1.6E-14	mg/kg-day	7.0E-10	mg/kg-day	2.3E-05
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-11	--	5.5E-15	mg/kg-day	7.0E-10	mg/kg-day	7.9E-06
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.6E-11	--	4.0E-14	mg/kg-day	7.0E-09	mg/kg-day	5.7E-06
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.1E-12	--	6.4E-15	mg/kg-day	7.0E-09	mg/kg-day	9.2E-07
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	4.9E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.3E-12	--	1.1E-14	mg/kg-day	7.0E-09	mg/kg-day	1.6E-06
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.2E-12	--	8.1E-14	mg/kg-day	7.0E-08	mg/kg-day	1.2E-06
				OCDD	6E-05	µg/L	3.6E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.6E-12	--	8.5E-13	mg/kg-day	2.3E-06	mg/kg-day	3.6E-07
				2,3,7,8-TCDF	5E-07	µg/L	2.7E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.0E-12	--	6.2E-15	mg/kg-day	7.0E-09	mg/kg-day	8.9E-07
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.1E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.6E-13	--	5.0E-15	mg/kg-day	2.3E-08	mg/kg-day	2.1E-07
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.7E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-11	--	8.6E-15	mg/kg-day	2.3E-09	mg/kg-day	3.7E-06
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.5E-11	--	2.4E-14	mg/kg-day	7.0E-09	mg/kg-day	3.4E-06
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.5E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.7E-12	--	5.8E-15	mg/kg-day	7.0E-09	mg/kg-day	8.3E-07
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.2E-11	--	3.5E-14	mg/kg-day	7.0E-09	mg/kg-day	4.9E-06
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-12	--	3.7E-15	mg/kg-day	7.0E-09	mg/kg-day	5.3E-07
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.3E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.5E-12	--	1.0E-13	mg/kg-day	7.0E-08	mg/kg-day	1.4E-06
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.7E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.1E-13	--	6.4E-15	mg/kg-day	7.0E-08	mg/kg-day	9.1E-08
				OCDF	1E-05	µg/L	8.2E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.7E-13	--	1.9E-13	mg/kg-day	2.3E-06	mg/kg-day	8.2E-08
				KM TEQ DF	2E-06	µg/L	1.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-10	--	3.2E-14	mg/kg-day	7.0E-10	mg/kg-day	4.6E-05
				PCB-77	2E-05	µg/L	1.2E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.7E-13	--	2.7E-13	mg/kg-day	7.0E-06	mg/kg-day	3.8E-08
				PCB-81	7E-07	µg/L	3.8E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-14	--	9.0E-15	mg/kg-day	2.3E-06	mg/kg-day	3.8E-09
				PCB-105	7E-05	µg/L	4.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-13	--	9.6E-13	mg/kg-day	2.3E-05	mg/kg-day	4.1E-08
				PCB-114	4E-06	µg/L	2.1E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	9.6E-15	--	5.0E-14	mg/kg-day	2.3E-05	mg/kg-day	2.1E-09
				PCB-118	2E-04	µg/L	9.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.1E-13	--	2.1E-12	mg/kg-day	2.3E-05	mg/kg-day	9.2E-08
				PCB-123	3E-06	µg/L	1.8E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.0E-15	--	4.2E-14	mg/kg-day	2.3E-05	mg/kg-day	1.8E-09
				PCB-126	7E-07	µg/L	3.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-12	--	8.8E-15	mg/kg-day	7.0E-09	mg/kg-day	1.3E-06
				PCB-156/157	2E-05	µg/L	1.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.9E-14	--	2.5E-13	mg/kg-day	2.3E-05	mg/kg-day	1.1E-08
				PCB-167	7E-06	µg/L	3.7E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-14	--	8.6E-14	mg/kg-day	2.3E-05	mg/kg-day	3.7E-09
				PCB-169	4E-07	µg/L	2.3E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-12	--	5.3E-15	mg/kg-day	2.3E-08	mg/kg-day	2.3E-07
				PCB-189	9E-07	µg/L	4.8E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-15	--	1.1E-14	mg/kg-day	2.3E-05	mg/kg-day	4.8E-10
				KM TEQ PCB	1E-07	µg/L	6.1E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.2E-12	--	1.4E-15	mg/kg-day	7.0E-10	mg/kg-day	2.0E-06
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	6.6E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.0E-12	M	1.5E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	8.5E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.6E-11	M	2.0E-10	mg/kg-day	3.0E-04	mg/kg-day	6.6E-07
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.5E-12	M	2.7E-10	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	5.2E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.6E-13	M	1.2E-10	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.1E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.4E-14	M	2.6E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.2E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.6E-12	M	5.1E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	4.9E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-12	M	1.1E-10	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.0E-11	mg/kg-day	--	--	--	--	4.6E-10	mg/kg-day	2.0E-02	mg/kg-day	2.3E-08
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	6.7E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.1E-12	--	1.6E-09	mg/kg-day	1.0E-02	mg/kg-day	1.6E-07
				Trichloroethylene	1E-01	µg/L	7.4E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.0E-11	M	1.7E-09	mg/kg-day	5.0E-04	mg/kg-day	3.4E-06
				Inorganics													
				Antimony	7E-01	µg/L	3.9E-10	mg/kg-day	--	--	--	--	9.1E-09	mg/kg-day	4.0E-04	mg/kg-day	2.3E-05
				Arsenic, inorganic	1E+00	µg/L	7.2E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-09	--	1.7E-08	mg/kg-day	3.0E-04	mg/kg-day	5.6E-05
				Chromium [as Cr(III)]	1E+00	µg/L	7.3E-10	mg/kg-day	--	--	--	--	1.7E-08	mg/kg-day	1.5E+00	mg/kg-day	1.1E-08
				Chromium (VI)	2E-01	µg/L	1.2E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	7.5E-09	M	2.9E-09	mg/kg-day	3.0E-03	mg/kg-day	9.7E-07
				Iron	5E+02	µg/L	3.0E-07	mg/kg-day	--	--	--	--	7.0E-06	mg/kg-day	7.0E-01	mg/kg-day	1.0E-05
				Manganese	7E+01	µg/L	3.9E-08	mg/kg-day	--	--	--	--	9.1E-07	mg/kg-day	2.4E-02	mg/kg-day	3.8E-05
				Mercury	3E-02	µg/L	1.5E-11	mg/kg-day	--	--	--	--	3.5E-10	mg/kg-day	3.0E-04	mg/kg-day	1.2E-06
				Thallium	1E-02	µg/L	6.3E-13	mg/kg-day	--	--	--	--	1.5E-11	mg/kg-day	1.0E-05	mg/kg-day	1.5E-06
				Titanium	8E+00	µg/L	4.0E-10	mg/kg-day	--	--	--	--	9.4E-09	mg/kg-day	--	--	--

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake Units	CSF/Unit Risk Value	CSF Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake Units	RfD Value	RfD Units	Hazard Quotient
				Total DLCs (excluding KM TEQs)							2.6E-10						5.8E-05
				Total DLCs (based on KM TEQs)							2.1E-10						4.8E-05
				Total PCDD/Fs (excluding KM TEQ)							2.6E-10						5.7E-05
				Total PCDD/Fs (based on KM TEQ)							2.1E-10						4.6E-05
				Total DL-PCBs (excluding KM TEQ)							7.6E-12						1.7E-06
				Total DL-PCBs (based on KM TEQ)							9.2E-12						2.0E-06
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.6E-12						1.7E-06
				Total PCBs (DL & NDL; based on KM TEQ)							9.2E-12						2.0E-06
				Total PAHs							3.9E-11						6.9E-07
				Total Organics							1.2E-11						3.6E-06
				Total Inorganics							8.6E-09						1.3E-04
		Surface Water Dermal Total (excluding KM TEQs)									8.9E-09						1.9E-04
		Surface Water Dermal Total (based on KM TEQs)									8.8E-09						1.8E-04
Wader Surface Water Total (excluding KM TEQs)											1.0E-08						4.0E-04
Wader Surface Water Total (based on KM TEQs)											1.0E-08						3.8E-04
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											2.1E-07						4.8E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)											2.1E-07						4.7E-02
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	7.1E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.1E-09	--	1.7E-13	mg/kg-day	7.0E-10	mg/kg-day	2.4E-04
				1,2,3,7,8-PeCDD	4E-07	µg/L	2.5E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.7E-10	--	5.8E-14	mg/kg-day	7.0E-10	mg/kg-day	8.2E-05
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	1.8E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.7E-10	--	4.2E-13	mg/kg-day	7.0E-09	mg/kg-day	6.0E-05
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	2.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.3E-11	--	6.7E-14	mg/kg-day	7.0E-09	mg/kg-day	9.6E-06
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	5.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7.6E-11	--	1.2E-13	mg/kg-day	7.0E-09	mg/kg-day	1.7E-05
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	3.6E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	5.4E-11	--	8.4E-13	mg/kg-day	7.0E-08	mg/kg-day	1.2E-05
				OCDD	6E-05	µg/L	3.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.7E-11	--	8.8E-12	mg/kg-day	2.3E-06	mg/kg-day	3.8E-06
				2,3,7,8-TCDF	5E-07	µg/L	2.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.2E-11	--	6.5E-14	mg/kg-day	7.0E-09	mg/kg-day	9.3E-06
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.0E-11	--	5.2E-14	mg/kg-day	2.3E-08	mg/kg-day	2.2E-06
				2,3,4,7,8-PeCDF	7E-07	µg/L	3.8E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.7E-10	--	9.0E-14	mg/kg-day	2.3E-09	mg/kg-day	3.8E-05
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--	2.5E-13	mg/kg-day	7.0E-09	mg/kg-day	3.6E-05
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	2.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.9E-11	--	6.0E-14	mg/kg-day	7.0E-09	mg/kg-day	8.6E-06
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-10	--	3.6E-13	mg/kg-day	7.0E-09	mg/kg-day	5.1E-05
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	1.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-11	--	3.8E-14	mg/kg-day	7.0E-09	mg/kg-day	5.5E-06
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	4.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	6.8E-11	--	1.1E-12	mg/kg-day	7.0E-08	mg/kg-day	1.5E-05
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	2.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.3E-12	--	6.6E-14	mg/kg-day	7.0E-08	mg/kg-day	9.5E-07
				OCDF	1E-05	µg/L	8.5E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.8E-12	--	2.0E-12	mg/kg-day	2.3E-06	mg/kg-day	8.5E-07
				KM TEQ DF	2E-06	µg/L	1.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.1E-09	--	3.3E-13	mg/kg-day	7.0E-10	mg/kg-day	4.7E-04
				PCB-77	2E-05	µg/L	1.2E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.8E-12	--	2.8E-12	mg/kg-day	7.0E-06	mg/kg-day	4.0E-07
				PCB-81	7E-07	µg/L	4.0E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	1.8E-13	--	9.3E-14	mg/kg-day	2.3E-06	mg/kg-day	4.0E-08
				PCB-105	7E-05	µg/L	4.3E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.9E-12	--	1.0E-11	mg/kg-day	2.3E-05	mg/kg-day	4.3E-07
				PCB-114	4E-06	µg/L	2.2E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.0E-13	--	5.2E-13	mg/kg-day	2.3E-05	mg/kg-day	2.2E-08
				PCB-118	2E-04	µg/L	9.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-12	--	2.2E-11	mg/kg-day	2.3E-05	mg/kg-day	9.6E-07
				PCB-123	3E-06	µg/L	1.9E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.3E-14	--	4.3E-13	mg/kg-day	2.3E-05	mg/kg-day	1.9E-08
				PCB-126	7E-07	µg/L	3.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.9E-11	--	9.2E-14	mg/kg-day	7.0E-09	mg/kg-day	1.3E-05
				PCB-156/157	2E-05	µg/L	1.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	5.1E-13	--	2.6E-12	mg/kg-day	2.3E-05	mg/kg-day	1.1E-07
				PCB-167	7E-06	µg/L	3.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-13	--	8.9E-13	mg/kg-day	2.3E-05	mg/kg-day	3.8E-08
				PCB-169	4E-07	µg/L	2.4E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.1E-11	--	5.5E-14	mg/kg-day	2.3E-08	mg/kg-day	2.4E-06
				PCB-189	9E-07	µg/L	5.0E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-14	--	1.2E-13	mg/kg-day	2.3E-05	mg/kg-day	5.0E-09
				KM TEQ PCB	1E-07	µg/L	6.4E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	9.5E-11	--	1.5E-14	mg/kg-day	7.0E-10	mg/kg-day	2.1E-05
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	6.9E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-11	M	1.6E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	8.8E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.7E-10	M	2.1E-09	mg/kg-day	3.0E-04	mg/kg-day	6.9E-06
				Benzo(b)fluoranthene	2E-02	µg/L	1.2E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.6E-11	M	2.8E-09	mg/kg-day	--	--	--

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake Units	CSF/Unit Risk Value	CSF Units	Cancer Risk[a]		Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake Units	RfD Value	RfD Units	Hazard Quotient
				Benzo(k)fluoranthene	9E-03	µg/L	5.4E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.6E-12	M	1.3E-09	mg/kg-day	--	--	--
				Chrysene	2E-02	µg/L	1.2E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.5E-13	M	2.7E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	2.3E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.8E-11	M	5.3E-10	mg/kg-day	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	5.0E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.5E-11	M	1.2E-09	mg/kg-day	--	--	--
				Naphthalene	4E-02	µg/L	2.1E-10	mg/kg-day	--	--	--	--	4.8E-09	mg/kg-day	2.0E-02	mg/kg-day	2.4E-07
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	7.0E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	2.2E-11	--	1.6E-08	mg/kg-day	1.0E-02	mg/kg-day	1.6E-06
				Trichloroethylene	1E-01	µg/L	7.7E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	1.1E-10	M	1.8E-08	mg/kg-day	5.0E-04	mg/kg-day	3.6E-05
				Inorganics													
				Antimony	7E-01	µg/L	4.1E-09	mg/kg-day	--	--	--	--	9.5E-08	mg/kg-day	4.0E-04	mg/kg-day	2.4E-04
				Arsenic, inorganic	1E+00	µg/L	7.4E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-08	--	1.7E-07	mg/kg-day	3.0E-04	mg/kg-day	5.8E-04
				Chromium [as Cr(III)]	1E+00	µg/L	7.5E-09	mg/kg-day	--	--	--	--	1.8E-07	mg/kg-day	1.5E+00	mg/kg-day	1.2E-07
				Chromium (VI)	2E-01	µg/L	1.3E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	1.9E-09	M	3.0E-08	mg/kg-day	3.0E-03	mg/kg-day	1.0E-05
				Iron	5E+02	µg/L	3.1E-06	mg/kg-day	--	--	--	--	7.3E-05	mg/kg-day	7.0E-01	mg/kg-day	1.0E-04
				Manganese	7E+01	µg/L	4.0E-07	mg/kg-day	--	--	--	--	9.4E-06	mg/kg-day	2.4E-02	mg/kg-day	3.9E-04
				Mercury	3E-02	µg/L	1.5E-10	mg/kg-day	--	--	--	--	3.6E-09	mg/kg-day	3.0E-04	mg/kg-day	1.2E-05
				Thallium	1E-02	µg/L	7.2E-11	mg/kg-day	--	--	--	--	1.7E-09	mg/kg-day	1.0E-05	mg/kg-day	1.7E-04
				Titanium	8E+00	µg/L	4.6E-08	mg/kg-day	--	--	--	--	1.1E-06	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							2.7E-09						6.1E-04
				Total DLCs (based on KM TEQs)							2.2E-09						5.0E-04
				Total PCDD/Fs (excluding KM TEQ)							2.7E-09						5.9E-04
				Total PCDD/Fs (based on KM TEQ)							2.1E-09						4.7E-04
				Total DL-PCBs (excluding KM TEQ)							7.9E-11						1.7E-05
				Total DL-PCBs (based on KM TEQ)							9.5E-11						2.1E-05
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							7.9E-11						1.7E-05
				Total PCBs (DL & NDL; based on KM TEQ)							9.5E-11						2.1E-05
				Total PAHs							4.1E-10						7.1E-06
				Total Organics							1.3E-10						3.7E-05
				Total Inorganics							1.3E-08						1.5E-03
		Surface Water Ingestion Total (excluding KM TEQs)									1.6E-08						2.2E-03
		Surface Water Ingestion Total (based on KM TEQs)									1.6E-08						2.0E-03
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**													
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--	--	--	2.3E-09	mg/kg-day	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--	--	--	7.0E-08	mg/kg-day	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--	--	--	7.0E-06	mg/kg-day	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--	--	--	2.3E-06	mg/kg-day	--

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk				Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]		Value		Value	Units	Hazard Quotient
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--	--	--	7.0E-09	mg/kg-day	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--	--	--	2.3E-08	mg/kg-day	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--	--	--	2.3E-05	mg/kg-day	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--	--	--	7.0E-10	mg/kg-day	--
				PAHs													
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	3.0E-04	mg/kg-day	--
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M	--	--	--	--	--
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M	--	--	--	--	--
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M	--	--	--	--	--
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M	--	--	--	--	--
				Naphthalene	4E-02	µg/L	1.9E-09	mg/kg-day	--	--	--	--	4.5E-08	mg/kg-day	2.0E-02	mg/kg-day	2.3E-06
				Pesticides & Organics													
				Chloroform	1E-01	µg/L	9.7E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	3.0E-11	--	2.3E-08	mg/kg-day	1.0E-02	mg/kg-day	2.3E-06
				Trichloroethylene	1E-01	µg/L	1.9E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2.6E-10	M	4.4E-08	mg/kg-day	5.0E-04	mg/kg-day	8.8E-05
				Inorganics													
				Antimony	7E-01	µg/L	6.1E-10	mg/kg-day	--	--	--	--	1.4E-08	mg/kg-day	6.0E-05	mg/kg-day	2.4E-04
				Arsenic, inorganic	1E+00	µg/L	1.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.7E-09	--	2.6E-08	mg/kg-day	3.0E-04	mg/kg-day	8.7E-05
				Chromium [as Cr(III)]	1E+00	µg/L	1.1E-09	mg/kg-day	--	--	--	--	2.6E-08	mg/kg-day	2.0E-02	mg/kg-day	1.4E-06
				Chromium (VI)	2E-01	µg/L	3.9E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	2.3E-08	M	9.1E-09	mg/kg-day	7.5E-05	mg/kg-day	1.2E-04
				Iron	5E+02	µg/L	4.7E-07	mg/kg-day	--	--	--	--	1.1E-05	mg/kg-day	7.0E-01	mg/kg-day	1.6E-05
				Manganese	7E+01	µg/L	6.1E-08	mg/kg-day	--	--	--	--	1.4E-06	mg/kg-day	9.6E-04	mg/kg-day	1.5E-03
				Mercury	3E-02	µg/L	2.3E-11	mg/kg-day	--	--	--	--	5.4E-10	mg/kg-day	2.1E-05	mg/kg-day	2.6E-05
				Thallium	1E-02	µg/L	1.1E-11	mg/kg-day	--	--	--	--	2.5E-10	mg/kg-day	1.0E-05	mg/kg-day	2.5E-05
				Titanium	8E+00	µg/L	6.9E-09	mg/kg-day	--	--	--	--	1.6E-07	mg/kg-day	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00						0.0E+00
				Total DLCs (based on KM TEQs)							0.0E+00						0.0E+00
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCDD/Fs (based on KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (excluding KM TEQ)							0.0E+00						0.0E+00
				Total DL-PCBs (based on KM TEQ)							0.0E+00						0.0E+00
				Total Non-DL PCBs							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00						0.0E+00
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00						0.0E+00
				Total PAHs							0.0E+00						2.3E-06
				Total Organics							2.9E-10						9.0E-05
				Total Inorganics							2.5E-08						2.0E-03
		Surface Water Dermal Total (excluding KM TEQs)									2.5E-08						2.1E-03
		Surface Water Dermal Total (based on KM TEQs)									2.5E-08						2.1E-03
Swimmer Surface Water Total (excluding KM TEQs)											4.2E-08						4.2E-03
Swimmer Surface Water Total (based on KM TEQs)											4.1E-08						4.1E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											2.4E-07						5.2E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											2.4E-07						5.1E-02

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2

TABLE 7.7 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk			Intake/Exposure Concentration		RfD		
							Value	Units	Value	Units	Cancer Risk[a]	Value		Value	Units	Hazard Quotient

and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls

USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
Sediment	Sediment	Wader	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--
				OCDD	3E-03	mg/kg	7.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	4.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.1E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	4.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	9.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.8E-11	--
				OCDF	4E-04	mg/kg	1.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.0E-11	--
				KM TEQ DF	1E-04	mg/kg	3.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.6E-08	--
				PCB-77	8E-03	mg/kg	2.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-10	--
				PCB-81	3E-04	mg/kg	8.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.0E-11	--
				PCB-105	1E-02	mg/kg	3.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-10	--
				PCB-114	9E-04	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				PCB-118	4E-02	mg/kg	1.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-10	--
				PCB-123	1E-03	mg/kg	3.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--
				PCB-126	2E-04	mg/kg	7.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				PCB-156/157	3E-03	mg/kg	9.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-11	--
				PCB-167	1E-03	mg/kg	3.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--
				PCB-169	3E-04	mg/kg	7.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.4E-09	--
				PCB-189	2E-04	mg/kg	7.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-12	--
				KM TEQ PCB	3E-05	mg/kg	9.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	2.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	6.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.2E-10	M
				Benzo(a)pyrene	2E+00	mg/kg	6.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.0E-09	M
				Benzo(b)fluoranthene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.4E-10	M
				Benzo(k)fluoranthene	1E+00	mg/kg	3.5E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.5E-11	M
				Chrysene	2E+00	mg/kg	5.9E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.9E-12	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.2E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	1.7E-08	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	3.6E-05	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	6.9E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	5.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.2E-08	--
				Cadmium	3E+00	mg/kg	9.1E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	3.2E-07	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	4.2E-08	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	5.0E-07	mg/kg-day	--	--	--	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Chromium (VI)	1E+00	mg/kg	4.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.1E-09	M
				Iron	4E+04	mg/kg	1.3E-04	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	1.4E-06	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	1.0E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	5.9E-09	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	2.0E-07	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	7.3E-10	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	3.7E-06	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							6.3E-08	
				Total DLCs (based on KM TEQs)							6.0E-08	
				Total PCDD/Fs (excluding KM TEQ)							4.7E-08	
				Total PCDD/Fs (based on KM TEQ)							4.6E-08	
				Total DL-PCBs (excluding KM TEQ)							1.5E-08	
				Total DL-PCBs (based on KM TEQ)							1.4E-08	
				Total Non-DL PCBs							2.0E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.7E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							1.6E-08	
				Total PAHs							8.7E-09	
				Total Organics							0.0E+00	
				Total Inorganics							8.4E-08	
		Sediment Ingestion Total (excluding KM TEQs)									1.6E-07	
		Sediment Ingestion Total (based on KM TEQs)									1.5E-07	
Sediment	Sediment	Wader	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.8E-10	--
				OCDD	3E-03	mg/kg	6.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.7E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.7E-11	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.6E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.7E-11	--
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.6E-11	--
				KM TEQ DF	1E-04	mg/kg	2.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-08	--
				PCB-77	8E-03	mg/kg	1.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-10	--
				PCB-81	3E-04	mg/kg	6.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--
				PCB-105	1E-02	mg/kg	2.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-12	--
				PCB-118	4E-02	mg/kg	8.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-10	--
				PCB-123	1E-03	mg/kg	2.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				PCB-126	2E-04	mg/kg	5.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-09	--
				PCB-156/157	3E-03	mg/kg	7.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				PCB-169	3E-04	mg/kg	5.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-09	--
				PCB-189	2E-04	mg/kg	5.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-12	--
				KM TEQ PCB	3E-05	mg/kg	7.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	7.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.0E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-08	M
				Benzo(b)fluoranthene	2E+00	mg/kg	1.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.2E-10	M
				Chrysene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.2E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.5E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	7.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--
				Cadmium	3E+00	mg/kg	2.3E-10	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							4.8E-08	
				Total DLCs (based on KM TEQs)							4.6E-08	
				Total PCDD/Fs (excluding KM TEQ)							3.7E-08	
				Total PCDD/Fs (based on KM TEQ)							3.6E-08	
				Total DL-PCBs (excluding KM TEQ)							1.2E-08	
				Total DL-PCBs (based on KM TEQ)							1.0E-08	
				Total Non-DL PCBs							7.0E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							1.7E-08	
				Total PAHs							2.9E-08	
				Total Organics							0.0E+00	
				Total Inorganics							1.1E-07	
		Sediment Dermal Total (excluding KM TEQs)									1.9E-07	
		Sediment Dermal Total (based on KM TEQs)									1.9E-07	
Wader Sediment Total (excluding KM TEQs)											3.5E-07	
Wader Sediment Total (based on KM TEQs)											3.4E-07	
Sediment	Sediment	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	2.3E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.4E-08	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.2E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.8E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	4.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.5E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.8E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	7.6E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--
				OCDD	3E-03	mg/kg	7.7E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.5E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	4.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.1E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.8E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.3E-10	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	4.7E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	2.1E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	2.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.2E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	5.6E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	4.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.2E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	9.5E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.4E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	4.8E-11	--
				OCDF	4E-04	mg/kg	1.3E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	6.0E-11	--
				KM TEQ DF	1E-04	mg/kg	3.1E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.6E-08	--
				PCB-77	8E-03	mg/kg	2.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.4E-10	--
				PCB-81	3E-04	mg/kg	8.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.0E-11	--
				PCB-105	1E-02	mg/kg	3.7E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-10	--
				PCB-114	9E-04	mg/kg	2.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				PCB-118	4E-02	mg/kg	1.1E-10	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-10	--
				PCB-123	1E-03	mg/kg	3.1E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.4E-11	--
				PCB-126	2E-04	mg/kg	7.2E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.1E-08	--
				PCB-156/157	3E-03	mg/kg	9.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.3E-11	--
				PCB-167	1E-03	mg/kg	3.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.5E-11	--
				PCB-169	3E-04	mg/kg	7.5E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	3.4E-09	--
				PCB-189	2E-04	mg/kg	7.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.2E-12	--
				KM TEQ PCB	3E-05	mg/kg	9.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	2.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	6.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	6.2E-10	M
				Benzo(a)pyrene	2E+00	mg/kg	6.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	6.0E-09	M
				Benzo(b)fluoranthene	2E+00	mg/kg	5.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	5.4E-10	M
				Benzo(k)fluoranthene	1E+00	mg/kg	3.5E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.5E-11	M
				Chrysene	2E+00	mg/kg	5.9E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	5.9E-12	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.2E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	2.2E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.2E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	1.7E-08	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.2E-06	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	3.6E-05	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	6.9E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	5.5E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.2E-08	--
				Cadmium	3E+00	mg/kg	9.1E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	3.2E-07	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	4.2E-08	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	5.0E-07	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	4.1E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	2.1E-09	M

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Iron	4E+04	mg/kg	1.3E-04	mg/kg-day	--	--	--	--
				Lead	5E+02	mg/kg	1.4E-06	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	1.0E-06	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	5.9E-09	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	2.0E-07	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	7.3E-10	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	1.5E-07	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	3.7E-06	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							6.3E-08	
				Total DLCs (based on KM TEQs)							6.0E-08	
				Total PCDD/Fs (excluding KM TEQ)							4.7E-08	
				Total PCDD/Fs (based on KM TEQ)							4.6E-08	
				Total DL-PCBs (excluding KM TEQ)							1.5E-08	
				Total DL-PCBs (based on KM TEQ)							1.4E-08	
				Total Non-DL PCBs							2.0E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.7E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							1.6E-08	
				Total PAHs							8.7E-09	
				Total Organics							0.0E+00	
				Total Inorganics							8.4E-08	
		Sediment Ingestion Total (excluding KM TEQs)									1.6E-07	
		Sediment Ingestion Total (based on KM TEQs)									1.5E-07	
Sediment	Sediment	Swimmer	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	1.7E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-08	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	9.2E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.4E-09	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	8.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	3.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.0E-10	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.9E-10	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	5.9E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	8.8E-10	--
				OCDD	3E-03	mg/kg	6.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	2.7E-10	--
				2,3,7,8-TCDF	1E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.7E-10	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	2.2E-14	mg/kg-day	4.5E+03	(mg/kg-day)-1	9.7E-11	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	3.6E-14	mg/kg-day	4.5E+04	(mg/kg-day)-1	1.6E-09	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	1.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.5E-09	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	4.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.4E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	3.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-11	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	2.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3.6E-10	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	7.3E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.1E-09	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	2.5E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	3.7E-11	--
				OCDF	4E-04	mg/kg	1.0E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	4.6E-11	--
				KM TEQ DF	1E-04	mg/kg	2.4E-13	mg/kg-day	1.5E+05	(mg/kg-day)-1	3.6E-08	--
				PCB-77	8E-03	mg/kg	1.8E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-10	--
				PCB-81	3E-04	mg/kg	6.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	3.1E-11	--
				PCB-105	1E-02	mg/kg	2.8E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.3E-10	--
				PCB-114	9E-04	mg/kg	1.9E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	8.7E-12	--
				PCB-118	4E-02	mg/kg	8.3E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.7E-10	--
				PCB-123	1E-03	mg/kg	2.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.1E-11	--
				PCB-126	2E-04	mg/kg	5.6E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.4E-09	--
				PCB-156/157	3E-03	mg/kg	7.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	3.3E-11	--
				PCB-167	1E-03	mg/kg	2.6E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.2E-11	--
				PCB-169	3E-04	mg/kg	5.8E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	2.6E-09	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				PCB-189	2E-04	mg/kg	5.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-12	--
				KM TEQ PCB	3E-05	mg/kg	7.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	1.0E-08	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	7.0E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.0E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	2.1E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	2.1E-09	M
				Benzo(a)pyrene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.0E-08	M
				Benzo(b)fluoranthene	2E+00	mg/kg	1.8E-08	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.8E-09	M
				Benzo(k)fluoranthene	1E+00	mg/kg	1.2E-08	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.2E-10	M
				Chrysene	2E+00	mg/kg	2.0E-08	mg/kg-day	1.0E-03	(mg/kg-day)-1	2.0E-11	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	4.2E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	4.2E-09	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	7.5E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	7.5E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	7.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-07	--
				Cadmium	3E+00	mg/kg	2.3E-10	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							4.8E-08	
				Total DLCs (based on KM TEQs)							4.6E-08	
				Total PCDD/Fs (excluding KM TEQ)							3.7E-08	
				Total PCDD/Fs (based on KM TEQ)							3.6E-08	
				Total DL-PCBs (excluding KM TEQ)							1.2E-08	
				Total DL-PCBs (based on KM TEQ)							1.0E-08	
				Total Non-DL PCBs							7.0E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.9E-08	
				Total PCBs (DL & NDL; based on KM TEQ)							1.7E-08	
				Total PAHs							2.9E-08	
				Total Organics							0.0E+00	
				Total Inorganics							1.1E-07	
		Sediment Dermal Total (excluding KM TEQs)									1.9E-07	
		Sediment Dermal Total (based on KM TEQs)									1.9E-07	
Swimmer Sediment Total (excluding KM TEQs)											3.5E-07	
Swimmer Sediment Total (based on KM TEQs)											3.4E-07	
Sediment	Sediment	Boater	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	3.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	5.0E-09	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.7E-10	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.4E-11	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	6.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.6E-11	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.7E-11	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.7E-10	--
				OCDD	3E-03	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.2E-11	--
				2,3,7,8-TCDF	1E-05	mg/kg	6.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.1E-11	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	4.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.9E-11	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.9E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.1E-10	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	3.2E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.8E-10	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	8.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	6.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-12	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.9E-11	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.1E-10	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.8E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.2E-12	--
				OCDF	4E-04	mg/kg	2.0E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.9E-12	--
				KM TEQ DF	1E-04	mg/kg	4.6E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.9E-09	--
				PCB-77	8E-03	mg/kg	3.4E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.1E-11	--
				PCB-81	3E-04	mg/kg	1.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.9E-12	--
				PCB-105	1E-02	mg/kg	5.5E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.5E-11	--
				PCB-114	9E-04	mg/kg	3.7E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.7E-12	--
				PCB-118	4E-02	mg/kg	1.6E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.2E-11	--
				PCB-123	1E-03	mg/kg	4.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.1E-12	--
				PCB-126	2E-04	mg/kg	1.1E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--
				PCB-156/157	3E-03	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.4E-12	--
				PCB-167	1E-03	mg/kg	5.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.3E-12	--
				PCB-169	3E-04	mg/kg	1.1E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	5.0E-10	--
				PCB-189	2E-04	mg/kg	1.1E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.8E-13	--
				KM TEQ PCB	3E-05	mg/kg	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-09	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	2.9E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	2.9E-10	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	9.2E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	9.2E-11	M
				Benzo(a)pyrene	2E+00	mg/kg	9.0E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	9.0E-10	M
				Benzo(b)fluoranthene	2E+00	mg/kg	8.1E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	8.1E-11	M
				Benzo(k)fluoranthene	1E+00	mg/kg	5.2E-10	mg/kg-day	1.0E-02	(mg/kg-day)-1	5.2E-12	M
				Chrysene	2E+00	mg/kg	8.8E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	8.8E-13	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	1.8E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.8E-10	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	3.3E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.3E-11	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	2.5E-09	mg/kg-day	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	1.8E-07	mg/kg-day	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	5.4E-06	mg/kg-day	--	--	--	--
				Antimony	2E+00	mg/kg	1.0E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	8.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-08	--
				Cadmium	3E+00	mg/kg	1.4E-09	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	4.7E-08	mg/kg-day	--	--	--	--
				Cobalt	1E+01	mg/kg	6.2E-09	mg/kg-day	--	--	--	--
				Copper	2E+02	mg/kg	7.4E-08	mg/kg-day	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	6.1E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	3.1E-10	M
				Iron	4E+04	mg/kg	1.9E-05	mg/kg-day	--	--	--	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Lead	5E+02	mg/kg	2.1E-07	mg/kg-day	--	--	--	--
				Manganese	4E+02	mg/kg	1.6E-07	mg/kg-day	--	--	--	--
				Mercury	2E+00	mg/kg	8.8E-10	mg/kg-day	--	--	--	--
				Nickel	7E+01	mg/kg	3.0E-08	mg/kg-day	--	--	--	--
				Thallium	2E-01	mg/kg	1.1E-10	mg/kg-day	--	--	--	--
				Vanadium	5E+01	mg/kg	2.2E-08	mg/kg-day	--	--	--	--
				Zinc	1E+03	mg/kg	5.4E-07	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							9.3E-09	
				Total DLCs (based on KM TEQs)							8.9E-09	
				Total PCDD/Fs (excluding KM TEQ)							7.0E-09	
				Total PCDD/Fs (based on KM TEQ)							6.9E-09	
				Total DL-PCBs (excluding KM TEQ)							2.3E-09	
				Total DL-PCBs (based on KM TEQ)							2.0E-09	
				Total Non-DL PCBs							2.9E-10	
				Total PCBs (DL & NDL; excluding KM TEQ)							2.6E-09	
				Total PCBs (DL & NDL; based on KM TEQ)							2.3E-09	
				Total PAHs							1.3E-09	
				Total Organics							0.0E+00	
				Total Inorganics							1.2E-08	
		Sediment Ingestion Total (excluding KM TEQs)									2.3E-08	
		Sediment Ingestion Total (based on KM TEQs)									2.3E-08	
Sediment	Sediment	Boater	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	8E-05	mg/kg	3.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	4.9E-09	--
				1,2,3,7,8-PeCDD	4E-06	mg/kg	1.7E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.6E-10	--
				1,2,3,4,7,8-HxCDD	4E-06	mg/kg	1.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2.3E-11	--
				1,2,3,6,7,8-HxCDD	1E-05	mg/kg	6.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.3E-11	--
				1,2,3,7,8,9-HxCDD	9E-06	mg/kg	3.7E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5.5E-11	--
				1,2,3,4,6,7,8-HpCDD	3E-04	mg/kg	1.1E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	1.6E-10	--
				OCDD	3E-03	mg/kg	1.1E-12	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.0E-11	--
				2,3,7,8-TCDF	1E-05	mg/kg	5.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8.8E-11	--
				1,2,3,7,8-PeCDF	9E-06	mg/kg	4.0E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1.8E-11	--
				2,3,4,7,8-PeCDF	2E-05	mg/kg	6.7E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	3.0E-10	--
				1,2,3,4,7,8-HxCDF	7E-05	mg/kg	3.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4.6E-10	--
				1,2,3,6,7,8-HxCDF	2E-05	mg/kg	8.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.2E-10	--
				1,2,3,7,8,9-HxCDF	1E-06	mg/kg	6.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9.0E-12	--
				2,3,4,6,7,8-HxCDF	1E-05	mg/kg	4.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6.7E-11	--
				1,2,3,4,6,7,8-HpCDF	3E-04	mg/kg	1.4E-13	mg/kg-day	1.5E+03	(mg/kg-day)-1	2.0E-10	--
				1,2,3,4,7,8,9-HpCDF	1E-05	mg/kg	4.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7.0E-12	--
				OCDF	4E-04	mg/kg	1.9E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	8.6E-12	--
				KM TEQ DF	1E-04	mg/kg	4.4E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	6.7E-09	--
				PCB-77	8E-03	mg/kg	3.3E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.9E-11	--
				PCB-81	3E-04	mg/kg	1.3E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5.7E-12	--
				PCB-105	1E-02	mg/kg	5.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.4E-11	--
				PCB-114	9E-04	mg/kg	3.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	1.6E-12	--
				PCB-118	4E-02	mg/kg	1.5E-11	mg/kg-day	4.5E+00	(mg/kg-day)-1	7.0E-11	--
				PCB-123	1E-03	mg/kg	4.5E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.0E-12	--
				PCB-126	2E-04	mg/kg	1.0E-13	mg/kg-day	1.5E+04	(mg/kg-day)-1	1.6E-09	--
				PCB-156/157	3E-03	mg/kg	1.4E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6.2E-12	--
				PCB-167	1E-03	mg/kg	4.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2.2E-12	--
				PCB-169	3E-04	mg/kg	1.1E-13	mg/kg-day	4.5E+03	(mg/kg-day)-1	4.8E-10	--
				PCB-189	2E-04	mg/kg	1.0E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	4.7E-13	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				KM TEQ PCB	3E-05	mg/kg	1.3E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	2.0E-09	--
				Non-DL PCBs								
				Total Non-DL PCBs	7E-01	mg/kg	1.3E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	1.3E-09	--
				PAHs								
				Benz(a)anthracene	2E+00	mg/kg	3.9E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.9E-10	M
				Benzo(a)pyrene	2E+00	mg/kg	3.8E-09	mg/kg-day	1.0E+00	(mg/kg-day)-1	3.8E-09	M
				Benzo(b)fluoranthene	2E+00	mg/kg	3.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	3.4E-10	M
				Benzo(k)fluoranthene	1E+00	mg/kg	2.2E-09	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.2E-11	M
				Chrysene	2E+00	mg/kg	3.7E-09	mg/kg-day	1.0E-03	(mg/kg-day)-1	3.7E-12	M
				Dibenz(a,h)anthracene	4E-01	mg/kg	7.8E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	7.8E-10	M
				Indeno(1,2,3-c,d)-pyrene	8E-01	mg/kg	1.4E-09	mg/kg-day	1.0E-01	(mg/kg-day)-1	1.4E-10	M
				Pesticides & Organics								
				PHC as gasoline	6E+00	mg/kg	--	--	--	--	--	--
				TPH (C9-C40)	4E+02	mg/kg	--	--	--	--	--	--
				Inorganics								
				Aluminum	1E+04	mg/kg	--	--	--	--	--	--
				Antimony	2E+00	mg/kg	--	--	--	--	--	--
				Arsenic, inorganic	3E+01	mg/kg	1.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-08	--
				Cadmium	3E+00	mg/kg	4.4E-11	mg/kg-day	--	--	--	--
				Chromium [as Cr(III)]	1E+02	mg/kg	--	--	--	--	--	--
				Cobalt	1E+01	mg/kg	--	--	--	--	--	--
				Copper	2E+02	mg/kg	--	--	--	--	--	--
				Chromium (VI)	1E+00	mg/kg	--	--	2.0E+01	(mg/kg-day)-1	--	M
				Iron	4E+04	mg/kg	--	--	--	--	--	--
				Lead	5E+02	mg/kg	--	--	--	--	--	--
				Manganese	4E+02	mg/kg	--	--	--	--	--	--
				Mercury	2E+00	mg/kg	--	--	--	--	--	--
				Nickel	7E+01	mg/kg	--	--	--	--	--	--
				Thallium	2E-01	mg/kg	--	--	--	--	--	--
				Vanadium	5E+01	mg/kg	--	--	--	--	--	--
				Zinc	1E+03	mg/kg	--	--	--	--	--	--
				Total DLCs (excluding KM TEQs)							9.0E-09	
				Total DLCs (based on KM TEQs)							8.6E-09	
				Total PCDD/Fs (excluding KM TEQ)							6.8E-09	
				Total PCDD/Fs (based on KM TEQ)							6.7E-09	
				Total DL-PCBs (excluding KM TEQ)							2.2E-09	
				Total DL-PCBs (based on KM TEQ)							2.0E-09	
				Total Non-DL PCBs							1.3E-09	
				Total PCBs (DL & NDL; excluding KM TEQ)							3.5E-09	
				Total PCBs (DL & NDL; based on KM TEQ)							3.3E-09	
				Total PAHs							5.4E-09	
				Total Organics							0.0E+00	
				Total Inorganics							2.0E-08	
		Sediment Dermal Total (excluding KM TEQs)									3.5E-08	
		Sediment Dermal Total (based on KM TEQs)									3.5E-08	
Boater Sediment Total (excluding KM TEQs)											5.9E-08	
Boater Sediment Total (based on KM TEQs)											5.8E-08	
Surface Water	Surface Water	Wader	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	8.8E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1E-10	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	3.0E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	5E-11	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.2E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-11	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	3.5E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-12	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	6.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	9E-12	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	4.5E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	7E-12	--
				OCDD	6E-05	µg/L	4.7E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	2E-12	--
				2,3,7,8-TCDF	5E-07	µg/L	3.4E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-12	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.7E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1E-12	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	4.7E-16	mg/kg-day	4.5E+04	(mg/kg-day)-1	2E-11	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	2E-11	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.2E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-12	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	1.9E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-11	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.0E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-12	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	5.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	8E-12	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	3.5E-16	mg/kg-day	1.5E+03	(mg/kg-day)-1	5E-13	--
				OCDF	1E-05	µg/L	1.0E-14	mg/kg-day	4.5E+01	(mg/kg-day)-1	5E-13	--
				KM TEQ DF	2E-06	µg/L	1.8E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	3E-10	--
				PCB-77	2E-05	µg/L	1.5E-14	mg/kg-day	1.5E+01	(mg/kg-day)-1	2E-13	--
				PCB-81	7E-07	µg/L	4.9E-16	mg/kg-day	4.5E+01	(mg/kg-day)-1	2E-14	--
				PCB-105	7E-05	µg/L	5.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2E-13	--
				PCB-114	4E-06	µg/L	2.7E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1E-14	--
				PCB-118	2E-04	µg/L	1.2E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	5E-13	--
				PCB-123	3E-06	µg/L	2.3E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	1E-14	--
				PCB-126	7E-07	µg/L	4.8E-16	mg/kg-day	1.5E+04	(mg/kg-day)-1	7E-12	--
				PCB-156/157	2E-05	µg/L	1.4E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	6E-14	--
				PCB-167	7E-06	µg/L	4.7E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	2E-14	--
				PCB-169	4E-07	µg/L	2.9E-16	mg/kg-day	4.5E+03	(mg/kg-day)-1	1E-12	--
				PCB-189	9E-07	µg/L	6.2E-16	mg/kg-day	4.5E+00	(mg/kg-day)-1	3E-15	--
				KM TEQ PCB	1E-07	µg/L	7.8E-17	mg/kg-day	1.5E+05	(mg/kg-day)-1	1E-11	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	8.5E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	8E-13	M
				Benzo(a)pyrene	2E-02	µg/L	1.1E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	1E-11	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.5E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1E-12	M
				Benzo(k)fluoranthene	9E-03	µg/L	6.6E-12	mg/kg-day	1.0E-02	(mg/kg-day)-1	7E-14	M
				Chrysene	2E-02	µg/L	1.4E-11	mg/kg-day	1.0E-03	(mg/kg-day)-1	1E-14	M
				Dibenz(a,h)anthracene	4E-03	µg/L	2.8E-12	mg/kg-day	1.0E+00	(mg/kg-day)-1	3E-12	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	6.2E-12	mg/kg-day	1.0E-01	(mg/kg-day)-1	6E-13	M
				Naphthalene	4E-02	µg/L	2.6E-11	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	8.6E-11	mg/kg-day	3.1E-02	(mg/kg-day)-1	3E-12	--
				Trichloroethylene	1E-01	µg/L	9.4E-11	mg/kg-day	4.6E-02	(mg/kg-day)-1	4E-12	M
				Inorganics								
				Antimony	7E-01	µg/L	5.0E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	9.2E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	9.3E-10	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.6E-10	mg/kg-day	5.0E-01	(mg/kg-day)-1	8E-11	M
				Iron	5E+02	µg/L	3.8E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	5.0E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	1.9E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	8.9E-12	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	5.7E-09	mg/kg-day	--	--	--	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total DLCs (excluding KM TEQs)							3.4E-10	
				Total DLCs (based on KM TEQs)							2.7E-10	
				Total PCDD/Fs (excluding KM TEQ)							3.3E-10	
				Total PCDD/Fs (based on KM TEQ)							2.6E-10	
				Total DL-PCBs (excluding KM TEQ)							9.7E-12	
				Total DL-PCBs (based on KM TEQ)							1.2E-11	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							9.7E-12	
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-11	
				Total PAHs							1.7E-11	
				Total Organics							7.0E-12	
				Total Inorganics							1.5E-09	
		Surface Water Ingestion Total (excluding KM TEQs)									1.8E-09	
		Surface Water Ingestion Total (based on KM TEQs)									1.8E-09	
Surface Water	Surface Water	Wader	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	4.7E-10	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	2.7E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	9E-12	--
				Trichloroethylene	1E-01	µg/L	4.9E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	2E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	4.6E-10	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	8.3E-10	mg/kg-day	1.5E+00	(mg/kg-day)-1	1E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	8.5E-10	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.7E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	3E-09	M
				Iron	5E+02	µg/L	3.5E-07	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	4.5E-08	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	1.7E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	1.8E-12	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	1.1E-09	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							3.1E-11	
				Total Inorganics							4.6E-09	
		Surface Water Dermal Total (excluding KM TEQs)									4.6E-09	
		Surface Water Dermal Total (based on KM TEQs)									4.6E-09	
Wader Surface Water Total (excluding KM TEQs)											6.4E-09	
Wader Surface Water Total (based on KM TEQs)											6.4E-09	
Wader Sediment Total + Surface Water Total (excluding KM TEQs)											3.5E-07	
Wader Sediment Total + Surface Water Total (based on KM TEQs)											3.5E-07	
Surface Water	Surface Water	Swimmer	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	9.1E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1E-09	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	3.1E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5E-10	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.3E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-10	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	3.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-11	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	6.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1E-10	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	4.6E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	7E-11	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				OCDD	6E-05	µg/L	4.8E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2E-11	--
				2,3,7,8-TCDF	5E-07	µg/L	3.5E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-11	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	2.8E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1E-11	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	4.9E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	2E-10	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.4E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2E-10	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-11	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.0E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-10	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.1E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-11	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	5.7E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	9E-11	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	3.6E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	5E-12	--
				OCDF	1E-05	µg/L	1.1E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5E-12	--
				KM TEQ DF	2E-06	µg/L	1.8E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3E-09	--
				PCB-77	2E-05	µg/L	1.5E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	2E-12	--
				PCB-81	7E-07	µg/L	5.1E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2E-13	--
				PCB-105	7E-05	µg/L	5.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	2E-12	--
				PCB-114	4E-06	µg/L	2.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1E-13	--
				PCB-118	2E-04	µg/L	1.2E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	5E-12	--
				PCB-123	3E-06	µg/L	2.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1E-13	--
				PCB-126	7E-07	µg/L	5.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	7E-11	--
				PCB-156/157	2E-05	µg/L	1.4E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	6E-13	--
				PCB-167	7E-06	µg/L	4.8E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2E-13	--
				PCB-169	4E-07	µg/L	3.0E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1E-11	--
				PCB-189	9E-07	µg/L	6.3E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3E-14	--
				KM TEQ PCB	1E-07	µg/L	8.1E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1E-10	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	8.7E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	9E-12	M
				Benzo(a)pyrene	2E-02	µg/L	1.1E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1E-10	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.5E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2E-11	M
				Benzo(k)fluoranthene	9E-03	µg/L	6.8E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	7E-13	M
				Chrysene	2E-02	µg/L	1.5E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	1E-13	M
				Dibenz(a,h)anthracene	4E-03	µg/L	2.9E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	3E-11	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	6.4E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	6E-12	M
				Naphthalene	4E-02	µg/L	2.6E-10	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	8.9E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	3E-11	--
				Trichloroethylene	1E-01	µg/L	9.7E-10	mg/kg-day	4.6E-02	(mg/kg-day)-1	4E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	5.2E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	9.4E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	1E-08	--
				Chromium [as Cr(III)]	1E+00	µg/L	9.6E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.6E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	8E-10	M
				Iron	5E+02	µg/L	3.9E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	5.1E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	2.0E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	9.2E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	5.9E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							3.5E-09	
				Total DLCs (based on KM TEQs)							2.8E-09	

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total PCDD/Fs (excluding KM TEQ)							3.4E-09	
				Total PCDD/Fs (based on KM TEQ)							2.7E-09	
				Total DL-PCBs (excluding KM TEQ)							1.0E-10	
				Total DL-PCBs (based on KM TEQ)							1.2E-10	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.0E-10	
				Total PCBs (DL & NDL; based on KM TEQ)							1.2E-10	
				Total PAHs							1.7E-10	
				Total Organics							7.2E-11	
				Total Inorganics							1.5E-08	
		Surface Water Ingestion Total (excluding KM TEQs)									1.9E-08	
		Surface Water Ingestion Total (based on KM TEQs)									1.8E-08	
Surface Water	Surface Water	Swimmer	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	5.4E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	2.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	8E-11	--
				Trichloroethylene	1E-01	µg/L	5.2E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	1.7E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	3.1E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	5E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	3.1E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.1E-09	mg/kg-day	2.0E+01	(mg/kg-day)-1	2E-08	M
				Iron	5E+02	µg/L	1.3E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	1.7E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	6.4E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	3.0E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	1.9E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							3.2E-10	
				Total Inorganics							2.6E-08	
		Surface Water Dermal Total (excluding KM TEQs)									2.7E-08	
		Surface Water Dermal Total (based on KM TEQs)									2.7E-08	
Swimmer Surface Water Total (excluding KM TEQs)											4.5E-08	
Swimmer Surface Water Total (based on KM TEQs)											4.5E-08	
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)											3.9E-07	
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)											3.9E-07	
Surface Water	Surface Water	Boater	Incidental Ingestion	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	9.9E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	1E-09	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	3.4E-15	mg/kg-day	1.5E+05	(mg/kg-day)-1	5E-10	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	2.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	4E-10	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	4.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6E-11	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	7.0E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	1E-10	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	5.0E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	7E-11	--
				OCDD	6E-05	µg/L	5.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	2E-11	--
				2,3,7,8-TCDF	5E-07	µg/L	3.8E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	6E-11	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	3.1E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1E-11	--

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				2,3,4,7,8-PeCDF	7E-07	µg/L	5.3E-15	mg/kg-day	4.5E+04	(mg/kg-day)-1	2E-10	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	1.5E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	2E-10	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	3.6E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	5E-11	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	2.1E-14	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-10	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	2.3E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	3E-11	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	6.2E-14	mg/kg-day	1.5E+03	(mg/kg-day)-1	9E-11	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	3.9E-15	mg/kg-day	1.5E+03	(mg/kg-day)-1	6E-12	--
				OCDF	1E-05	µg/L	1.2E-13	mg/kg-day	4.5E+01	(mg/kg-day)-1	5E-12	--
				KM TEQ DF	2E-06	µg/L	2.0E-14	mg/kg-day	1.5E+05	(mg/kg-day)-1	3E-09	--
				PCB-77	2E-05	µg/L	1.7E-13	mg/kg-day	1.5E+01	(mg/kg-day)-1	2E-12	--
				PCB-81	7E-07	µg/L	5.5E-15	mg/kg-day	4.5E+01	(mg/kg-day)-1	2E-13	--
				PCB-105	7E-05	µg/L	5.9E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	3E-12	--
				PCB-114	4E-06	µg/L	3.1E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1E-13	--
				PCB-118	2E-04	µg/L	1.3E-12	mg/kg-day	4.5E+00	(mg/kg-day)-1	6E-12	--
				PCB-123	3E-06	µg/L	2.6E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	1E-13	--
				PCB-126	7E-07	µg/L	5.4E-15	mg/kg-day	1.5E+04	(mg/kg-day)-1	8E-11	--
				PCB-156/157	2E-05	µg/L	1.6E-13	mg/kg-day	4.5E+00	(mg/kg-day)-1	7E-13	--
				PCB-167	7E-06	µg/L	5.3E-14	mg/kg-day	4.5E+00	(mg/kg-day)-1	2E-13	--
				PCB-169	4E-07	µg/L	3.2E-15	mg/kg-day	4.5E+03	(mg/kg-day)-1	1E-11	--
				PCB-189	9E-07	µg/L	6.9E-15	mg/kg-day	4.5E+00	(mg/kg-day)-1	3E-14	--
				KM TEQ PCB	1E-07	µg/L	8.8E-16	mg/kg-day	1.5E+05	(mg/kg-day)-1	1E-10	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	9.5E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	1E-11	M
				Benzo(a)pyrene	2E-02	µg/L	1.2E-10	mg/kg-day	1.0E+00	(mg/kg-day)-1	1E-10	M
				Benzo(b)fluoranthene	2E-02	µg/L	1.7E-10	mg/kg-day	1.0E-01	(mg/kg-day)-1	2E-11	M
				Benzo(k)fluoranthene	9E-03	µg/L	7.4E-11	mg/kg-day	1.0E-02	(mg/kg-day)-1	7E-13	M
				Chrysene	2E-02	µg/L	1.6E-10	mg/kg-day	1.0E-03	(mg/kg-day)-1	2E-13	M
				Dibenz(a,h)anthracene	4E-03	µg/L	3.1E-11	mg/kg-day	1.0E+00	(mg/kg-day)-1	3E-11	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	7.0E-11	mg/kg-day	1.0E-01	(mg/kg-day)-1	7E-12	M
				Naphthalene	4E-02	µg/L	2.9E-10	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	9.6E-10	mg/kg-day	3.1E-02	(mg/kg-day)-1	3E-11	--
				Trichloroethylene	1E-01	µg/L	1.1E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	5E-11	M
				Inorganics								
				Antimony	7E-01	µg/L	5.6E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	1.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2E-08	--
				Chromium [as Cr(III)]	1E+00	µg/L	1.0E-08	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	1.8E-09	mg/kg-day	5.0E-01	(mg/kg-day)-1	9E-10	M
				Iron	5E+02	µg/L	4.3E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	5.6E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	2.1E-10	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	1.0E-10	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	6.4E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							3.8E-09	
				Total DLCs (based on KM TEQs)							3.1E-09	
				Total PCDD/Fs (excluding KM TEQ)							3.7E-09	
				Total PCDD/Fs (based on KM TEQ)							2.9E-09	

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk[a]	
				Total DL-PCBs (excluding KM TEQ)							1.1E-10	
				Total DL-PCBs (based on KM TEQ)							1.3E-10	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							1.1E-10	
				Total PCBs (DL & NDL; based on KM TEQ)							1.3E-10	
				Total PAHs							1.9E-10	
				Total Organics							7.9E-11	
				Total Inorganics							1.6E-08	
		Surface Water Ingestion Total (excluding KM TEQs)									2.0E-08	
		Surface Water Ingestion Total (based on KM TEQs)									2.0E-08	
Surface Water	Surface Water	Boater	Dermal Contact	**Dioxin-like Compounds**								
				2,3,7,8-TCDD	1E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDD	4E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDD	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDD	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDD	9E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDD	6E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDD	6E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				2,3,7,8-TCDF	5E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8-PeCDF	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				2,3,4,7,8-PeCDF	7E-07	µg/L	--	--	4.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,7,8-HxCDF	2E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,6,7,8-HxCDF	4E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,7,8,9-HxCDF	3E-06	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				2,3,4,6,7,8-HxCDF	3E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				1,2,3,4,6,7,8-HpCDF	8E-06	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				1,2,3,4,7,8,9-HpCDF	5E-07	µg/L	--	--	1.5E+03	(mg/kg-day)-1	--	--
				OCDF	1E-05	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				KM TEQ DF	2E-06	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PCB-77	2E-05	µg/L	--	--	1.5E+01	(mg/kg-day)-1	--	--
				PCB-81	7E-07	µg/L	--	--	4.5E+01	(mg/kg-day)-1	--	--
				PCB-105	7E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-114	4E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-118	2E-04	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-123	3E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-126	7E-07	µg/L	--	--	1.5E+04	(mg/kg-day)-1	--	--
				PCB-156/157	2E-05	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-167	7E-06	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				PCB-169	4E-07	µg/L	--	--	4.5E+03	(mg/kg-day)-1	--	--
				PCB-189	9E-07	µg/L	--	--	4.5E+00	(mg/kg-day)-1	--	--
				KM TEQ PCB	1E-07	µg/L	--	--	1.5E+05	(mg/kg-day)-1	--	--
				PAHs								
				Benz(a)anthracene	1E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(a)pyrene	2E-02	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Benzo(b)fluoranthene	2E-02	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Benzo(k)fluoranthene	9E-03	µg/L	--	--	1.0E-02	(mg/kg-day)-1	--	M
				Chrysene	2E-02	µg/L	--	--	1.0E-03	(mg/kg-day)-1	--	M

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
							Intake/Exposure Concentration		CSF/Unit Risk			
					Value	Units	Value	Units	Value	Units	Cancer Risk[a]	
				Dibenz(a,h)anthracene	4E-03	µg/L	--	--	1.0E+00	(mg/kg-day)-1	--	M
				Indeno(1,2,3-c,d)-pyrene	9E-03	µg/L	--	--	1.0E-01	(mg/kg-day)-1	--	M
				Naphthalene	4E-02	µg/L	5.6E-09	mg/kg-day	--	--	--	--
				Pesticides & Organics								
				Chloroform	1E-01	µg/L	2.7E-09	mg/kg-day	3.1E-02	(mg/kg-day)-1	8E-11	--
				Trichloroethylene	1E-01	µg/L	5.3E-09	mg/kg-day	4.6E-02	(mg/kg-day)-1	2E-10	M
				Inorganics								
				Antimony	7E-01	µg/L	1.4E-09	mg/kg-day	--	--	--	--
				Arsenic, inorganic	1E+00	µg/L	2.5E-09	mg/kg-day	1.5E+00	(mg/kg-day)-1	4E-09	--
				Chromium [as Cr(III)]	1E+00	µg/L	2.5E-09	mg/kg-day	--	--	--	--
				Chromium (VI)	2E-01	µg/L	8.8E-10	mg/kg-day	2.0E+01	(mg/kg-day)-1	2E-08	M
				Iron	5E+02	µg/L	1.1E-06	mg/kg-day	--	--	--	--
				Manganese	7E+01	µg/L	1.4E-07	mg/kg-day	--	--	--	--
				Mercury	3E-02	µg/L	5.2E-11	mg/kg-day	--	--	--	--
				Thallium	1E-02	µg/L	2.4E-11	mg/kg-day	--	--	--	--
				Titanium	8E+00	µg/L	1.6E-08	mg/kg-day	--	--	--	--
				Total DLCs (excluding KM TEQs)							0.0E+00	
				Total DLCs (based on KM TEQs)							0.0E+00	
				Total PCDD/Fs (excluding KM TEQ)							0.0E+00	
				Total PCDD/Fs (based on KM TEQ)							0.0E+00	
				Total DL-PCBs (excluding KM TEQ)							0.0E+00	
				Total DL-PCBs (based on KM TEQ)							0.0E+00	
				Total Non-DL PCBs							0.0E+00	
				Total PCBs (DL & NDL; excluding KM TEQ)							0.0E+00	
				Total PCBs (DL & NDL; based on KM TEQ)							0.0E+00	
				Total PAHs							0.0E+00	
				Total Organics							3.2E-10	
				Total Inorganics							2.1E-08	
		Surface Water Dermal Total (excluding KM TEQs)									2.2E-08	
		Surface Water Dermal Total (based on KM TEQs)									2.2E-08	
Boater Surface Water Total (excluding KM TEQs)											4.2E-08	
Boater Surface Water Total (based on KM TEQs)											4.1E-08	
Boater Sediment Total + Surface Water Total (excluding KM TEQs)											1.0E-07	
Boater Sediment Total + Surface Water Total (based on KM TEQs)											9.9E-08	

Note: Sediment and surface water boater risks are for adult only, since the child is not expected to participate in boating activities on the Bay.

[a] Chemicals identified by USEPA (2019) as mutagens are designated with an "M". There is evidence that some chemicals with a mutagenic mode of action, which can result in irreversible DNA modifications, may produce a greater effect in early-life versus later-life exposures (USEPA 2015, 2019). USEPA's age dependent adjustment factors (ADAFs) were applied to evaluate early-life exposure to chemicals that act by a mutagenic mode of action; cancer risks for mutagenic chemicals were modified by an additional factor (ADAF) of 10 for age <2 and an ADAF of 3 for age 2<16. The ADAF for an adult is 1. Calculated age-weighted ADAFs specific to Newark Bay age groups are shown in Table 5-3; these are 4.2 (child age 1-<7 RME), 2.5 (adolescent age 7-<19 RME); 3 (child age 1-<7 CTE), and 2 (adolescent age 7-<19 CTE).

Cancer risks for mutagens are calculated using the following equation:

Risk = Intake x CSF x ADAF

References

TABLE 7.B CTE
CALCULATION OF CHEMICAL CANCER RISKS - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium/ Exposure Point	Receptor Population	Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		
							Value	Units	Value	Units	Cancer Risk[a]

USEPA. 2019. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Avaliable at https://www.epa.gov/risk/regional-screening-levels-rsls
USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens. EPA/630/R/03/003F. Risk Assessment Forum. Washington, DC.

Appendix G

APPENDIX G
RAGS PART D TABLE 9 SERIES – SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS

RAGS D Table 9.1 RME	Summary of Receptor Risks and Hazards for COPCs – Adult Angler/Sportsman – RME Scenario
RAGS D Table 9.2 RME	Summary of Receptor Risks and Hazards for COPCs – Adolescent Angler/Sportsman – RME Scenario
RAGS D Table 9.3 RME	Summary of Receptor Risks and Hazards for COPCs – Child Angler/Sportsman – RME Scenario
RAGS D Table 9.A RME	Summary of Receptor Risks for COPCs – Combined Adult and Child Angler/Sportsman – RME Scenario
RAGS D Table 9.4 RME	Summary of Receptor Risks and Hazards for COPCs – Adult Worker – RME Scenario
RAGS D Table 9.5 RME	Summary of Receptor Risks and Hazards for COPCs – Adult Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 9.6 RME	Summary of Receptor Risks and Hazards for COPCs – Adolescent Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 9.7 RME	Summary of Receptor Risks and Hazards for COPCs – Child Wader and Swimmer – RME Scenario
RAGS D Table 9.B RME	Summary of Receptor Risks for COPCs – Combined Adult and Child Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 9.1 CTE	Summary of Receptor Risks and Hazards for COPCs – Adult Angler/Sportsman – CTE Scenario
RAGS D Table 9.2 CTE	Summary of Receptor Risks and Hazards for COPCs – Adolescent Angler/Sportsman – CTE Scenario
RAGS D Table 9.3 CTE	Summary of Receptor Risks and Hazards for COPCs – Child Angler/Sportsman – CTE Scenario
RAGS D Table 9.A CTE	Summary of Receptor Risks for COPCs – Combined Adult and Child Angler/Sportsman – CTE Scenario
RAGS D Table 9.4 CTE	Summary of Receptor Risks and Hazards for COPCs – Adult Worker – CTE Scenario
RAGS D Table 9.5 CTE	Summary of Receptor Risks and Hazards for COPCs – Adult Wader, Swimmer, and Boater – CTE Scenario
RAGS D Table 9.6 CTE	Summary of Receptor Risks and Hazards for COPCs – Adolescent Wader, Swimmer, and Boater – CTE Scenario
RAGS D Table 9.7 CTE	Summary of Receptor Risks and Hazards for COPCs – Child Wader and Swimmer – CTE Scenario
RAGS D Table 9.B CTE	Summary of Receptor Risks for COPCs – Combined Adult and Child Wader, Swimmer, and Boater – CTE Scenario

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.5E-04	--	1.5E-04	Reproductive	5.1E+00	--	5.1E+00
			1,2,3,7,8-PeCDD	8.2E-06	--	8.2E-06	Reproductive	2.7E-01	--	2.7E-01
			1,2,3,4,7,8-HxCDD	3.8E-07	--	3.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	1.2E-06	--	1.2E-06	Reproductive	3.9E-02	--	3.9E-02
			1,2,3,7,8,9-HxCDD	2.8E-07	--	2.8E-07	Reproductive	9.2E-03	--	9.2E-03
			1,2,3,4,6,7,8-HpCDD	1.3E-07	--	1.3E-07	Reproductive	4.4E-03	--	4.4E-03
			OCDD	2.3E-08	--	2.3E-08	Reproductive	7.7E-04	--	7.7E-04
			2,3,7,8-TCDF	3.1E-06	--	3.1E-06	Reproductive	1.0E-01	--	1.0E-01
			1,2,3,7,8-PeCDF	8.5E-07	--	8.5E-07	Reproductive	2.8E-02	--	2.8E-02
			2,3,4,7,8-PeCDF	1.4E-05	--	1.4E-05	Reproductive	4.5E-01	--	4.5E-01
			1,2,3,4,7,8-HxCDF	2.0E-06	--	2.0E-06	Reproductive	6.8E-02	--	6.8E-02
			1,2,3,6,7,8-HxCDF	1.8E-06	--	1.8E-06	Reproductive	6.1E-02	--	6.1E-02
			1,2,3,7,8,9-HxCDF	2.1E-07	--	2.1E-07	Reproductive	7.0E-03	--	7.0E-03
			2,3,4,6,7,8-HxCDF	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,6,7,8-HpCDF	4.3E-07	--	4.3E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8,9-HpCDF	2.0E-08	--	2.0E-08	Reproductive	6.7E-04	--	6.7E-04
			OCDF	1.3E-09	--	1.3E-09	Reproductive	4.2E-05	--	4.2E-05
			KM TEQ DF	1.8E-04	--	1.8E-04	Reproductive	6.1E+00	--	6.1E+00
			PCB-77	9.0E-07	--	9.0E-07	Reproductive	3.0E-02	--	3.0E-02
			PCB-81	1.1E-07	--	1.1E-07	Reproductive	3.5E-03	--	3.5E-03
			PCB-105	4.2E-06	--	4.2E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	3.2E-07	--	3.2E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-118	1.7E-05	--	1.7E-05	Reproductive	5.7E-01	--	5.7E-01
			PCB-123	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-126	1.7E-04	--	1.7E-04	Reproductive	5.6E+00	--	5.6E+00
			PCB-156/157	1.6E-06	--	1.6E-06	Reproductive	5.2E-02	--	5.2E-02
			PCB-167	6.8E-07	--	6.8E-07	Reproductive	2.3E-02	--	2.3E-02
			PCB-169	2.1E-06	--	2.1E-06	Reproductive	7.0E-02	--	7.0E-02
			PCB-189	1.3E-07	--	1.3E-07	Reproductive	4.2E-03	--	4.2E-03
			KM TEQ PCB	2.1E-04	--	2.1E-04	Reproductive	7.1E+00	--	7.1E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.0E-04	--	1.0E-04	Whole Body	8.8E+00	--	8.8E+00
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,4'-DDD	5.4E-07	--	5.4E-07	Liver	2.6E-01	--	2.6E-01
			2,4'-DDE	2.4E-07	--	2.4E-07	Liver	8.4E-03	--	8.4E-03
			2,4'-DDT	1.5E-07	--	1.5E-07	Liver	3.0E-03	--	3.0E-03
			4,4'-DDD	2.7E-06	--	2.7E-06	Liver	1.3E+00	--	1.3E+00
			4,4'-DDE	5.2E-06	--	5.2E-06	Liver	1.8E-01	--	1.8E-01
			4,4'-DDT	6.0E-07	--	6.0E-07	Liver	1.2E-02	--	1.2E-02
			Benzaldehyde	6.4E-07	--	6.4E-07	GI Tract, Kidney	5.6E-03	--	5.6E-03
			Chlordane, alpha (cis)	7.0E-07	--	7.0E-07	Liver	1.4E-02	--	1.4E-02
			Chlordane, gamma (trans)	1.6E-07	--	1.6E-07	Liver	3.1E-03	--	3.1E-03
			Dieldrin	1.5E-05	--	1.5E-05	Liver	6.6E-02	--	6.6E-02
			Heptachlor epoxide, cis-	2.1E-06	--	2.1E-06	Liver	6.2E-02	--	6.2E-02
			Heptachlor epoxide, trans-	1.0E-07	--	1.0E-07	Liver	3.0E-03	--	3.0E-03
			Hexachlorobenzene	2.9E-07	--	2.9E-07	Liver	8.0E-04	--	8.0E-04
			Mirex	5.6E-07	--	5.6E-07	Liver, Thyroid	5.5E-04	--	5.5E-04
			Nonachlor, cis-	2.8E-07	--	2.8E-07	Liver	2.8E-02	--	2.8E-02
			Nonachlor, trans-	6.7E-07	--	6.7E-07	Liver	4.3E-01	--	4.3E-01
			Oxychlordane	2.0E-07	--	2.0E-07	Liver	2.2E-02	--	2.2E-02
			Pyridine	--	--	--	Liver	5.6E-01	--	5.6E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.8E-03	--	2.8E-03
			Arsenic, organic	--	--	--	Urinary	2.2E-02	--	2.2E-02
			Arsenic, inorganic	2.1E-05	--	2.1E-05	Skin, Blood	1.7E-01	--	1.7E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	1.9E-04	--	1.9E-04
			Cobalt	--	--	--	Thyroid	3.2E-01	--	3.2E-01
			Copper	--	--	--	GI Tract	2.1E-01	--	2.1E-01
			Iron	--	--	--	GI Tract	4.4E-03	--	4.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	8.9E-04	--	8.9E-04
			Mercury	--	--	--	Immune	4.4E-01	--	4.4E-01
			Methyl Mercury	--	--	--	Neurological	1.6E+00	--	1.6E+00
			Selenium	--	--	--	Whole Body	4.7E-02	--	4.7E-02
			Silver	--	--	--	Skin	1.7E-03	--	1.7E-03
			Vanadium	--	--	--	Hair	2.4E-03	--	2.4E-03
			Zinc	--	--	--	Blood	2.1E-02	--	2.1E-02
Total DLCs (excluding KM TEQs)						3.8E-04				1.3E+01
Total DLCs (based on KM TEQs)						3.9E-04				1.3E+01
Total PCDD/Fs (excluding KM TEQ)						1.9E-04				6.2E+00
Total PCDD/Fs (based on KM TEQ)						1.8E-04				6.1E+00
Total DL-PCBs (excluding KM TEQ)						1.9E-04				6.5E+00
Total DL-PCBs (based on KM TEQ)						2.1E-04				7.1E+00

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total Non-DL PCBs			1.0E-04				8.8E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.0E-04				1.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.1E-04				1.6E+01
			Total PAHs			2.4E-06				1.2E-02
			Total Organics			3.0E-05				3.0E+00
			Total Inorganics			2.1E-05				2.8E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					5.3E-04				2.7E+01
	Mixed Fish/All Species Total (based on KM TEQs)					5.5E-04				2.8E+01
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.6E-04	--	1.6E-04	Reproductive	5.4E+00	--	5.4E+00
			1,2,3,7,8-PeCDD	1.3E-05	--	1.3E-05	Reproductive	4.3E-01	--	4.3E-01
			1,2,3,4,7,8-HxCDD	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDD	3.5E-06	--	3.5E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDD	6.4E-07	--	6.4E-07	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,6,7,8-HpCDD	2.4E-07	--	2.4E-07	Reproductive	8.0E-03	--	8.0E-03
			OCDD	1.8E-08	--	1.8E-08	Reproductive	5.9E-04	--	5.9E-04
			2,3,7,8-TCDF	1.9E-07	--	1.9E-07	Reproductive	6.5E-03	--	6.5E-03
			1,2,3,7,8-PeCDF	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			2,3,4,7,8-PeCDF	2.1E-05	--	2.1E-05	Reproductive	7.1E-01	--	7.1E-01
			1,2,3,4,7,8-HxCDF	5.0E-06	--	5.0E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,6,7,8-HxCDF	3.7E-06	--	3.7E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDF	2.1E-07	--	2.1E-07	Reproductive	7.0E-03	--	7.0E-03
			2,3,4,6,7,8-HxCDF	6.7E-07	--	6.7E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,4,6,7,8-HpCDF	8.8E-07	--	8.8E-07	Reproductive	2.9E-02	--	2.9E-02
			1,2,3,4,7,8,9-HpCDF	3.0E-08	--	3.0E-08	Reproductive	1.0E-03	--	1.0E-03
			OCDF	2.0E-09	--	2.0E-09	Reproductive	6.7E-05	--	6.7E-05
			KM TEQ DF	2.1E-04	--	2.1E-04	Reproductive	6.9E+00	--	6.9E+00
			PCB-77	1.4E-07	--	1.4E-07	Reproductive	4.6E-03	--	4.6E-03
			PCB-81	6.5E-08	--	6.5E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-105	1.2E-05	--	1.2E-05	Reproductive	3.8E-01	--	3.8E-01
			PCB-114	7.3E-07	--	7.3E-07	Reproductive	2.4E-02	--	2.4E-02
			PCB-118	4.0E-05	--	4.0E-05	Reproductive	1.3E+00	--	1.3E+00
			PCB-123	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			PCB-126	2.2E-04	--	2.2E-04	Reproductive	7.4E+00	--	7.4E+00
			PCB-156/157	3.4E-06	--	3.4E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-167	1.5E-06	--	1.5E-06	Reproductive	5.0E-02	--	5.0E-02
			PCB-169	2.4E-06	--	2.4E-06	Reproductive	8.1E-02	--	8.1E-02
			PCB-189	2.7E-07	--	2.7E-07	Reproductive	8.9E-03	--	8.9E-03
			KM TEQ PCB	4.0E-04	--	4.0E-04	Reproductive	1.3E+01	--	1.3E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-04	--	1.5E-04	Whole Body	1.3E+01	--	1.3E+01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PAHs							
			Benz(a)anthracene	1.6E-07	–	1.6E-07	–	–	–	–
			Benzo(a)pyrene	1.6E-06	–	1.6E-06	Developmental	1.9E-02	–	1.9E-02
			Benzo(b)fluoranthene	1.6E-07	–	1.6E-07	–	–	–	–
			Chrysene	1.6E-09	–	1.6E-09	–	–	–	–
			Dibenz(a,h)anthracene	1.6E-06	–	1.6E-06	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	–	1.6E-07	–	–	–	–
			Pesticides & Organics							
			2,4'-DDD	9.1E-08	–	9.1E-08	Liver	4.4E-02	–	4.4E-02
			2,4'-DDE	8.3E-08	–	8.3E-08	Liver	2.8E-03	–	2.8E-03
			2,4'-DDT	1.5E-08	–	1.5E-08	Liver	3.1E-04	–	3.1E-04
			4,4'-DDD	3.9E-06	–	3.9E-06	Liver	1.9E+00	–	1.9E+00
			4,4'-DDE	1.2E-05	–	1.2E-05	Liver	4.0E-01	–	4.0E-01
			4,4'-DDT	3.2E-07	–	3.2E-07	Liver	6.7E-03	–	6.7E-03
			Benzaldehyde	6.4E-07	–	6.4E-07	GI Tract, Kidney	5.6E-03	–	5.6E-03
			Chlordane, alpha (cis)	6.1E-07	–	6.1E-07	Liver	1.2E-02	–	1.2E-02
			Chlordane, gamma (trans)	1.7E-07	–	1.7E-07	Liver	3.4E-03	–	3.4E-03
			Dieldrin	2.8E-05	–	2.8E-05	Liver	1.2E-01	–	1.2E-01
			Heptachlor epoxide, cis-	4.2E-06	–	4.2E-06	Liver	1.2E-01	–	1.2E-01
			Heptachlor epoxide, trans-	4.3E-07	–	4.3E-07	Liver	1.3E-02	–	1.3E-02
			Hexachlorobenzene	8.0E-07	–	8.0E-07	Liver	2.2E-03	–	2.2E-03
			Mirex	9.3E-07	–	9.3E-07	Liver, Thyroid	9.0E-04	–	9.0E-04
			Nonachlor, cis-	4.7E-07	–	4.7E-07	Liver	4.7E-02	–	4.7E-02
			Nonachlor, trans-	1.1E-06	–	1.1E-06	Liver	7.3E-01	–	7.3E-01
			Oxychlordane	6.2E-07	–	6.2E-07	Liver	6.9E-02	–	6.9E-02
			Pyridine	–	–	–	Liver	5.6E-01	–	5.6E-01
			Inorganics							
			Aluminum	–	–	–	Neurological	2.7E-03	–	2.7E-03
			Arsenic, organic	–	–	–	Urinary	2.3E-02	–	2.3E-02
			Arsenic, inorganic	2.2E-05	–	2.2E-05	Skin, Blood	1.7E-01	–	1.7E-01
			Cadmium	–	–	–	Urinary	2.0E-02	–	2.0E-02
			Chromium [as Cr(III)]	–	–	–	No Effect	7.0E-04	–	7.0E-04
			Cobalt	–	–	–	Thyroid	1.0E-02	–	1.0E-02
			Copper	–	–	–	GI Tract	9.1E-02	–	9.1E-02
			Iron	–	–	–	GI Tract	4.7E-03	–	4.7E-03
			Lead	–	–	–	–	–	–	–
			Manganese	–	–	–	Neurological	1.1E-03	–	1.1E-03
			Mercury	–	–	–	Immune	6.0E-01	–	6.0E-01
			Methyl Mercury	–	–	–	Neurological	2.0E+00	–	2.0E+00
			Selenium	–	–	–	Whole Body	4.4E-02	–	4.4E-02
			Silver	–	–	–	Skin	1.7E-03	–	1.7E-03

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Vanadium	--	--	--	Hair	2.0E-03	--	2.0E-03
			Zinc	--	--	--	Blood	4.2E-02	--	4.2E-02
			Total DLCs (excluding KM TEQs)			5.0E-04				1.7E+01
			Total DLCs (based on KM TEQs)			6.1E-04				2.0E+01
			Total PCDD/Fs (excluding KM TEQ)			2.1E-04				7.1E+00
			Total PCDD/Fs (based on KM TEQ)			2.1E-04				6.9E+00
			Total DL-PCBs (excluding KM TEQ)			2.8E-04				9.4E+00
			Total DL-PCBs (based on KM TEQ)			4.0E-04				1.3E+01
			Total Non-DL PCBs			1.5E-04				1.3E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.3E-04				2.2E+01
			Total PCBs (DL & NDL; based on KM TEQ)			5.5E-04				2.6E+01
			Total PAHs			3.7E-06				1.9E-02
			Total Organics			5.4E-05				4.0E+00
			Total Inorganics			2.2E-05				3.0E+00
	American Eel Total (excluding KM TEQs)					7.2E-04				3.6E+01
	American Eel Total (based on KM TEQs)					8.4E-04				4.0E+01
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.8E-05	--	2.8E-05	Reproductive	9.2E-01	--	9.2E-01
			1,2,3,7,8-PeCDD	5.5E-06	--	5.5E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,4,7,8-HxCDD	1.3E-07	--	1.3E-07	Reproductive	4.5E-03	--	4.5E-03
			1,2,3,6,7,8-HxCDD	3.7E-07	--	3.7E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,7,8,9-HxCDD	1.3E-07	--	1.3E-07	Reproductive	4.3E-03	--	4.3E-03
			1,2,3,4,6,7,8-HpCDD	2.6E-08	--	2.6E-08	Reproductive	8.7E-04	--	8.7E-04
			OCDD	1.4E-09	--	1.4E-09	Reproductive	4.8E-05	--	4.8E-05
			2,3,7,8-TCDF	7.1E-07	--	7.1E-07	Reproductive	2.4E-02	--	2.4E-02
			1,2,3,7,8-PeCDF	3.7E-07	--	3.7E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,7,8-PeCDF	4.2E-06	--	4.2E-06	Reproductive	1.4E-01	--	1.4E-01
			1,2,3,4,7,8-HxCDF	1.7E-07	--	1.7E-07	Reproductive	5.8E-03	--	5.8E-03
			1,2,3,6,7,8-HxCDF	4.2E-07	--	4.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,7,8,9-HxCDF	1.6E-07	--	1.6E-07	Reproductive	5.3E-03	--	5.3E-03
			2,3,4,6,7,8-HxCDF	1.0E-07	--	1.0E-07	Reproductive	3.5E-03	--	3.5E-03
			1,2,3,4,6,7,8-HpCDF	1.2E-07	--	1.2E-07	Reproductive	4.1E-03	--	4.1E-03
			1,2,3,4,7,8,9-HpCDF	1.4E-08	--	1.4E-08	Reproductive	4.7E-04	--	4.7E-04
			OCDF	9.5E-10	--	9.5E-10	Reproductive	3.2E-05	--	3.2E-05
			KM TEQ DF	3.7E-05	--	3.7E-05	Reproductive	1.2E+00	--	1.2E+00
			PCB-77	1.8E-07	--	1.8E-07	Reproductive	6.0E-03	--	6.0E-03
			PCB-81	2.0E-08	--	2.0E-08	Reproductive	6.6E-04	--	6.6E-04
			PCB-105	7.0E-07	--	7.0E-07	Reproductive	2.3E-02	--	2.3E-02
			PCB-114	4.2E-08	--	4.2E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	2.9E-06	--	2.9E-06	Reproductive	9.7E-02	--	9.7E-02
			PCB-123	4.1E-08	--	4.1E-08	Reproductive	1.4E-03	--	1.4E-03

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-126	7.1E-05	--	7.1E-05	Reproductive	2.4E+00	--	2.4E+00
			PCB-156/157	3.2E-07	--	3.2E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-167	1.6E-07	--	1.6E-07	Reproductive	5.4E-03	--	5.4E-03
			PCB-169	9.9E-07	--	9.9E-07	Reproductive	3.3E-02	--	3.3E-02
			PCB-189	3.1E-08	--	3.1E-08	Reproductive	1.0E-03	--	1.0E-03
			KM TEQ PCB	7.5E-05	--	7.5E-05	Reproductive	2.5E+00	--	2.5E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.9E-05	--	2.9E-05	Whole Body	2.6E+00	--	2.6E+00
			PAHs							
			Benz(a)anthracene	6.5E-08	--	6.5E-08	--	--	--	--
			Benzo(a)pyrene	6.5E-07	--	6.5E-07	Developmental	7.6E-03	--	7.6E-03
			Benzo(b)fluoranthene	6.5E-08	--	6.5E-08	--	--	--	--
			Chrysene	6.5E-10	--	6.5E-10	--	--	--	--
			Dibenz(a,h)anthracene	6.5E-07	--	6.5E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	6.5E-08	--	6.5E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.7E-08	--	1.7E-08	Liver	8.1E-03	--	8.1E-03
			2,4'-DDE	4.3E-08	--	4.3E-08	Liver	1.5E-03	--	1.5E-03
			2,4'-DDT	9.2E-09	--	9.2E-09	Liver	1.9E-04	--	1.9E-04
			4,4'-DDD	1.9E-07	--	1.9E-07	Liver	9.4E-02	--	9.4E-02
			4,4'-DDE	1.3E-06	--	1.3E-06	Liver	4.4E-02	--	4.4E-02
			4,4'-DDT	8.7E-07	--	8.7E-07	Liver	1.8E-02	--	1.8E-02
			Benzaldehyde	6.4E-07	--	6.4E-07	GI Tract, Kidney	5.6E-03	--	5.6E-03
			Chlordane, alpha (cis)	2.5E-07	--	2.5E-07	Liver	5.1E-03	--	5.1E-03
			Chlordane, gamma (trans)	9.8E-08	--	9.8E-08	Liver	2.0E-03	--	2.0E-03
			Dieldrin	8.9E-06	--	8.9E-06	Liver	3.9E-02	--	3.9E-02
			Heptachlor epoxide, cis-	1.4E-06	--	1.4E-06	Liver	4.0E-02	--	4.0E-02
			Heptachlor epoxide, trans-	1.9E-08	--	1.9E-08	Liver	5.7E-04	--	5.7E-04
			Hexachlorobenzene	1.1E-07	--	1.1E-07	Liver	2.9E-04	--	2.9E-04
			Mirex	3.0E-07	--	3.0E-07	Liver, Thyroid	2.9E-04	--	2.9E-04
			Nonachlor, cis-	7.2E-08	--	7.2E-08	Liver	7.2E-03	--	7.2E-03
			Nonachlor, trans-	1.3E-07	--	1.3E-07	Liver	8.5E-02	--	8.5E-02
			Oxychlordane	1.5E-08	--	1.5E-08	Liver	1.7E-03	--	1.7E-03
			Pyridine	--	--	--	Liver	5.6E-01	--	5.6E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.6E-03	--	2.6E-03
			Arsenic, organic	--	--	--	Urinary	1.4E-02	--	1.4E-02
			Arsenic, inorganic	1.3E-05	--	1.3E-05	Skin, Blood	1.0E-01	--	1.0E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	2.6E-05	--	2.6E-05
			Cobalt	--	--	--	Thyroid	3.2E-01	--	3.2E-01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Copper	--	--	--	GI Tract	3.4E-01	--	3.4E-01
			Iron	--	--	--	GI Tract	6.1E-03	--	6.1E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	5.6E-04	--	5.6E-04
			Mercury	--	--	--	Immune	4.7E-01	--	4.7E-01
			Methyl Mercury	--	--	--	Neurological	1.7E+00	--	1.7E+00
			Selenium	--	--	--	Whole Body	4.7E-02	--	4.7E-02
			Silver	--	--	--	Skin	1.7E-03	--	1.7E-03
			Vanadium	--	--	--	Hair	2.0E-03	--	2.0E-03
			Zinc	--	--	--	Blood	2.5E-02	--	2.5E-02
			Total DLCs (excluding KM TEQs)			1.2E-04				3.9E+00
			Total DLCs (based on KM TEQs)			1.1E-04				3.7E+00
			Total PCDD/Fs (excluding KM TEQ)			4.0E-05				1.3E+00
			Total PCDD/Fs (based on KM TEQ)			3.7E-05				1.2E+00
			Total DL-PCBs (excluding KM TEQ)			7.7E-05				2.6E+00
			Total DL-PCBs (based on KM TEQ)			7.5E-05				2.5E+00
			Total Non-DL PCBs			2.9E-05				2.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-04				5.1E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.0E-04				5.1E+00
			Total PAHs			1.5E-06				7.6E-03
			Total Organics			1.4E-05				9.1E-01
			Total Inorganics			1.3E-05				3.0E+00
	Bluefish Total (excluding KM TEQs)					1.8E-04				1.0E+01
	Bluefish Total (based on KM TEQs)					1.7E-04				1.0E+01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-04	--	1.7E-04	Reproductive	5.8E+00	--	5.8E+00
			1,2,3,7,8-PeCDD	1.0E-05	--	1.0E-05	Reproductive	3.4E-01	--	3.4E-01
			1,2,3,4,7,8-HxCDD	3.8E-07	--	3.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	3.9E-07	--	3.9E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	1.6E-07	--	1.6E-07	Reproductive	5.3E-03	--	5.3E-03
			1,2,3,4,6,7,8-HpCDD	2.7E-07	--	2.7E-07	Reproductive	8.9E-03	--	8.9E-03
			OCDD	8.9E-08	--	8.9E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,7,8-TCDF	7.0E-06	--	7.0E-06	Reproductive	2.3E-01	--	2.3E-01
			1,2,3,7,8-PeCDF	1.2E-06	--	1.2E-06	Reproductive	4.1E-02	--	4.1E-02
			2,3,4,7,8-PeCDF	1.8E-05	--	1.8E-05	Reproductive	6.0E-01	--	6.0E-01
			1,2,3,4,7,8-HxCDF	7.7E-07	--	7.7E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDF	2.3E-06	--	2.3E-06	Reproductive	7.5E-02	--	7.5E-02
			1,2,3,7,8,9-HxCDF	2.2E-07	--	2.2E-07	Reproductive	7.5E-03	--	7.5E-03
			2,3,4,6,7,8-HxCDF	1.8E-07	--	1.8E-07	Reproductive	6.1E-03	--	6.1E-03
			1,2,3,4,6,7,8-HpCDF	6.1E-07	--	6.1E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8,9-HpCDF	2.0E-08	--	2.0E-08	Reproductive	6.7E-04	--	6.7E-04

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			OCDF	1.1E-09	--	1.1E-09	Reproductive	3.5E-05	--	3.5E-05
			KM TEQ DF	2.2E-04	--	2.2E-04	Reproductive	7.2E+00	--	7.2E+00
			PCB-77	2.1E-06	--	2.1E-06	Reproductive	7.0E-02	--	7.0E-02
			PCB-81	1.6E-07	--	1.6E-07	Reproductive	5.2E-03	--	5.2E-03
			PCB-105	3.3E-06	--	3.3E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-114	4.0E-07	--	4.0E-07	Reproductive	1.3E-02	--	1.3E-02
			PCB-118	2.1E-05	--	2.1E-05	Reproductive	6.9E-01	--	6.9E-01
			PCB-123	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-126	3.5E-04	--	3.5E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-156/157	1.8E-06	--	1.8E-06	Reproductive	6.1E-02	--	6.1E-02
			PCB-167	8.1E-07	--	8.1E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-169	1.9E-06	--	1.9E-06	Reproductive	6.2E-02	--	6.2E-02
			PCB-189	1.6E-07	--	1.6E-07	Reproductive	5.3E-03	--	5.3E-03
			KM TEQ PCB	3.6E-04	--	3.6E-04	Reproductive	1.2E+01	--	1.2E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-04	--	1.8E-04	Whole Body	1.5E+01	--	1.5E+01
			PAHs							
			Benz(a)anthracene	6.5E-08	--	6.5E-08	--	--	--	--
			Benzo(a)pyrene	6.5E-07	--	6.5E-07	Developmental	7.6E-03	--	7.6E-03
			Benzo(b)fluoranthene	6.5E-08	--	6.5E-08	--	--	--	--
			Chrysene	6.5E-10	--	6.5E-10	--	--	--	--
			Dibenz(a,h)anthracene	6.5E-07	--	6.5E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	6.5E-08	--	6.5E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	9.7E-07	--	9.7E-07	Liver	4.7E-01	--	4.7E-01
			2,4'-DDE	5.4E-07	--	5.4E-07	Liver	1.9E-02	--	1.9E-02
			2,4'-DDT	1.1E-07	--	1.1E-07	Liver	2.3E-03	--	2.3E-03
			4,4'-DDD	4.0E-06	--	4.0E-06	Liver	2.0E+00	--	2.0E+00
			4,4'-DDE	6.5E-06	--	6.5E-06	Liver	2.2E-01	--	2.2E-01
			4,4'-DDT	5.5E-07	--	5.5E-07	Liver	1.1E-02	--	1.1E-02
			Benzaldehyde	6.4E-07	--	6.4E-07	GI Tract, Kidney	5.6E-03	--	5.6E-03
			Chlordane, alpha (cis)	1.5E-06	--	1.5E-06	Liver	3.1E-02	--	3.1E-02
			Chlordane, gamma (trans)	2.7E-07	--	2.7E-07	Liver	5.4E-03	--	5.4E-03
			Dieldrin	2.1E-05	--	2.1E-05	Liver	9.3E-02	--	9.3E-02
			Heptachlor epoxide, cis-	2.1E-06	--	2.1E-06	Liver	6.1E-02	--	6.1E-02
			Heptachlor epoxide, trans-	1.9E-08	--	1.9E-08	Liver	5.7E-04	--	5.7E-04
			Hexachlorobenzene	2.1E-07	--	2.1E-07	Liver	5.6E-04	--	5.6E-04
			Mirex	6.6E-07	--	6.6E-07	Liver, Thyroid	6.4E-04	--	6.4E-04
			Nonachlor, cis-	4.8E-07	--	4.8E-07	Liver	4.8E-02	--	4.8E-02
			Nonachlor, trans-	1.1E-06	--	1.1E-06	Liver	7.4E-01	--	7.4E-01
			Oxychlordane	1.7E-07	--	1.7E-07	Liver	1.9E-02	--	1.9E-02

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Pyridine	–	–	–	Liver	5.6E-01	–	5.6E-01
			Inorganics							
			Aluminum	–	–	–	Neurological	2.4E-03	–	2.4E-03
			Arsenic, organic	–	–	–	Urinary	2.5E-02	–	2.5E-02
			Arsenic, inorganic	2.4E-05	–	2.4E-05	Skin, Blood	1.8E-01	–	1.8E-01
			Cadmium	–	–	–	Urinary	2.0E-02	–	2.0E-02
			Chromium [as Cr(III)]	–	–	–	No Effect	3.5E-05	–	3.5E-05
			Cobalt	–	–	–	Thyroid	2.9E-02	–	2.9E-02
			Copper	–	–	–	GI Tract	2.4E-01	–	2.4E-01
			Iron	–	–	–	GI Tract	4.1E-03	–	4.1E-03
			Lead	–	–	–	–	–	–	–
			Manganese	–	–	–	Neurological	6.7E-04	–	6.7E-04
			Mercury	–	–	–	Immune	4.1E-01	–	4.1E-01
			Methyl Mercury	–	–	–	Neurological	1.5E+00	–	1.5E+00
			Selenium	–	–	–	Whole Body	3.3E-02	–	3.3E-02
			Silver	–	–	–	Skin	1.7E-03	–	1.7E-03
			Vanadium	–	–	–	Hair	2.6E-03	–	2.6E-03
			Zinc	–	–	–	Blood	1.1E-02	–	1.1E-02
			Total DLCs (excluding KM TEQs)			6.0E-04				2.0E+01
			Total DLCs (based on KM TEQs)			5.8E-04				1.9E+01
			Total PCDD/Fs (excluding KM TEQ)			2.2E-04				7.2E+00
			Total PCDD/Fs (based on KM TEQ)			2.2E-04				7.2E+00
			Total DL-PCBs (excluding KM TEQ)			3.8E-04				1.3E+01
			Total DL-PCBs (based on KM TEQ)			3.6E-04				1.2E+01
			Total Non-DL PCBs			1.8E-04				1.5E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			5.6E-04				2.8E+01
			Total PCBs (DL & NDL; based on KM TEQ)			5.4E-04				2.7E+01
			Total PAHs			1.5E-06				7.6E-03
			Total Organics			4.1E-05				4.3E+00
			Total Inorganics			2.4E-05				2.4E+00
	Striped Bass Total (excluding KM TEQs)					8.4E-04				4.2E+01
	Striped Bass Total (based on KM TEQs)					8.2E-04				4.1E+01
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-04	–	1.0E-04	Reproductive	3.4E+00	–	3.4E+00
			1,2,3,7,8-PeCDD	4.5E-06	–	4.5E-06	Reproductive	1.5E-01	–	1.5E-01
			1,2,3,4,7,8-HxCDD	1.5E-07	–	1.5E-07	Reproductive	5.0E-03	–	5.0E-03
			1,2,3,6,7,8-HxCDD	4.7E-07	–	4.7E-07	Reproductive	1.6E-02	–	1.6E-02
			1,2,3,7,8,9-HxCDD	2.0E-07	–	2.0E-07	Reproductive	6.6E-03	–	6.6E-03
			1,2,3,4,6,7,8-HpCDD	5.7E-08	–	5.7E-08	Reproductive	1.9E-03	–	1.9E-03
			OCDD	2.5E-09	–	2.5E-09	Reproductive	8.3E-05	–	8.3E-05
			2,3,7,8-TCDF	5.0E-07	–	5.0E-07	Reproductive	1.7E-02	–	1.7E-02

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8-PeCDF	1.9E-07	--	1.9E-07	Reproductive	6.5E-03	--	6.5E-03
			2,3,4,7,8-PeCDF	5.0E-06	--	5.0E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06	Reproductive	4.0E-02	--	4.0E-02
			1,2,3,6,7,8-HxCDF	4.9E-07	--	4.9E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,7,8,9-HxCDF	2.6E-07	--	2.6E-07	Reproductive	8.8E-03	--	8.8E-03
			2,3,4,6,7,8-HxCDF	2.0E-07	--	2.0E-07	Reproductive	6.7E-03	--	6.7E-03
			1,2,3,4,6,7,8-HpCDF	9.2E-08	--	9.2E-08	Reproductive	3.1E-03	--	3.1E-03
			1,2,3,4,7,8,9-HpCDF	2.0E-08	--	2.0E-08	Reproductive	6.6E-04	--	6.6E-04
			OCDF	1.1E-09	--	1.1E-09	Reproductive	3.7E-05	--	3.7E-05
			KM TEQ DF	1.1E-04	--	1.1E-04	Reproductive	3.7E+00	--	3.7E+00
			PCB-77	2.6E-07	--	2.6E-07	Reproductive	8.8E-03	--	8.8E-03
			PCB-81	8.2E-08	--	8.2E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-105	1.5E-06	--	1.5E-06	Reproductive	5.1E-02	--	5.1E-02
			PCB-114	1.3E-07	--	1.3E-07	Reproductive	4.4E-03	--	4.4E-03
			PCB-118	6.5E-06	--	6.5E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-123	9.9E-08	--	9.9E-08	Reproductive	3.3E-03	--	3.3E-03
			PCB-126	8.1E-05	--	8.1E-05	Reproductive	2.7E+00	--	2.7E+00
			PCB-156/157	6.4E-07	--	6.4E-07	Reproductive	2.1E-02	--	2.1E-02
			PCB-167	2.9E-07	--	2.9E-07	Reproductive	9.8E-03	--	9.8E-03
			PCB-169	1.1E-06	--	1.1E-06	Reproductive	3.8E-02	--	3.8E-02
			PCB-189	4.4E-08	--	4.4E-08	Reproductive	1.5E-03	--	1.5E-03
			KM TEQ PCB	8.9E-05	--	8.9E-05	Reproductive	3.0E+00	--	3.0E+00
			Non-DL PCBs							
			Total Non-DL PCBs	3.7E-05	--	3.7E-05	Whole Body	3.2E+00	--	3.2E+00
			PAHs							
			Benz(a)anthracene	6.5E-08	--	6.5E-08	--	--	--	--
			Benzo(a)pyrene	6.5E-07	--	6.5E-07	Developmental	7.6E-03	--	7.6E-03
			Benzo(b)fluoranthene	6.5E-08	--	6.5E-08	--	--	--	--
			Chrysene	6.5E-10	--	6.5E-10	--	--	--	--
			Dibenz(a,h)anthracene	6.5E-07	--	6.5E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	6.5E-08	--	6.5E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	9.8E-08	--	9.8E-08	Liver	4.8E-02	--	4.8E-02
			2,4'-DDE	1.2E-07	--	1.2E-07	Liver	4.0E-03	--	4.0E-03
			2,4'-DDT	9.1E-09	--	9.1E-09	Liver	1.9E-04	--	1.9E-04
			4,4'-DDD	5.6E-07	--	5.6E-07	Liver	2.7E-01	--	2.7E-01
			4,4'-DDE	1.7E-06	--	1.7E-06	Liver	5.8E-02	--	5.8E-02
			4,4'-DDT	6.1E-08	--	6.1E-08	Liver	1.3E-03	--	1.3E-03
			Benzaldehyde	6.4E-07	--	6.4E-07	GI Tract, Kidney	5.6E-03	--	5.6E-03
			Chlordane, alpha (cis)	9.0E-08	--	9.0E-08	Liver	1.8E-03	--	1.8E-03
			Chlordane, gamma (trans)	3.0E-08	--	3.0E-08	Liver	6.0E-04	--	6.0E-04

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Dieldrin	2.8E-06	–	2.8E-06	Liver	1.2E-02	–	1.2E-02
			Heptachlor epoxide, cis-	3.8E-07	–	3.8E-07	Liver	1.1E-02	–	1.1E-02
			Heptachlor epoxide, trans-	1.9E-08	–	1.9E-08	Liver	5.7E-04	–	5.7E-04
			Hexachlorobenzene	9.7E-08	–	9.7E-08	Liver	2.6E-04	–	2.6E-04
			Mirex	1.4E-07	–	1.4E-07	Liver, Thyroid	1.4E-04	–	1.4E-04
			Nonachlor, cis-	4.8E-08	–	4.8E-08	Liver	4.8E-03	–	4.8E-03
			Nonachlor, trans-	1.2E-07	–	1.2E-07	Liver	7.8E-02	–	7.8E-02
			Oxychlordane	5.5E-08	–	5.5E-08	Liver	6.2E-03	–	6.2E-03
			Pyridine	–	–	–	Liver	5.6E-01	–	5.6E-01
			Inorganics							
			Aluminum	–	–	–	Neurological	2.4E-03	–	2.4E-03
			Arsenic, organic	–	–	–	Urinary	3.6E-02	–	3.6E-02
			Arsenic, inorganic	3.4E-05	–	3.4E-05	Skin, Blood	2.6E-01	–	2.6E-01
			Cadmium	–	–	–	Urinary	2.0E-02	–	2.0E-02
			Chromium [as Cr(III)]	–	–	–	No Effect	1.3E-04	–	1.3E-04
			Cobalt	–	–	–	Thyroid	1.2E+00	–	1.2E+00
			Copper	–	–	–	GI Tract	9.1E-02	–	9.1E-02
			Iron	–	–	–	GI Tract	3.2E-03	–	3.2E-03
			Lead	–	–	–	–	–	–	–
			Manganese	–	–	–	Neurological	9.8E-04	–	9.8E-04
			Mercury	–	–	–	Immune	2.6E-01	–	2.6E-01
			Methyl Mercury	–	–	–	Neurological	9.2E-01	–	9.2E-01
			Selenium	–	–	–	Whole Body	5.6E-02	–	5.6E-02
			Silver	–	–	–	Skin	1.7E-03	–	1.7E-03
			Vanadium	–	–	–	Hair	2.6E-03	–	2.6E-03
			Zinc	–	–	–	Blood	9.9E-03	–	9.9E-03
			Total DLCs (excluding KM TEQs)			2.1E-04				6.9E+00
			Total DLCs (based on KM TEQs)			2.0E-04				6.7E+00
			Total PCDD/Fs (excluding KM TEQ)			1.1E-04				3.8E+00
			Total PCDD/Fs (based on KM TEQ)			1.1E-04				3.7E+00
			Total DL-PCBs (excluding KM TEQ)			9.1E-05				3.0E+00
			Total DL-PCBs (based on KM TEQ)			8.9E-05				3.0E+00
			Total Non-DL PCBs			3.7E-05				3.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-04				6.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-04				6.2E+00
			Total PAHs			1.5E-06				7.6E-03
			Total Organics			7.0E-06				1.1E+00
			Total Inorganics			3.4E-05				2.9E+00
	Summer Flounder Total (excluding KM TEQs)					2.8E-04				1.4E+01
	Summer Flounder Total (based on KM TEQs)					2.8E-04				1.4E+01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDD	3.0E-04	--	3.0E-04	Reproductive	9.9E+00	--	9.9E+00
			1,2,3,7,8-PeCDD	7.8E-06	--	7.8E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDD	4.5E-07	--	4.5E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,6,7,8-HxCDD	1.1E-06	--	1.1E-06	Reproductive	3.7E-02	--	3.7E-02
			1,2,3,7,8,9-HxCDD	2.6E-07	--	2.6E-07	Reproductive	8.6E-03	--	8.6E-03
			1,2,3,4,6,7,8-HpCDD	6.9E-08	--	6.9E-08	Reproductive	2.3E-03	--	2.3E-03
			OCDD	4.7E-09	--	4.7E-09	Reproductive	1.6E-04	--	1.6E-04
			2,3,7,8-TCDF	7.2E-06	--	7.2E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,7,8-PeCDF	1.7E-06	--	1.7E-06	Reproductive	5.6E-02	--	5.6E-02
			2,3,4,7,8-PeCDF	1.9E-05	--	1.9E-05	Reproductive	6.3E-01	--	6.3E-01
			1,2,3,4,7,8-HxCDF	3.0E-06	--	3.0E-06	Reproductive	1.0E-01	--	1.0E-01
			1,2,3,6,7,8-HxCDF	2.2E-06	--	2.2E-06	Reproductive	7.3E-02	--	7.3E-02
			1,2,3,7,8,9-HxCDF	1.9E-07	--	1.9E-07	Reproductive	6.5E-03	--	6.5E-03
			2,3,4,6,7,8-HxCDF	4.0E-07	--	4.0E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,6,7,8-HpCDF	4.4E-07	--	4.4E-07	Reproductive	1.5E-02	--	1.5E-02
			2,3,4,6,7,8-HxCDF	4.0E-07	--	4.0E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,6,7,8-HpCDF	4.4E-07	--	4.4E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,7,8,9-HpCDF	1.6E-08	--	1.6E-08	Reproductive	5.4E-04	--	5.4E-04
			OCDF	1.2E-09	--	1.2E-09	Reproductive	4.0E-05	--	4.0E-05
			KM TEQ DF	3.4E-04	--	3.4E-04	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	1.8E-06	--	1.8E-06	Reproductive	6.0E-02	--	6.0E-02
			PCB-81	2.0E-07	--	2.0E-07	Reproductive	6.8E-03	--	6.8E-03
			PCB-105	4.1E-06	--	4.1E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-118	1.6E-05	--	1.6E-05	Reproductive	5.2E-01	--	5.2E-01
			PCB-123	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-126	1.1E-04	--	1.1E-04	Reproductive	3.7E+00	--	3.7E+00
			PCB-156/157	1.6E-06	--	1.6E-06	Reproductive	5.3E-02	--	5.3E-02
			PCB-167	6.5E-07	--	6.5E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-169	4.1E-06	--	4.1E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-189	1.2E-07	--	1.2E-07	Reproductive	4.2E-03	--	4.2E-03
			KM TEQ PCB	1.4E-04	--	1.4E-04	Reproductive	4.6E+00	--	4.6E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.2E-04	--	1.2E-04	Whole Body	1.0E+01	--	1.0E+01
			PAHs							
			Benz(a)anthracene	1.6E-07	--	1.6E-07	--	--	--	--
			Benzo(a)pyrene	1.6E-06	--	1.6E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	1.6E-07	--	1.6E-07	--	--	--	--
			Chrysene	1.6E-09	--	1.6E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.6E-06	--	1.6E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	--	1.6E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.5E-06	--	1.5E-06	Liver	7.4E-01	--	7.4E-01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,4'-DDE	4.3E-07	--	4.3E-07	Liver	1.5E-02	--	1.5E-02
			2,4'-DDT	5.8E-07	--	5.8E-07	Liver	1.2E-02	--	1.2E-02
			4,4'-DDD	4.6E-06	--	4.6E-06	Liver	2.2E+00	--	2.2E+00
			4,4'-DDE	5.0E-06	--	5.0E-06	Liver	1.7E-01	--	1.7E-01
			4,4'-DDT	1.2E-06	--	1.2E-06	Liver	2.4E-02	--	2.4E-02
			Benzaldehyde	6.4E-07	--	6.4E-07	GI Tract, Kidney	5.6E-03	--	5.6E-03
			Chlordane, alpha (cis)	1.0E-06	--	1.0E-06	Liver	2.1E-02	--	2.1E-02
			Chlordane, gamma (trans)	2.1E-07	--	2.1E-07	Liver	4.2E-03	--	4.2E-03
			Dieldrin	1.4E-05	--	1.4E-05	Liver	6.3E-02	--	6.3E-02
			Heptachlor epoxide, cis-	2.4E-06	--	2.4E-06	Liver	7.0E-02	--	7.0E-02
			Heptachlor epoxide, trans-	1.9E-08	--	1.9E-08	Liver	5.7E-04	--	5.7E-04
			Hexachlorobenzene	2.5E-07	--	2.5E-07	Liver	6.8E-04	--	6.8E-04
			Mirex	8.0E-07	--	8.0E-07	Liver, Thyroid	7.7E-04	--	7.7E-04
			Nonachlor, cis-	3.2E-07	--	3.2E-07	Liver	3.2E-02	--	3.2E-02
			Nonachlor, trans-	8.3E-07	--	8.3E-07	Liver	5.4E-01	--	5.4E-01
			Oxychlordane	1.3E-07	--	1.3E-07	Liver	1.5E-02	--	1.5E-02
			Pyridine	--	--	--	Liver	5.6E-01	--	5.6E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	3.8E-03	--	3.8E-03
			Arsenic, organic	--	--	--	Urinary	1.5E-02	--	1.5E-02
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	1.1E-01	--	1.1E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	4.2E-05	--	4.2E-05
			Cobalt	--	--	--	Thyroid	2.9E-02	--	2.9E-02
			Copper	--	--	--	GI Tract	2.7E-01	--	2.7E-01
			Iron	--	--	--	GI Tract	3.8E-03	--	3.8E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-03	--	1.2E-03
			Mercury	--	--	--	Immune	4.4E-01	--	4.4E-01
			Methyl Mercury	--	--	--	Neurological	1.8E+00	--	1.8E+00
			Selenium	--	--	--	Whole Body	5.6E-02	--	5.6E-02
			Silver	--	--	--	Skin	1.7E-03	--	1.7E-03
			Vanadium	--	--	--	Hair	3.0E-03	--	3.0E-03
			Zinc	--	--	--	Blood	1.8E-02	--	1.8E-02
Total DLCs (excluding KM TEQs)						4.8E-04				1.6E+01
Total DLCs (based on KM TEQs)						4.7E-04				1.6E+01
Total PCDD/Fs (excluding KM TEQ)						3.4E-04				1.1E+01
Total PCDD/Fs (based on KM TEQ)						3.4E-04				1.1E+01
Total DL-PCBs (excluding KM TEQ)						1.4E-04				4.7E+00
Total DL-PCBs (based on KM TEQ)						1.4E-04				4.6E+00
Total Non-DL PCBs						1.2E-04				1.0E+01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-04				1.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-04				1.5E+01
			Total PAHs			3.7E-06				1.9E-02
			Total Organics			3.4E-05				4.5E+00
			Total Inorganics			1.4E-05				2.8E+00
	White Perch Total (excluding KM TEQs)					6.5E-04				3.4E+01
	White Perch Total (based on KM TEQs)					6.4E-04				3.3E+01
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.9E-04	--	2.9E-04	Reproductive	9.8E+00	--	9.8E+00
			1,2,3,7,8-PeCDD	7.7E-06	--	7.7E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDD	2.2E-07	--	2.2E-07	Reproductive	7.5E-03	--	7.5E-03
			1,2,3,6,7,8-HxCDD	6.6E-07	--	6.6E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,7,8,9-HxCDD	2.4E-07	--	2.4E-07	Reproductive	7.8E-03	--	7.8E-03
			1,2,3,4,6,7,8-HpCDD	7.6E-08	--	7.6E-08	Reproductive	2.5E-03	--	2.5E-03
			OCDD	6.7E-09	--	6.7E-09	Reproductive	2.2E-04	--	2.2E-04
			2,3,7,8-TCDF	1.1E-05	--	1.1E-05	Reproductive	3.6E-01	--	3.6E-01
			1,2,3,7,8-PeCDF	7.0E-07	--	7.0E-07	Reproductive	2.3E-02	--	2.3E-02
			2,3,4,7,8-PeCDF	1.6E-05	--	1.6E-05	Reproductive	5.5E-01	--	5.5E-01
			1,2,3,4,7,8-HxCDF	5.3E-06	--	5.3E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,6,7,8-HxCDF	1.6E-06	--	1.6E-06	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,7,8,9-HxCDF	9.6E-08	--	9.6E-08	Reproductive	3.2E-03	--	3.2E-03
			2,3,4,6,7,8-HxCDF	4.1E-07	--	4.1E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDF	5.2E-07	--	5.2E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,4,7,8,9-HpCDF	7.4E-09	--	7.4E-09	Reproductive	2.5E-04	--	2.5E-04
			OCDF	8.2E-10	--	8.2E-10	Reproductive	2.7E-05	--	2.7E-05
			KM TEQ DF	3.4E-04	--	3.4E-04	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	2.2E-06	--	2.2E-06	Reproductive	7.3E-02	--	7.3E-02
			PCB-81	2.9E-07	--	2.9E-07	Reproductive	9.5E-03	--	9.5E-03
			PCB-105	3.5E-06	--	3.5E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-114	3.0E-07	--	3.0E-07	Reproductive	9.9E-03	--	9.9E-03
			PCB-118	1.6E-05	--	1.6E-05	Reproductive	5.2E-01	--	5.2E-01
			PCB-123	2.7E-07	--	2.7E-07	Reproductive	9.2E-03	--	9.2E-03
			PCB-126	1.1E-04	--	1.1E-04	Reproductive	3.6E+00	--	3.6E+00
			PCB-156/157	1.3E-06	--	1.3E-06	Reproductive	4.2E-02	--	4.2E-02
			PCB-167	5.2E-07	--	5.2E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-169	3.7E-06	--	3.7E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-189	9.0E-08	--	9.0E-08	Reproductive	3.0E-03	--	3.0E-03
			KM TEQ PCB	1.3E-04	--	1.3E-04	Reproductive	4.3E+00	--	4.3E+00
			Non-DL PCBs							
			Total Non-DL PCBs	4.8E-05	--	4.8E-05	Whole Body	4.2E+00	--	4.2E+00
			PAHs							

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Benz(a)anthracene	2.1E-08	–	2.1E-08	–	–	–	–
			Benzo(a)pyrene	2.0E-07	–	2.0E-07	Developmental	2.3E-03	–	2.3E-03
			Benzo(b)fluoranthene	2.0E-08	–	2.0E-08	–	–	–	–
			Chrysene	2.7E-10	–	2.7E-10	–	–	–	–
			Dibenz(a,h)anthracene	2.0E-07	–	2.0E-07	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	–	1.6E-07	–	–	–	–
			Pesticides & Organics							
			2,4'-DDD	3.9E-09	–	3.9E-09	Liver	1.9E-03	–	1.9E-03
			2,4'-DDE	1.1E-08	–	1.1E-08	Liver	3.9E-04	–	3.9E-04
			2,4'-DDT	5.0E-09	–	5.0E-09	Liver	1.0E-04	–	1.0E-04
			4,4'-DDD	6.3E-07	–	6.3E-07	Liver	3.0E-01	–	3.0E-01
			4,4'-DDE	2.4E-06	–	2.4E-06	Liver	8.2E-02	–	8.2E-02
			4,4'-DDT	2.7E-08	–	2.7E-08	Liver	5.6E-04	–	5.6E-04
			Benzaldehyde	3.6E-07	–	3.6E-07	GI Tract, Kidney	3.1E-03	–	3.1E-03
			Chlordane, alpha (cis)	5.3E-08	–	5.3E-08	Liver	1.1E-03	–	1.1E-03
			Chlordane, gamma (trans)	6.6E-09	–	6.6E-09	Liver	1.3E-04	–	1.3E-04
			Dieldrin	7.3E-06	–	7.3E-06	Liver	3.2E-02	–	3.2E-02
			Heptachlor epoxide, cis-	2.4E-06	–	2.4E-06	Liver	7.2E-02	–	7.2E-02
			Heptachlor epoxide, trans-	7.8E-07	–	7.8E-07	Liver	2.3E-02	–	2.3E-02
			Hexachlorobenzene	1.3E-07	–	1.3E-07	Liver	3.6E-04	–	3.6E-04
			Mirex	2.7E-07	–	2.7E-07	Liver, Thyroid	2.6E-04	–	2.6E-04
			Nonachlor, cis-	1.4E-07	–	1.4E-07	Liver	1.4E-02	–	1.4E-02
			Nonachlor, trans-	2.7E-07	–	2.7E-07	Liver	1.8E-01	–	1.8E-01
			Oxychlordane	4.1E-07	–	4.1E-07	Liver	4.6E-02	–	4.6E-02
			Pyridine	–	–	–	Liver	1.3E-01	–	1.3E-01
			Inorganics							
			Aluminum	–	–	–	Neurological	2.4E-03	–	2.4E-03
			Arsenic, organic	–	–	–	Urinary	3.3E-02	–	3.3E-02
			Arsenic, inorganic	3.1E-05	–	3.1E-05	Skin, Blood	2.4E-01	–	2.4E-01
			Cadmium	–	–	–	Urinary	1.0E-01	–	1.0E-01
			Chromium [as Cr(III)]	–	–	–	No Effect	2.9E-05	–	2.9E-05
			Cobalt	–	–	–	Thyroid	7.8E-02	–	7.8E-02
			Copper	–	–	–	GI Tract	7.5E+00	–	7.5E+00
			Iron	–	–	–	GI Tract	1.4E-02	–	1.4E-02
			Lead	–	–	–	–	–	–	–
			Manganese	–	–	–	Neurological	1.8E-02	–	1.8E-02
			Mercury	–	–	–	Immune	1.3E-01	–	1.3E-01
			Methyl Mercury	–	–	–	Neurological	4.5E-01	–	4.5E-01
			Selenium	–	–	–	Whole Body	5.9E-02	–	5.9E-02
			Silver	–	–	–	Skin	4.1E-02	–	4.1E-02
			Vanadium	–	–	–	Hair	3.8E-03	–	3.8E-03

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Zinc	--	--	--	Blood	4.1E-02	--	4.1E-02
			Total DLCs (excluding KM TEQs)			4.7E-04				1.6E+01
			Total DLCs (based on KM TEQs)			4.7E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			3.4E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			3.4E-04				1.1E+01
			Total DL-PCBs (excluding KM TEQ)			1.4E-04				4.5E+00
			Total DL-PCBs (based on KM TEQ)			1.3E-04				4.3E+00
			Total Non-DL PCBs			4.8E-05				4.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-04				8.7E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-04				8.5E+00
			Total PAHs			6.0E-07				2.3E-03
			Total Organics			1.5E-05				8.9E-01
			Total Inorganics			3.1E-05				8.7E+00
	Crab (H+M) Total (excluding KM TEQs)					5.7E-04				3.0E+01
	Crab (H+M) Total (based on KM TEQs)					5.6E-04				2.9E+01
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.3E-05	--	4.3E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	2.8E-06	--	2.8E-06	Reproductive	9.3E-02	--	9.3E-02
			1,2,3,4,7,8-HxCDD	3.1E-08	--	3.1E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,6,7,8-HxCDD	7.8E-08	--	7.8E-08	Reproductive	2.6E-03	--	2.6E-03
			1,2,3,7,8,9-HxCDD	4.0E-08	--	4.0E-08	Reproductive	1.3E-03	--	1.3E-03
			1,2,3,4,6,7,8-HpCDD	1.5E-08	--	1.5E-08	Reproductive	5.0E-04	--	5.0E-04
			OCDD	1.6E-09	--	1.6E-09	Reproductive	5.2E-05	--	5.2E-05
			2,3,7,8-TCDF	1.3E-06	--	1.3E-06	Reproductive	4.3E-02	--	4.3E-02
			1,2,3,7,8-PeCDF	9.1E-08	--	9.1E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,4,7,8-PeCDF	1.6E-06	--	1.6E-06	Reproductive	5.4E-02	--	5.4E-02
			1,2,3,4,7,8-HxCDF	8.0E-07	--	8.0E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDF	2.0E-07	--	2.0E-07	Reproductive	6.7E-03	--	6.7E-03
			1,2,3,7,8,9-HxCDF	7.9E-08	--	7.9E-08	Reproductive	2.6E-03	--	2.6E-03
			2,3,4,6,7,8-HxCDF	5.2E-08	--	5.2E-08	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,4,6,7,8-HpCDF	4.4E-08	--	4.4E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	3.8E-09	--	3.8E-09	Reproductive	1.3E-04	--	1.3E-04
			OCDF	3.1E-10	--	3.1E-10	Reproductive	1.0E-05	--	1.0E-05
			KM TEQ DF	4.9E-05	--	4.9E-05	Reproductive	1.6E+00	--	1.6E+00
			PCB-77	2.2E-07	--	2.2E-07	Reproductive	7.4E-03	--	7.4E-03
			PCB-81	3.0E-08	--	3.0E-08	Reproductive	1.0E-03	--	1.0E-03
			PCB-105	3.6E-07	--	3.6E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-114	3.1E-08	--	3.1E-08	Reproductive	1.0E-03	--	1.0E-03
			PCB-118	1.3E-06	--	1.3E-06	Reproductive	4.4E-02	--	4.4E-02
			PCB-123	2.6E-08	--	2.6E-08	Reproductive	8.8E-04	--	8.8E-04
			PCB-126	9.5E-06	--	9.5E-06	Reproductive	3.2E-01	--	3.2E-01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-156/157	1.1E-07	–	1.1E-07	Reproductive	3.6E-03	–	3.6E-03
			PCB-167	4.1E-08	–	4.1E-08	Reproductive	1.4E-03	–	1.4E-03
			PCB-169	3.8E-06	–	3.8E-06	Reproductive	1.3E-01	–	1.3E-01
			PCB-189	5.3E-09	–	5.3E-09	Reproductive	1.8E-04	–	1.8E-04
			KM TEQ PCB	1.1E-05	–	1.1E-05	Reproductive	3.8E-01	–	3.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	4.1E-06	–	4.1E-06	Whole Body	3.6E-01	–	3.6E-01
			PAHs							
			Benz(a)anthracene	9.7E-08	–	9.7E-08	–	–	–	–
			Benzo(a)pyrene	9.7E-07	–	9.7E-07	Developmental	1.1E-02	–	1.1E-02
			Benzo(b)fluoranthene	9.7E-08	–	9.7E-08	–	–	–	–
			Chrysene	9.7E-10	–	9.7E-10	–	–	–	–
			Dibenz(a,h)anthracene	9.7E-07	–	9.7E-07	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	9.7E-08	–	9.7E-08	–	–	–	–
			Pesticides & Organics							
			2,4'-DDD	4.3E-10	–	4.3E-10	Liver	2.1E-04	–	2.1E-04
			2,4'-DDE	1.2E-09	–	1.2E-09	Liver	4.2E-05	–	4.2E-05
			2,4'-DDT	9.4E-10	–	9.4E-10	Liver	1.9E-05	–	1.9E-05
			4,4'-DDD	9.3E-08	–	9.3E-08	Liver	4.5E-02	–	4.5E-02
			4,4'-DDE	3.7E-07	–	3.7E-07	Liver	1.3E-02	–	1.3E-02
			4,4'-DDT	3.8E-09	–	3.8E-09	Liver	7.9E-05	–	7.9E-05
			Benzaldehyde	3.9E-07	–	3.9E-07	GI Tract, Kidney	3.4E-03	–	3.4E-03
			Chlordane, alpha (cis)	1.5E-08	–	1.5E-08	Liver	3.0E-04	–	3.0E-04
			Chlordane, gamma (trans)	6.9E-10	–	6.9E-10	Liver	1.4E-05	–	1.4E-05
			Dieldrin	1.6E-06	–	1.6E-06	Liver	7.1E-03	–	7.1E-03
			Heptachlor epoxide, cis-	2.2E-07	–	2.2E-07	Liver	6.6E-03	–	6.6E-03
			Heptachlor epoxide, trans-	1.5E-07	–	1.5E-07	Liver	4.5E-03	–	4.5E-03
			Hexachlorobenzene	2.6E-08	–	2.6E-08	Liver	7.2E-05	–	7.2E-05
			Mirex	6.8E-08	–	6.8E-08	Liver, Thyroid	6.6E-05	–	6.6E-05
			Nonachlor, cis-	1.7E-08	–	1.7E-08	Liver	1.7E-03	–	1.7E-03
			Nonachlor, trans-	3.1E-08	–	3.1E-08	Liver	2.0E-02	–	2.0E-02
			Oxychlordane	4.4E-08	–	4.4E-08	Liver	5.0E-03	–	5.0E-03
			Pyridine	–	–	–	Liver	1.1E-01	–	1.1E-01
			Inorganics							
			Aluminum	–	–	–	Neurological	1.5E-03	–	1.5E-03
			Arsenic, organic	–	–	–	Urinary	3.1E-02	–	3.1E-02
			Arsenic, inorganic	2.9E-05	–	2.9E-05	Skin, Blood	2.3E-01	–	2.3E-01
			Cadmium	–	–	–	Urinary	4.3E-02	–	4.3E-02
			Chromium [as Cr(III)]	–	–	–	No Effect	2.6E-05	–	2.6E-05
			Cobalt	–	–	–	Thyroid	6.1E-02	–	6.1E-02
			Copper	–	–	–	GI Tract	4.8E+00	–	4.8E+00

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Iron	--	--	--	GI Tract	7.0E-03	--	7.0E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.1E-02	--	1.1E-02
			Mercury	--	--	--	Immune	1.6E-01	--	1.6E-01
			Methyl Mercury	--	--	--	Neurological	5.6E-01	--	5.6E-01
			Selenium	--	--	--	Whole Body	4.9E-02	--	4.9E-02
			Silver	--	--	--	Skin	2.5E-02	--	2.5E-02
			Vanadium	--	--	--	Hair	2.2E-03	--	2.2E-03
			Zinc	--	--	--	Blood	4.1E-02	--	4.1E-02
			Total DLCs (excluding KM TEQs)			6.6E-05				2.2E+00
			Total DLCs (based on KM TEQs)			6.1E-05				2.0E+00
			Total PCDD/Fs (excluding KM TEQ)			5.0E-05				1.7E+00
			Total PCDD/Fs (based on KM TEQ)			4.9E-05				1.6E+00
			Total DL-PCBs (excluding KM TEQ)			1.5E-05				5.2E-01
			Total DL-PCBs (based on KM TEQ)			1.1E-05				3.8E-01
			Total DL-PCBs (excluding KM TEQ)			1.5E-05				5.2E-01
			Total DL-PCBs (based on KM TEQ)			1.1E-05				3.8E-01
			Total Non-DL PCBs			4.1E-06				3.6E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.0E-05				8.8E-01
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-05				7.4E-01
			Total PAHs			2.2E-06				1.1E-02
			Total Organics			3.0E-06				2.2E-01
			Total Inorganics			2.9E-05				6.0E+00
	Crab (Muscle) Total (excluding KM TEQs)					1.0E-04				8.8E+00
	Crab (Muscle) Total (based on KM TEQs)					9.9E-05				8.6E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-03	--	1.0E-03	Reproductive	3.4E+01	--	3.4E+01
			1,2,3,7,8-PeCDD	2.4E-05	--	2.4E-05	Reproductive	8.1E-01	--	8.1E-01
			1,2,3,4,7,8-HxCDD	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDD	2.3E-06	--	2.3E-06	Reproductive	7.8E-02	--	7.8E-02
			1,2,3,7,8,9-HxCDD	8.0E-07	--	8.0E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,4,6,7,8-HpCDD	2.5E-07	--	2.5E-07	Reproductive	8.4E-03	--	8.4E-03
			OCDD	2.2E-08	--	2.2E-08	Reproductive	7.2E-04	--	7.2E-04
			2,3,7,8-TCDF	3.8E-05	--	3.8E-05	Reproductive	1.3E+00	--	1.3E+00
			1,2,3,7,8-PeCDF	2.5E-06	--	2.5E-06	Reproductive	8.3E-02	--	8.3E-02
			2,3,4,7,8-PeCDF	5.9E-05	--	5.9E-05	Reproductive	2.0E+00	--	2.0E+00
			1,2,3,4,7,8-HxCDF	1.9E-05	--	1.9E-05	Reproductive	6.2E-01	--	6.2E-01
			1,2,3,6,7,8-HxCDF	5.6E-06	--	5.6E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,7,8,9-HxCDF	1.5E-07	--	1.5E-07	Reproductive	5.1E-03	--	5.1E-03
			2,3,4,6,7,8-HxCDF	1.5E-06	--	1.5E-06	Reproductive	4.8E-02	--	4.8E-02
			1,2,3,4,6,7,8-HpCDF	1.9E-06	--	1.9E-06	Reproductive	6.3E-02	--	6.3E-02
			1,2,3,4,7,8,9-HpCDF	1.5E-08	--	1.5E-08	Reproductive	5.1E-04	--	5.1E-04
			OCDF	2.8E-09	--	2.8E-09	Reproductive	9.4E-05	--	9.4E-05

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	1.2E-03	--	1.2E-03	Reproductive	3.9E+01	--	3.9E+01
			PCB-77	7.7E-06	--	7.7E-06	Reproductive	2.6E-01	--	2.6E-01
			PCB-81	1.0E-06	--	1.0E-06	Reproductive	3.4E-02	--	3.4E-02
			PCB-105	1.2E-05	--	1.2E-05	Reproductive	4.2E-01	--	4.2E-01
			PCB-114	1.1E-06	--	1.1E-06	Reproductive	3.5E-02	--	3.5E-02
			PCB-118	5.7E-05	--	5.7E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-123	9.9E-07	--	9.9E-07	Reproductive	3.3E-02	--	3.3E-02
			PCB-126	3.9E-04	--	3.9E-04	Reproductive	1.3E+01	--	1.3E+01
			PCB-156/157	4.5E-06	--	4.5E-06	Reproductive	1.5E-01	--	1.5E-01
			PCB-167	1.9E-06	--	1.9E-06	Reproductive	6.4E-02	--	6.4E-02
			PCB-169	1.2E-05	--	1.2E-05	Reproductive	4.1E-01	--	4.1E-01
			PCB-189	3.3E-07	--	3.3E-07	Reproductive	1.1E-02	--	1.1E-02
			KM TEQ PCB	4.7E-04	--	4.7E-04	Reproductive	1.6E+01	--	1.6E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-04	--	1.7E-04	Whole Body	1.5E+01	--	1.5E+01
			PAHs							
			Benz(a)anthracene	2.4E-08	--	2.4E-08	--	--	--	--
			Benzo(a)pyrene	2.1E-07	--	2.1E-07	Developmental	2.5E-03	--	2.5E-03
			Benzo(b)fluoranthene	2.0E-08	--	2.0E-08	--	--	--	--
			Chrysene	3.3E-10	--	3.3E-10	--	--	--	--
			Dibenz(a,h)anthracene	2.1E-07	--	2.1E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.6E-07	--	5.6E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.4E-08	--	1.4E-08	Liver	6.6E-03	--	6.6E-03
			2,4'-DDE	4.0E-08	--	4.0E-08	Liver	1.4E-03	--	1.4E-03
			2,4'-DDT	1.7E-08	--	1.7E-08	Liver	3.4E-04	--	3.4E-04
			4,4'-DDD	2.2E-06	--	2.2E-06	Liver	1.1E+00	--	1.1E+00
			4,4'-DDE	8.2E-06	--	8.2E-06	Liver	2.8E-01	--	2.8E-01
			4,4'-DDT	9.4E-08	--	9.4E-08	Liver	1.9E-03	--	1.9E-03
			Benzaldehyde	7.6E-07	--	7.6E-07	GI Tract, Kidney	6.6E-03	--	6.6E-03
			Chlordane, alpha (cis)	1.7E-07	--	1.7E-07	Liver	3.5E-03	--	3.5E-03
			Chlordane, gamma (trans)	2.4E-08	--	2.4E-08	Liver	4.7E-04	--	4.7E-04
			Dieldrin	2.4E-05	--	2.4E-05	Liver	1.1E-01	--	1.1E-01
			Heptachlor epoxide, cis-	8.9E-06	--	8.9E-06	Liver	2.6E-01	--	2.6E-01
			Heptachlor epoxide, trans-	2.6E-06	--	2.6E-06	Liver	7.7E-02	--	7.7E-02
			Hexachlorobenzene	4.3E-07	--	4.3E-07	Liver	1.2E-03	--	1.2E-03
			Mirex	9.0E-07	--	9.0E-07	Liver, Thyroid	8.7E-04	--	8.7E-04
			Nonachlor, cis-	4.8E-07	--	4.8E-07	Liver	4.8E-02	--	4.8E-02
			Nonachlor, trans-	9.7E-07	--	9.7E-07	Liver	6.3E-01	--	6.3E-01
			Oxychlordane	1.4E-06	--	1.4E-06	Liver	1.6E-01	--	1.6E-01
			Pyridine	--	--	--	Liver	2.1E-01	--	2.1E-01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Inorganics							
			Aluminum	–	–	–	Neurological	7.4E-03	–	7.4E-03
			Arsenic, organic	–	–	–	Urinary	4.1E-02	–	4.1E-02
			Arsenic, inorganic	3.9E-05	–	3.9E-05	Skin, Blood	3.0E-01	–	3.0E-01
			Cadmium	–	–	–	Urinary	3.3E-01	–	3.3E-01
			Chromium [as Cr(III)]	–	–	–	No Effect	4.9E-05	–	4.9E-05
			Cobalt	–	–	–	Thyroid	2.0E-01	–	2.0E-01
			Copper	–	–	–	GI Tract	2.0E+01	–	2.0E+01
			Iron	–	–	–	GI Tract	3.8E-02	–	3.8E-02
			Lead	–	–	–	–	–	–	–
			Manganese	–	–	–	Neurological	3.5E-02	–	3.5E-02
			Mercury	–	–	–	Immune	6.5E-02	–	6.5E-02
			Methyl Mercury	–	–	–	Neurological	1.5E-01	–	1.5E-01
			Selenium	–	–	–	Whole Body	9.5E-02	–	9.5E-02
			Silver	–	–	–	Skin	1.0E-01	–	1.0E-01
			Vanadium	–	–	–	Hair	8.9E-03	–	8.9E-03
			Zinc	–	–	–	Blood	4.1E-02	–	4.1E-02
			Total DLCs (excluding KM TEQs)			1.7E-03				5.6E+01
			Total DLCs (based on KM TEQs)			1.6E-03				5.5E+01
			Total PCDD/Fs (excluding KM TEQ)			1.2E-03				3.9E+01
			Total PCDD/Fs (based on KM TEQ)			1.2E-03				3.9E+01
			Total DL-PCBs (excluding KM TEQ)			4.9E-04				1.6E+01
			Total DL-PCBs (based on KM TEQ)			4.7E-04				1.6E+01
			Total Non-DL PCBs			1.7E-04				1.5E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			6.7E-04				3.2E+01
			Total PCBs (DL & NDL; based on KM TEQ)			6.4E-04				3.1E+01
			Total PAHs			1.0E-06				2.5E-03
			Total Organics			5.1E-05				2.9E+00
			Total Inorganics			3.9E-05				2.1E+01
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.9E-03				9.5E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.9E-03				9.4E+01
Sediment	Sediment	Angler - Fishing	**Dioxin-like Compounds**							
		Sediment	2,3,7,8-TCDD	2.7E-07	3.1E-07	5.8E-07	Reproductive	9.0E-03	1.0E-02	1.9E-02
			1,2,3,7,8-PeCDD	1.4E-08	1.7E-08	3.1E-08	Reproductive	4.7E-04	5.5E-04	1.0E-03
			1,2,3,4,7,8-HxCDD	1.3E-09	1.5E-09	2.8E-09	Reproductive	4.2E-05	4.9E-05	9.2E-05
			1,2,3,6,7,8-HxCDD	5.1E-09	6.0E-09	1.1E-08	Reproductive	1.7E-04	2.0E-04	3.7E-04
			1,2,3,7,8,9-HxCDD	3.0E-09	3.5E-09	6.6E-09	Reproductive	1.0E-04	1.2E-04	2.2E-04
			1,2,3,4,6,7,8-HpCDD	9.0E-09	1.1E-08	2.0E-08	Reproductive	3.0E-04	3.5E-04	6.5E-04
			OCDD	2.8E-09	3.2E-09	6.0E-09	Reproductive	9.2E-05	1.1E-04	2.0E-04
			2,3,7,8-TCDF	4.8E-09	5.7E-09	1.1E-08	Reproductive	1.6E-04	1.9E-04	3.5E-04
			1,2,3,7,8-PeCDF	1.0E-09	1.2E-09	2.2E-09	Reproductive	3.3E-05	3.9E-05	7.2E-05

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,7,8-PeCDF	1.7E-08	1.9E-08	3.6E-08	Reproductive	5.6E-04	6.5E-04	1.2E-03
			1,2,3,4,7,8-HxCDF	2.5E-08	3.0E-08	5.5E-08	Reproductive	8.5E-04	9.9E-04	1.8E-03
			1,2,3,6,7,8-HxCDF	6.6E-09	7.7E-09	1.4E-08	Reproductive	2.2E-04	2.6E-04	4.8E-04
			1,2,3,7,8,9-HxCDF	5.0E-10	5.8E-10	1.1E-09	Reproductive	1.7E-05	1.9E-05	3.6E-05
			2,3,4,6,7,8-HxCDF	3.7E-09	4.3E-09	8.0E-09	Reproductive	1.2E-04	1.4E-04	2.7E-04
			1,2,3,4,6,7,8-HpCDF	1.1E-08	1.3E-08	2.4E-08	Reproductive	3.8E-04	4.4E-04	8.1E-04
			1,2,3,4,7,8,9-HpCDF	3.8E-10	4.5E-10	8.3E-10	Reproductive	1.3E-05	1.5E-05	2.8E-05
			OCDF	4.7E-10	5.5E-10	1.0E-09	Reproductive	1.6E-05	1.8E-05	3.4E-05
			KM TEQ DF	3.7E-07	4.3E-07	8.0E-07	Reproductive	1.2E-02	1.4E-02	2.7E-02
			PCB-77	2.7E-09	3.2E-09	5.9E-09	Reproductive	9.1E-05	1.1E-04	2.0E-04
			PCB-81	3.1E-10	3.7E-10	6.8E-10	Reproductive	1.0E-05	1.2E-05	2.3E-05
			PCB-105	1.3E-09	1.5E-09	2.8E-09	Reproductive	4.4E-05	5.1E-05	9.5E-05
			PCB-114	9.0E-11	1.1E-10	2.0E-10	Reproductive	3.0E-06	3.5E-06	6.5E-06
			PCB-118	3.8E-09	4.5E-09	8.3E-09	Reproductive	1.3E-04	1.5E-04	2.8E-04
			PCB-123	1.1E-10	1.3E-10	2.4E-10	Reproductive	3.7E-06	4.3E-06	8.0E-06
			PCB-126	8.6E-08	1.0E-07	1.9E-07	Reproductive	2.9E-03	3.4E-03	6.2E-03
			PCB-156/157	3.4E-10	4.0E-10	7.4E-10	Reproductive	1.1E-05	1.3E-05	2.5E-05
			PCB-167	1.2E-10	1.4E-10	2.7E-10	Reproductive	4.1E-06	4.8E-06	8.9E-06
			PCB-169	2.7E-08	3.1E-08	5.8E-08	Reproductive	8.9E-04	1.0E-03	1.9E-03
			PCB-189	2.6E-11	3.0E-11	5.6E-11	Reproductive	8.6E-07	1.0E-06	1.9E-06
			KM TEQ PCB	1.1E-07	1.3E-07	2.3E-07	Reproductive	3.6E-03	4.2E-03	7.8E-03
			Non-DL PCBs							
			Total Non-DL PCBs	3.1E-08	1.7E-07	2.0E-07	Whole Body	2.7E-03	1.5E-02	1.8E-02
			PAHs							
			Benz(a)anthracene	4.9E-09	2.5E-08	3.0E-08	–	–	–	–
			Benzo(a)pyrene	4.8E-08	2.4E-07	2.9E-07	Developmental	5.6E-04	2.8E-03	3.4E-03
			Benzo(b)fluoranthene	4.3E-09	2.2E-08	2.6E-08	–	–	–	–
			Benzo(k)fluoranthene	2.8E-10	1.4E-09	1.7E-09	–	–	–	–
			Chrysene	4.7E-11	2.4E-10	2.8E-10	–	–	–	–
			Dibenz(a,h)anthracene	9.9E-09	5.0E-08	6.0E-08	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	1.8E-09	9.0E-09	1.1E-08	–	–	–	–
			Pesticides & Organics							
			PHC as gasoline	–	–	–	Blood, Immune	1.2E-04	–	1.2E-04
			TPH (C9-C40)	–	–	–	Respiratory	8.5E-03	–	8.5E-03
			Inorganics							
			Aluminum	–	–	–	Neurological	1.0E-03	–	1.0E-03
			Antimony	–	–	–	Whole Body	4.8E-04	–	4.8E-04
			Arsenic, inorganic	6.5E-07	1.3E-06	1.9E-06	Skin, Blood	5.1E-03	9.8E-03	1.5E-02
			Cadmium	–	–	–	Urinary	2.5E-04	3.9E-04	6.5E-04
			Chromium [as Cr(III)]	–	–	–	No Effect	5.9E-06	–	5.9E-06
			Cobalt	–	–	–	Thyroid	3.9E-03	–	3.9E-03

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Copper	--	--	--	GI Tract	1.4E-02	--	1.4E-02
			Chromium (VI)	1.6E-08	--	1.6E-08	No Effect	3.8E-05	--	3.8E-05
			Iron	--	--	--	GI Tract	5.1E-03	--	5.1E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-03	--	1.2E-03
			Mercury	--	--	--	Immune	5.4E-04	--	5.4E-04
			Nickel	--	--	--	Body Weight, Organ Weights	2.8E-04	--	2.8E-04
			Thallium	--	--	--	Skin, Hair	2.0E-03	--	2.0E-03
			Vanadium	--	--	--	Hair	8.2E-04	--	8.2E-04
			Zinc	--	--	--	Blood	3.4E-04	--	3.4E-04
			Total DLCs (excluding KM TEQs)			1.1E-06				3.6E-02
			Total DLCs (based on KM TEQs)			1.0E-06				3.4E-02
			Total PCDD/Fs (excluding KM TEQ)			8.1E-07				2.7E-02
			Total PCDD/Fs (based on KM TEQ)			8.0E-07				2.7E-02
			Total DL-PCBs (excluding KM TEQ)			2.6E-07				8.8E-03
			Total DL-PCBs (based on KM TEQ)			2.3E-07				7.8E-03
			Total Non-DL PCBs			2.0E-07				1.8E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			4.6E-07				2.6E-02
			Total PCBs (DL & NDL; based on KM TEQ)			4.3E-07				2.5E-02
			Total PAHs			4.2E-07				3.4E-03
			Total Organics			0.0E+00				8.6E-03
			Total Inorganics			1.9E-06				4.5E-02
	Fishing - Sediment Total (excluding KM TEQs)					3.6E-06				1.1E-01
	Fishing - Sediment Total (based on KM TEQs)					3.6E-06				1.1E-01
Surface Water	Surface Water	Angler - Fishing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.5E-10	--	9.5E-10	Reproductive	3.2E-05	--	3.2E-05
			1,2,3,7,8-PeCDD	3.3E-10	--	3.3E-10	Reproductive	1.1E-05	--	1.1E-05
			1,2,3,4,7,8-HxCDD	2.4E-10	--	2.4E-10	Reproductive	7.9E-06	--	7.9E-06
			1,2,3,6,7,8-HxCDD	3.8E-11	--	3.8E-11	Reproductive	1.3E-06	--	1.3E-06
			1,2,3,7,8,9-HxCDD	6.7E-11	--	6.7E-11	Reproductive	2.2E-06	--	2.2E-06
			1,2,3,4,6,7,8-HpCDD	4.8E-11	--	4.8E-11	Reproductive	1.6E-06	--	1.6E-06
			OCDD	1.5E-11	--	1.5E-11	Reproductive	5.0E-07	--	5.0E-07
			2,3,7,8-TCDF	3.7E-11	--	3.7E-11	Reproductive	1.2E-06	--	1.2E-06
			1,2,3,7,8-PeCDF	8.8E-12	--	8.8E-12	Reproductive	2.9E-07	--	2.9E-07
			2,3,4,7,8-PeCDF	1.5E-10	--	1.5E-10	Reproductive	5.1E-06	--	5.1E-06
			1,2,3,4,7,8-HxCDF	1.4E-10	--	1.4E-10	Reproductive	4.7E-06	--	4.7E-06
			1,2,3,6,7,8-HxCDF	3.4E-11	--	3.4E-11	Reproductive	1.1E-06	--	1.1E-06
			1,2,3,7,8,9-HxCDF	2.0E-10	--	2.0E-10	Reproductive	6.8E-06	--	6.8E-06
			2,3,4,6,7,8-HxCDF	2.2E-11	--	2.2E-11	Reproductive	7.3E-07	--	7.3E-07
			1,2,3,4,6,7,8-HpCDF	6.0E-11	--	6.0E-11	Reproductive	2.0E-06	--	2.0E-06
			1,2,3,4,7,8,9-HpCDF	3.8E-12	--	3.8E-12	Reproductive	1.3E-07	--	1.3E-07

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			OCDF	3.4E-12	–	3.4E-12	Reproductive	1.1E-07	–	1.1E-07
			KM TEQ DF	1.9E-09	–	1.9E-09	Reproductive	6.3E-05	–	6.3E-05
			PCB-77	1.6E-12	–	1.6E-12	Reproductive	5.3E-08	–	5.3E-08
			PCB-81	1.6E-13	–	1.6E-13	Reproductive	5.3E-09	–	5.3E-09
			PCB-105	1.7E-12	–	1.7E-12	Reproductive	5.7E-08	–	5.7E-08
			PCB-114	8.9E-14	–	8.9E-14	Reproductive	3.0E-09	–	3.0E-09
			PCB-118	3.8E-12	–	3.8E-12	Reproductive	1.3E-07	–	1.3E-07
			PCB-123	7.4E-14	–	7.4E-14	Reproductive	2.5E-09	–	2.5E-09
			PCB-126	5.2E-11	–	5.2E-11	Reproductive	1.7E-06	–	1.7E-06
			PCB-156/157	4.5E-13	–	4.5E-13	Reproductive	1.5E-08	–	1.5E-08
			PCB-167	1.5E-13	–	1.5E-13	Reproductive	5.1E-09	–	5.1E-09
			PCB-169	9.4E-12	–	9.4E-12	Reproductive	3.1E-07	–	3.1E-07
			PCB-189	2.0E-14	–	2.0E-14	Reproductive	6.6E-10	–	6.6E-10
			KM TEQ PCB	8.4E-11	–	8.4E-11	Reproductive	2.8E-06	–	2.8E-06
			PAHs							
			Benz(a)anthracene	6.1E-12	–	6.1E-12	–	–	–	–
			Benzo(a)pyrene	7.8E-11	–	7.8E-11	Developmental	9.1E-07	–	9.1E-07
			Benzo(b)fluoranthene	1.1E-11	–	1.1E-11	–	–	–	–
			Benzo(k)fluoranthene	4.8E-13	–	4.8E-13	–	–	–	–
			Chrysene	1.0E-13	–	1.0E-13	–	–	–	–
			Dibenz(a,h)anthracene	2.0E-11	–	2.0E-11	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	4.5E-12	–	4.5E-12	–	–	–	–
			Naphthalene	–	–	–	Body Weight	3.2E-08	1.8E-06	1.8E-06
			Pesticides & Organics							
			Chloroform	1.9E-11	1.5E-10	1.7E-10	Liver	2.2E-07	1.7E-06	1.9E-06
			Trichloroethylene	3.1E-11	4.5E-10	4.8E-10	Thymus, Blood, Immune, Developmental	4.7E-06	6.8E-05	7.3E-05
			Inorganics							
			Antimony	–	–	–	Whole Body	3.2E-05	1.2E-04	1.6E-04
			Arsenic, inorganic	9.9E-09	5.8E-09	1.6E-08	Skin, Blood	7.7E-05	4.5E-05	1.2E-04
			Chromium [as Cr(III)]	–	–	–	No Effect	1.6E-08	7.1E-07	7.2E-07
			Chromium (VI)	5.7E-10	2.7E-08	2.8E-08	No Effect	1.3E-06	6.3E-05	6.5E-05
			Iron	–	–	–	GI Tract	1.4E-05	8.1E-06	2.2E-05
			Manganese	–	–	–	Neurological	5.2E-05	7.7E-04	8.2E-04
			Mercury	–	–	–	Immune	1.6E-06	1.3E-05	1.5E-05
			Thallium	–	–	–	Skin, Hair	2.2E-05	1.3E-05	3.6E-05
			Titanium	–	–	–	–	–	–	–
Total DLCs (excluding KM TEQs)						2.4E-09				8.1E-05
Total DLCs (based on KM TEQs)						2.0E-09				6.6E-05
Total PCDD/Fs (excluding KM TEQ)						2.4E-09				7.8E-05
Total PCDD/Fs (based on KM TEQ)						1.9E-09				6.3E-05
Total DL-PCBs (excluding KM TEQ)						7.0E-11				2.3E-06

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total DL-PCBs (based on KM TEQ)			8.4E-11				2.8E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.0E-11				2.3E-06
			Total PCBs (DL & NDL; based on KM TEQ)			8.4E-11				2.8E-06
			Total PAHs			1.2E-10				2.8E-06
			Total Organics			6.5E-10				7.5E-05
			Total Inorganics			4.3E-08				1.2E-03
	Fishing - Surface Water Total (excluding KM TEQs)					4.7E-08				1.4E-03
	Fishing - Surface Water Total (based on KM TEQs)					4.6E-08				1.4E-03
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						5.4E-04				2.7E+01
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						5.5E-04				2.8E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						7.3E-04				3.6E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						8.4E-04				4.0E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						8.4E-04				4.0E+01
Sediment	Sediment	Angler - Crabbing Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-07	2.0E-07	3.7E-07	Reproductive	5.6E-03	6.6E-03	1.2E-02
			1,2,3,7,8-PeCDD	8.8E-09	1.0E-08	1.9E-08	Reproductive	2.9E-04	3.4E-04	6.4E-04
			1,2,3,4,7,8-HxCDD	7.9E-10	9.3E-10	1.7E-09	Reproductive	2.6E-05	3.1E-05	5.7E-05
			1,2,3,6,7,8-HxCDD	3.2E-09	3.7E-09	7.0E-09	Reproductive	1.1E-04	1.2E-04	2.3E-04
			1,2,3,7,8,9-HxCDD	1.9E-09	2.2E-09	4.1E-09	Reproductive	6.3E-05	7.4E-05	1.4E-04
			1,2,3,4,6,7,8-HpCDD	5.6E-09	6.6E-09	1.2E-08	Reproductive	1.9E-04	2.2E-04	4.1E-04
			OCDD	1.7E-09	2.0E-09	3.7E-09	Reproductive	5.7E-05	6.7E-05	1.2E-04
			2,3,7,8-TCDF	3.0E-09	3.5E-09	6.6E-09	Reproductive	1.0E-04	1.2E-04	2.2E-04
			1,2,3,7,8-PeCDF	6.2E-10	7.3E-10	1.4E-09	Reproductive	2.1E-05	2.4E-05	4.5E-05
			2,3,4,7,8-PeCDF	1.0E-08	1.2E-08	2.3E-08	Reproductive	3.5E-04	4.1E-04	7.5E-04
			1,2,3,4,7,8-HxCDF	1.6E-08	1.9E-08	3.4E-08	Reproductive	5.3E-04	6.2E-04	1.1E-03
			1,2,3,6,7,8-HxCDF	4.1E-09	4.8E-09	9.0E-09	Reproductive	1.4E-04	1.6E-04	3.0E-04
			1,2,3,7,8,9-HxCDF	3.1E-10	3.6E-10	6.7E-10	Reproductive	1.0E-05	1.2E-05	2.2E-05
			2,3,4,6,7,8-HxCDF	2.3E-09	2.7E-09	5.0E-09	Reproductive	7.7E-05	9.0E-05	1.7E-04
			1,2,3,4,6,7,8-HpCDF	7.0E-09	8.2E-09	1.5E-08	Reproductive	2.3E-04	2.7E-04	5.1E-04
			1,2,3,4,7,8,9-HpCDF	2.4E-10	2.8E-10	5.2E-10	Reproductive	8.0E-06	9.3E-06	1.7E-05
			OCDF	3.0E-10	3.5E-10	6.4E-10	Reproductive	9.8E-06	1.2E-05	2.1E-05
			KM TEQ DF	2.3E-07	2.7E-07	5.0E-07	Reproductive	7.7E-03	8.9E-03	1.7E-02
			PCB-77	1.7E-09	2.0E-09	3.7E-09	Reproductive	5.7E-05	6.6E-05	1.2E-04
			PCB-81	2.0E-10	2.3E-10	4.3E-10	Reproductive	6.5E-06	7.6E-06	1.4E-05
			PCB-105	8.2E-10	9.6E-10	1.8E-09	Reproductive	2.7E-05	3.2E-05	5.9E-05
			PCB-114	5.6E-11	6.6E-11	1.2E-10	Reproductive	1.9E-06	2.2E-06	4.1E-06
			PCB-118	2.4E-09	2.8E-09	5.2E-09	Reproductive	8.0E-05	9.3E-05	1.7E-04
			PCB-123	6.9E-11	8.1E-11	1.5E-10	Reproductive	2.3E-06	2.7E-06	5.0E-06
			PCB-126	5.4E-08	6.3E-08	1.2E-07	Reproductive	1.8E-03	2.1E-03	3.9E-03
			PCB-156/157	2.1E-10	2.5E-10	4.6E-10	Reproductive	7.1E-06	8.3E-06	1.5E-05
			PCB-167	7.7E-11	9.0E-11	1.7E-10	Reproductive	2.6E-06	3.0E-06	5.5E-06

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-169	1.7E-08	1.9E-08	3.6E-08	Reproductive	5.5E-04	6.5E-04	1.2E-03
			PCB-189	1.6E-11	1.9E-11	3.5E-11	Reproductive	5.4E-07	6.3E-07	1.2E-06
			KM TEQ PCB	6.7E-08	7.9E-08	1.5E-07	Reproductive	2.2E-03	2.6E-03	4.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.9E-08	1.1E-07	1.3E-07	Whole Body	1.7E-03	9.2E-03	1.1E-02
			PAHs							
			Benz(a)anthracene	3.1E-09	1.6E-08	1.9E-08	–	–	–	–
			Benzo(a)pyrene	3.0E-08	1.5E-07	1.8E-07	Developmental	3.5E-04	1.8E-03	2.1E-03
			Benzo(b)fluoranthene	2.7E-09	1.4E-08	1.6E-08	–	–	–	–
			Benzo(k)fluoranthene	1.7E-10	8.8E-10	1.1E-09	–	–	–	–
			Chrysene	2.9E-11	1.5E-10	1.8E-10	–	–	–	–
			Dibenz(a,h)anthracene	6.2E-09	3.1E-08	3.7E-08	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	1.1E-09	5.6E-09	6.7E-09	–	–	–	–
			Pesticides & Organics							
			PHC as gasoline	–	–	–	Blood, Immune	7.3E-05	–	7.3E-05
			TPH (C9-C40)	–	–	–	Respiratory	5.3E-03	–	5.3E-03
			Inorganics							
			Aluminum	–	–	–	Neurological	6.3E-04	–	6.3E-04
			Antimony	–	–	–	Whole Body	3.0E-04	–	3.0E-04
			Arsenic, inorganic	4.1E-07	7.9E-07	1.2E-06	Skin, Blood	3.2E-03	6.2E-03	9.3E-03
			Cadmium	–	–	–	Urinary	1.6E-04	2.5E-04	4.1E-04
			Chromium [as Cr(III)]	–	–	–	No Effect	3.7E-06	–	3.7E-06
			Cobalt	–	–	–	Thyroid	2.4E-03	–	2.4E-03
			Copper	–	–	–	GI Tract	8.6E-03	–	8.6E-03
			Chromium (VI)	1.0E-08	–	1.0E-08	No Effect	2.4E-05	–	2.4E-05
			Iron	–	–	–	GI Tract	3.2E-03	–	3.2E-03
			Lead	–	–	–	–	–	–	–
			Manganese	–	–	–	Neurological	7.6E-04	–	7.6E-04
			Mercury	–	–	–	Immune	3.4E-04	–	3.4E-04
			Nickel	–	–	–	Body Weight, Organ Weights	1.7E-04	–	1.7E-04
			Thallium	–	–	–	Skin, Hair	1.3E-03	–	1.3E-03
			Vanadium	–	–	–	Hair	5.1E-04	–	5.1E-04
			Zinc	–	–	–	Blood	2.1E-04	–	2.1E-04
Total DLCs (excluding KM TEQs)						6.7E-07				2.2E-02
Total DLCs (based on KM TEQs)						6.4E-07				2.1E-02
Total PCDD/Fs (excluding KM TEQ)						5.1E-07				1.7E-02
Total PCDD/Fs (based on KM TEQ)						5.0E-07				1.7E-02
Total DL-PCBs (excluding KM TEQ)						1.6E-07				5.5E-03
Total DL-PCBs (based on KM TEQ)						1.5E-07				4.9E-03
Total Non-DL PCBs						1.3E-07				1.1E-02
Total PCBs (DL & NDL; excluding KM TEQ)						2.9E-07				1.6E-02

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			2.7E-07				1.6E-02
			Total PAHs			2.6E-07				2.1E-03
			Total Organics			0.0E+00				5.4E-03
			Total Inorganics			1.2E-06				2.8E-02
	Crabbing - Sediment Total (excluding KM TEQs)					2.3E-06				6.9E-02
	Crabbing - Sediment Total (based on KM TEQs)					2.2E-06				6.8E-02
Surface Water	Surface Water	Angler - Crabbing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.9E-10	--	5.9E-10	Reproductive	2.0E-05	--	2.0E-05
			1,2,3,7,8-PeCDD	2.0E-10	--	2.0E-10	Reproductive	6.8E-06	--	6.8E-06
			1,2,3,4,7,8-HxCDD	1.5E-10	--	1.5E-10	Reproductive	5.0E-06	--	5.0E-06
			1,2,3,6,7,8-HxCDD	2.4E-11	--	2.4E-11	Reproductive	7.9E-07	--	7.9E-07
			1,2,3,7,8,9-HxCDD	4.2E-11	--	4.2E-11	Reproductive	1.4E-06	--	1.4E-06
			1,2,3,4,6,7,8-HpCDD	3.0E-11	--	3.0E-11	Reproductive	1.0E-06	--	1.0E-06
			OCDD	9.4E-12	--	9.4E-12	Reproductive	3.1E-07	--	3.1E-07
			2,3,7,8-TCDF	2.3E-11	--	2.3E-11	Reproductive	7.7E-07	--	7.7E-07
			1,2,3,7,8-PeCDF	5.5E-12	--	5.5E-12	Reproductive	1.8E-07	--	1.8E-07
			2,3,4,7,8-PeCDF	9.6E-11	--	9.6E-11	Reproductive	3.2E-06	--	3.2E-06
			1,2,3,4,7,8-HxCDF	8.9E-11	--	8.9E-11	Reproductive	3.0E-06	--	3.0E-06
			1,2,3,6,7,8-HxCDF	2.1E-11	--	2.1E-11	Reproductive	7.2E-07	--	7.2E-07
			1,2,3,7,8,9-HxCDF	1.3E-10	--	1.3E-10	Reproductive	4.3E-06	--	4.3E-06
			2,3,4,6,7,8-HxCDF	1.4E-11	--	1.4E-11	Reproductive	4.5E-07	--	4.5E-07
			1,2,3,4,6,7,8-HpCDF	3.8E-11	--	3.8E-11	Reproductive	1.3E-06	--	1.3E-06
			1,2,3,4,7,8,9-HpCDF	2.4E-12	--	2.4E-12	Reproductive	7.9E-08	--	7.9E-08
			OCDF	2.1E-12	--	2.1E-12	Reproductive	7.0E-08	--	7.0E-08
			KM TEQ DF	1.2E-09	--	1.2E-09	Reproductive	3.9E-05	--	3.9E-05
			PCB-77	1.0E-12	--	1.0E-12	Reproductive	3.3E-08	--	3.3E-08
			PCB-81	9.9E-14	--	9.9E-14	Reproductive	3.3E-09	--	3.3E-09
			PCB-105	1.1E-12	--	1.1E-12	Reproductive	3.5E-08	--	3.5E-08
			PCB-114	5.5E-14	--	5.5E-14	Reproductive	1.8E-09	--	1.8E-09
			PCB-118	2.4E-12	--	2.4E-12	Reproductive	7.9E-08	--	7.9E-08
			PCB-123	4.6E-14	--	4.6E-14	Reproductive	1.5E-09	--	1.5E-09
			PCB-126	3.3E-11	--	3.3E-11	Reproductive	1.1E-06	--	1.1E-06
			PCB-156/157	2.8E-13	--	2.8E-13	Reproductive	9.4E-09	--	9.4E-09
			PCB-167	9.5E-14	--	9.5E-14	Reproductive	3.2E-09	--	3.2E-09
			PCB-169	5.9E-12	--	5.9E-12	Reproductive	2.0E-07	--	2.0E-07
			PCB-189	1.2E-14	--	1.2E-14	Reproductive	4.2E-10	--	4.2E-10
			KM TEQ PCB	5.3E-11	--	5.3E-11	Reproductive	1.8E-06	--	1.8E-06
			PAHs							
			Benz(a)anthracene	3.8E-12	--	3.8E-12	--	--	--	--
			Benzo(a)pyrene	4.9E-11	--	4.9E-11	Developmental	5.7E-07	--	5.7E-07
			Benzo(b)fluoranthene	6.7E-12	--	6.7E-12	--	--	--	--

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Benzo(k)fluoranthene	3.0E-13	–	3.0E-13	–	–	–	–
			Chrysene	6.5E-14	–	6.5E-14	–	–	–	–
			Dibenz(a,h)anthracene	1.3E-11	–	1.3E-11	–	–	–	–
			Indeno(1,2,3-c,d)-pyrene	2.8E-12	–	2.8E-12	–	–	–	–
			Naphthalene	–	–	–	Body Weight	2.0E-08	1.1E-06	1.1E-06
			Pesticides & Organics							
			Chloroform	1.2E-11	9.3E-11	1.1E-10	Liver	1.4E-07	1.1E-06	1.2E-06
			Trichloroethylene	1.9E-11	2.8E-10	3.0E-10	Thymus, Blood, Immune, Developmental	3.0E-06	4.2E-05	4.5E-05
			Inorganics							
			Antimony	–	–	–	Whole Body	2.0E-05	7.8E-05	9.7E-05
			Arsenic, inorganic	6.2E-09	3.6E-09	9.8E-09	Skin, Blood	4.8E-05	2.8E-05	7.6E-05
			Chromium [as Cr(III)]	–	–	–	No Effect	9.7E-09	4.4E-07	4.5E-07
			Chromium (VI)	3.6E-10	1.7E-08	1.7E-08	No Effect	8.4E-07	4.0E-05	4.0E-05
			Iron	–	–	–	GI Tract	8.6E-06	5.1E-06	1.4E-05
			Manganese	–	–	–	Neurological	3.3E-05	4.8E-04	5.1E-04
			Mercury	–	–	–	Immune	9.9E-07	8.4E-06	9.4E-06
			Thallium	–	–	–	Skin, Hair	1.4E-05	8.2E-06	2.2E-05
			Titanium	–	–	–	–	–	–	–
			Total DLCs (excluding KM TEQs)			1.5E-09				5.0E-05
			Total DLCs (based on KM TEQs)			1.2E-09				4.1E-05
			Total PCDD/Fs (excluding KM TEQ)			1.5E-09				4.9E-05
			Total PCDD/Fs (based on KM TEQ)			1.2E-09				3.9E-05
			Total DL-PCBs (excluding KM TEQ)			4.4E-11				1.5E-06
			Total DL-PCBs (based on KM TEQ)			5.3E-11				1.8E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.4E-11				1.5E-06
			Total PCBs (DL & NDL; based on KM TEQ)			5.3E-11				1.8E-06
			Total PAHs			7.5E-11				1.7E-06
			Total Organics			4.0E-10				4.7E-05
			Total Inorganics			2.7E-08				7.7E-04
	Crabbing - Surface Water Total (excluding KM TEQs)					2.9E-08				8.7E-04
	Crabbing - Surface Water Total (based on KM TEQs)					2.9E-08				8.6E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						5.7E-04				3.0E+01
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						5.6E-04				2.9E+01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						1.1E-04				8.8E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						1.0E-04				8.7E+00

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.0E-01		Blood HI =		2.0E-01
				Body Weight HI =		2.8E-04		Body Weight HI =		2.8E-04
				Developmental HI =		1.6E-02		Developmental HI =		1.6E-02
				GI Tract HI =		2.4E-01		GI Tract HI =		2.4E-01
				Hair HI =		5.3E-03		Hair HI =		5.3E-03
				Immune HI =		4.4E-01		Immune HI =		4.4E-01
				Kidney HI =		5.6E-03		Kidney HI =		5.6E-03
				Liver HI =		3.0E+00		Liver HI =		3.0E+00
				Neurological HI =		1.6E+00		Neurological HI =		1.6E+00
				No Effect HI =		3.0E-04		No Effect HI =		3.0E-04
				Organ Weights HI =		2.8E-04		Organ Weights HI =		2.8E-04
				Reproductive HI =		1.3E+01		Reproductive HI =		1.3E+01
				Skin HI =		1.9E-01		Skin HI =		1.9E-01
				Thymus HI =		7.3E-05		Thymus HI =		7.3E-05
				Thyroid HI =		3.3E-01		Thyroid HI =		3.3E-01
				Urinary HI =		4.3E-02		Urinary HI =		4.3E-02
				Whole Body HI =		8.9E+00		Whole Body HI =		8.9E+00
				American Eel + Fishing Sediment Total + Fishing Surface Water Total			American Eel + Fishing Sediment Total + Fishing Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.3E-01		Blood HI =		2.3E-01
				Body Weight HI =		2.8E-04		Body Weight HI =		2.8E-04
				Developmental HI =		2.2E-02		Developmental HI =		2.2E-02
				GI Tract HI =		1.2E-01		GI Tract HI =		1.2E-01
				Hair HI =		4.8E-03		Hair HI =		4.8E-03
				Immune HI =		6.0E-01		Immune HI =		6.0E-01
				Kidney HI =		5.6E-03		Kidney HI =		5.6E-03
				Liver HI =		4.0E+00		Liver HI =		4.0E+00
				Neurological HI =		2.0E+00		Neurological HI =		2.0E+00
				No Effect HI =		8.1E-04		No Effect HI =		8.1E-04
				Organ Weights HI =		2.8E-04		Organ Weights HI =		2.8E-04
				Reproductive HI =		1.7E+01		Reproductive HI =		2.0E+01
				Skin HI =		1.9E-01		Skin HI =		1.9E-01
				Thymus HI =		7.3E-05		Thymus HI =		7.3E-05
				Thyroid HI =		1.5E-02		Thyroid HI =		1.5E-02
				Urinary HI =		4.4E-02		Urinary HI =		4.4E-02
				Whole Body HI =		1.3E+01		Whole Body HI =		1.3E+01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.0E-01		Blood HI =		3.0E-01
				Body Weight HI =		1.7E-04		Body Weight HI =		1.7E-04
				Developmental HI =		4.5E-03		Developmental HI =		4.5E-03
				GI Tract HI =		7.5E+00		GI Tract HI =		7.5E+00
				Hair HI =		5.6E-03		Hair HI =		5.6E-03
				Immune HI =		1.3E-01		Immune HI =		1.3E-01
				Kidney HI =		3.1E-03		Kidney HI =		3.1E-03
				Liver HI =		8.8E-01		Liver HI =		8.8E-01
				Neurological HI =		4.7E-01		Neurological HI =		4.7E-01
				No Effect HI =		9.7E-05		No Effect HI =		9.7E-05
				Organ Weights HI =		1.7E-04		Organ Weights HI =		1.7E-04
				Reproductive HI =		1.6E+01		Reproductive HI =		1.6E+01
				Skin HI =		3.0E-01		Skin HI =		3.0E-01
				Thymus HI =		4.5E-05		Thymus HI =		4.5E-05
				Thyroid HI =		8.0E-02		Thyroid HI =		8.0E-02
				Urinary HI =		1.4E-01		Urinary HI =		1.4E-01
				Whole Body HI =		4.3E+00		Whole Body HI =		4.3E+00
				Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total			Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.8E-01		Blood HI =		2.8E-01
				Body Weight HI =		1.7E-04		Body Weight HI =		1.7E-04
				Developmental HI =		1.3E-02		Developmental HI =		1.3E-02
				GI Tract HI =		4.8E+00		GI Tract HI =		4.8E+00
				Hair HI =		4.0E-03		Hair HI =		4.0E-03
				Immune HI =		1.6E-01		Immune HI =		1.6E-01
				Kidney HI =		3.4E-03		Kidney HI =		3.4E-03
				Liver HI =		2.1E-01		Liver HI =		2.1E-01
				Neurological HI =		5.7E-01		Neurological HI =		5.7E-01
				No Effect HI =		9.5E-05		No Effect HI =		9.5E-05
				Organ Weights HI =		1.7E-04		Organ Weights HI =		1.7E-04
				Reproductive HI =		2.2E+00		Reproductive HI =		2.0E+00
				Skin HI =		2.6E-01		Skin HI =		2.6E-01
				Thymus HI =		4.5E-05		Thymus HI =		4.5E-05
				Thyroid HI =		6.4E-02		Thyroid HI =		6.4E-02
				Urinary HI =		7.4E-02		Urinary HI =		7.4E-02
				Whole Body HI =		4.2E-01		Whole Body HI =		4.2E-01

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.4E-05	--	9.4E-05	Reproductive	5.2E+00	--	5.2E+00
			1,2,3,7,8-PeCDD	5.0E-06	--	5.0E-06	Reproductive	2.8E-01	--	2.8E-01
			1,2,3,4,7,8-HxCDD	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	7.2E-07	--	7.2E-07	Reproductive	4.0E-02	--	4.0E-02
			1,2,3,7,8,9-HxCDD	1.7E-07	--	1.7E-07	Reproductive	9.5E-03	--	9.5E-03
			1,2,3,4,6,7,8-HpCDD	8.1E-08	--	8.1E-08	Reproductive	4.5E-03	--	4.5E-03
			OCDD	1.4E-08	--	1.4E-08	Reproductive	7.9E-04	--	7.9E-04
			2,3,7,8-TCDF	1.9E-06	--	1.9E-06	Reproductive	1.1E-01	--	1.1E-01
			1,2,3,7,8-PeCDF	5.2E-07	--	5.2E-07	Reproductive	2.9E-02	--	2.9E-02
			2,3,4,7,8-PeCDF	8.3E-06	--	8.3E-06	Reproductive	4.6E-01	--	4.6E-01
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06	Reproductive	6.9E-02	--	6.9E-02
			1,2,3,6,7,8-HxCDF	1.1E-06	--	1.1E-06	Reproductive	6.2E-02	--	6.2E-02
			1,2,3,7,8,9-HxCDF	1.3E-07	--	1.3E-07	Reproductive	7.2E-03	--	7.2E-03
			2,3,4,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,6,7,8-HpCDF	2.6E-07	--	2.6E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,7,8,9-HpCDF	1.2E-08	--	1.2E-08	Reproductive	6.9E-04	--	6.9E-04
			OCDF	7.8E-10	--	7.8E-10	Reproductive	4.3E-05	--	4.3E-05
			KM TEQ DF	1.1E-04	--	1.1E-04	Reproductive	6.2E+00	--	6.2E+00
			PCB-77	5.6E-07	--	5.6E-07	Reproductive	3.1E-02	--	3.1E-02
			PCB-81	6.5E-08	--	6.5E-08	Reproductive	3.6E-03	--	3.6E-03
			PCB-105	2.6E-06	--	2.6E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	2.0E-07	--	2.0E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-118	1.0E-05	--	1.0E-05	Reproductive	5.8E-01	--	5.8E-01
			PCB-123	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-126	1.0E-04	--	1.0E-04	Reproductive	5.7E+00	--	5.7E+00
			PCB-156/157	9.6E-07	--	9.6E-07	Reproductive	5.3E-02	--	5.3E-02
			PCB-167	4.2E-07	--	4.2E-07	Reproductive	2.3E-02	--	2.3E-02
			PCB-169	1.3E-06	--	1.3E-06	Reproductive	7.2E-02	--	7.2E-02
			PCB-189	7.7E-08	--	7.7E-08	Reproductive	4.3E-03	--	4.3E-03
			KM TEQ PCB	1.3E-04	--	1.3E-04	Reproductive	7.3E+00	--	7.3E+00
			Non-DL PCBs							
			Total Non-DL PCBs	6.2E-05	--	6.2E-05	Whole Body	9.1E+00	--	9.1E+00
			PAHs							
			Benz(a)anthracene	1.6E-07	--	1.6E-07	--	--	--	--
			Benzo(a)pyrene	1.6E-06	--	1.6E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.6E-07	--	1.6E-07	--	--	--	--
			Chrysene	1.6E-09	--	1.6E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.6E-06	--	1.6E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	--	1.6E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	3.3E-07	--	3.3E-07	Liver	2.7E-01	--	2.7E-01
			2,4'-DDE	1.5E-07	--	1.5E-07	Liver	8.6E-03	--	8.6E-03
			2,4'-DDT	9.0E-08	--	9.0E-08	Liver	3.1E-03	--	3.1E-03
			4,4'-DDD	1.6E-06	--	1.6E-06	Liver	1.3E+00	--	1.3E+00
			4,4'-DDE	3.2E-06	--	3.2E-06	Liver	1.8E-01	--	1.8E-01
			4,4'-DDT	3.7E-07	--	3.7E-07	Liver	1.3E-02	--	1.3E-02
			Benzaldehyde	4.0E-07	--	4.0E-07	GI Tract, Kidney	5.8E-03	--	5.8E-03
			Chlordane, alpha (cis)	4.3E-07	--	4.3E-07	Liver	1.4E-02	--	1.4E-02

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, gamma (trans)	9.6E-08	--	9.6E-08	Liver	3.2E-03	--	3.2E-03
			Dieldrin	9.3E-06	--	9.3E-06	Liver	6.8E-02	--	6.8E-02
			Heptachlor epoxide, cis-	1.3E-06	--	1.3E-06	Liver	6.3E-02	--	6.3E-02
			Heptachlor epoxide, trans-	6.2E-08	--	6.2E-08	Liver	3.1E-03	--	3.1E-03
			Hexachlorobenzene	1.8E-07	--	1.8E-07	Liver	8.2E-04	--	8.2E-04
			Mirex	3.5E-07	--	3.5E-07	Liver, Thyroid	5.6E-04	--	5.6E-04
			Nonachlor, cis-	1.7E-07	--	1.7E-07	Liver	2.8E-02	--	2.8E-02
			Nonachlor, trans-	4.1E-07	--	4.1E-07	Liver	4.4E-01	--	4.4E-01
			Oxychlordane	1.2E-07	--	1.2E-07	Liver	2.3E-02	--	2.3E-02
			Pyridine	--	--	--	Liver	5.8E-01	--	5.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.9E-03	--	2.9E-03
			Arsenic, organic	--	--	--	Urinary	2.3E-02	--	2.3E-02
			Arsenic, inorganic	1.3E-05	--	1.3E-05	Skin, Blood	1.7E-01	--	1.7E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	1.9E-04	--	1.9E-04
			Cobalt	--	--	--	Thyroid	3.3E-01	--	3.3E-01
			Copper	--	--	--	GI Tract	2.1E-01	--	2.1E-01
			Iron	--	--	--	GI Tract	4.5E-03	--	4.5E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	9.1E-04	--	9.1E-04
			Mercury	--	--	--	Immune	4.5E-01	--	4.5E-01
			Methyl Mercury	--	--	--	Neurological	1.6E+00	--	1.6E+00
			Selenium	--	--	--	Whole Body	4.8E-02	--	4.8E-02
			Silver	--	--	--	Skin	1.8E-03	--	1.8E-03
			Vanadium	--	--	--	Hair	2.5E-03	--	2.5E-03
			Zinc	--	--	--	Blood	2.2E-02	--	2.2E-02
			Total DLCs (excluding KM TEQs)			2.3E-04				1.3E+01
			Total DLCs (based on KM TEQs)			2.4E-04				1.3E+01
			Total PCDD/Fs (excluding KM TEQ)			1.1E-04				6.3E+00
			Total PCDD/Fs (based on KM TEQ)			1.1E-04				6.2E+00
			Total DL-PCBs (excluding KM TEQ)			1.2E-04				6.6E+00
			Total DL-PCBs (based on KM TEQ)			1.3E-04				7.3E+00
			Total Non-DL PCBs			6.2E-05				9.1E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-04				1.6E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.9E-04				1.6E+01
			Total PAHs			3.7E-06				1.2E-02
			Total Organics			1.9E-05				3.0E+00
			Total Inorganics			1.3E-05				2.9E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					3.3E-04				2.8E+01
	Mixed Fish/All Species Total (based on KM TEQs)					3.4E-04				2.8E+01
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-04	--	1.0E-04	Reproductive	5.6E+00	--	5.6E+00
			1,2,3,7,8-PeCDD	8.0E-06	--	8.0E-06	Reproductive	4.4E-01	--	4.4E-01
			1,2,3,4,7,8-HxCDD	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDD	2.2E-06	--	2.2E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDD	3.9E-07	--	3.9E-07	Reproductive	2.2E-02	--	2.2E-02

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	1.5E-07	--	1.5E-07	Reproductive	8.2E-03	--	8.2E-03
			OCDD	1.1E-08	--	1.1E-08	Reproductive	6.0E-04	--	6.0E-04
			2,3,7,8-TCDF	1.2E-07	--	1.2E-07	Reproductive	6.6E-03	--	6.6E-03
			1,2,3,7,8-PeCDF	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			2,3,4,7,8-PeCDF	1.3E-05	--	1.3E-05	Reproductive	7.3E-01	--	7.3E-01
			1,2,3,4,7,8-HxCDF	3.1E-06	--	3.1E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,6,7,8-HxCDF	2.3E-06	--	2.3E-06	Reproductive	1.3E-01	--	1.3E-01
			1,2,3,7,8,9-HxCDF	1.3E-07	--	1.3E-07	Reproductive	7.2E-03	--	7.2E-03
			2,3,4,6,7,8-HxCDF	4.1E-07	--	4.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,4,6,7,8-HpCDF	5.4E-07	--	5.4E-07	Reproductive	3.0E-02	--	3.0E-02
			1,2,3,4,7,8,9-HpCDF	1.8E-08	--	1.8E-08	Reproductive	1.0E-03	--	1.0E-03
			OCDF	1.2E-09	--	1.2E-09	Reproductive	6.9E-05	--	6.9E-05
			KM TEQ DF	1.3E-04	--	1.3E-04	Reproductive	7.1E+00	--	7.1E+00
			PCB-77	8.5E-08	--	8.5E-08	Reproductive	4.7E-03	--	4.7E-03
			PCB-81	4.0E-08	--	4.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-105	7.1E-06	--	7.1E-06	Reproductive	3.9E-01	--	3.9E-01
			PCB-114	4.5E-07	--	4.5E-07	Reproductive	2.5E-02	--	2.5E-02
			PCB-118	2.4E-05	--	2.4E-05	Reproductive	1.4E+00	--	1.4E+00
			PCB-123	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-126	1.4E-04	--	1.4E-04	Reproductive	7.6E+00	--	7.6E+00
			PCB-156/157	2.1E-06	--	2.1E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-167	9.2E-07	--	9.2E-07	Reproductive	5.1E-02	--	5.1E-02
			PCB-169	1.5E-06	--	1.5E-06	Reproductive	8.3E-02	--	8.3E-02
			PCB-189	1.7E-07	--	1.7E-07	Reproductive	9.2E-03	--	9.2E-03
			KM TEQ PCB	2.5E-04	--	2.5E-04	Reproductive	1.4E+01	--	1.4E+01
			Non-DL PCBs							
			Total Non-DL PCBs	9.0E-05	--	9.0E-05	Whole Body	1.3E+01	--	1.3E+01
			PAHs							
			Benz(a)anthracene	2.5E-07	--	2.5E-07	--	--	--	--
			Benzo(a)pyrene	2.5E-06	--	2.5E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	2.5E-07	--	2.5E-07	--	--	--	--
			Chrysene	2.5E-09	--	2.5E-09	--	--	--	--
			Dibenz(a,h)anthracene	2.5E-06	--	2.5E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.5E-07	--	2.5E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	5.6E-08	--	5.6E-08	Liver	4.5E-02	--	4.5E-02
			2,4'-DDE	5.1E-08	--	5.1E-08	Liver	2.9E-03	--	2.9E-03
			2,4'-DDT	9.2E-09	--	9.2E-09	Liver	3.2E-04	--	3.2E-04
			4,4'-DDD	2.4E-06	--	2.4E-06	Liver	1.9E+00	--	1.9E+00
			4,4'-DDE	7.2E-06	--	7.2E-06	Liver	4.1E-01	--	4.1E-01
			4,4'-DDT	2.0E-07	--	2.0E-07	Liver	6.8E-03	--	6.8E-03
			Benzaldehyde	4.0E-07	--	4.0E-07	GI Tract, Kidney	5.8E-03	--	5.8E-03
			Chlordane, alpha (cis)	3.7E-07	--	3.7E-07	Liver	1.2E-02	--	1.2E-02
			Chlordane, gamma (trans)	1.0E-07	--	1.0E-07	Liver	3.5E-03	--	3.5E-03
			Dieldrin	1.7E-05	--	1.7E-05	Liver	1.3E-01	--	1.3E-01
			Heptachlor epoxide, cis-	2.6E-06	--	2.6E-06	Liver	1.3E-01	--	1.3E-01
			Heptachlor epoxide, trans-	2.6E-07	--	2.6E-07	Liver	1.3E-02	--	1.3E-02
			Hexachlorobenzene	5.0E-07	--	5.0E-07	Liver	2.3E-03	--	2.3E-03
			Mirex	5.7E-07	--	5.7E-07	Liver, Thyroid	9.3E-04	--	9.3E-04

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Nonachlor, cis-	2.9E-07	--	2.9E-07	Liver	4.8E-02	--	4.8E-02
			Nonachlor, trans-	7.0E-07	--	7.0E-07	Liver	7.5E-01	--	7.5E-01
			Oxychlordane	3.8E-07	--	3.8E-07	Liver	7.1E-02	--	7.1E-02
			Pyridine	--	--	--	Liver	5.8E-01	--	5.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.8E-03	--	2.8E-03
			Arsenic, organic	--	--	--	Urinary	2.4E-02	--	2.4E-02
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	1.8E-01	--	1.8E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	7.2E-04	--	7.2E-04
			Cobalt	--	--	--	Thyroid	1.0E-02	--	1.0E-02
			Copper	--	--	--	GI Tract	9.3E-02	--	9.3E-02
			Iron	--	--	--	GI Tract	4.8E-03	--	4.8E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.1E-03	--	1.1E-03
			Mercury	--	--	--	Immune	6.2E-01	--	6.2E-01
			Methyl Mercury	--	--	--	Neurological	2.0E+00	--	2.0E+00
			Selenium	--	--	--	Whole Body	4.6E-02	--	4.6E-02
			Silver	--	--	--	Skin	1.8E-03	--	1.8E-03
			Vanadium	--	--	--	Hair	2.0E-03	--	2.0E-03
			Zinc	--	--	--	Blood	4.3E-02	--	4.3E-02
			Total DLCs (excluding KM TEQs)			3.0E-04				1.7E+01
			Total DLCs (based on KM TEQs)			3.7E-04				2.1E+01
			Total PCDD/Fs (excluding KM TEQ)			1.3E-04				7.3E+00
			Total PCDD/Fs (based on KM TEQ)			1.3E-04				7.1E+00
			Total DL-PCBs (excluding KM TEQ)			1.7E-04				9.6E+00
			Total DL-PCBs (based on KM TEQ)			2.5E-04				1.4E+01
			Total Non-DL PCBs			9.0E-05				1.3E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-04				2.3E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.4E-04				2.7E+01
			Total PAHs			5.7E-06				1.9E-02
			Total Organics			3.3E-05				4.1E+00
			Total Inorganics			1.4E-05				3.1E+00
	American Eel Total (excluding KM TEQs)					4.5E-04				3.7E+01
	American Eel Total (based on KM TEQs)					5.2E-04				4.1E+01
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-05	--	1.7E-05	Reproductive	9.4E-01	--	9.4E-01
			1,2,3,7,8-PeCDD	3.4E-06	--	3.4E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,4,7,8-HxCDD	8.3E-08	--	8.3E-08	Reproductive	4.6E-03	--	4.6E-03
			1,2,3,6,7,8-HxCDD	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	7.9E-08	--	7.9E-08	Reproductive	4.4E-03	--	4.4E-03
			1,2,3,4,6,7,8-HpCDD	1.6E-08	--	1.6E-08	Reproductive	9.0E-04	--	9.0E-04
			OCDD	8.8E-10	--	8.8E-10	Reproductive	4.9E-05	--	4.9E-05
			2,3,7,8-TCDF	4.4E-07	--	4.4E-07	Reproductive	2.4E-02	--	2.4E-02
			1,2,3,7,8-PeCDF	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			2,3,4,7,8-PeCDF	2.6E-06	--	2.6E-06	Reproductive	1.4E-01	--	1.4E-01
			1,2,3,4,7,8-HxCDF	1.1E-07	--	1.1E-07	Reproductive	6.0E-03	--	6.0E-03

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDF	2.6E-07	--	2.6E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,7,8,9-HxCDF	9.7E-08	--	9.7E-08	Reproductive	5.4E-03	--	5.4E-03
			2,3,4,6,7,8-HxCDF	6.4E-08	--	6.4E-08	Reproductive	3.5E-03	--	3.5E-03
			1,2,3,4,6,7,8-HpCDF	7.5E-08	--	7.5E-08	Reproductive	4.2E-03	--	4.2E-03
			1,2,3,4,7,8,9-HpCDF	8.6E-09	--	8.6E-09	Reproductive	4.8E-04	--	4.8E-04
			OCDF	5.8E-10	--	5.8E-10	Reproductive	3.2E-05	--	3.2E-05
			KM TEQ DF	2.3E-05	--	2.3E-05	Reproductive	1.3E+00	--	1.3E+00
			PCB-77	1.1E-07	--	1.1E-07	Reproductive	6.2E-03	--	6.2E-03
			PCB-81	1.2E-08	--	1.2E-08	Reproductive	6.8E-04	--	6.8E-04
			PCB-105	4.3E-07	--	4.3E-07	Reproductive	2.4E-02	--	2.4E-02
			PCB-114	2.6E-08	--	2.6E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	1.8E-06	--	1.8E-06	Reproductive	1.0E-01	--	1.0E-01
			PCB-123	2.5E-08	--	2.5E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-126	4.4E-05	--	4.4E-05	Reproductive	2.4E+00	--	2.4E+00
			PCB-156/157	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-167	9.9E-08	--	9.9E-08	Reproductive	5.5E-03	--	5.5E-03
			PCB-169	6.1E-07	--	6.1E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-189	1.9E-08	--	1.9E-08	Reproductive	1.1E-03	--	1.1E-03
			KM TEQ PCB	4.6E-05	--	4.6E-05	Reproductive	2.6E+00	--	2.6E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-05	--	1.8E-05	Whole Body	2.6E+00	--	2.6E+00
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	7.8E-03	--	7.8E-03
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.0E-08	--	1.0E-08	Liver	8.4E-03	--	8.4E-03
			2,4'-DDE	2.7E-08	--	2.7E-08	Liver	1.5E-03	--	1.5E-03
			2,4'-DDT	5.7E-09	--	5.7E-09	Liver	1.9E-04	--	1.9E-04
			4,4'-DDD	1.2E-07	--	1.2E-07	Liver	9.6E-02	--	9.6E-02
			4,4'-DDE	7.8E-07	--	7.8E-07	Liver	4.5E-02	--	4.5E-02
			4,4'-DDT	5.4E-07	--	5.4E-07	Liver	1.8E-02	--	1.8E-02
			Benzaldehyde	4.0E-07	--	4.0E-07	GI Tract, Kidney	5.8E-03	--	5.8E-03
			Chlordane, alpha (cis)	1.6E-07	--	1.6E-07	Liver	5.2E-03	--	5.2E-03
			Chlordane, gamma (trans)	6.0E-08	--	6.0E-08	Liver	2.0E-03	--	2.0E-03
			Dieldrin	5.5E-06	--	5.5E-06	Liver	4.0E-02	--	4.0E-02
			Heptachlor epoxide, cis-	8.4E-07	--	8.4E-07	Liver	4.1E-02	--	4.1E-02
			Heptachlor epoxide, trans-	1.2E-08	--	1.2E-08	Liver	5.8E-04	--	5.8E-04
			Hexachlorobenzene	6.5E-08	--	6.5E-08	Liver	3.0E-04	--	3.0E-04
			Mirex	1.8E-07	--	1.8E-07	Liver, Thyroid	3.0E-04	--	3.0E-04
			Nonachlor, cis-	4.4E-08	--	4.4E-08	Liver	7.4E-03	--	7.4E-03
			Nonachlor, trans-	8.1E-08	--	8.1E-08	Liver	8.8E-02	--	8.8E-02
			Oxychlordane	9.3E-09	--	9.3E-09	Liver	1.7E-03	--	1.7E-03
			Pyridine	--	--	--	Liver	5.8E-01	--	5.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.6E-03	--	2.6E-03

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Arsenic, organic	--	--	--	Urinary	1.4E-02	--	1.4E-02
			Arsenic, inorganic	8.2E-06	--	8.2E-06	Skin, Blood	1.1E-01	--	1.1E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	2.6E-05	--	2.6E-05
			Cobalt	--	--	--	Thyroid	3.3E-01	--	3.3E-01
			Copper	--	--	--	GI Tract	3.5E-01	--	3.5E-01
			Iron	--	--	--	GI Tract	6.3E-03	--	6.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	5.8E-04	--	5.8E-04
			Mercury	--	--	--	Immune	4.8E-01	--	4.8E-01
			Methyl Mercury	--	--	--	Neurological	1.7E+00	--	1.7E+00
			Selenium	--	--	--	Whole Body	4.8E-02	--	4.8E-02
			Silver	--	--	--	Skin	1.8E-03	--	1.8E-03
			Vanadium	--	--	--	Hair	2.0E-03	--	2.0E-03
			Zinc	--	--	--	Blood	2.6E-02	--	2.6E-02
			Total DLCs (excluding KM TEQs)			7.2E-05				4.0E+00
			Total DLCs (based on KM TEQs)			6.9E-05				3.8E+00
			Total PCDD/Fs (excluding KM TEQ)			2.5E-05				1.4E+00
			Total PCDD/Fs (based on KM TEQ)			2.3E-05				1.3E+00
			Total DL-PCBs (excluding KM TEQ)			4.7E-05				2.6E+00
			Total DL-PCBs (based on KM TEQ)			4.6E-05				2.6E+00
			Total Non-DL PCBs			1.8E-05				2.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.5E-05				5.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			6.4E-05				5.2E+00
			Total PAHs			2.3E-06				7.8E-03
			Total Organics			8.8E-06				9.4E-01
			Total Inorganics			8.2E-06				3.1E+00
	Bluefish Total (excluding KM TEQs)					1.1E-04				1.1E+01
	Bluefish Total (based on KM TEQs)					1.1E-04				1.1E+01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.1E-04	--	1.1E-04	Reproductive	5.9E+00	--	5.9E+00
			1,2,3,7,8-PeCDD	6.2E-06	--	6.2E-06	Reproductive	3.5E-01	--	3.5E-01
			1,2,3,4,7,8-HxCDD	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	2.4E-07	--	2.4E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	9.8E-08	--	9.8E-08	Reproductive	5.4E-03	--	5.4E-03
			1,2,3,4,6,7,8-HpCDD	1.6E-07	--	1.6E-07	Reproductive	9.1E-03	--	9.1E-03
			OCDD	5.5E-08	--	5.5E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,7,8-TCDF	4.3E-06	--	4.3E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,7,8-PeCDF	7.5E-07	--	7.5E-07	Reproductive	4.2E-02	--	4.2E-02
			2,3,4,7,8-PeCDF	1.1E-05	--	1.1E-05	Reproductive	6.2E-01	--	6.2E-01
			1,2,3,4,7,8-HxCDF	4.7E-07	--	4.7E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDF	1.4E-06	--	1.4E-06	Reproductive	7.7E-02	--	7.7E-02
			1,2,3,7,8,9-HxCDF	1.4E-07	--	1.4E-07	Reproductive	7.7E-03	--	7.7E-03
			2,3,4,6,7,8-HxCDF	1.1E-07	--	1.1E-07	Reproductive	6.2E-03	--	6.2E-03
			1,2,3,4,6,7,8-HpCDF	3.8E-07	--	3.8E-07	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,7,8,9-HpCDF	1.2E-08	--	1.2E-08	Reproductive	6.9E-04	--	6.9E-04
			OCDF	6.5E-10	--	6.5E-10	Reproductive	3.6E-05	--	3.6E-05

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	1.3E-04	--	1.3E-04	Reproductive	7.4E+00	--	7.4E+00
			PCB-77	1.3E-06	--	1.3E-06	Reproductive	7.2E-02	--	7.2E-02
			PCB-81	9.7E-08	--	9.7E-08	Reproductive	5.4E-03	--	5.4E-03
			PCB-105	2.0E-06	--	2.0E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-114	2.5E-07	--	2.5E-07	Reproductive	1.4E-02	--	1.4E-02
			PCB-118	1.3E-05	--	1.3E-05	Reproductive	7.1E-01	--	7.1E-01
			PCB-123	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-126	2.2E-04	--	2.2E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-156/157	1.1E-06	--	1.1E-06	Reproductive	6.2E-02	--	6.2E-02
			PCB-167	5.0E-07	--	5.0E-07	Reproductive	2.8E-02	--	2.8E-02
			PCB-169	1.1E-06	--	1.1E-06	Reproductive	6.3E-02	--	6.3E-02
			PCB-189	9.7E-08	--	9.7E-08	Reproductive	5.4E-03	--	5.4E-03
			KM TEQ PCB	2.2E-04	--	2.2E-04	Reproductive	1.2E+01	--	1.2E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-04	--	1.1E-04	Whole Body	1.6E+01	--	1.6E+01
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	7.8E-03	--	7.8E-03
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	6.0E-07	--	6.0E-07	Liver	4.8E-01	--	4.8E-01
			2,4'-DDE	3.3E-07	--	3.3E-07	Liver	1.9E-02	--	1.9E-02
			2,4'-DDT	6.9E-08	--	6.9E-08	Liver	2.4E-03	--	2.4E-03
			4,4'-DDD	2.5E-06	--	2.5E-06	Liver	2.0E+00	--	2.0E+00
			4,4'-DDE	4.0E-06	--	4.0E-06	Liver	2.3E-01	--	2.3E-01
			4,4'-DDT	3.4E-07	--	3.4E-07	Liver	1.2E-02	--	1.2E-02
			Benzaldehyde	4.0E-07	--	4.0E-07	GI Tract, Kidney	5.8E-03	--	5.8E-03
			Chlordane, alpha (cis)	9.4E-07	--	9.4E-07	Liver	3.1E-02	--	3.1E-02
			Chlordane, gamma (trans)	1.7E-07	--	1.7E-07	Liver	5.6E-03	--	5.6E-03
			Dieldrin	1.3E-05	--	1.3E-05	Liver	9.6E-02	--	9.6E-02
			Heptachlor epoxide, cis-	1.3E-06	--	1.3E-06	Liver	6.3E-02	--	6.3E-02
			Heptachlor epoxide, trans-	1.2E-08	--	1.2E-08	Liver	5.8E-04	--	5.8E-04
			Hexachlorobenzene	1.3E-07	--	1.3E-07	Liver	5.8E-04	--	5.8E-04
			Mirex	4.1E-07	--	4.1E-07	Liver, Thyroid	6.6E-04	--	6.6E-04
			Nonachlor, cis-	2.9E-07	--	2.9E-07	Liver	4.9E-02	--	4.9E-02
			Nonachlor, trans-	7.0E-07	--	7.0E-07	Liver	7.6E-01	--	7.6E-01
			Oxychlordane	1.0E-07	--	1.0E-07	Liver	1.9E-02	--	1.9E-02
			Pyridine	--	--	--	Liver	5.8E-01	--	5.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.5E-03	--	2.5E-03
			Arsenic, organic	--	--	--	Urinary	2.5E-02	--	2.5E-02
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	1.9E-01	--	1.9E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	3.6E-05	--	3.6E-05
			Cobalt	--	--	--	Thyroid	3.0E-02	--	3.0E-02
			Copper	--	--	--	GI Tract	2.5E-01	--	2.5E-01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Iron	--	--	--	GI Tract	4.2E-03	--	4.2E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	6.8E-04	--	6.8E-04
			Mercury	--	--	--	Immune	4.2E-01	--	4.2E-01
			Methyl Mercury	--	--	--	Neurological	1.5E+00	--	1.5E+00
			Selenium	--	--	--	Whole Body	3.4E-02	--	3.4E-02
			Silver	--	--	--	Skin	1.8E-03	--	1.8E-03
			Vanadium	--	--	--	Hair	2.7E-03	--	2.7E-03
			Zinc	--	--	--	Blood	1.1E-02	--	1.1E-02
			Total DLCs (excluding KM TEQs)			3.7E-04				2.0E+01
			Total DLCs (based on KM TEQs)			3.5E-04				2.0E+01
			Total PCDD/Fs (excluding KM TEQ)			1.3E-04				7.4E+00
			Total PCDD/Fs (based on KM TEQ)			1.3E-04				7.4E+00
			Total DL-PCBs (excluding KM TEQ)			2.3E-04				1.3E+01
			Total DL-PCBs (based on KM TEQ)			2.2E-04				1.2E+01
			Total Non-DL PCBs			1.1E-04				1.6E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			3.4E-04				2.9E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.3E-04				2.8E+01
			Total PAHs			2.3E-06				7.8E-03
			Total Organics			2.5E-05				4.4E+00
			Total Inorganics			1.4E-05				2.5E+00
	Striped Bass Total (excluding KM TEQs)					5.2E-04				4.3E+01
	Striped Bass Total (based on KM TEQs)					5.0E-04				4.2E+01
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.2E-05	--	6.2E-05	Reproductive	3.5E+00	--	3.5E+00
			1,2,3,7,8-PeCDD	2.8E-06	--	2.8E-06	Reproductive	1.5E-01	--	1.5E-01
			1,2,3,4,7,8-HxCDD	9.2E-08	--	9.2E-08	Reproductive	5.1E-03	--	5.1E-03
			1,2,3,6,7,8-HxCDD	2.9E-07	--	2.9E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,7,8,9-HxCDD	1.2E-07	--	1.2E-07	Reproductive	6.8E-03	--	6.8E-03
			1,2,3,4,6,7,8-HpCDD	3.5E-08	--	3.5E-08	Reproductive	2.0E-03	--	2.0E-03
			OCDD	1.5E-09	--	1.5E-09	Reproductive	8.6E-05	--	8.6E-05
			2,3,7,8-TCDF	3.1E-07	--	3.1E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	1.2E-07	--	1.2E-07	Reproductive	6.6E-03	--	6.6E-03
			2,3,4,7,8-PeCDF	3.1E-06	--	3.1E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,4,7,8-HxCDF	7.4E-07	--	7.4E-07	Reproductive	4.1E-02	--	4.1E-02
			1,2,3,6,7,8-HxCDF	3.0E-07	--	3.0E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8,9-HxCDF	1.6E-07	--	1.6E-07	Reproductive	9.0E-03	--	9.0E-03
			2,3,4,6,7,8-HxCDF	1.2E-07	--	1.2E-07	Reproductive	6.9E-03	--	6.9E-03
			1,2,3,4,6,7,8-HpCDF	5.6E-08	--	5.6E-08	Reproductive	3.1E-03	--	3.1E-03
			1,2,3,4,7,8,9-HpCDF	1.2E-08	--	1.2E-08	Reproductive	6.8E-04	--	6.8E-04
			OCDF	6.8E-10	--	6.8E-10	Reproductive	3.8E-05	--	3.8E-05
			KM TEQ DF	6.9E-05	--	6.9E-05	Reproductive	3.8E+00	--	3.8E+00
			PCB-77	1.6E-07	--	1.6E-07	Reproductive	9.0E-03	--	9.0E-03
			PCB-81	5.1E-08	--	5.1E-08	Reproductive	2.8E-03	--	2.8E-03
			PCB-105	9.4E-07	--	9.4E-07	Reproductive	5.2E-02	--	5.2E-02
			PCB-114	8.0E-08	--	8.0E-08	Reproductive	4.5E-03	--	4.5E-03
			PCB-118	4.0E-06	--	4.0E-06	Reproductive	2.2E-01	--	2.2E-01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	6.1E-08	--	6.1E-08	Reproductive	3.4E-03	--	3.4E-03
			PCB-126	5.0E-05	--	5.0E-05	Reproductive	2.8E+00	--	2.8E+00
			PCB-156/157	3.9E-07	--	3.9E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-167	1.8E-07	--	1.8E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-169	6.9E-07	--	6.9E-07	Reproductive	3.9E-02	--	3.9E-02
			PCB-189	2.7E-08	--	2.7E-08	Reproductive	1.5E-03	--	1.5E-03
			KM TEQ PCB	5.5E-05	--	5.5E-05	Reproductive	3.0E+00	--	3.0E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.3E-05	--	2.3E-05	Whole Body	3.3E+00	--	3.3E+00
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	7.8E-03	--	7.8E-03
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	6.1E-08	--	6.1E-08	Liver	4.9E-02	--	4.9E-02
			2,4'-DDE	7.2E-08	--	7.2E-08	Liver	4.1E-03	--	4.1E-03
			2,4'-DDT	5.6E-09	--	5.6E-09	Liver	1.9E-04	--	1.9E-04
			4,4'-DDD	3.4E-07	--	3.4E-07	Liver	2.8E-01	--	2.8E-01
			4,4'-DDE	1.0E-06	--	1.0E-06	Liver	6.0E-02	--	6.0E-02
			4,4'-DDT	3.7E-08	--	3.7E-08	Liver	1.3E-03	--	1.3E-03
			Benzaldehyde	4.0E-07	--	4.0E-07	GI Tract, Kidney	5.8E-03	--	5.8E-03
			Chlordane, alpha (cis)	5.6E-08	--	5.6E-08	Liver	1.9E-03	--	1.9E-03
			Chlordane, gamma (trans)	1.8E-08	--	1.8E-08	Liver	6.1E-04	--	6.1E-04
			Dieldrin	1.7E-06	--	1.7E-06	Liver	1.3E-02	--	1.3E-02
			Heptachlor epoxide, cis-	2.4E-07	--	2.4E-07	Liver	1.2E-02	--	1.2E-02
			Heptachlor epoxide, trans-	1.2E-08	--	1.2E-08	Liver	5.8E-04	--	5.8E-04
			Hexachlorobenzene	5.9E-08	--	5.9E-08	Liver	2.7E-04	--	2.7E-04
			Mirex	8.6E-08	--	8.6E-08	Liver, Thyroid	1.4E-04	--	1.4E-04
			Nonachlor, cis-	3.0E-08	--	3.0E-08	Liver	5.0E-03	--	5.0E-03
			Nonachlor, trans-	7.5E-08	--	7.5E-08	Liver	8.0E-02	--	8.0E-02
			Oxychlordane	3.4E-08	--	3.4E-08	Liver	6.3E-03	--	6.3E-03
			Pyridine	--	--	--	Liver	5.8E-01	--	5.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.5E-03	--	2.5E-03
			Arsenic, organic	--	--	--	Urinary	3.6E-02	--	3.6E-02
			Arsenic, inorganic	2.1E-05	--	2.1E-05	Skin, Blood	2.7E-01	--	2.7E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	1.4E-04	--	1.4E-04
			Cobalt	--	--	--	Thyroid	1.3E+00	--	1.3E+00
			Copper	--	--	--	GI Tract	9.3E-02	--	9.3E-02
			Iron	--	--	--	GI Tract	3.3E-03	--	3.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.0E-03	--	1.0E-03
			Mercury	--	--	--	Immune	2.7E-01	--	2.7E-01
			Methyl Mercury	--	--	--	Neurological	9.4E-01	--	9.4E-01
			Selenium	--	--	--	Whole Body	5.7E-02	--	5.7E-02

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Silver	--	--	--	Skin	1.8E-03	--	1.8E-03
			Vanadium	--	--	--	Hair	2.7E-03	--	2.7E-03
			Zinc	--	--	--	Blood	1.0E-02	--	1.0E-02
			Total DLCs (excluding KM TEQs)			1.3E-04				7.0E+00
			Total DLCs (based on KM TEQs)			1.2E-04				6.9E+00
			Total PCDD/Fs (excluding KM TEQ)			7.0E-05				3.9E+00
			Total PCDD/Fs (based on KM TEQ)			6.9E-05				3.8E+00
			Total DL-PCBs (excluding KM TEQ)			5.6E-05				3.1E+00
			Total DL-PCBs (based on KM TEQ)			5.5E-05				3.0E+00
			Total Non-DL PCBs			2.3E-05				3.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.9E-05				6.4E+00
			Total PCBs (DL & NDL; based on KM TEQ)			7.7E-05				6.3E+00
			Total PAHs			2.3E-06				7.8E-03
			Total Organics			4.3E-06				1.1E+00
			Total Inorganics			2.1E-05				3.0E+00
	Summer Flounder Total (excluding KM TEQs)					1.8E-04				1.4E+01
	Summer Flounder Total (based on KM TEQs)					1.7E-04				1.4E+01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.8E-04	--	1.8E-04	Reproductive	1.0E+01	--	1.0E+01
			1,2,3,7,8-PeCDD	4.8E-06	--	4.8E-06	Reproductive	2.7E-01	--	2.7E-01
			1,2,3,4,7,8-HxCDD	2.8E-07	--	2.8E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,6,7,8-HxCDD	6.9E-07	--	6.9E-07	Reproductive	3.8E-02	--	3.8E-02
			1,2,3,7,8,9-HxCDD	1.6E-07	--	1.6E-07	Reproductive	8.9E-03	--	8.9E-03
			1,2,3,4,6,7,8-HpCDD	4.2E-08	--	4.2E-08	Reproductive	2.3E-03	--	2.3E-03
			OCDD	2.9E-09	--	2.9E-09	Reproductive	1.6E-04	--	1.6E-04
			2,3,7,8-TCDF	4.4E-06	--	4.4E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,7,8-PeCDF	1.0E-06	--	1.0E-06	Reproductive	5.8E-02	--	5.8E-02
			2,3,4,7,8-PeCDF	1.2E-05	--	1.2E-05	Reproductive	6.5E-01	--	6.5E-01
			1,2,3,4,7,8-HxCDF	1.9E-06	--	1.9E-06	Reproductive	1.0E-01	--	1.0E-01
			1,2,3,6,7,8-HxCDF	1.4E-06	--	1.4E-06	Reproductive	7.5E-02	--	7.5E-02
			1,2,3,7,8,9-HxCDF	1.2E-07	--	1.2E-07	Reproductive	6.6E-03	--	6.6E-03
			2,3,4,6,7,8-HxCDF	2.4E-07	--	2.4E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDF	2.7E-07	--	2.7E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,7,8,9-HpCDF	1.0E-08	--	1.0E-08	Reproductive	5.6E-04	--	5.6E-04
			OCDF	7.5E-10	--	7.5E-10	Reproductive	4.1E-05	--	4.1E-05
			KM TEQ DF	2.1E-04	--	2.1E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-77	1.1E-06	--	1.1E-06	Reproductive	6.2E-02	--	6.2E-02
			PCB-81	1.3E-07	--	1.3E-07	Reproductive	7.0E-03	--	7.0E-03
			PCB-105	2.5E-06	--	2.5E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-118	9.6E-06	--	9.6E-06	Reproductive	5.3E-01	--	5.3E-01
			PCB-123	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-126	6.9E-05	--	6.9E-05	Reproductive	3.8E+00	--	3.8E+00
			PCB-156/157	9.8E-07	--	9.8E-07	Reproductive	5.4E-02	--	5.4E-02
			PCB-167	4.0E-07	--	4.0E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-169	2.6E-06	--	2.6E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-189	7.7E-08	--	7.7E-08	Reproductive	4.3E-03	--	4.3E-03

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ PCB	8.5E-05	--	8.5E-05	Reproductive	4.7E+00	--	4.7E+00
			Non-DL PCBs							
			Total Non-DL PCBs	7.2E-05	--	7.2E-05	Whole Body	1.0E+01	--	1.0E+01
			PAHs							
			Benz(a)anthracene	2.5E-07	--	2.5E-07	--	--	--	--
			Benzo(a)pyrene	2.5E-06	--	2.5E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	2.5E-07	--	2.5E-07	--	--	--	--
			Chrysene	2.5E-09	--	2.5E-09	--	--	--	--
			Dibenz(a,h)anthracene	2.5E-06	--	2.5E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.5E-07	--	2.5E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	9.3E-07	--	9.3E-07	Liver	7.6E-01	--	7.6E-01
			2,4'-DDE	2.7E-07	--	2.7E-07	Liver	1.5E-02	--	1.5E-02
			2,4'-DDT	3.6E-07	--	3.6E-07	Liver	1.2E-02	--	1.2E-02
			4,4'-DDD	2.8E-06	--	2.8E-06	Liver	2.3E+00	--	2.3E+00
			4,4'-DDE	3.1E-06	--	3.1E-06	Liver	1.8E-01	--	1.8E-01
			4,4'-DDT	7.2E-07	--	7.2E-07	Liver	2.5E-02	--	2.5E-02
			Benzaldehyde	4.0E-07	--	4.0E-07	GI Tract, Kidney	5.8E-03	--	5.8E-03
			Chlordane, alpha (cis)	6.3E-07	--	6.3E-07	Liver	2.1E-02	--	2.1E-02
			Chlordane, gamma (trans)	1.3E-07	--	1.3E-07	Liver	4.3E-03	--	4.3E-03
			Dieldrin	8.9E-06	--	8.9E-06	Liver	6.5E-02	--	6.5E-02
			Heptachlor epoxide, cis-	1.5E-06	--	1.5E-06	Liver	7.2E-02	--	7.2E-02
			Heptachlor epoxide, trans-	1.2E-08	--	1.2E-08	Liver	5.8E-04	--	5.8E-04
			Hexachlorobenzene	1.5E-07	--	1.5E-07	Liver	7.0E-04	--	7.0E-04
			Mirex	4.9E-07	--	4.9E-07	Liver, Thyroid	7.9E-04	--	7.9E-04
			Nonachlor, cis-	2.0E-07	--	2.0E-07	Liver	3.3E-02	--	3.3E-02
			Nonachlor, trans-	5.1E-07	--	5.1E-07	Liver	5.5E-01	--	5.5E-01
			Oxychlordane	8.3E-08	--	8.3E-08	Liver	1.5E-02	--	1.5E-02
			Pyridine	--	--	--	Liver	5.8E-01	--	5.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	3.9E-03	--	3.9E-03
			Arsenic, organic	--	--	--	Urinary	1.5E-02	--	1.5E-02
			Arsenic, inorganic	8.7E-06	--	8.7E-06	Skin, Blood	1.1E-01	--	1.1E-01
			Cadmium	--	--	--	Urinary	2.0E-02	--	2.0E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	4.3E-05	--	4.3E-05
			Cobalt	--	--	--	Thyroid	3.0E-02	--	3.0E-02
			Copper	--	--	--	GI Tract	2.8E-01	--	2.8E-01
			Iron	--	--	--	GI Tract	3.9E-03	--	3.9E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-03	--	1.2E-03
			Mercury	--	--	--	Immune	4.5E-01	--	4.5E-01
			Methyl Mercury	--	--	--	Neurological	1.8E+00	--	1.8E+00
			Selenium	--	--	--	Whole Body	5.8E-02	--	5.8E-02
			Silver	--	--	--	Skin	1.8E-03	--	1.8E-03
			Vanadium	--	--	--	Hair	3.0E-03	--	3.0E-03
			Zinc	--	--	--	Blood	1.8E-02	--	1.8E-02
			Total DLCs (excluding KM TEQs)			3.0E-04				1.7E+01
			Total DLCs (based on KM TEQs)			2.9E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			2.1E-04				1.2E+01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			2.1E-04				1.2E+01
			Total DL-PCBs (excluding KM TEQ)			8.7E-05				4.8E+00
			Total DL-PCBs (based on KM TEQ)			8.5E-05				4.7E+00
			Total Non-DL PCBs			7.2E-05				1.0E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-04				1.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-04				1.5E+01
			Total PAHs			5.7E-06				1.9E-02
			Total Organics			2.1E-05				4.6E+00
			Total Inorganics			8.7E-06				2.8E+00
	White Perch Total (excluding KM TEQs)					4.0E-04				3.4E+01
	White Perch Total (based on KM TEQs)					4.0E-04				3.4E+01
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.8E-04	--	1.8E-04	Reproductive	1.0E+01	--	1.0E+01
			1,2,3,7,8-PeCDD	4.8E-06	--	4.8E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDD	1.4E-07	--	1.4E-07	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,6,7,8-HxCDD	4.1E-07	--	4.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,7,8,9-HxCDD	1.4E-07	--	1.4E-07	Reproductive	8.0E-03	--	8.0E-03
			1,2,3,4,6,7,8-HpCDD	4.7E-08	--	4.7E-08	Reproductive	2.6E-03	--	2.6E-03
			OCDD	4.1E-09	--	4.1E-09	Reproductive	2.3E-04	--	2.3E-04
			2,3,7,8-TCDF	6.7E-06	--	6.7E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDF	4.3E-07	--	4.3E-07	Reproductive	2.4E-02	--	2.4E-02
			2,3,4,7,8-PeCDF	1.0E-05	--	1.0E-05	Reproductive	5.6E-01	--	5.6E-01
			1,2,3,4,7,8-HxCDF	3.2E-06	--	3.2E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,6,7,8-HxCDF	9.6E-07	--	9.6E-07	Reproductive	5.4E-02	--	5.4E-02
			1,2,3,7,8,9-HxCDF	5.9E-08	--	5.9E-08	Reproductive	3.3E-03	--	3.3E-03
			2,3,4,6,7,8-HxCDF	2.5E-07	--	2.5E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDF	3.2E-07	--	3.2E-07	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,4,7,8,9-HpCDF	4.6E-09	--	4.6E-09	Reproductive	2.5E-04	--	2.5E-04
			OCDF	5.0E-10	--	5.0E-10	Reproductive	2.8E-05	--	2.8E-05
			KM TEQ DF	2.1E-04	--	2.1E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-77	1.3E-06	--	1.3E-06	Reproductive	7.5E-02	--	7.5E-02
			PCB-81	1.8E-07	--	1.8E-07	Reproductive	9.8E-03	--	9.8E-03
			PCB-105	2.1E-06	--	2.1E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-114	1.8E-07	--	1.8E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-118	9.6E-06	--	9.6E-06	Reproductive	5.4E-01	--	5.4E-01
			PCB-123	1.7E-07	--	1.7E-07	Reproductive	9.4E-03	--	9.4E-03
			PCB-126	6.7E-05	--	6.7E-05	Reproductive	3.7E+00	--	3.7E+00
			PCB-156/157	7.7E-07	--	7.7E-07	Reproductive	4.3E-02	--	4.3E-02
			PCB-167	3.2E-07	--	3.2E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-169	2.3E-06	--	2.3E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	5.5E-08	--	5.5E-08	Reproductive	3.1E-03	--	3.1E-03
			KM TEQ PCB	8.0E-05	--	8.0E-05	Reproductive	4.4E+00	--	4.4E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.9E-05	--	2.9E-05	Whole Body	4.3E+00	--	4.3E+00
			PAHs							
			Benz(a)anthracene	3.2E-08	--	3.2E-08	--	--	--	--
			Benzo(a)pyrene	3.1E-07	--	3.1E-07	Developmental	2.4E-03	--	2.4E-03

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Benzo(b)fluoranthene	3.0E-08	--	3.0E-08	--	--	--	--
			Chrysene	4.2E-10	--	4.2E-10	--	--	--	--
			Dibenz(a,h)anthracene	3.0E-07	--	3.0E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.5E-07	--	2.5E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.4E-09	--	2.4E-09	Liver	1.9E-03	--	1.9E-03
			2,4'-DDE	7.0E-09	--	7.0E-09	Liver	4.0E-04	--	4.0E-04
			2,4'-DDT	3.1E-09	--	3.1E-09	Liver	1.1E-04	--	1.1E-04
			4,4'-DDD	3.8E-07	--	3.8E-07	Liver	3.1E-01	--	3.1E-01
			4,4'-DDE	1.5E-06	--	1.5E-06	Liver	8.4E-02	--	8.4E-02
			4,4'-DDT	1.7E-08	--	1.7E-08	Liver	5.8E-04	--	5.8E-04
			Benzaldehyde	2.2E-07	--	2.2E-07	GI Tract, Kidney	3.2E-03	--	3.2E-03
			Chlordane, alpha (cis)	3.3E-08	--	3.3E-08	Liver	1.1E-03	--	1.1E-03
			Chlordane, gamma (trans)	4.1E-09	--	4.1E-09	Liver	1.4E-04	--	1.4E-04
			Dieldrin	4.5E-06	--	4.5E-06	Liver	3.3E-02	--	3.3E-02
			Heptachlor epoxide, cis-	1.5E-06	--	1.5E-06	Liver	7.4E-02	--	7.4E-02
			Heptachlor epoxide, trans-	4.8E-07	--	4.8E-07	Liver	2.4E-02	--	2.4E-02
			Hexachlorobenzene	8.1E-08	--	8.1E-08	Liver	3.7E-04	--	3.7E-04
			Mirex	1.7E-07	--	1.7E-07	Liver, Thyroid	2.7E-04	--	2.7E-04
			Nonachlor, cis-	8.5E-08	--	8.5E-08	Liver	1.4E-02	--	1.4E-02
			Nonachlor, trans-	1.7E-07	--	1.7E-07	Liver	1.8E-01	--	1.8E-01
			Oxychlordane	2.5E-07	--	2.5E-07	Liver	4.7E-02	--	4.7E-02
			Pyridine	--	--	--	Liver	1.4E-01	--	1.4E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.5E-03	--	2.5E-03
			Arsenic, organic	--	--	--	Urinary	3.4E-02	--	3.4E-02
			Arsenic, inorganic	1.9E-05	--	1.9E-05	Skin, Blood	2.5E-01	--	2.5E-01
			Cadmium	--	--	--	Urinary	1.1E-01	--	1.1E-01
			Chromium [as Cr(III)]	--	--	--	No Effect	3.0E-05	--	3.0E-05
			Cobalt	--	--	--	Thyroid	7.9E-02	--	7.9E-02
			Copper	--	--	--	GI Tract	7.7E+00	--	7.7E+00
			Iron	--	--	--	GI Tract	1.5E-02	--	1.5E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.9E-02	--	1.9E-02
			Mercury	--	--	--	Immune	1.4E-01	--	1.4E-01
			Methyl Mercury	--	--	--	Neurological	4.6E-01	--	4.6E-01
			Selenium	--	--	--	Whole Body	6.1E-02	--	6.1E-02
			Silver	--	--	--	Skin	4.2E-02	--	4.2E-02
			Vanadium	--	--	--	Hair	3.9E-03	--	3.9E-03
			Zinc	--	--	--	Blood	4.2E-02	--	4.2E-02
			Total DLCs (excluding KM TEQs)			2.9E-04				1.6E+01
			Total DLCs (based on KM TEQs)			2.9E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			2.1E-04				1.2E+01
			Total PCDD/Fs (based on KM TEQ)			2.1E-04				1.2E+01
			Total DL-PCBs (excluding KM TEQ)			8.4E-05				4.6E+00
			Total DL-PCBs (based on KM TEQ)			8.0E-05				4.4E+00
			Total Non-DL PCBs			2.9E-05				4.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-04				8.9E+00

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-04				8.7E+00
			Total PAHs			9.2E-07				2.4E-03
			Total Organics			9.4E-06				9.1E-01
			Total Inorganics			1.9E-05				8.9E+00
	Crab (H+M) Total (excluding KM TEQs)					3.5E-04				3.0E+01
	Crab (H+M) Total (based on KM TEQs)					3.5E-04				3.0E+01
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.7E-05	--	2.7E-05	Reproductive	1.5E+00	--	1.5E+00
			1,2,3,7,8-PeCDD	1.7E-06	--	1.7E-06	Reproductive	9.6E-02	--	9.6E-02
			1,2,3,4,7,8-HxCDD	1.9E-08	--	1.9E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,6,7,8-HxCDD	4.8E-08	--	4.8E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,7,8,9-HxCDD	2.4E-08	--	2.4E-08	Reproductive	1.4E-03	--	1.4E-03
			1,2,3,4,6,7,8-HpCDD	9.2E-09	--	9.2E-09	Reproductive	5.1E-04	--	5.1E-04
			OCDD	9.5E-10	--	9.5E-10	Reproductive	5.3E-05	--	5.3E-05
			2,3,7,8-TCDF	8.0E-07	--	8.0E-07	Reproductive	4.4E-02	--	4.4E-02
			1,2,3,7,8-PeCDF	5.6E-08	--	5.6E-08	Reproductive	3.1E-03	--	3.1E-03
			2,3,4,7,8-PeCDF	1.0E-06	--	1.0E-06	Reproductive	5.5E-02	--	5.5E-02
			1,2,3,4,7,8-HxCDF	4.9E-07	--	4.9E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDF	1.2E-07	--	1.2E-07	Reproductive	6.9E-03	--	6.9E-03
			1,2,3,7,8,9-HxCDF	4.9E-08	--	4.9E-08	Reproductive	2.7E-03	--	2.7E-03
			2,3,4,6,7,8-HxCDF	3.2E-08	--	3.2E-08	Reproductive	1.8E-03	--	1.8E-03
			1,2,3,4,6,7,8-HpCDF	2.7E-08	--	2.7E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	2.3E-09	--	2.3E-09	Reproductive	1.3E-04	--	1.3E-04
			OCDF	1.9E-10	--	1.9E-10	Reproductive	1.1E-05	--	1.1E-05
			KM TEQ DF	3.0E-05	--	3.0E-05	Reproductive	1.7E+00	--	1.7E+00
			PCB-77	1.4E-07	--	1.4E-07	Reproductive	7.6E-03	--	7.6E-03
			PCB-81	1.9E-08	--	1.9E-08	Reproductive	1.0E-03	--	1.0E-03
			PCB-105	2.2E-07	--	2.2E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-114	1.9E-08	--	1.9E-08	Reproductive	1.1E-03	--	1.1E-03
			PCB-118	8.2E-07	--	8.2E-07	Reproductive	4.5E-02	--	4.5E-02
			PCB-123	1.6E-08	--	1.6E-08	Reproductive	9.0E-04	--	9.0E-04
			PCB-126	5.8E-06	--	5.8E-06	Reproductive	3.2E-01	--	3.2E-01
			PCB-156/157	6.6E-08	--	6.6E-08	Reproductive	3.7E-03	--	3.7E-03
			PCB-167	2.5E-08	--	2.5E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-169	2.4E-06	--	2.4E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	3.2E-09	--	3.2E-09	Reproductive	1.8E-04	--	1.8E-04
			KM TEQ PCB	7.0E-06	--	7.0E-06	Reproductive	3.9E-01	--	3.9E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.5E-06	--	2.5E-06	Whole Body	3.7E-01	--	3.7E-01
			PAHs							
			Benz(a)anthracene	1.5E-07	--	1.5E-07	--	--	--	--
			Benzo(a)pyrene	1.5E-06	--	1.5E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.5E-07	--	1.5E-07	--	--	--	--
			Chrysene	1.5E-09	--	1.5E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.5E-06	--	1.5E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.5E-07	--	1.5E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.6E-10	--	2.6E-10	Liver	2.1E-04	--	2.1E-04

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,4'-DDE	7.6E-10	--	7.6E-10	Liver	4.3E-05	--	4.3E-05
			2,4'-DDT	5.8E-10	--	5.8E-10	Liver	2.0E-05	--	2.0E-05
			4,4'-DDD	5.7E-08	--	5.7E-08	Liver	4.6E-02	--	4.6E-02
			4,4'-DDE	2.3E-07	--	2.3E-07	Liver	1.3E-02	--	1.3E-02
			4,4'-DDT	2.4E-09	--	2.4E-09	Liver	8.1E-05	--	8.1E-05
			Benzaldehyde	2.4E-07	--	2.4E-07	GI Tract, Kidney	3.5E-03	--	3.5E-03
			Chlordane, alpha (cis)	9.4E-09	--	9.4E-09	Liver	3.1E-04	--	3.1E-04
			Chlordane, gamma (trans)	4.2E-10	--	4.2E-10	Liver	1.4E-05	--	1.4E-05
			Dieldrin	9.9E-07	--	9.9E-07	Liver	7.2E-03	--	7.2E-03
			Heptachlor epoxide, cis-	1.4E-07	--	1.4E-07	Liver	6.7E-03	--	6.7E-03
			Heptachlor epoxide, trans-	9.5E-08	--	9.5E-08	Liver	4.7E-03	--	4.7E-03
			Hexachlorobenzene	1.6E-08	--	1.6E-08	Liver	7.4E-05	--	7.4E-05
			Mirex	4.2E-08	--	4.2E-08	Liver, Thyroid	6.8E-05	--	6.8E-05
			Nonachlor, cis-	1.1E-08	--	1.1E-08	Liver	1.8E-03	--	1.8E-03
			Nonachlor, trans-	1.9E-08	--	1.9E-08	Liver	2.1E-02	--	2.1E-02
			Oxychlordane	2.7E-08	--	2.7E-08	Liver	5.1E-03	--	5.1E-03
			Pyridine	--	--	--	Liver	1.1E-01	--	1.1E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	1.5E-03	--	1.5E-03
			Arsenic, organic	--	--	--	Urinary	3.2E-02	--	3.2E-02
			Arsenic, inorganic	1.8E-05	--	1.8E-05	Skin, Blood	2.3E-01	--	2.3E-01
			Cadmium	--	--	--	Urinary	4.4E-02	--	4.4E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	2.7E-05	--	2.7E-05
			Cobalt	--	--	--	Thyroid	6.3E-02	--	6.3E-02
			Copper	--	--	--	GI Tract	4.9E+00	--	4.9E+00
			Iron	--	--	--	GI Tract	7.2E-03	--	7.2E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-02	--	1.2E-02
			Mercury	--	--	--	Immune	1.6E-01	--	1.6E-01
			Methyl Mercury	--	--	--	Neurological	5.7E-01	--	5.7E-01
			Selenium	--	--	--	Whole Body	5.0E-02	--	5.0E-02
			Silver	--	--	--	Skin	2.6E-02	--	2.6E-02
			Vanadium	--	--	--	Hair	2.3E-03	--	2.3E-03
			Zinc	--	--	--	Blood	4.2E-02	--	4.2E-02
			Total DLCs (excluding KM TEQs)			4.1E-05				2.3E+00
			Total DLCs (based on KM TEQs)			3.7E-05				2.1E+00
			Total PCDD/Fs (excluding KM TEQ)			3.1E-05				1.7E+00
			Total PCDD/Fs (based on KM TEQ)			3.0E-05				1.7E+00
			Total DL-PCBs (excluding KM TEQ)			9.5E-06				5.3E-01
			Total DL-PCBs (based on KM TEQ)			7.0E-06				3.9E-01
			Total Non-DL PCBs			2.5E-06				3.7E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.2E-05				9.0E-01
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-06				7.6E-01
			Total PAHs			3.4E-06				1.2E-02
			Total Organics			1.9E-06				2.2E-01
			Total Inorganics			1.8E-05				6.1E+00
Crab (Muscle) Total (excluding KM TEQs)						6.6E-05				9.0E+00

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Crab (Muscle) Total (based on KM TEQs)					6.3E-05				8.8E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.3E-04	--	6.3E-04	Reproductive	3.5E+01	--	3.5E+01
			1,2,3,7,8-PeCDD	1.5E-05	--	1.5E-05	Reproductive	8.3E-01	--	8.3E-01
			1,2,3,4,7,8-HxCDD	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDD	1.4E-06	--	1.4E-06	Reproductive	8.0E-02	--	8.0E-02
			1,2,3,7,8,9-HxCDD	4.9E-07	--	4.9E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,4,6,7,8-HpCDD	1.6E-07	--	1.6E-07	Reproductive	8.7E-03	--	8.7E-03
			OCDD	1.3E-08	--	1.3E-08	Reproductive	7.4E-04	--	7.4E-04
			2,3,7,8-TCDF	2.4E-05	--	2.4E-05	Reproductive	1.3E+00	--	1.3E+00
			1,2,3,7,8-PeCDF	1.5E-06	--	1.5E-06	Reproductive	8.5E-02	--	8.5E-02
			2,3,4,7,8-PeCDF	3.6E-05	--	3.6E-05	Reproductive	2.0E+00	--	2.0E+00
			1,2,3,4,7,8-HxCDF	1.1E-05	--	1.1E-05	Reproductive	6.3E-01	--	6.3E-01
			1,2,3,6,7,8-HxCDF	3.5E-06	--	3.5E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,7,8,9-HxCDF	9.4E-08	--	9.4E-08	Reproductive	5.2E-03	--	5.2E-03
			2,3,4,6,7,8-HxCDF	8.9E-07	--	8.9E-07	Reproductive	5.0E-02	--	5.0E-02
			1,2,3,4,6,7,8-HpCDF	1.2E-06	--	1.2E-06	Reproductive	6.5E-02	--	6.5E-02
			1,2,3,4,7,8,9-HpCDF	9.5E-09	--	9.5E-09	Reproductive	5.3E-04	--	5.3E-04
			OCDF	1.7E-09	--	1.7E-09	Reproductive	9.6E-05	--	9.6E-05
			KM TEQ DF	7.2E-04	--	7.2E-04	Reproductive	4.0E+01	--	4.0E+01
			PCB-77	4.7E-06	--	4.7E-06	Reproductive	2.6E-01	--	2.6E-01
			PCB-81	6.3E-07	--	6.3E-07	Reproductive	3.5E-02	--	3.5E-02
			PCB-105	7.7E-06	--	7.7E-06	Reproductive	4.3E-01	--	4.3E-01
			PCB-114	6.5E-07	--	6.5E-07	Reproductive	3.6E-02	--	3.6E-02
			PCB-118	3.5E-05	--	3.5E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-123	6.1E-07	--	6.1E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-126	2.4E-04	--	2.4E-04	Reproductive	1.3E+01	--	1.3E+01
			PCB-156/157	2.8E-06	--	2.8E-06	Reproductive	1.6E-01	--	1.6E-01
			PCB-167	1.2E-06	--	1.2E-06	Reproductive	6.5E-02	--	6.5E-02
			PCB-169	7.5E-06	--	7.5E-06	Reproductive	4.2E-01	--	4.2E-01
			PCB-189	2.1E-07	--	2.1E-07	Reproductive	1.1E-02	--	1.1E-02
			KM TEQ PCB	2.9E-04	--	2.9E-04	Reproductive	1.6E+01	--	1.6E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-04	--	1.1E-04	Whole Body	1.6E+01	--	1.6E+01
			PAHs							
			Benz(a)anthracene	3.7E-08	--	3.7E-08	--	--	--	--
			Benzo(a)pyrene	3.3E-07	--	3.3E-07	Developmental	2.5E-03	--	2.5E-03
			Benzo(b)fluoranthene	3.1E-08	--	3.1E-08	--	--	--	--
			Chrysene	5.1E-10	--	5.1E-10	--	--	--	--
			Dibenz(a,h)anthracene	3.2E-07	--	3.2E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	8.6E-07	--	8.6E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	8.4E-09	--	8.4E-09	Liver	6.8E-03	--	6.8E-03
			2,4'-DDE	2.5E-08	--	2.5E-08	Liver	1.4E-03	--	1.4E-03
			2,4'-DDT	1.0E-08	--	1.0E-08	Liver	3.5E-04	--	3.5E-04
			4,4'-DDD	1.3E-06	--	1.3E-06	Liver	1.1E+00	--	1.1E+00
			4,4'-DDE	5.0E-06	--	5.0E-06	Liver	2.9E-01	--	2.9E-01
			4,4'-DDT	5.8E-08	--	5.8E-08	Liver	2.0E-03	--	2.0E-03
			Benzaldehyde	4.7E-07	--	4.7E-07	GI Tract, Kidney	6.8E-03	--	6.8E-03

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, alpha (cis)	1.1E-07	--	1.1E-07	Liver	3.5E-03	--	3.5E-03
			Chlordane, gamma (trans)	1.5E-08	--	1.5E-08	Liver	4.8E-04	--	4.8E-04
			Dieldrin	1.5E-05	--	1.5E-05	Liver	1.1E-01	--	1.1E-01
			Heptachlor epoxide, cis-	5.5E-06	--	5.5E-06	Liver	2.7E-01	--	2.7E-01
			Heptachlor epoxide, trans-	1.6E-06	--	1.6E-06	Liver	7.9E-02	--	7.9E-02
			Hexachlorobenzene	2.7E-07	--	2.7E-07	Liver	1.2E-03	--	1.2E-03
			Mirex	5.5E-07	--	5.5E-07	Liver, Thyroid	8.9E-04	--	8.9E-04
			Nonachlor, cis-	3.0E-07	--	3.0E-07	Liver	5.0E-02	--	5.0E-02
			Nonachlor, trans-	6.0E-07	--	6.0E-07	Liver	6.4E-01	--	6.4E-01
			Oxychlordane	8.9E-07	--	8.9E-07	Liver	1.7E-01	--	1.7E-01
			Pyridine	--	--	--	Liver	2.1E-01	--	2.1E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	7.6E-03	--	7.6E-03
			Arsenic, organic	--	--	--	Urinary	4.2E-02	--	4.2E-02
			Arsenic, inorganic	2.4E-05	--	2.4E-05	Skin, Blood	3.1E-01	--	3.1E-01
			Cadmium	--	--	--	Urinary	3.4E-01	--	3.4E-01
			Chromium [as Cr(III)]	--	--	--	No Effect	5.1E-05	--	5.1E-05
			Cobalt	--	--	--	Thyroid	2.0E-01	--	2.0E-01
			Copper	--	--	--	GI Tract	2.0E+01	--	2.0E+01
			Iron	--	--	--	GI Tract	3.9E-02	--	3.9E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.5E-02	--	3.5E-02
			Mercury	--	--	--	Immune	6.7E-02	--	6.7E-02
			Methyl Mercury	--	--	--	Neurological	1.6E-01	--	1.6E-01
			Selenium	--	--	--	Whole Body	9.8E-02	--	9.8E-02
			Silver	--	--	--	Skin	1.0E-01	--	1.0E-01
			Vanadium	--	--	--	Hair	9.2E-03	--	9.2E-03
			Zinc	--	--	--	Blood	4.2E-02	--	4.2E-02
			Total DLCs (excluding KM TEQs)			1.0E-03				5.7E+01
			Total DLCs (based on KM TEQs)			1.0E-03				5.6E+01
			Total PCDD/Fs (excluding KM TEQ)			7.2E-04				4.0E+01
			Total PCDD/Fs (based on KM TEQ)			7.2E-04				4.0E+01
			Total DL-PCBs (excluding KM TEQ)			3.0E-04				1.7E+01
			Total DL-PCBs (based on KM TEQ)			2.9E-04				1.6E+01
			Total Non-DL PCBs			1.1E-04				1.6E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.1E-04				3.2E+01
			Total PCBs (DL & NDL; based on KM TEQ)			4.0E-04				3.2E+01
			Total PAHs			1.6E-06				2.5E-03
			Total Organics			3.2E-05				2.9E+00
			Total Inorganics			2.4E-05				2.2E+01
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.2E-03				9.7E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.2E-03				9.6E+01
Sediment	Sediment	Angler - Fishing Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.5E-07	1.3E-07	3.8E-07	Reproductive	1.4E-02	7.4E-03	2.1E-02
			1,2,3,7,8-PeCDD	1.3E-08	7.0E-09	2.0E-08	Reproductive	7.3E-04	3.9E-04	1.1E-03
			1,2,3,4,7,8-HxCDD	1.2E-09	6.2E-10	1.8E-09	Reproductive	6.5E-05	3.5E-05	1.0E-04
			1,2,3,6,7,8-HxCDD	4.7E-09	2.5E-09	7.3E-09	Reproductive	2.6E-04	1.4E-04	4.0E-04

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8,9-HxCDD	2.8E-09	1.5E-09	4.3E-09	Reproductive	1.6E-04	8.3E-05	2.4E-04
			1,2,3,4,6,7,8-HpCDD	8.3E-09	4.4E-09	1.3E-08	Reproductive	4.6E-04	2.5E-04	7.1E-04
			OCDD	2.5E-09	1.4E-09	3.9E-09	Reproductive	1.4E-04	7.5E-05	2.2E-04
			2,3,7,8-TCDF	4.5E-09	2.4E-09	6.9E-09	Reproductive	2.5E-04	1.3E-04	3.8E-04
			1,2,3,7,8-PeCDF	9.2E-10	4.9E-10	1.4E-09	Reproductive	5.1E-05	2.7E-05	7.8E-05
			2,3,4,7,8-PeCDF	1.5E-08	8.2E-09	2.4E-08	Reproductive	8.5E-04	4.5E-04	1.3E-03
			1,2,3,4,7,8-HxCDF	2.3E-08	1.3E-08	3.6E-08	Reproductive	1.3E-03	6.9E-04	2.0E-03
			1,2,3,6,7,8-HxCDF	6.1E-09	3.3E-09	9.4E-09	Reproductive	3.4E-04	1.8E-04	5.2E-04
			1,2,3,7,8,9-HxCDF	4.6E-10	2.4E-10	7.0E-10	Reproductive	2.5E-05	1.4E-05	3.9E-05
			2,3,4,6,7,8-HxCDF	3.4E-09	1.8E-09	5.2E-09	Reproductive	1.9E-04	1.0E-04	2.9E-04
			1,2,3,4,6,7,8-HpCDF	1.0E-08	5.5E-09	1.6E-08	Reproductive	5.8E-04	3.1E-04	8.9E-04
			1,2,3,4,7,8,9-HpCDF	3.5E-10	1.9E-10	5.4E-10	Reproductive	2.0E-05	1.0E-05	3.0E-05
			OCDF	4.4E-10	2.3E-10	6.7E-10	Reproductive	2.4E-05	1.3E-05	3.7E-05
			KM TEQ DF	3.4E-07	1.8E-07	5.2E-07	Reproductive	1.9E-02	1.0E-02	2.9E-02
			PCB-77	2.5E-09	1.3E-09	3.8E-09	Reproductive	1.4E-04	7.4E-05	2.1E-04
			PCB-81	2.9E-10	1.5E-10	4.4E-10	Reproductive	1.6E-05	8.6E-06	2.5E-05
			PCB-105	1.2E-09	6.4E-10	1.9E-09	Reproductive	6.7E-05	3.6E-05	1.0E-04
			PCB-114	8.3E-11	4.4E-11	1.3E-10	Reproductive	4.6E-06	2.5E-06	7.1E-06
			PCB-118	3.5E-09	1.9E-09	5.4E-09	Reproductive	2.0E-04	1.0E-04	3.0E-04
			PCB-123	1.0E-10	5.5E-11	1.6E-10	Reproductive	5.7E-06	3.0E-06	8.7E-06
			PCB-126	8.0E-08	4.2E-08	1.2E-07	Reproductive	4.4E-03	2.4E-03	6.8E-03
			PCB-156/157	3.2E-10	1.7E-10	4.8E-10	Reproductive	1.8E-05	9.3E-06	2.7E-05
			PCB-167	1.1E-10	6.0E-11	1.7E-10	Reproductive	6.3E-06	3.3E-06	9.6E-06
			PCB-169	2.5E-08	1.3E-08	3.8E-08	Reproductive	1.4E-03	7.3E-04	2.1E-03
			PCB-189	2.4E-11	1.3E-11	3.6E-11	Reproductive	1.3E-06	7.0E-07	2.0E-06
			KM TEQ PCB	9.9E-08	5.3E-08	1.5E-07	Reproductive	5.5E-03	2.9E-03	8.4E-03
			Non-DL PCBs							
			Total Non-DL PCBs	2.9E-08	7.1E-08	1.0E-07	Whole Body	4.2E-03	1.0E-02	1.5E-02
			PAHs							
			Benz(a)anthracene	1.1E-08	2.6E-08	3.7E-08	--	--	--	--
			Benzo(a)pyrene	1.1E-07	2.6E-07	3.7E-07	Developmental	8.6E-04	2.0E-03	2.8E-03
			Benzo(b)fluoranthene	9.9E-09	2.3E-08	3.3E-08	--	--	--	--
			Benzo(k)fluoranthene	6.4E-10	1.5E-09	2.1E-09	--	--	--	--
			Chrysene	1.1E-10	2.5E-10	3.6E-10	--	--	--	--
			Dibenz(a,h)anthracene	2.3E-08	5.3E-08	7.5E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.1E-09	9.5E-09	1.4E-08	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	1.8E-04	--	1.8E-04
			TPH (C9-C40)	--	--	--	Respiratory	1.3E-02	--	1.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.5E-03	--	1.5E-03
			Antimony	--	--	--	Whole Body	7.4E-04	--	7.4E-04
			Arsenic, inorganic	6.0E-07	5.3E-07	1.1E-06	Skin, Blood	7.8E-03	6.9E-03	1.5E-02
			Cadmium	--	--	--	Urinary	3.9E-04	2.8E-04	6.7E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	9.1E-06	--	9.1E-06
			Cobalt	--	--	--	Thyroid	5.9E-03	--	5.9E-03
			Copper	--	--	--	GI Tract	2.1E-02	--	2.1E-02
			Chromium (VI)	3.8E-08	--	3.8E-08	No Effect	5.9E-05	--	5.9E-05
			Iron	--	--	--	GI Tract	7.8E-03	--	7.8E-03

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.9E-03	--	1.9E-03
			Mercury	--	--	--	Immune	8.4E-04	--	8.4E-04
			Nickel	--	--	--	Body Weight, Organ Weights	4.2E-04	--	4.2E-04
			Thallium	--	--	--	Skin, Hair	3.1E-03	--	3.1E-03
			Vanadium	--	--	--	Hair	1.3E-03	--	1.3E-03
			Zinc	--	--	--	Blood	5.2E-04	--	5.2E-04
			Total DLCs (excluding KM TEQs)			7.0E-07				3.9E-02
			Total DLCs (based on KM TEQs)			6.7E-07				3.7E-02
			Total PCDD/Fs (excluding KM TEQ)			5.3E-07				3.0E-02
			Total PCDD/Fs (based on KM TEQ)			5.2E-07				2.9E-02
			Total DL-PCBs (excluding KM TEQ)			1.7E-07				9.6E-03
			Total DL-PCBs (based on KM TEQ)			1.5E-07				8.4E-03
			Total Non-DL PCBs			1.0E-07				1.5E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			2.7E-07				2.4E-02
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-07				2.3E-02
			Total PAHs			5.3E-07				2.8E-03
			Total Organics			0.0E+00				1.3E-02
			Total Inorganics			1.2E-06				6.1E-02
	Fishing - Sediment Total (excluding KM TEQs)					2.5E-06				1.3E-01
	Fishing - Sediment Total (based on KM TEQs)					2.5E-06				1.3E-01
Surface Water	Surface Water	Angler - Fishing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-09	--	2.0E-09	Reproductive	1.1E-04	--	1.1E-04
			1,2,3,7,8-PeCDD	6.9E-10	--	6.9E-10	Reproductive	3.8E-05	--	3.8E-05
			1,2,3,4,7,8-HxCDD	5.0E-10	--	5.0E-10	Reproductive	2.8E-05	--	2.8E-05
			1,2,3,6,7,8-HxCDD	8.0E-11	--	8.0E-11	Reproductive	4.4E-06	--	4.4E-06
			1,2,3,7,8,9-HxCDD	1.4E-10	--	1.4E-10	Reproductive	7.8E-06	--	7.8E-06
			1,2,3,4,6,7,8-HpCDD	1.0E-10	--	1.0E-10	Reproductive	5.6E-06	--	5.6E-06
			OCDD	3.2E-11	--	3.2E-11	Reproductive	1.8E-06	--	1.8E-06
			2,3,7,8-TCDF	7.7E-11	--	7.7E-11	Reproductive	4.3E-06	--	4.3E-06
			1,2,3,7,8-PeCDF	1.9E-11	--	1.9E-11	Reproductive	1.0E-06	--	1.0E-06
			2,3,4,7,8-PeCDF	3.2E-10	--	3.2E-10	Reproductive	1.8E-05	--	1.8E-05
			1,2,3,4,7,8-HxCDF	3.0E-10	--	3.0E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,6,7,8-HxCDF	7.2E-11	--	7.2E-11	Reproductive	4.0E-06	--	4.0E-06
			1,2,3,7,8,9-HxCDF	4.3E-10	--	4.3E-10	Reproductive	2.4E-05	--	2.4E-05
			2,3,4,6,7,8-HxCDF	4.6E-11	--	4.6E-11	Reproductive	2.5E-06	--	2.5E-06
			1,2,3,4,6,7,8-HpCDF	1.3E-10	--	1.3E-10	Reproductive	7.0E-06	--	7.0E-06
			1,2,3,4,7,8,9-HpCDF	7.9E-12	--	7.9E-12	Reproductive	4.4E-07	--	4.4E-07
			OCDF	7.1E-12	--	7.1E-12	Reproductive	3.9E-07	--	3.9E-07
			KM TEQ DF	4.0E-09	--	4.0E-09	Reproductive	2.2E-04	--	2.2E-04
			PCB-77	3.3E-12	--	3.3E-12	Reproductive	1.9E-07	--	1.9E-07
			PCB-81	3.3E-13	--	3.3E-13	Reproductive	1.9E-08	--	1.9E-08
			PCB-105	3.6E-12	--	3.6E-12	Reproductive	2.0E-07	--	2.0E-07
			PCB-114	1.9E-13	--	1.9E-13	Reproductive	1.0E-08	--	1.0E-08
			PCB-118	8.0E-12	--	8.0E-12	Reproductive	4.4E-07	--	4.4E-07
			PCB-123	1.5E-13	--	1.5E-13	Reproductive	8.6E-09	--	8.6E-09
			PCB-126	1.1E-10	--	1.1E-10	Reproductive	6.1E-06	--	6.1E-06

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-156/157	9.5E-13	--	9.5E-13	Reproductive	5.3E-08	--	5.3E-08
			PCB-167	3.2E-13	--	3.2E-13	Reproductive	1.8E-08	--	1.8E-08
			PCB-169	2.0E-11	--	2.0E-11	Reproductive	1.1E-06	--	1.1E-06
			PCB-189	4.2E-14	--	4.2E-14	Reproductive	2.3E-09	--	2.3E-09
			KM TEQ PCB	1.8E-10	--	1.8E-10	Reproductive	9.8E-06	--	9.8E-06
			PAHs							
			Benz(a)anthracene	3.2E-11	--	3.2E-11	--	--	--	--
			Benzo(a)pyrene	4.1E-10	--	4.1E-10	Developmental	3.2E-06	--	3.2E-06
			Benzo(b)fluoranthene	5.6E-11	--	5.6E-11	--	--	--	--
			Benzo(k)fluoranthene	2.5E-12	--	2.5E-12	--	--	--	--
			Chrysene	5.5E-13	--	5.5E-13	--	--	--	--
			Dibenz(a,h)anthracene	1.1E-10	--	1.1E-10	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.3E-11	--	2.3E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	1.1E-07	1.9E-06	2.0E-06
			Pesticides & Organics							
			Chloroform	4.0E-11	9.4E-11	1.3E-10	Liver	7.6E-07	1.8E-06	2.5E-06
			Trichloroethylene	1.6E-10	7.0E-10	8.7E-10	Thymus, Blood, Immune, Developmental	1.7E-05	7.1E-05	8.8E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	1.1E-04	1.3E-04	2.4E-04
			Arsenic, inorganic	2.1E-08	3.7E-09	2.4E-08	Skin, Blood	2.7E-04	4.8E-05	3.2E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	5.4E-08	7.4E-07	8.0E-07
			Chromium (VI)	3.0E-09	4.3E-08	4.6E-08	No Effect	4.7E-06	6.7E-05	7.1E-05
			Iron	--	--	--	GI Tract	4.8E-05	8.5E-06	5.7E-05
			Manganese	--	--	--	Neurological	1.8E-04	8.1E-04	9.9E-04
			Mercury	--	--	--	Immune	5.6E-06	1.4E-05	2.0E-05
			Thallium	--	--	--	Skin, Hair	7.8E-05	1.4E-05	9.2E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			5.1E-09				2.8E-04
			Total DLCs (based on KM TEQs)			4.1E-09				2.3E-04
			Total PCDD/Fs (excluding KM TEQ)			4.9E-09				2.7E-04
			Total PCDD/Fs (based on KM TEQ)			4.0E-09				2.2E-04
			Total DL-PCBs (excluding KM TEQ)			1.5E-10				8.1E-06
			Total DL-PCBs (based on KM TEQ)			1.8E-10				9.8E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.5E-10				8.1E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-10				9.8E-06
			Total PAHs			6.3E-10				5.2E-06
			Total Organics			1.0E-09				9.0E-05
			Total Inorganics			7.0E-08				1.8E-03
	Fishing - Surface Water Total (excluding KM TEQs)					7.7E-08				2.2E-03
	Fishing - Surface Water Total (based on KM TEQs)					7.6E-08				2.1E-03
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						3.3E-04				2.8E+01
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						3.4E-04				2.9E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						4.5E-04				3.7E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						5.2E-04				4.1E+01
Sediment	Sediment	Angler - Crabbing	**Dioxin-like Compounds**							

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
		Sediment	2,3,7,8-TCDD	1.6E-07	8.3E-08	2.4E-07	Reproductive	8.6E-03	4.6E-03	1.3E-02
			1,2,3,7,8-PeCDD	8.2E-09	4.3E-09	1.3E-08	Reproductive	4.5E-04	2.4E-04	7.0E-04
			1,2,3,4,7,8-HxCDD	7.3E-10	3.9E-10	1.1E-09	Reproductive	4.1E-05	2.2E-05	6.2E-05
			1,2,3,6,7,8-HxCDD	3.0E-09	1.6E-09	4.5E-09	Reproductive	1.6E-04	8.8E-05	2.5E-04
			1,2,3,7,8,9-HxCDD	1.7E-09	9.3E-10	2.7E-09	Reproductive	9.7E-05	5.2E-05	1.5E-04
			1,2,3,4,6,7,8-HpCDD	5.2E-09	2.8E-09	8.0E-09	Reproductive	2.9E-04	1.5E-04	4.4E-04
			OCDD	1.6E-09	8.5E-10	2.4E-09	Reproductive	8.8E-05	4.7E-05	1.4E-04
			2,3,7,8-TCDF	2.8E-09	1.5E-09	4.3E-09	Reproductive	1.6E-04	8.3E-05	2.4E-04
			1,2,3,7,8-PeCDF	5.8E-10	3.1E-10	8.8E-10	Reproductive	3.2E-05	1.7E-05	4.9E-05
			2,3,4,7,8-PeCDF	9.6E-09	5.1E-09	1.5E-08	Reproductive	5.3E-04	2.8E-04	8.2E-04
			1,2,3,4,7,8-HxCDF	1.5E-08	7.8E-09	2.2E-08	Reproductive	8.2E-04	4.3E-04	1.2E-03
			1,2,3,6,7,8-HxCDF	3.8E-09	2.0E-09	5.9E-09	Reproductive	2.1E-04	1.1E-04	3.3E-04
			1,2,3,7,8,9-HxCDF	2.9E-10	1.5E-10	4.4E-10	Reproductive	1.6E-05	8.4E-06	2.4E-05
			2,3,4,6,7,8-HxCDF	2.1E-09	1.1E-09	3.3E-09	Reproductive	1.2E-04	6.3E-05	1.8E-04
			1,2,3,4,6,7,8-HpCDF	6.5E-09	3.5E-09	1.0E-08	Reproductive	3.6E-04	1.9E-04	5.5E-04
			1,2,3,4,7,8,9-HpCDF	2.2E-10	1.2E-10	3.4E-10	Reproductive	1.2E-05	6.5E-06	1.9E-05
			OCDF	2.7E-10	1.5E-10	4.2E-10	Reproductive	1.5E-05	8.1E-06	2.3E-05
			KM TEQ DF	2.1E-07	1.1E-07	3.2E-07	Reproductive	1.2E-02	6.3E-03	1.8E-02
			PCB-77	1.6E-09	8.4E-10	2.4E-09	Reproductive	8.7E-05	4.6E-05	1.3E-04
			PCB-81	1.8E-10	9.6E-11	2.8E-10	Reproductive	1.0E-05	5.4E-06	1.5E-05
			PCB-105	7.6E-10	4.0E-10	1.2E-09	Reproductive	4.2E-05	2.2E-05	6.4E-05
			PCB-114	5.2E-11	2.8E-11	7.9E-11	Reproductive	2.9E-06	1.5E-06	4.4E-06
			PCB-118	2.2E-09	1.2E-09	3.4E-09	Reproductive	1.2E-04	6.5E-05	1.9E-04
			PCB-123	6.4E-11	3.4E-11	9.8E-11	Reproductive	3.6E-06	1.9E-06	5.4E-06
			PCB-126	5.0E-08	2.6E-08	7.6E-08	Reproductive	2.8E-03	1.5E-03	4.2E-03
			PCB-156/157	2.0E-10	1.1E-10	3.0E-10	Reproductive	1.1E-05	5.8E-06	1.7E-05
			PCB-167	7.1E-11	3.8E-11	1.1E-10	Reproductive	3.9E-06	2.1E-06	6.0E-06
			PCB-169	1.5E-08	8.2E-09	2.4E-08	Reproductive	8.5E-04	4.5E-04	1.3E-03
			PCB-189	1.5E-11	7.9E-12	2.3E-11	Reproductive	8.2E-07	4.4E-07	1.3E-06
			KM TEQ PCB	6.2E-08	3.3E-08	9.5E-08	Reproductive	3.4E-03	1.8E-03	5.3E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-08	4.4E-08	6.2E-08	Whole Body	2.6E-03	6.5E-03	9.1E-03
			PAHs							
			Benz(a)anthracene	7.1E-09	1.6E-08	2.3E-08	--	--	--	--
			Benzo(a)pyrene	6.9E-08	1.6E-07	2.3E-07	Developmental	5.4E-04	1.2E-03	1.8E-03
			Benzo(b)fluoranthene	6.2E-09	1.4E-08	2.1E-08	--	--	--	--
			Benzo(k)fluoranthene	4.0E-10	9.3E-10	1.3E-09	--	--	--	--
			Chrysene	6.8E-11	1.6E-10	2.2E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.4E-08	3.3E-08	4.7E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.6E-09	5.9E-09	8.5E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	1.1E-04	--	1.1E-04
			TPH (C9-C40)	--	--	--	Respiratory	8.1E-03	--	8.1E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	9.6E-04	--	9.6E-04
			Antimony	--	--	--	Whole Body	4.6E-04	--	4.6E-04
			Arsenic, inorganic	3.7E-07	3.3E-07	7.1E-07	Skin, Blood	4.9E-03	4.3E-03	9.2E-03
			Cadmium	--	--	--	Urinary	2.4E-04	1.7E-04	4.2E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	5.7E-06	--	5.7E-06

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Cobalt	--	--	--	Thyroid	3.7E-03	--	3.7E-03
			Copper	--	--	--	GI Tract	1.3E-02	--	1.3E-02
			Chromium (VI)	2.4E-08	--	2.4E-08	No Effect	3.7E-05	--	3.7E-05
			Iron	--	--	--	GI Tract	4.9E-03	--	4.9E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-03	--	1.2E-03
			Mercury	--	--	--	Immune	5.2E-04	--	5.2E-04
			Nickel	--	--	--	Body Weight, Organ Weights	2.7E-04	--	2.7E-04
			Thallium	--	--	--	Skin, Hair	1.9E-03	--	1.9E-03
			Vanadium	--	--	--	Hair	7.9E-04	--	7.9E-04
			Zinc	--	--	--	Blood	3.3E-04	--	3.3E-04
			Total DLCs (excluding KM TEQs)			4.4E-07				2.4E-02
			Total DLCs (based on KM TEQs)			4.2E-07				2.3E-02
			Total PCDD/Fs (excluding KM TEQ)			3.3E-07				1.8E-02
			Total PCDD/Fs (based on KM TEQ)			3.2E-07				1.8E-02
			Total DL-PCBs (excluding KM TEQ)			1.1E-07				6.0E-03
			Total DL-PCBs (based on KM TEQ)			9.5E-08				5.3E-03
			Total Non-DL PCBs			6.2E-08				9.1E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			1.7E-07				1.5E-02
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-07				1.4E-02
			Total PAHs			3.3E-07				1.8E-03
			Total Organics			0.0E+00				8.2E-03
			Total Inorganics			7.3E-07				3.8E-02
	Crabbing - Sediment Total (excluding KM TEQs)					1.6E-06				8.1E-02
	Crabbing - Sediment Total (based on KM TEQs)					1.5E-06				8.0E-02
Surface Water	Surface Water	Angler - Crabbing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.2E-09	--	1.2E-09	Reproductive	6.9E-05	--	6.9E-05
			1,2,3,7,8-PeCDD	4.3E-10	--	4.3E-10	Reproductive	2.4E-05	--	2.4E-05
			1,2,3,4,7,8-HxCDD	3.1E-10	--	3.1E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,6,7,8-HxCDD	5.0E-11	--	5.0E-11	Reproductive	2.8E-06	--	2.8E-06
			1,2,3,7,8,9-HxCDD	8.8E-11	--	8.8E-11	Reproductive	4.9E-06	--	4.9E-06
			1,2,3,4,6,7,8-HpCDD	6.3E-11	--	6.3E-11	Reproductive	3.5E-06	--	3.5E-06
			OCDD	2.0E-11	--	2.0E-11	Reproductive	1.1E-06	--	1.1E-06
			2,3,7,8-TCDF	4.8E-11	--	4.8E-11	Reproductive	2.7E-06	--	2.7E-06
			1,2,3,7,8-PeCDF	1.2E-11	--	1.2E-11	Reproductive	6.4E-07	--	6.4E-07
			2,3,4,7,8-PeCDF	2.0E-10	--	2.0E-10	Reproductive	1.1E-05	--	1.1E-05
			1,2,3,4,7,8-HxCDF	1.9E-10	--	1.9E-10	Reproductive	1.0E-05	--	1.0E-05
			1,2,3,6,7,8-HxCDF	4.5E-11	--	4.5E-11	Reproductive	2.5E-06	--	2.5E-06
			1,2,3,7,8,9-HxCDF	2.7E-10	--	2.7E-10	Reproductive	1.5E-05	--	1.5E-05
			2,3,4,6,7,8-HxCDF	2.9E-11	--	2.9E-11	Reproductive	1.6E-06	--	1.6E-06
			1,2,3,4,6,7,8-HpCDF	7.9E-11	--	7.9E-11	Reproductive	4.4E-06	--	4.4E-06
			1,2,3,4,7,8,9-HpCDF	5.0E-12	--	5.0E-12	Reproductive	2.8E-07	--	2.8E-07
			OCDF	4.4E-12	--	4.4E-12	Reproductive	2.5E-07	--	2.5E-07
			KM TEQ DF	2.5E-09	--	2.5E-09	Reproductive	1.4E-04	--	1.4E-04
			PCB-77	2.1E-12	--	2.1E-12	Reproductive	1.2E-07	--	1.2E-07
			PCB-81	2.1E-13	--	2.1E-13	Reproductive	1.2E-08	--	1.2E-08
			PCB-105	2.2E-12	--	2.2E-12	Reproductive	1.2E-07	--	1.2E-07

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-114	1.2E-13	--	1.2E-13	Reproductive	6.5E-09	--	6.5E-09
			PCB-118	5.0E-12	--	5.0E-12	Reproductive	2.8E-07	--	2.8E-07
			PCB-123	9.7E-14	--	9.7E-14	Reproductive	5.4E-09	--	5.4E-09
			PCB-126	6.8E-11	--	6.8E-11	Reproductive	3.8E-06	--	3.8E-06
			PCB-156/157	5.9E-13	--	5.9E-13	Reproductive	3.3E-08	--	3.3E-08
			PCB-167	2.0E-13	--	2.0E-13	Reproductive	1.1E-08	--	1.1E-08
			PCB-169	1.2E-11	--	1.2E-11	Reproductive	6.8E-07	--	6.8E-07
			PCB-189	2.6E-14	--	2.6E-14	Reproductive	1.5E-09	--	1.5E-09
			KM TEQ PCB	1.1E-10	--	1.1E-10	Reproductive	6.2E-06	--	6.2E-06
			PAHs							
			Benz(a)anthracene	2.0E-11	--	2.0E-11	--	--	--	--
			Benzo(a)pyrene	2.6E-10	--	2.6E-10	Developmental	2.0E-06	--	2.0E-06
			Benzo(b)fluoranthene	3.5E-11	--	3.5E-11	--	--	--	--
			Benzo(k)fluoranthene	1.6E-12	--	1.6E-12	--	--	--	--
			Chrysene	3.4E-13	--	3.4E-13	--	--	--	--
			Dibenz(a,h)anthracene	6.6E-11	--	6.6E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.5E-11	--	1.5E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	7.0E-08	1.2E-06	1.3E-06
			Pesticides & Organics							
			Chloroform	2.5E-11	5.9E-11	8.4E-11	Liver	4.7E-07	1.1E-06	1.6E-06
			Trichloroethylene	1.0E-10	4.4E-10	5.4E-10	Thymus, Blood, Immune, Developmental	1.0E-05	4.5E-05	5.5E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	6.9E-05	8.2E-05	1.5E-04
			Arsenic, inorganic	1.3E-08	2.3E-09	1.5E-08	Skin, Blood	1.7E-04	3.0E-05	2.0E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	3.4E-08	4.6E-07	5.0E-07
			Chromium (VI)	1.9E-09	2.7E-08	2.9E-08	No Effect	2.9E-06	4.2E-05	4.5E-05
			Iron	--	--	--	GI Tract	3.0E-05	5.3E-06	3.5E-05
			Manganese	--	--	--	Neurological	1.1E-04	5.0E-04	6.2E-04
			Mercury	--	--	--	Immune	3.5E-06	8.8E-06	1.2E-05
			Thallium	--	--	--	Skin, Hair	4.9E-05	8.7E-06	5.8E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			3.2E-09				1.8E-04
			Total DLCs (based on KM TEQs)			2.6E-09				1.4E-04
			Total PCDD/Fs (excluding KM TEQ)			3.1E-09				1.7E-04
			Total PCDD/Fs (based on KM TEQ)			2.5E-09				1.4E-04
			Total DL-PCBs (excluding KM TEQ)			9.1E-11				5.1E-06
			Total DL-PCBs (based on KM TEQ)			1.1E-10				6.2E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			9.1E-11				5.1E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-10				6.2E-06
			Total PAHs			3.9E-10				3.3E-06
			Total Organics			6.3E-10				5.7E-05
			Total Inorganics			4.4E-08				1.1E-03
	Crabbing - Surface Water Total (excluding KM TEQs)					4.8E-08				1.4E-03
	Crabbing - Surface Water Total (based on KM TEQs)					4.7E-08				1.3E-03
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						3.5E-04				3.0E+01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						3.5E-04				3.0E+01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						6.8E-05				9.1E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						6.5E-05				8.9E+00

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SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.1E-01		Blood HI =		2.1E-01
				Body Weight HI =		4.3E-04		Body Weight HI =		4.3E-04
				Developmental HI =		1.5E-02		Developmental HI =		1.5E-02
				GI Tract HI =		2.5E-01		GI Tract HI =		2.5E-01
				Hair HI =		6.9E-03		Hair HI =		6.9E-03
				Immune HI =		4.5E-01		Immune HI =		4.5E-01
				Kidney HI =		5.8E-03		Kidney HI =		5.8E-03
				Liver HI =		3.0E+00		Liver HI =		3.0E+00
				Neurological HI =		1.6E+00		Neurological HI =		1.6E+00
				No Effect HI =		3.3E-04		No Effect HI =		3.3E-04
				Organ Weights HI =		4.2E-04		Organ Weights HI =		4.2E-04
				Reproductive HI =		1.3E+01		Reproductive HI =		1.4E+01
				Skin HI =		1.9E-01		Skin HI =		1.9E-01
				Thymus HI =		8.8E-05		Thymus HI =		8.8E-05
				Thyroid HI =		3.4E-01		Thyroid HI =		3.4E-01
				Urinary HI =		4.4E-02		Urinary HI =		4.4E-02
				Whole Body HI =		9.1E+00		Whole Body HI =		9.1E+00
			American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.4E-01		Blood HI =		2.4E-01
				Body Weight HI =		4.3E-04		Body Weight HI =		4.3E-04
				Developmental HI =		2.2E-02		Developmental HI =		2.2E-02
				GI Tract HI =		1.3E-01		GI Tract HI =		1.3E-01
				Hair HI =		6.5E-03		Hair HI =		6.5E-03
				Immune HI =		6.2E-01		Immune HI =		6.2E-01
				Kidney HI =		5.8E-03		Kidney HI =		5.8E-03
				Liver HI =		4.1E+00		Liver HI =		4.1E+00
				Neurological HI =		2.0E+00		Neurological HI =		2.0E+00
				No Effect HI =		8.6E-04		No Effect HI =		8.6E-04
				Organ Weights HI =		4.2E-04		Organ Weights HI =		4.2E-04
				Reproductive HI =		1.7E+01		Reproductive HI =		2.1E+01
				Skin HI =		2.0E-01		Skin HI =		2.0E-01
				Thymus HI =		8.8E-05		Thymus HI =		8.8E-05
				Thyroid HI =		1.7E-02		Thyroid HI =		1.7E-02
				Urinary HI =		4.5E-02		Urinary HI =		4.5E-02
				Whole Body HI =		1.3E+01		Whole Body HI =		1.3E+01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.0E-01		Blood HI =		3.0E-01
				Body Weight HI =		2.7E-04		Body Weight HI =		2.7E-04
				Developmental HI =		4.2E-03		Developmental HI =		4.2E-03
				GI Tract HI =		7.7E+00		GI Tract HI =		7.7E+00
				Hair HI =		6.7E-03		Hair HI =		6.7E-03
				Immune HI =		1.4E-01		Immune HI =		1.4E-01
				Kidney HI =		3.2E-03		Kidney HI =		3.2E-03
				Liver HI =		9.1E-01		Liver HI =		9.1E-01
				Neurological HI =		4.9E-01		Neurological HI =		4.9E-01
				No Effect HI =		1.2E-04		No Effect HI =		1.2E-04
				Organ Weights HI =		2.7E-04		Organ Weights HI =		2.7E-04
				Reproductive HI =		1.6E+01		Reproductive HI =		1.6E+01
				Skin HI =		3.0E-01		Skin HI =		3.0E-01
				Thymus HI =		5.5E-05		Thymus HI =		5.5E-05
				Thyroid HI =		8.3E-02		Thyroid HI =		8.3E-02
				Urinary HI =		1.4E-01		Urinary HI =		1.4E-01
				Whole Body HI =		4.4E+00		Whole Body HI =		4.4E+00
			Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.9E-01		Blood HI =		2.9E-01
				Body Weight HI =		2.7E-04		Body Weight HI =		2.7E-04
				Developmental HI =		1.3E-02		Developmental HI =		1.3E-02
				GI Tract HI =		4.9E+00		GI Tract HI =		4.9E+00
				Hair HI =		5.1E-03		Hair HI =		5.1E-03
				Immune HI =		1.6E-01		Immune HI =		1.6E-01
				Kidney HI =		3.5E-03		Kidney HI =		3.5E-03
				Liver HI =		2.2E-01		Liver HI =		2.2E-01
				Neurological HI =		5.9E-01		Neurological HI =		5.9E-01
				No Effect HI =		1.1E-04		No Effect HI =		1.1E-04
				Organ Weights HI =		2.7E-04		Organ Weights HI =		2.7E-04
				Reproductive HI =		2.3E+00		Reproductive HI =		2.1E+00
				Skin HI =		2.7E-01		Skin HI =		2.7E-01
				Thymus HI =		5.5E-05		Thymus HI =		5.5E-05
				Thyroid HI =		6.7E-02		Thyroid HI =		6.7E-02
				Urinary HI =		7.6E-02		Urinary HI =		7.6E-02
				Whole Body HI =		4.3E-01		Whole Body HI =		4.3E-01

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	7.2E-05	--	7.2E-05	Reproductive	8.0E+00	--	8.0E+00
			1,2,3,7,8-PeCDD	3.9E-06	--	3.9E-06	Reproductive	4.3E-01	--	4.3E-01
			1,2,3,4,7,8-HxCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,6,7,8-HxCDD	5.5E-07	--	5.5E-07	Reproductive	6.1E-02	--	6.1E-02
			1,2,3,7,8,9-HxCDD	1.3E-07	--	1.3E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,6,7,8-HpCDD	6.2E-08	--	6.2E-08	Reproductive	6.9E-03	--	6.9E-03
			OCDD	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			2,3,7,8-TCDF	1.5E-06	--	1.5E-06	Reproductive	1.6E-01	--	1.6E-01
			1,2,3,7,8-PeCDF	4.0E-07	--	4.0E-07	Reproductive	4.4E-02	--	4.4E-02
			2,3,4,7,8-PeCDF	6.4E-06	--	6.4E-06	Reproductive	7.1E-01	--	7.1E-01
			1,2,3,4,7,8-HxCDF	9.5E-07	--	9.5E-07	Reproductive	1.1E-01	--	1.1E-01
			1,2,3,6,7,8-HxCDF	8.6E-07	--	8.6E-07	Reproductive	9.5E-02	--	9.5E-02
			1,2,3,7,8,9-HxCDF	9.9E-08	--	9.9E-08	Reproductive	1.1E-02	--	1.1E-02
			2,3,4,6,7,8-HxCDF	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,4,6,7,8-HpCDF	2.0E-07	--	2.0E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,4,7,8,9-HpCDF	9.4E-09	--	9.4E-09	Reproductive	1.0E-03	--	1.0E-03
			OCDF	5.9E-10	--	5.9E-10	Reproductive	6.6E-05	--	6.6E-05
			KM TEQ DF	8.6E-05	--	8.6E-05	Reproductive	9.5E+00	--	9.5E+00
			PCB-77	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			PCB-81	5.0E-08	--	5.0E-08	Reproductive	5.5E-03	--	5.5E-03
			PCB-105	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-114	1.5E-07	--	1.5E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-118	8.0E-06	--	8.0E-06	Reproductive	8.9E-01	--	8.9E-01
			PCB-123	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-126	7.9E-05	--	7.9E-05	Reproductive	8.7E+00	--	8.7E+00
			PCB-156/157	7.3E-07	--	7.3E-07	Reproductive	8.2E-02	--	8.2E-02
			PCB-167	3.2E-07	--	3.2E-07	Reproductive	3.6E-02	--	3.6E-02
			PCB-169	9.9E-07	--	9.9E-07	Reproductive	1.1E-01	--	1.1E-01
			PCB-189	5.9E-08	--	5.9E-08	Reproductive	6.6E-03	--	6.6E-03
			KM TEQ PCB	1.0E-04	--	1.0E-04	Reproductive	1.1E+01	--	1.1E+01
			Non-DL PCBs							
			Total Non-DL PCBs	4.7E-05	--	4.7E-05	Whole Body	1.4E+01	--	1.4E+01
			PAHs							
			Benz(a)anthracene	2.0E-07	--	2.0E-07	--	--	--	--
			Benzo(a)pyrene	2.0E-06	--	2.0E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	2.0E-07	--	2.0E-07	--	--	--	--
			Chrysene	2.0E-09	--	2.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	2.0E-06	--	2.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.0E-07	--	2.0E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.5E-07	--	2.5E-07	Liver	4.1E-01	--	4.1E-01
			2,4'-DDE	1.1E-07	--	1.1E-07	Liver	1.3E-02	--	1.3E-02
			2,4'-DDT	6.9E-08	--	6.9E-08	Liver	4.7E-03	--	4.7E-03
			4,4'-DDD	1.2E-06	--	1.2E-06	Liver	2.0E+00	--	2.0E+00
			4,4'-DDE	2.5E-06	--	2.5E-06	Liver	2.8E-01	--	2.8E-01
			4,4'-DDT	2.8E-07	--	2.8E-07	Liver	1.9E-02	--	1.9E-02
			Benzaldehyde	3.0E-07	--	3.0E-07	GI Tract, Kidney	8.8E-03	--	8.8E-03
			Chlordane, alpha (cis)	3.3E-07	--	3.3E-07	Liver	2.2E-02	--	2.2E-02

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, gamma (trans)	7.3E-08	--	7.3E-08	Liver	4.9E-03	--	4.9E-03
			Dieldrin	7.1E-06	--	7.1E-06	Liver	1.0E-01	--	1.0E-01
			Heptachlor epoxide, cis-	9.8E-07	--	9.8E-07	Liver	9.7E-02	--	9.7E-02
			Heptachlor epoxide, trans-	4.7E-08	--	4.7E-08	Liver	4.7E-03	--	4.7E-03
			Hexachlorobenzene	1.4E-07	--	1.4E-07	Liver	1.3E-03	--	1.3E-03
			Mirex	2.7E-07	--	2.7E-07	Liver, Thyroid	8.6E-04	--	8.6E-04
			Nonachlor, cis-	1.3E-07	--	1.3E-07	Liver	4.4E-02	--	4.4E-02
			Nonachlor, trans-	3.2E-07	--	3.2E-07	Liver	6.8E-01	--	6.8E-01
			Oxychlordane	9.3E-08	--	9.3E-08	Liver	3.5E-02	--	3.5E-02
			Pyridine	--	--	--	Liver	8.8E-01	--	8.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	4.4E-03	--	4.4E-03
			Arsenic, organic	--	--	--	Urinary	3.5E-02	--	3.5E-02
			Arsenic, inorganic	1.0E-05	--	1.0E-05	Skin, Blood	2.6E-01	--	2.6E-01
			Cadmium	--	--	--	Urinary	3.1E-02	--	3.1E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	2.9E-04	--	2.9E-04
			Cobalt	--	--	--	Thyroid	5.1E-01	--	5.1E-01
			Copper	--	--	--	GI Tract	3.3E-01	--	3.3E-01
			Iron	--	--	--	GI Tract	6.9E-03	--	6.9E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.4E-03	--	1.4E-03
			Mercury	--	--	--	Immune	6.8E-01	--	6.8E-01
			Methyl Mercury	--	--	--	Neurological	2.5E+00	--	2.5E+00
			Selenium	--	--	--	Whole Body	7.4E-02	--	7.4E-02
			Silver	--	--	--	Skin	2.7E-03	--	2.7E-03
			Vanadium	--	--	--	Hair	3.8E-03	--	3.8E-03
			Zinc	--	--	--	Blood	3.3E-02	--	3.3E-02
			Total DLCs (excluding KM TEQs)			1.8E-04				2.0E+01
			Total DLCs (based on KM TEQs)			1.9E-04				2.1E+01
			Total PCDD/Fs (excluding KM TEQ)			8.7E-05				9.7E+00
			Total PCDD/Fs (based on KM TEQ)			8.6E-05				9.5E+00
			Total DL-PCBs (excluding KM TEQ)			9.1E-05				1.0E+01
			Total DL-PCBs (based on KM TEQ)			1.0E-04				1.1E+01
			Total Non-DL PCBs			4.7E-05				1.4E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.4E-04				2.4E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.5E-04				2.5E+01
			Total PAHs			4.7E-06				1.9E-02
			Total Organics			1.4E-05				4.6E+00
			Total Inorganics			1.0E-05				4.4E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					2.6E-04				4.3E+01
	Mixed Fish/All Species Total (based on KM TEQs)					2.6E-04				4.4E+01
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	7.7E-05	--	7.7E-05	Reproductive	8.5E+00	--	8.5E+00
			1,2,3,7,8-PeCDD	6.1E-06	--	6.1E-06	Reproductive	6.8E-01	--	6.8E-01
			1,2,3,4,7,8-HxCDD	3.6E-07	--	3.6E-07	Reproductive	4.1E-02	--	4.1E-02
			1,2,3,6,7,8-HxCDD	1.7E-06	--	1.7E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,7,8,9-HxCDD	3.0E-07	--	3.0E-07	Reproductive	3.4E-02	--	3.4E-02

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	1.1E-07	--	1.1E-07	Reproductive	1.3E-02	--	1.3E-02
			OCDD	8.3E-09	--	8.3E-09	Reproductive	9.2E-04	--	9.2E-04
			2,3,7,8-TCDF	9.1E-08	--	9.1E-08	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,7,8-PeCDF	3.7E-07	--	3.7E-07	Reproductive	4.1E-02	--	4.1E-02
			2,3,4,7,8-PeCDF	1.0E-05	--	1.0E-05	Reproductive	1.1E+00	--	1.1E+00
			1,2,3,4,7,8-HxCDF	2.3E-06	--	2.3E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,6,7,8-HxCDF	1.8E-06	--	1.8E-06	Reproductive	2.0E-01	--	2.0E-01
			1,2,3,7,8,9-HxCDF	9.9E-08	--	9.9E-08	Reproductive	1.1E-02	--	1.1E-02
			2,3,4,6,7,8-HxCDF	3.2E-07	--	3.2E-07	Reproductive	3.5E-02	--	3.5E-02
			1,2,3,4,6,7,8-HpCDF	4.1E-07	--	4.1E-07	Reproductive	4.6E-02	--	4.6E-02
			1,2,3,4,7,8,9-HpCDF	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			OCDF	9.4E-10	--	9.4E-10	Reproductive	1.0E-04	--	1.0E-04
			KM TEQ DF	9.8E-05	--	9.8E-05	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	6.5E-08	--	6.5E-08	Reproductive	7.3E-03	--	7.3E-03
			PCB-81	3.1E-08	--	3.1E-08	Reproductive	3.4E-03	--	3.4E-03
			PCB-105	5.4E-06	--	5.4E-06	Reproductive	6.0E-01	--	6.0E-01
			PCB-114	3.5E-07	--	3.5E-07	Reproductive	3.8E-02	--	3.8E-02
			PCB-118	1.9E-05	--	1.9E-05	Reproductive	2.1E+00	--	2.1E+00
			PCB-123	3.7E-07	--	3.7E-07	Reproductive	4.1E-02	--	4.1E-02
			PCB-126	1.0E-04	--	1.0E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-156/157	1.6E-06	--	1.6E-06	Reproductive	1.8E-01	--	1.8E-01
			PCB-167	7.1E-07	--	7.1E-07	Reproductive	7.9E-02	--	7.9E-02
			PCB-169	1.1E-06	--	1.1E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	1.3E-07	--	1.3E-07	Reproductive	1.4E-02	--	1.4E-02
			KM TEQ PCB	1.9E-04	--	1.9E-04	Reproductive	2.1E+01	--	2.1E+01
			Non-DL PCBs							
			Total Non-DL PCBs	6.9E-05	--	6.9E-05	Whole Body	2.0E+01	--	2.0E+01
			PAHs							
			Benz(a)anthracene	3.1E-07	--	3.1E-07	--	--	--	--
			Benzo(a)pyrene	3.1E-06	--	3.1E-06	Developmental	2.9E-02	--	2.9E-02
			Benzo(b)fluoranthene	3.1E-07	--	3.1E-07	--	--	--	--
			Chrysene	3.1E-09	--	3.1E-09	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-06	--	3.1E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	4.3E-08	--	4.3E-08	Liver	6.9E-02	--	6.9E-02
			2,4'-DDE	3.9E-08	--	3.9E-08	Liver	4.5E-03	--	4.5E-03
			2,4'-DDT	7.1E-09	--	7.1E-09	Liver	4.9E-04	--	4.9E-04
			4,4'-DDD	1.8E-06	--	1.8E-06	Liver	3.0E+00	--	3.0E+00
			4,4'-DDE	5.5E-06	--	5.5E-06	Liver	6.3E-01	--	6.3E-01
			4,4'-DDT	1.5E-07	--	1.5E-07	Liver	1.0E-02	--	1.0E-02
			Benzaldehyde	3.0E-07	--	3.0E-07	GI Tract, Kidney	8.8E-03	--	8.8E-03
			Chlordane, alpha (cis)	2.8E-07	--	2.8E-07	Liver	1.9E-02	--	1.9E-02
			Chlordane, gamma (trans)	7.9E-08	--	7.9E-08	Liver	5.3E-03	--	5.3E-03
			Dieldrin	1.3E-05	--	1.3E-05	Liver	1.9E-01	--	1.9E-01
			Heptachlor epoxide, cis-	2.0E-06	--	2.0E-06	Liver	2.0E-01	--	2.0E-01
			Heptachlor epoxide, trans-	2.0E-07	--	2.0E-07	Liver	2.0E-02	--	2.0E-02
			Hexachlorobenzene	3.8E-07	--	3.8E-07	Liver	3.5E-03	--	3.5E-03
			Mirex	4.4E-07	--	4.4E-07	Liver, Thyroid	1.4E-03	--	1.4E-03

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Nonachlor, cis-	2.2E-07	--	2.2E-07	Liver	7.3E-02	--	7.3E-02
			Nonachlor, trans-	5.3E-07	--	5.3E-07	Liver	1.1E+00	--	1.1E+00
			Oxychlordane	2.9E-07	--	2.9E-07	Liver	1.1E-01	--	1.1E-01
			Pyridine	--	--	--	Liver	8.8E-01	--	8.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	4.3E-03	--	4.3E-03
			Arsenic, organic	--	--	--	Urinary	3.6E-02	--	3.6E-02
			Arsenic, inorganic	1.0E-05	--	1.0E-05	Skin, Blood	2.7E-01	--	2.7E-01
			Cadmium	--	--	--	Urinary	3.1E-02	--	3.1E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	1.1E-03	--	1.1E-03
			Cobalt	--	--	--	Thyroid	1.6E-02	--	1.6E-02
			Copper	--	--	--	GI Tract	1.4E-01	--	1.4E-01
			Iron	--	--	--	GI Tract	7.3E-03	--	7.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.6E-03	--	1.6E-03
			Mercury	--	--	--	Immune	9.5E-01	--	9.5E-01
			Methyl Mercury	--	--	--	Neurological	3.1E+00	--	3.1E+00
			Selenium	--	--	--	Whole Body	7.0E-02	--	7.0E-02
			Silver	--	--	--	Skin	2.7E-03	--	2.7E-03
			Vanadium	--	--	--	Hair	3.1E-03	--	3.1E-03
			Zinc	--	--	--	Blood	6.6E-02	--	6.6E-02
			Total DLCs (excluding KM TEQs)			2.3E-04				2.6E+01
			Total DLCs (based on KM TEQs)			2.9E-04				3.2E+01
			Total PCDD/Fs (excluding KM TEQ)			1.0E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			9.8E-05				1.1E+01
			Total DL-PCBs (excluding KM TEQ)			1.3E-04				1.5E+01
			Total DL-PCBs (based on KM TEQ)			1.9E-04				2.1E+01
			Total Non-DL PCBs			6.9E-05				2.0E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.0E-04				3.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-04				4.1E+01
			Total PAHs			7.2E-06				2.9E-02
			Total Organics			2.6E-05				6.3E+00
			Total Inorganics			1.0E-05				4.7E+00
	American Eel Total (excluding KM TEQs)					3.5E-04				5.7E+01
	American Eel Total (based on KM TEQs)					4.0E-04				6.3E+01
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.3E-05	--	1.3E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	2.6E-06	--	2.6E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,4,7,8-HxCDD	6.3E-08	--	6.3E-08	Reproductive	7.0E-03	--	7.0E-03
			1,2,3,6,7,8-HxCDD	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			1,2,3,7,8,9-HxCDD	6.0E-08	--	6.0E-08	Reproductive	6.7E-03	--	6.7E-03
			1,2,3,4,6,7,8-HpCDD	1.2E-08	--	1.2E-08	Reproductive	1.4E-03	--	1.4E-03
			OCDD	6.7E-10	--	6.7E-10	Reproductive	7.5E-05	--	7.5E-05
			2,3,7,8-TCDF	3.3E-07	--	3.3E-07	Reproductive	3.7E-02	--	3.7E-02
			1,2,3,7,8-PeCDF	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			2,3,4,7,8-PeCDF	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			1,2,3,4,7,8-HxCDF	8.2E-08	--	8.2E-08	Reproductive	9.1E-03	--	9.1E-03

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDF	2.0E-07	--	2.0E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,7,8,9-HxCDF	7.4E-08	--	7.4E-08	Reproductive	8.3E-03	--	8.3E-03
			2,3,4,6,7,8-HxCDF	4.9E-08	--	4.9E-08	Reproductive	5.4E-03	--	5.4E-03
			1,2,3,4,6,7,8-HpCDF	5.7E-08	--	5.7E-08	Reproductive	6.4E-03	--	6.4E-03
			1,2,3,4,7,8,9-HpCDF	6.6E-09	--	6.6E-09	Reproductive	7.3E-04	--	7.3E-04
			OCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			KM TEQ DF	1.8E-05	--	1.8E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-77	8.5E-08	--	8.5E-08	Reproductive	9.5E-03	--	9.5E-03
			PCB-81	9.4E-09	--	9.4E-09	Reproductive	1.0E-03	--	1.0E-03
			PCB-105	3.3E-07	--	3.3E-07	Reproductive	3.6E-02	--	3.6E-02
			PCB-114	2.0E-08	--	2.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-118	1.4E-06	--	1.4E-06	Reproductive	1.5E-01	--	1.5E-01
			PCB-123	1.9E-08	--	1.9E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-126	3.3E-05	--	3.3E-05	Reproductive	3.7E+00	--	3.7E+00
			PCB-156/157	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-167	7.6E-08	--	7.6E-08	Reproductive	8.4E-03	--	8.4E-03
			PCB-169	4.7E-07	--	4.7E-07	Reproductive	5.2E-02	--	5.2E-02
			PCB-189	1.5E-08	--	1.5E-08	Reproductive	1.6E-03	--	1.6E-03
			KM TEQ PCB	3.5E-05	--	3.5E-05	Reproductive	3.9E+00	--	3.9E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-05	--	1.4E-05	Whole Body	4.0E+00	--	4.0E+00
			PAHs							
			Benz(a)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Benzo(a)pyrene	1.3E-06	--	1.3E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.3E-07	--	1.3E-07	--	--	--	--
			Chrysene	1.3E-09	--	1.3E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-06	--	1.3E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-07	--	1.3E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	7.9E-09	--	7.9E-09	Liver	1.3E-02	--	1.3E-02
			2,4'-DDE	2.0E-08	--	2.0E-08	Liver	2.3E-03	--	2.3E-03
			2,4'-DDT	4.3E-09	--	4.3E-09	Liver	3.0E-04	--	3.0E-04
			4,4'-DDD	9.1E-08	--	9.1E-08	Liver	1.5E-01	--	1.5E-01
			4,4'-DDE	6.0E-07	--	6.0E-07	Liver	6.8E-02	--	6.8E-02
			4,4'-DDT	4.1E-07	--	4.1E-07	Liver	2.8E-02	--	2.8E-02
			Benzaldehyde	3.0E-07	--	3.0E-07	GI Tract, Kidney	8.8E-03	--	8.8E-03
			Chlordane, alpha (cis)	1.2E-07	--	1.2E-07	Liver	8.0E-03	--	8.0E-03
			Chlordane, gamma (trans)	4.6E-08	--	4.6E-08	Liver	3.1E-03	--	3.1E-03
			Dieldrin	4.2E-06	--	4.2E-06	Liver	6.1E-02	--	6.1E-02
			Heptachlor epoxide, cis-	6.4E-07	--	6.4E-07	Liver	6.3E-02	--	6.3E-02
			Heptachlor epoxide, trans-	9.0E-09	--	9.0E-09	Liver	8.9E-04	--	8.9E-04
			Hexachlorobenzene	5.0E-08	--	5.0E-08	Liver	4.6E-04	--	4.6E-04
			Mirex	1.4E-07	--	1.4E-07	Liver, Thyroid	4.5E-04	--	4.5E-04
			Nonachlor, cis-	3.4E-08	--	3.4E-08	Liver	1.1E-02	--	1.1E-02
			Nonachlor, trans-	6.2E-08	--	6.2E-08	Liver	1.3E-01	--	1.3E-01
			Oxychlordane	7.1E-09	--	7.1E-09	Liver	2.7E-03	--	2.7E-03
			Pyridine	--	--	--	Liver	8.8E-01	--	8.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	4.0E-03	--	4.0E-03

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Arsenic, organic	--	--	--	Urinary	2.2E-02	--	2.2E-02
			Arsenic, inorganic	6.3E-06	--	6.3E-06	Skin, Blood	1.6E-01	--	1.6E-01
			Cadmium	--	--	--	Urinary	3.1E-02	--	3.1E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	4.0E-05	--	4.0E-05
			Cobalt	--	--	--	Thyroid	5.0E-01	--	5.0E-01
			Copper	--	--	--	GI Tract	5.4E-01	--	5.4E-01
			Iron	--	--	--	GI Tract	9.6E-03	--	9.6E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	8.8E-04	--	8.8E-04
			Mercury	--	--	--	Immune	7.4E-01	--	7.4E-01
			Methyl Mercury	--	--	--	Neurological	2.6E+00	--	2.6E+00
			Selenium	--	--	--	Whole Body	7.3E-02	--	7.3E-02
			Silver	--	--	--	Skin	2.7E-03	--	2.7E-03
			Vanadium	--	--	--	Hair	3.1E-03	--	3.1E-03
			Zinc	--	--	--	Blood	3.9E-02	--	3.9E-02
			Total DLCs (excluding KM TEQs)			5.5E-05				6.1E+00
			Total DLCs (based on KM TEQs)			5.3E-05				5.9E+00
			Total PCDD/Fs (excluding KM TEQ)			1.9E-05				2.1E+00
			Total PCDD/Fs (based on KM TEQ)			1.8E-05				1.9E+00
			Total DL-PCBs (excluding KM TEQ)			3.6E-05				4.0E+00
			Total DL-PCBs (based on KM TEQ)			3.5E-05				3.9E+00
			Total Non-DL PCBs			1.4E-05				4.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			5.0E-05				8.0E+00
			Total PCBs (DL & NDL; based on KM TEQ)			4.9E-05				7.9E+00
			Total PAHs			3.0E-06				1.2E-02
			Total Organics			6.7E-06				1.4E+00
			Total Inorganics			6.3E-06				4.8E+00
	Bluefish Total (excluding KM TEQs)					8.5E-05				1.6E+01
	Bluefish Total (based on KM TEQs)					8.3E-05				1.6E+01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.2E-05	--	8.2E-05	Reproductive	9.1E+00	--	9.1E+00
			1,2,3,7,8-PeCDD	4.8E-06	--	4.8E-06	Reproductive	5.3E-01	--	5.3E-01
			1,2,3,4,7,8-HxCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,6,7,8-HxCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,7,8,9-HxCDD	7.5E-08	--	7.5E-08	Reproductive	8.3E-03	--	8.3E-03
			1,2,3,4,6,7,8-HpCDD	1.3E-07	--	1.3E-07	Reproductive	1.4E-02	--	1.4E-02
			OCDD	4.2E-08	--	4.2E-08	Reproductive	4.7E-03	--	4.7E-03
			2,3,7,8-TCDF	3.3E-06	--	3.3E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDF	5.8E-07	--	5.8E-07	Reproductive	6.4E-02	--	6.4E-02
			2,3,4,7,8-PeCDF	8.5E-06	--	8.5E-06	Reproductive	9.5E-01	--	9.5E-01
			1,2,3,4,7,8-HxCDF	3.6E-07	--	3.6E-07	Reproductive	4.0E-02	--	4.0E-02
			1,2,3,6,7,8-HxCDF	1.1E-06	--	1.1E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,6,7,8-HxCDF	8.6E-08	--	8.6E-08	Reproductive	9.5E-03	--	9.5E-03
			1,2,3,4,6,7,8-HpCDF	2.9E-07	--	2.9E-07	Reproductive	3.2E-02	--	3.2E-02
			1,2,3,4,7,8,9-HpCDF	9.5E-09	--	9.5E-09	Reproductive	1.1E-03	--	1.1E-03
			OCDF	4.9E-10	--	4.9E-10	Reproductive	5.5E-05	--	5.5E-05

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	1.0E-04	--	1.0E-04	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	9.9E-07	--	9.9E-07	Reproductive	1.1E-01	--	1.1E-01
			PCB-81	7.4E-08	--	7.4E-08	Reproductive	8.2E-03	--	8.2E-03
			PCB-105	1.5E-06	--	1.5E-06	Reproductive	1.7E-01	--	1.7E-01
			PCB-114	1.9E-07	--	1.9E-07	Reproductive	2.1E-02	--	2.1E-02
			PCB-118	9.8E-06	--	9.8E-06	Reproductive	1.1E+00	--	1.1E+00
			PCB-123	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-126	1.6E-04	--	1.6E-04	Reproductive	1.8E+01	--	1.8E+01
			PCB-156/157	8.6E-07	--	8.6E-07	Reproductive	9.5E-02	--	9.5E-02
			PCB-167	3.8E-07	--	3.8E-07	Reproductive	4.2E-02	--	4.2E-02
			PCB-169	8.7E-07	--	8.7E-07	Reproductive	9.7E-02	--	9.7E-02
			PCB-189	7.4E-08	--	7.4E-08	Reproductive	8.3E-03	--	8.3E-03
			KM TEQ PCB	1.7E-04	--	1.7E-04	Reproductive	1.9E+01	--	1.9E+01
			Non-DL PCBs							
			Total Non-DL PCBs	8.3E-05	--	8.3E-05	Whole Body	2.4E+01	--	2.4E+01
			PAHs							
			Benz(a)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Benzo(a)pyrene	1.3E-06	--	1.3E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.3E-07	--	1.3E-07	--	--	--	--
			Chrysene	1.3E-09	--	1.3E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-06	--	1.3E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-07	--	1.3E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	4.6E-07	--	4.6E-07	Liver	7.4E-01	--	7.4E-01
			2,4'-DDE	2.6E-07	--	2.6E-07	Liver	2.9E-02	--	2.9E-02
			2,4'-DDT	5.3E-08	--	5.3E-08	Liver	3.6E-03	--	3.6E-03
			4,4'-DDD	1.9E-06	--	1.9E-06	Liver	3.1E+00	--	3.1E+00
			4,4'-DDE	3.1E-06	--	3.1E-06	Liver	3.5E-01	--	3.5E-01
			4,4'-DDT	2.6E-07	--	2.6E-07	Liver	1.8E-02	--	1.8E-02
			Benzaldehyde	3.0E-07	--	3.0E-07	GI Tract, Kidney	8.8E-03	--	8.8E-03
			Chlordane, alpha (cis)	7.2E-07	--	7.2E-07	Liver	4.8E-02	--	4.8E-02
			Chlordane, gamma (trans)	1.3E-07	--	1.3E-07	Liver	8.5E-03	--	8.5E-03
			Dieldrin	1.0E-05	--	1.0E-05	Liver	1.5E-01	--	1.5E-01
			Heptachlor epoxide, cis-	9.7E-07	--	9.7E-07	Liver	9.6E-02	--	9.6E-02
			Heptachlor epoxide, trans-	9.0E-09	--	9.0E-09	Liver	8.9E-04	--	8.9E-04
			Hexachlorobenzene	9.7E-08	--	9.7E-08	Liver	8.8E-04	--	8.8E-04
			Mirex	3.1E-07	--	3.1E-07	Liver, Thyroid	1.0E-03	--	1.0E-03
			Nonachlor, cis-	2.2E-07	--	2.2E-07	Liver	7.5E-02	--	7.5E-02
			Nonachlor, trans-	5.4E-07	--	5.4E-07	Liver	1.2E+00	--	1.2E+00
			Oxychlordane	7.9E-08	--	7.9E-08	Liver	3.0E-02	--	3.0E-02
			Pyridine	--	--	--	Liver	8.8E-01	--	8.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	3.8E-03	--	3.8E-03
			Arsenic, organic	--	--	--	Urinary	3.9E-02	--	3.9E-02
			Arsenic, inorganic	1.1E-05	--	1.1E-05	Skin, Blood	2.9E-01	--	2.9E-01
			Cadmium	--	--	--	Urinary	3.1E-02	--	3.1E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	5.6E-05	--	5.6E-05
			Cobalt	--	--	--	Thyroid	4.5E-02	--	4.5E-02
			Copper	--	--	--	GI Tract	3.8E-01	--	3.8E-01

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Iron	--	--	--	GI Tract	6.5E-03	--	6.5E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.0E-03	--	1.0E-03
			Mercury	--	--	--	Immune	6.4E-01	--	6.4E-01
			Methyl Mercury	--	--	--	Neurological	2.3E+00	--	2.3E+00
			Selenium	--	--	--	Whole Body	5.1E-02	--	5.1E-02
			Silver	--	--	--	Skin	2.7E-03	--	2.7E-03
			Vanadium	--	--	--	Hair	4.1E-03	--	4.1E-03
			Zinc	--	--	--	Blood	1.7E-02	--	1.7E-02
			Total DLCs (excluding KM TEQs)			2.8E-04				3.1E+01
			Total DLCs (based on KM TEQs)			2.7E-04				3.0E+01
			Total PCDD/Fs (excluding KM TEQ)			1.0E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			1.0E-04				1.1E+01
			Total DL-PCBs (excluding KM TEQ)			1.8E-04				2.0E+01
			Total DL-PCBs (based on KM TEQ)			1.7E-04				1.9E+01
			Total Non-DL PCBs			8.3E-05				2.4E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-04				4.4E+01
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-04				4.3E+01
			Total PAHs			3.0E-06				1.2E-02
			Total Organics			1.9E-05				6.7E+00
			Total Inorganics			1.1E-05				3.8E+00
	Striped Bass Total (excluding KM TEQs)					4.0E-04				6.6E+01
	Striped Bass Total (based on KM TEQs)					3.9E-04				6.5E+01
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.8E-05	--	4.8E-05	Reproductive	5.3E+00	--	5.3E+00
			1,2,3,7,8-PeCDD	2.1E-06	--	2.1E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,4,7,8-HxCDD	7.1E-08	--	7.1E-08	Reproductive	7.8E-03	--	7.8E-03
			1,2,3,6,7,8-HxCDD	2.2E-07	--	2.2E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,7,8,9-HxCDD	9.4E-08	--	9.4E-08	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,6,7,8-HpCDD	2.7E-08	--	2.7E-08	Reproductive	3.0E-03	--	3.0E-03
			OCDD	1.2E-09	--	1.2E-09	Reproductive	1.3E-04	--	1.3E-04
			2,3,7,8-TCDF	2.3E-07	--	2.3E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,7,8-PeCDF	9.1E-08	--	9.1E-08	Reproductive	1.0E-02	--	1.0E-02
			2,3,4,7,8-PeCDF	2.3E-06	--	2.3E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDF	5.7E-07	--	5.7E-07	Reproductive	6.3E-02	--	6.3E-02
			1,2,3,6,7,8-HxCDF	2.3E-07	--	2.3E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,7,8,9-HxCDF	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			2,3,4,6,7,8-HxCDF	9.5E-08	--	9.5E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,6,7,8-HpCDF	4.3E-08	--	4.3E-08	Reproductive	4.8E-03	--	4.8E-03
			1,2,3,4,7,8,9-HpCDF	9.4E-09	--	9.4E-09	Reproductive	1.0E-03	--	1.0E-03
			OCDF	5.2E-10	--	5.2E-10	Reproductive	5.8E-05	--	5.8E-05
			KM TEQ DF	5.3E-05	--	5.3E-05	Reproductive	5.9E+00	--	5.9E+00
			PCB-77	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			PCB-81	3.9E-08	--	3.9E-08	Reproductive	4.3E-03	--	4.3E-03
			PCB-105	7.2E-07	--	7.2E-07	Reproductive	8.0E-02	--	8.0E-02
			PCB-114	6.2E-08	--	6.2E-08	Reproductive	6.8E-03	--	6.8E-03
			PCB-118	3.1E-06	--	3.1E-06	Reproductive	3.4E-01	--	3.4E-01

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	4.7E-08	--	4.7E-08	Reproductive	5.2E-03	--	5.2E-03
			PCB-126	3.8E-05	--	3.8E-05	Reproductive	4.2E+00	--	4.2E+00
			PCB-156/157	3.0E-07	--	3.0E-07	Reproductive	3.3E-02	--	3.3E-02
			PCB-167	1.4E-07	--	1.4E-07	Reproductive	1.5E-02	--	1.5E-02
			PCB-169	5.3E-07	--	5.3E-07	Reproductive	5.9E-02	--	5.9E-02
			PCB-189	2.1E-08	--	2.1E-08	Reproductive	2.3E-03	--	2.3E-03
			KM TEQ PCB	4.2E-05	--	4.2E-05	Reproductive	4.7E+00	--	4.7E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-05	--	1.7E-05	Whole Body	5.0E+00	--	5.0E+00
			PAHs							
			Benz(a)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Benzo(a)pyrene	1.3E-06	--	1.3E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.3E-07	--	1.3E-07	--	--	--	--
			Chrysene	1.3E-09	--	1.3E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-06	--	1.3E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-07	--	1.3E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	4.6E-08	--	4.6E-08	Liver	7.5E-02	--	7.5E-02
			2,4'-DDE	5.5E-08	--	5.5E-08	Liver	6.3E-03	--	6.3E-03
			2,4'-DDT	4.3E-09	--	4.3E-09	Liver	2.9E-04	--	2.9E-04
			4,4'-DDD	2.6E-07	--	2.6E-07	Liver	4.3E-01	--	4.3E-01
			4,4'-DDE	8.0E-07	--	8.0E-07	Liver	9.2E-02	--	9.2E-02
			4,4'-DDT	2.9E-08	--	2.9E-08	Liver	2.0E-03	--	2.0E-03
			Benzaldehyde	3.0E-07	--	3.0E-07	GI Tract, Kidney	8.8E-03	--	8.8E-03
			Chlordane, alpha (cis)	4.3E-08	--	4.3E-08	Liver	2.8E-03	--	2.8E-03
			Chlordane, gamma (trans)	1.4E-08	--	1.4E-08	Liver	9.3E-04	--	9.3E-04
			Dieldrin	1.3E-06	--	1.3E-06	Liver	1.9E-02	--	1.9E-02
			Heptachlor epoxide, cis-	1.8E-07	--	1.8E-07	Liver	1.8E-02	--	1.8E-02
			Heptachlor epoxide, trans-	9.0E-09	--	9.0E-09	Liver	8.9E-04	--	8.9E-04
			Hexachlorobenzene	4.5E-08	--	4.5E-08	Liver	4.1E-04	--	4.1E-04
			Mirex	6.6E-08	--	6.6E-08	Liver, Thyroid	2.1E-04	--	2.1E-04
			Nonachlor, cis-	2.3E-08	--	2.3E-08	Liver	7.6E-03	--	7.6E-03
			Nonachlor, trans-	5.7E-08	--	5.7E-08	Liver	1.2E-01	--	1.2E-01
			Oxychlordane	2.6E-08	--	2.6E-08	Liver	9.7E-03	--	9.7E-03
			Pyridine	--	--	--	Liver	8.8E-01	--	8.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	3.8E-03	--	3.8E-03
			Arsenic, organic	--	--	--	Urinary	5.6E-02	--	5.6E-02
			Arsenic, inorganic	1.6E-05	--	1.6E-05	Skin, Blood	4.1E-01	--	4.1E-01
			Cadmium	--	--	--	Urinary	3.1E-02	--	3.1E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	2.1E-04	--	2.1E-04
			Cobalt	--	--	--	Thyroid	1.9E+00	--	1.9E+00
			Copper	--	--	--	GI Tract	1.4E-01	--	1.4E-01
			Iron	--	--	--	GI Tract	5.0E-03	--	5.0E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.5E-03	--	1.5E-03
			Mercury	--	--	--	Immune	4.1E-01	--	4.1E-01
			Methyl Mercury	--	--	--	Neurological	1.4E+00	--	1.4E+00
			Selenium	--	--	--	Whole Body	8.7E-02	--	8.7E-02

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Silver	--	--	--	Skin	2.7E-03	--	2.7E-03
			Vanadium	--	--	--	Hair	4.1E-03	--	4.1E-03
			Zinc	--	--	--	Blood	1.5E-02	--	1.5E-02
			Total DLCs (excluding KM TEQs)			9.7E-05				1.1E+01
			Total DLCs (based on KM TEQs)			9.5E-05				1.1E+01
			Total PCDD/Fs (excluding KM TEQ)			5.4E-05				6.0E+00
			Total PCDD/Fs (based on KM TEQ)			5.3E-05				5.9E+00
			Total DL-PCBs (excluding KM TEQ)			4.3E-05				4.8E+00
			Total DL-PCBs (based on KM TEQ)			4.2E-05				4.7E+00
			Total Non-DL PCBs			1.7E-05				5.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-05				9.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			5.9E-05				9.7E+00
			Total PAHs			3.0E-06				1.2E-02
			Total Organics			3.3E-06				1.7E+00
			Total Inorganics			1.6E-05				4.6E+00
	Summer Flounder Total (excluding KM TEQs)					1.4E-04				2.2E+01
	Summer Flounder Total (based on KM TEQs)					1.3E-04				2.2E+01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.4E-04	--	1.4E-04	Reproductive	1.6E+01	--	1.6E+01
			1,2,3,7,8-PeCDD	3.7E-06	--	3.7E-06	Reproductive	4.1E-01	--	4.1E-01
			1,2,3,4,7,8-HxCDD	2.1E-07	--	2.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,6,7,8-HxCDD	5.3E-07	--	5.3E-07	Reproductive	5.8E-02	--	5.8E-02
			1,2,3,7,8,9-HxCDD	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDD	3.2E-08	--	3.2E-08	Reproductive	3.6E-03	--	3.6E-03
			OCDD	2.2E-09	--	2.2E-09	Reproductive	2.5E-04	--	2.5E-04
			2,3,7,8-TCDF	3.4E-06	--	3.4E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDF	7.9E-07	--	7.9E-07	Reproductive	8.8E-02	--	8.8E-02
			2,3,4,7,8-PeCDF	8.9E-06	--	8.9E-06	Reproductive	9.9E-01	--	9.9E-01
			1,2,3,4,7,8-HxCDF	1.4E-06	--	1.4E-06	Reproductive	1.6E-01	--	1.6E-01
			1,2,3,6,7,8-HxCDF	1.0E-06	--	1.0E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDF	9.1E-08	--	9.1E-08	Reproductive	1.0E-02	--	1.0E-02
			2,3,4,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,6,7,8-HpCDF	2.1E-07	--	2.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,4,7,8,9-HpCDF	7.6E-09	--	7.6E-09	Reproductive	8.5E-04	--	8.5E-04
			OCDF	5.7E-10	--	5.7E-10	Reproductive	6.3E-05	--	6.3E-05
			KM TEQ DF	1.6E-04	--	1.6E-04	Reproductive	1.8E+01	--	1.8E+01
			PCB-77	8.5E-07	--	8.5E-07	Reproductive	9.5E-02	--	9.5E-02
			PCB-81	9.6E-08	--	9.6E-08	Reproductive	1.1E-02	--	1.1E-02
			PCB-105	1.9E-06	--	1.9E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-114	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-118	7.3E-06	--	7.3E-06	Reproductive	8.1E-01	--	8.1E-01
			PCB-123	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-126	5.3E-05	--	5.3E-05	Reproductive	5.9E+00	--	5.9E+00
			PCB-156/157	7.5E-07	--	7.5E-07	Reproductive	8.3E-02	--	8.3E-02
			PCB-167	3.0E-07	--	3.0E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-169	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-189	5.9E-08	--	5.9E-08	Reproductive	6.5E-03	--	6.5E-03

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ PCB	6.5E-05	--	6.5E-05	Reproductive	7.2E+00	--	7.2E+00
			Non-DL PCBs							
			Total Non-DL PCBs	5.5E-05	--	5.5E-05	Whole Body	1.6E+01	--	1.6E+01
			PAHs							
			Benz(a)anthracene	3.1E-07	--	3.1E-07	--	--	--	--
			Benzo(a)pyrene	3.1E-06	--	3.1E-06	Developmental	2.9E-02	--	2.9E-02
			Benzo(b)fluoranthene	3.1E-07	--	3.1E-07	--	--	--	--
			Chrysene	3.1E-09	--	3.1E-09	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-06	--	3.1E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	7.1E-07	--	7.1E-07	Liver	1.2E+00	--	1.2E+00
			2,4'-DDE	2.0E-07	--	2.0E-07	Liver	2.3E-02	--	2.3E-02
			2,4'-DDT	2.7E-07	--	2.7E-07	Liver	1.9E-02	--	1.9E-02
			4,4'-DDD	2.2E-06	--	2.2E-06	Liver	3.5E+00	--	3.5E+00
			4,4'-DDE	2.4E-06	--	2.4E-06	Liver	2.7E-01	--	2.7E-01
			4,4'-DDT	5.5E-07	--	5.5E-07	Liver	3.8E-02	--	3.8E-02
			Benzaldehyde	3.0E-07	--	3.0E-07	GI Tract, Kidney	8.8E-03	--	8.8E-03
			Chlordane, alpha (cis)	4.8E-07	--	4.8E-07	Liver	3.2E-02	--	3.2E-02
			Chlordane, gamma (trans)	9.8E-08	--	9.8E-08	Liver	6.6E-03	--	6.6E-03
			Dieldrin	6.8E-06	--	6.8E-06	Liver	9.9E-02	--	9.9E-02
			Heptachlor epoxide, cis-	1.1E-06	--	1.1E-06	Liver	1.1E-01	--	1.1E-01
			Heptachlor epoxide, trans-	9.0E-09	--	9.0E-09	Liver	8.9E-04	--	8.9E-04
			Hexachlorobenzene	1.2E-07	--	1.2E-07	Liver	1.1E-03	--	1.1E-03
			Mirex	3.7E-07	--	3.7E-07	Liver, Thyroid	1.2E-03	--	1.2E-03
			Nonachlor, cis-	1.5E-07	--	1.5E-07	Liver	5.1E-02	--	5.1E-02
			Nonachlor, trans-	3.9E-07	--	3.9E-07	Liver	8.4E-01	--	8.4E-01
			Oxychlordane	6.3E-08	--	6.3E-08	Liver	2.4E-02	--	2.4E-02
			Pyridine	--	--	--	Liver	8.8E-01	--	8.8E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	5.9E-03	--	5.9E-03
			Arsenic, organic	--	--	--	Urinary	2.3E-02	--	2.3E-02
			Arsenic, inorganic	6.7E-06	--	6.7E-06	Skin, Blood	1.7E-01	--	1.7E-01
			Cadmium	--	--	--	Urinary	3.1E-02	--	3.1E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	6.5E-05	--	6.5E-05
			Cobalt	--	--	--	Thyroid	4.5E-02	--	4.5E-02
			Copper	--	--	--	GI Tract	4.3E-01	--	4.3E-01
			Iron	--	--	--	GI Tract	5.9E-03	--	5.9E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.8E-03	--	1.8E-03
			Mercury	--	--	--	Immune	6.9E-01	--	6.9E-01
			Methyl Mercury	--	--	--	Neurological	2.8E+00	--	2.8E+00
			Selenium	--	--	--	Whole Body	8.8E-02	--	8.8E-02
			Silver	--	--	--	Skin	2.7E-03	--	2.7E-03
			Vanadium	--	--	--	Hair	4.7E-03	--	4.7E-03
			Zinc	--	--	--	Blood	2.8E-02	--	2.8E-02
			Total DLCs (excluding KM TEQs)			2.3E-04				2.5E+01
			Total DLCs (based on KM TEQs)			2.2E-04				2.5E+01
			Total PCDD/Fs (excluding KM TEQ)			1.6E-04				1.8E+01

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			1.6E-04				1.8E+01
			Total DL-PCBs (excluding KM TEQ)			6.6E-05				7.4E+00
			Total DL-PCBs (based on KM TEQ)			6.5E-05				7.2E+00
			Total Non-DL PCBs			5.5E-05				1.6E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.2E-04				2.3E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-04				2.3E+01
			Total PAHs			7.2E-06				2.9E-02
			Total Organics			1.6E-05				7.1E+00
			Total Inorganics			6.7E-06				4.3E+00
	White Perch Total (excluding KM TEQs)					3.1E-04				5.3E+01
	White Perch Total (based on KM TEQs)					3.1E-04				5.2E+01
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.4E-04	--	1.4E-04	Reproductive	1.5E+01	--	1.5E+01
			1,2,3,7,8-PeCDD	3.6E-06	--	3.6E-06	Reproductive	4.0E-01	--	4.0E-01
			1,2,3,4,7,8-HxCDD	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,6,7,8-HxCDD	3.1E-07	--	3.1E-07	Reproductive	3.5E-02	--	3.5E-02
			1,2,3,7,8,9-HxCDD	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,6,7,8-HpCDD	3.6E-08	--	3.6E-08	Reproductive	4.0E-03	--	4.0E-03
			OCDD	3.2E-09	--	3.2E-09	Reproductive	3.5E-04	--	3.5E-04
			2,3,7,8-TCDF	5.1E-06	--	5.1E-06	Reproductive	5.7E-01	--	5.7E-01
			1,2,3,7,8-PeCDF	3.3E-07	--	3.3E-07	Reproductive	3.7E-02	--	3.7E-02
			2,3,4,7,8-PeCDF	7.7E-06	--	7.7E-06	Reproductive	8.6E-01	--	8.6E-01
			1,2,3,4,7,8-HxCDF	2.5E-06	--	2.5E-06	Reproductive	2.7E-01	--	2.7E-01
			1,2,3,6,7,8-HxCDF	7.4E-07	--	7.4E-07	Reproductive	8.2E-02	--	8.2E-02
			1,2,3,7,8,9-HxCDF	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			2,3,4,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,4,6,7,8-HpCDF	2.5E-07	--	2.5E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,4,7,8,9-HpCDF	3.5E-09	--	3.5E-09	Reproductive	3.9E-04	--	3.9E-04
			OCDF	3.9E-10	--	3.9E-10	Reproductive	4.3E-05	--	4.3E-05
			KM TEQ DF	1.6E-04	--	1.6E-04	Reproductive	1.8E+01	--	1.8E+01
			PCB-77	1.0E-06	--	1.0E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-81	1.3E-07	--	1.3E-07	Reproductive	1.5E-02	--	1.5E-02
			PCB-105	1.6E-06	--	1.6E-06	Reproductive	1.8E-01	--	1.8E-01
			PCB-114	1.4E-07	--	1.4E-07	Reproductive	1.5E-02	--	1.5E-02
			PCB-118	7.4E-06	--	7.4E-06	Reproductive	8.2E-01	--	8.2E-01
			PCB-123	1.3E-07	--	1.3E-07	Reproductive	1.4E-02	--	1.4E-02
			PCB-126	5.1E-05	--	5.1E-05	Reproductive	5.7E+00	--	5.7E+00
			PCB-156/157	5.9E-07	--	5.9E-07	Reproductive	6.6E-02	--	6.6E-02
			PCB-167	2.5E-07	--	2.5E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-169	1.7E-06	--	1.7E-06	Reproductive	1.9E-01	--	1.9E-01
			PCB-189	4.2E-08	--	4.2E-08	Reproductive	4.7E-03	--	4.7E-03
			KM TEQ PCB	6.1E-05	--	6.1E-05	Reproductive	6.8E+00	--	6.8E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.2E-05	--	2.2E-05	Whole Body	6.6E+00	--	6.6E+00
			PAHs							
			Benz(a)anthracene	4.1E-08	--	4.1E-08	--	--	--	--
			Benzo(a)pyrene	3.9E-07	--	3.9E-07	Developmental	3.7E-03	--	3.7E-03
			Benzo(b)fluoranthene	3.8E-08	--	3.8E-08	--	--	--	--

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chrysene	5.4E-10	--	5.4E-10	--	--	--	--
			Dibenz(a,h)anthracene	3.9E-07	--	3.9E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.8E-09	--	1.8E-09	Liver	3.0E-03	--	3.0E-03
			2,4'-DDE	5.3E-09	--	5.3E-09	Liver	6.1E-04	--	6.1E-04
			2,4'-DDT	2.4E-09	--	2.4E-09	Liver	1.6E-04	--	1.6E-04
			4,4'-DDD	2.9E-07	--	2.9E-07	Liver	4.8E-01	--	4.8E-01
			4,4'-DDE	1.1E-06	--	1.1E-06	Liver	1.3E-01	--	1.3E-01
			4,4'-DDT	1.3E-08	--	1.3E-08	Liver	8.9E-04	--	8.9E-04
			Benzaldehyde	1.7E-07	--	1.7E-07	GI Tract, Kidney	4.9E-03	--	4.9E-03
			Chlordane, alpha (cis)	2.5E-08	--	2.5E-08	Liver	1.7E-03	--	1.7E-03
			Chlordane, gamma (trans)	3.1E-09	--	3.1E-09	Liver	2.1E-04	--	2.1E-04
			Dieldrin	3.4E-06	--	3.4E-06	Liver	5.0E-02	--	5.0E-02
			Heptachlor epoxide, cis-	1.1E-06	--	1.1E-06	Liver	1.1E-01	--	1.1E-01
			Heptachlor epoxide, trans-	3.7E-07	--	3.7E-07	Liver	3.6E-02	--	3.6E-02
			Hexachlorobenzene	6.2E-08	--	6.2E-08	Liver	5.6E-04	--	5.6E-04
			Mirex	1.3E-07	--	1.3E-07	Liver, Thyroid	4.1E-04	--	4.1E-04
			Nonachlor, cis-	6.5E-08	--	6.5E-08	Liver	2.2E-02	--	2.2E-02
			Nonachlor, trans-	1.3E-07	--	1.3E-07	Liver	2.7E-01	--	2.7E-01
			Oxychlordane	1.9E-07	--	1.9E-07	Liver	7.2E-02	--	7.2E-02
			Pyridine	--	--	--	Liver	2.1E-01	--	2.1E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	3.8E-03	--	3.8E-03
			Arsenic, organic	--	--	--	Urinary	5.2E-02	--	5.2E-02
			Arsenic, inorganic	1.5E-05	--	1.5E-05	Skin, Blood	3.8E-01	--	3.8E-01
			Cadmium	--	--	--	Urinary	1.6E-01	--	1.6E-01
			Chromium [as Cr(III)]	--	--	--	No Effect	4.5E-05	--	4.5E-05
			Cobalt	--	--	--	Thyroid	1.2E-01	--	1.2E-01
			Copper	--	--	--	GI Tract	1.2E+01	--	1.2E+01
			Iron	--	--	--	GI Tract	2.3E-02	--	2.3E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.9E-02	--	2.9E-02
			Mercury	--	--	--	Immune	2.1E-01	--	2.1E-01
			Methyl Mercury	--	--	--	Neurological	7.0E-01	--	7.0E-01
			Selenium	--	--	--	Whole Body	9.3E-02	--	9.3E-02
			Silver	--	--	--	Skin	6.4E-02	--	6.4E-02
			Vanadium	--	--	--	Hair	6.0E-03	--	6.0E-03
			Zinc	--	--	--	Blood	6.4E-02	--	6.4E-02
			Total DLCs (excluding KM TEQs)			2.2E-04				2.5E+01
			Total DLCs (based on KM TEQs)			2.2E-04				2.4E+01
			Total PCDD/Fs (excluding KM TEQ)			1.6E-04				1.8E+01
			Total PCDD/Fs (based on KM TEQ)			1.6E-04				1.8E+01
			Total DL-PCBs (excluding KM TEQ)			6.4E-05				7.1E+00
			Total DL-PCBs (based on KM TEQ)			6.1E-05				6.8E+00
			Total Non-DL PCBs			2.2E-05				6.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			8.6E-05				1.4E+01
			Total PCBs (DL & NDL; based on KM TEQ)			8.3E-05				1.3E+01

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PAHs			1.2E-06				3.7E-03
			Total Organics			7.2E-06				1.4E+00
			Total Inorganics			1.5E-05				1.4E+01
	Crab (H+M) Total (excluding KM TEQs)					2.7E-04				4.6E+01
	Crab (H+M) Total (based on KM TEQs)					2.7E-04				4.6E+01
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-05	--	2.0E-05	Reproductive	2.3E+00	--	2.3E+00
			1,2,3,7,8-PeCDD	1.3E-06	--	1.3E-06	Reproductive	1.5E-01	--	1.5E-01
			1,2,3,4,7,8-HxCDD	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,6,7,8-HxCDD	3.6E-08	--	3.6E-08	Reproductive	4.1E-03	--	4.1E-03
			1,2,3,7,8,9-HxCDD	1.9E-08	--	1.9E-08	Reproductive	2.1E-03	--	2.1E-03
			1,2,3,4,6,7,8-HpCDD	7.1E-09	--	7.1E-09	Reproductive	7.8E-04	--	7.8E-04
			OCDD	7.3E-10	--	7.3E-10	Reproductive	8.1E-05	--	8.1E-05
			2,3,7,8-TCDF	6.1E-07	--	6.1E-07	Reproductive	6.8E-02	--	6.8E-02
			1,2,3,7,8-PeCDF	4.3E-08	--	4.3E-08	Reproductive	4.7E-03	--	4.7E-03
			2,3,4,7,8-PeCDF	7.6E-07	--	7.6E-07	Reproductive	8.5E-02	--	8.5E-02
			1,2,3,4,7,8-HxCDF	3.8E-07	--	3.8E-07	Reproductive	4.2E-02	--	4.2E-02
			1,2,3,6,7,8-HxCDF	9.5E-08	--	9.5E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,7,8,9-HxCDF	3.7E-08	--	3.7E-08	Reproductive	4.2E-03	--	4.2E-03
			2,3,4,6,7,8-HxCDF	2.4E-08	--	2.4E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,4,6,7,8-HpCDF	2.1E-08	--	2.1E-08	Reproductive	2.3E-03	--	2.3E-03
			1,2,3,4,7,8,9-HpCDF	1.8E-09	--	1.8E-09	Reproductive	2.0E-04	--	2.0E-04
			OCDF	1.5E-10	--	1.5E-10	Reproductive	1.6E-05	--	1.6E-05
			KM TEQ DF	2.3E-05	--	2.3E-05	Reproductive	2.6E+00	--	2.6E+00
			PCB-77	1.0E-07	--	1.0E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-81	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			PCB-105	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			PCB-114	1.5E-08	--	1.5E-08	Reproductive	1.6E-03	--	1.6E-03
			PCB-118	6.3E-07	--	6.3E-07	Reproductive	7.0E-02	--	7.0E-02
			PCB-123	1.2E-08	--	1.2E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-126	4.5E-06	--	4.5E-06	Reproductive	5.0E-01	--	5.0E-01
			PCB-156/157	5.1E-08	--	5.1E-08	Reproductive	5.6E-03	--	5.6E-03
			PCB-167	1.9E-08	--	1.9E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-169	1.8E-06	--	1.8E-06	Reproductive	2.0E-01	--	2.0E-01
			PCB-189	2.5E-09	--	2.5E-09	Reproductive	2.8E-04	--	2.8E-04
			KM TEQ PCB	5.4E-06	--	5.4E-06	Reproductive	6.0E-01	--	6.0E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.9E-06	--	1.9E-06	Whole Body	5.7E-01	--	5.7E-01
			PAHs							
			Benz(a)anthracene	1.9E-07	--	1.9E-07	--	--	--	--
			Benzo(a)pyrene	1.9E-06	--	1.9E-06	Developmental	1.8E-02	--	1.8E-02
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07	--	--	--	--
			Chrysene	1.9E-09	--	1.9E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.0E-10	--	2.0E-10	Liver	3.3E-04	--	3.3E-04
			2,4'-DDE	5.8E-10	--	5.8E-10	Liver	6.6E-05	--	6.6E-05
			2,4'-DDT	4.4E-10	--	4.4E-10	Liver	3.1E-05	--	3.1E-05

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			4,4'-DDD	4.4E-08	--	4.4E-08	Liver	7.1E-02	--	7.1E-02
			4,4'-DDE	1.7E-07	--	1.7E-07	Liver	2.0E-02	--	2.0E-02
			4,4'-DDT	1.8E-09	--	1.8E-09	Liver	1.2E-04	--	1.2E-04
			Benzaldehyde	1.8E-07	--	1.8E-07	GI Tract, Kidney	5.3E-03	--	5.3E-03
			Chlordane, alpha (cis)	7.2E-09	--	7.2E-09	Liver	4.8E-04	--	4.8E-04
			Chlordane, gamma (trans)	3.2E-10	--	3.2E-10	Liver	2.2E-05	--	2.2E-05
			Dieldrin	7.6E-07	--	7.6E-07	Liver	1.1E-02	--	1.1E-02
			Heptachlor epoxide, cis-	1.0E-07	--	1.0E-07	Liver	1.0E-02	--	1.0E-02
			Heptachlor epoxide, trans-	7.2E-08	--	7.2E-08	Liver	7.1E-03	--	7.1E-03
			Hexachlorobenzene	1.2E-08	--	1.2E-08	Liver	1.1E-04	--	1.1E-04
			Mirex	3.2E-08	--	3.2E-08	Liver, Thyroid	1.0E-04	--	1.0E-04
			Nonachlor, cis-	8.1E-09	--	8.1E-09	Liver	2.7E-03	--	2.7E-03
			Nonachlor, trans-	1.5E-08	--	1.5E-08	Liver	3.2E-02	--	3.2E-02
			Oxychlordane	2.1E-08	--	2.1E-08	Liver	7.8E-03	--	7.8E-03
			Pyridine	--	--	--	Liver	1.7E-01	--	1.7E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	2.3E-03	--	2.3E-03
			Arsenic, organic	--	--	--	Urinary	4.8E-02	--	4.8E-02
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	3.6E-01	--	3.6E-01
			Cadmium	--	--	--	Urinary	6.7E-02	--	6.7E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	4.2E-05	--	4.2E-05
			Cobalt	--	--	--	Thyroid	9.6E-02	--	9.6E-02
			Copper	--	--	--	GI Tract	7.5E+00	--	7.5E+00
			Iron	--	--	--	GI Tract	1.1E-02	--	1.1E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.8E-02	--	1.8E-02
			Mercury	--	--	--	Immune	2.5E-01	--	2.5E-01
			Methyl Mercury	--	--	--	Neurological	8.7E-01	--	8.7E-01
			Selenium	--	--	--	Whole Body	7.6E-02	--	7.6E-02
			Silver	--	--	--	Skin	3.9E-02	--	3.9E-02
			Vanadium	--	--	--	Hair	3.5E-03	--	3.5E-03
			Zinc	--	--	--	Blood	6.5E-02	--	6.5E-02
			Total DLCs (excluding KM TEQs)			3.1E-05				3.4E+00
			Total DLCs (based on KM TEQs)			2.9E-05				3.2E+00
			Total PCDD/Fs (excluding KM TEQ)			2.4E-05				2.6E+00
			Total PCDD/Fs (based on KM TEQ)			2.3E-05				2.6E+00
			Total DL-PCBs (excluding KM TEQ)			7.3E-06				8.1E-01
			Total DL-PCBs (based on KM TEQ)			5.4E-06				6.0E-01
			Total Non-DL PCBs			1.9E-06				5.7E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			9.2E-06				1.4E+00
			Total PCBs (DL & NDL; based on KM TEQ)			7.3E-06				1.2E+00
			Total PAHs			4.4E-06				1.8E-02
			Total Organics			1.4E-06				3.4E-01
			Total Inorganics			1.4E-05				9.4E+00
	Crab (Muscle) Total (excluding KM TEQs)					5.3E-05				1.4E+01
	Crab (Muscle) Total (based on KM TEQs)					5.0E-05				1.3E+01
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDD	4.8E-04	--	4.8E-04	Reproductive	5.3E+01	--	5.3E+01
			1,2,3,7,8-PeCDD	1.1E-05	--	1.1E-05	Reproductive	1.3E+00	--	1.3E+00
			1,2,3,4,7,8-HxCDD	3.7E-07	--	3.7E-07	Reproductive	4.1E-02	--	4.1E-02
			1,2,3,6,7,8-HxCDD	1.1E-06	--	1.1E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDD	3.8E-07	--	3.8E-07	Reproductive	4.2E-02	--	4.2E-02
			1,2,3,4,6,7,8-HpCDD	1.2E-07	--	1.2E-07	Reproductive	1.3E-02	--	1.3E-02
			OCDD	1.0E-08	--	1.0E-08	Reproductive	1.1E-03	--	1.1E-03
			2,3,7,8-TCDF	1.8E-05	--	1.8E-05	Reproductive	2.0E+00	--	2.0E+00
			1,2,3,7,8-PeCDF	1.2E-06	--	1.2E-06	Reproductive	1.3E-01	--	1.3E-01
			2,3,4,7,8-PeCDF	2.8E-05	--	2.8E-05	Reproductive	3.1E+00	--	3.1E+00
			1,2,3,4,7,8-HxCDF	8.7E-06	--	8.7E-06	Reproductive	9.7E-01	--	9.7E-01
			1,2,3,6,7,8-HxCDF	2.6E-06	--	2.6E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,7,8,9-HxCDF	7.2E-08	--	7.2E-08	Reproductive	8.0E-03	--	8.0E-03
			2,3,4,6,7,8-HxCDF	6.8E-07	--	6.8E-07	Reproductive	7.6E-02	--	7.6E-02
			1,2,3,4,6,7,8-HpCDF	8.9E-07	--	8.9E-07	Reproductive	9.9E-02	--	9.9E-02
			1,2,3,4,7,8,9-HpCDF	7.2E-09	--	7.2E-09	Reproductive	8.0E-04	--	8.0E-04
			OCDF	1.3E-09	--	1.3E-09	Reproductive	1.5E-04	--	1.5E-04
			KM TEQ DF	5.5E-04	--	5.5E-04	Reproductive	6.1E+01	--	6.1E+01
			PCB-77	3.6E-06	--	3.6E-06	Reproductive	4.0E-01	--	4.0E-01
			PCB-81	4.8E-07	--	4.8E-07	Reproductive	5.4E-02	--	5.4E-02
			PCB-105	5.9E-06	--	5.9E-06	Reproductive	6.5E-01	--	6.5E-01
			PCB-114	5.0E-07	--	5.0E-07	Reproductive	5.5E-02	--	5.5E-02
			PCB-118	2.7E-05	--	2.7E-05	Reproductive	3.0E+00	--	3.0E+00
			PCB-123	4.7E-07	--	4.7E-07	Reproductive	5.2E-02	--	5.2E-02
			PCB-126	1.8E-04	--	1.8E-04	Reproductive	2.1E+01	--	2.1E+01
			PCB-156/157	2.1E-06	--	2.1E-06	Reproductive	2.4E-01	--	2.4E-01
			PCB-167	9.0E-07	--	9.0E-07	Reproductive	1.0E-01	--	1.0E-01
			PCB-169	5.7E-06	--	5.7E-06	Reproductive	6.4E-01	--	6.4E-01
			PCB-189	1.6E-07	--	1.6E-07	Reproductive	1.7E-02	--	1.7E-02
			KM TEQ PCB	2.2E-04	--	2.2E-04	Reproductive	2.5E+01	--	2.5E+01
			Non-DL PCBs							
			Total Non-DL PCBs	8.2E-05	--	8.2E-05	Whole Body	2.4E+01	--	2.4E+01
			PAHs							
			Benz(a)anthracene	4.7E-08	--	4.7E-08	--	--	--	--
			Benzo(a)pyrene	4.2E-07	--	4.2E-07	Developmental	3.9E-03	--	3.9E-03
			Benzo(b)fluoranthene	3.9E-08	--	3.9E-08	--	--	--	--
			Chrysene	6.6E-10	--	6.6E-10	--	--	--	--
			Dibenz(a,h)anthracene	4.0E-07	--	4.0E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.1E-06	--	1.1E-06	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	6.4E-09	--	6.4E-09	Liver	1.0E-02	--	1.0E-02
			2,4'-DDE	1.9E-08	--	1.9E-08	Liver	2.2E-03	--	2.2E-03
			2,4'-DDT	7.8E-09	--	7.8E-09	Liver	5.3E-04	--	5.3E-04
			4,4'-DDD	1.0E-06	--	1.0E-06	Liver	1.7E+00	--	1.7E+00
			4,4'-DDE	3.9E-06	--	3.9E-06	Liver	4.4E-01	--	4.4E-01
			4,4'-DDT	4.4E-08	--	4.4E-08	Liver	3.0E-03	--	3.0E-03
			Benzaldehyde	3.6E-07	--	3.6E-07	GI Tract, Kidney	1.0E-02	--	1.0E-02
			Chlordane, alpha (cis)	8.1E-08	--	8.1E-08	Liver	5.4E-03	--	5.4E-03
			Chlordane, gamma (trans)	1.1E-08	--	1.1E-08	Liver	7.4E-04	--	7.4E-04

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Dieldrin	1.1E-05	--	1.1E-05	Liver	1.7E-01	--	1.7E-01
			Heptachlor epoxide, cis-	4.2E-06	--	4.2E-06	Liver	4.1E-01	--	4.1E-01
			Heptachlor epoxide, trans-	1.2E-06	--	1.2E-06	Liver	1.2E-01	--	1.2E-01
			Hexachlorobenzene	2.0E-07	--	2.0E-07	Liver	1.9E-03	--	1.9E-03
			Mirex	4.2E-07	--	4.2E-07	Liver, Thyroid	1.4E-03	--	1.4E-03
			Nonachlor, cis-	2.3E-07	--	2.3E-07	Liver	7.6E-02	--	7.6E-02
			Nonachlor, trans-	4.6E-07	--	4.6E-07	Liver	9.9E-01	--	9.9E-01
			Oxychlordane	6.8E-07	--	6.8E-07	Liver	2.6E-01	--	2.6E-01
			Pyridine	--	--	--	Liver	3.3E-01	--	3.3E-01
			Inorganics							
			Aluminum	--	--	--	Neurological	1.2E-02	--	1.2E-02
			Arsenic, organic	--	--	--	Urinary	6.4E-02	--	6.4E-02
			Arsenic, inorganic	1.8E-05	--	1.8E-05	Skin, Blood	4.7E-01	--	4.7E-01
			Cadmium	--	--	--	Urinary	5.2E-01	--	5.2E-01
			Chromium [as Cr(III)]	--	--	--	No Effect	7.8E-05	--	7.8E-05
			Cobalt	--	--	--	Thyroid	3.1E-01	--	3.1E-01
			Copper	--	--	--	GI Tract	3.1E+01	--	3.1E+01
			Iron	--	--	--	GI Tract	5.9E-02	--	5.9E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	5.4E-02	--	5.4E-02
			Mercury	--	--	--	Immune	1.0E-01	--	1.0E-01
			Methyl Mercury	--	--	--	Neurological	2.4E-01	--	2.4E-01
			Selenium	--	--	--	Whole Body	1.5E-01	--	1.5E-01
			Silver	--	--	--	Skin	1.6E-01	--	1.6E-01
			Vanadium	--	--	--	Hair	1.4E-02	--	1.4E-02
			Zinc	--	--	--	Blood	6.5E-02	--	6.5E-02
			Total DLCs (excluding KM TEQs)			7.8E-04				8.7E+01
			Total DLCs (based on KM TEQs)			7.7E-04				8.6E+01
			Total PCDD/Fs (excluding KM TEQ)			5.5E-04				6.2E+01
			Total PCDD/Fs (based on KM TEQ)			5.5E-04				6.1E+01
			Total DL-PCBs (excluding KM TEQ)			2.3E-04				2.6E+01
			Total DL-PCBs (based on KM TEQ)			2.2E-04				2.5E+01
			Total Non-DL PCBs			8.2E-05				2.4E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			3.1E-04				5.0E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.0E-04				4.9E+01
			Total PAHs			2.0E-06				3.9E-03
			Total Organics			2.4E-05				4.5E+00
			Total Inorganics			1.8E-05				3.3E+01
	Crab (Hepatopancreas)	Total (excluding KM TEQs)				9.1E-04				1.5E+02
	Crab (Hepatopancreas)	Total (based on KM TEQs)				9.0E-04				1.5E+02

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Mixed Fish/All Species Total				Mixed Fish/All Species Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		2.9E-01		Blood HI =		2.9E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.9E-02		Developmental HI =		1.9E-02
				GI Tract HI =		3.4E-01		GI Tract HI =		3.4E-01
				Hair HI =		3.8E-03		Hair HI =		3.8E-03
				Immune HI =		6.8E-01		Immune HI =		6.8E-01
				Kidney HI =		8.8E-03		Kidney HI =		8.8E-03
				Liver HI =		4.6E+00		Liver HI =		4.6E+00
				Neurological HI =		2.5E+00		Neurological HI =		2.5E+00
				No Effect HI =		2.9E-04		No Effect HI =		2.9E-04
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.0E+01		Reproductive HI =		2.1E+01
				Skin HI =		2.6E-01		Skin HI =		2.6E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		5.1E-01		Thyroid HI =		5.1E-01
				Urinary HI =		6.6E-02		Urinary HI =		6.6E-02
				Whole Body HI =		1.4E+01		Whole Body HI =		1.4E+01
				American Eel Total				American Eel Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		3.4E-01		Blood HI =		3.4E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		2.9E-02		Developmental HI =		2.9E-02
				GI Tract HI =		1.6E-01		GI Tract HI =		1.6E-01
				Hair HI =		3.1E-03		Hair HI =		3.1E-03
				Immune HI =		9.5E-01		Immune HI =		9.5E-01
				Kidney HI =		8.8E-03		Kidney HI =		8.8E-03
				Liver HI =		6.3E+00		Liver HI =		6.3E+00
				Neurological HI =		3.1E+00		Neurological HI =		3.1E+00
				No Effect HI =		1.1E-03		No Effect HI =		1.1E-03
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.6E+01		Reproductive HI =		3.2E+01
				Skin HI =		2.7E-01		Skin HI =		2.7E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		1.7E-02		Thyroid HI =		1.7E-02
				Urinary HI =		6.7E-02		Urinary HI =		6.7E-02
				Whole Body HI =		2.0E+01		Whole Body HI =		2.0E+01

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
						Crab (H+M) Total				Crab (H+M) Total
						(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI
				Blood HI =		4.5E-01		Blood HI =		4.5E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		3.7E-03		Developmental HI =		3.7E-03
				GI Tract HI =		1.2E+01		GI Tract HI =		1.2E+01
				Hair HI =		6.0E-03		Hair HI =		6.0E-03
				Immune HI =		2.1E-01		Immune HI =		2.1E-01
				Kidney HI =		4.9E-03		Kidney HI =		4.9E-03
				Liver HI =		1.4E+00		Liver HI =		1.4E+00
				Neurological HI =		7.4E-01		Neurological HI =		7.4E-01
				No Effect HI =		4.5E-05		No Effect HI =		4.5E-05
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.5E+01		Reproductive HI =		2.4E+01
				Skin HI =		4.5E-01		Skin HI =		4.5E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		1.2E-01		Thyroid HI =		1.2E-01
				Urinary HI =		2.1E-01		Urinary HI =		2.1E-01
				Whole Body HI =		6.6E+00		Whole Body HI =		6.6E+00
						Crab (Muscle) Total				Crab (Muscle) Total
						(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI
				Blood HI =		4.2E-01		Blood HI =		4.2E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.8E-02		Developmental HI =		1.8E-02
				GI Tract HI =		7.5E+00		GI Tract HI =		7.5E+00
				Hair HI =		3.5E-03		Hair HI =		3.5E-03
				Immune HI =		2.5E-01		Immune HI =		2.5E-01
				Kidney HI =		5.3E-03		Kidney HI =		5.3E-03
				Liver HI =		3.3E-01		Liver HI =		3.3E-01
				Neurological HI =		8.9E-01		Neurological HI =		8.9E-01
				No Effect HI =		4.2E-05		No Effect HI =		4.2E-05
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		3.4E+00		Reproductive HI =		3.2E+00
				Skin HI =		4.0E-01		Skin HI =		4.0E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		9.6E-02		Thyroid HI =		9.6E-02
				Urinary HI =		1.2E-01		Urinary HI =		1.2E-01
				Whole Body HI =		6.4E-01		Whole Body HI =		6.4E-01

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.2E-04	--	2.2E-04
			1,2,3,7,8-PeCDD	1.2E-05	--	1.2E-05
			1,2,3,4,7,8-HxCDD	5.6E-07	--	5.6E-07
			1,2,3,6,7,8-HxCDD	1.7E-06	--	1.7E-06
			1,2,3,7,8,9-HxCDD	4.1E-07	--	4.1E-07
			1,2,3,4,6,7,8-HpCDD	1.9E-07	--	1.9E-07
			OCDD	3.4E-08	--	3.4E-08
			2,3,7,8-TCDF	4.6E-06	--	4.6E-06
			1,2,3,7,8-PeCDF	1.2E-06	--	1.2E-06
			2,3,4,7,8-PeCDF	2.0E-05	--	2.0E-05
			1,2,3,4,7,8-HxCDF	3.0E-06	--	3.0E-06
			1,2,3,6,7,8-HxCDF	2.7E-06	--	2.7E-06
			1,2,3,7,8,9-HxCDF	3.1E-07	--	3.1E-07
			2,3,4,6,7,8-HxCDF	4.6E-07	--	4.6E-07
			1,2,3,4,6,7,8-HpCDF	6.3E-07	--	6.3E-07
			1,2,3,4,7,8,9-HpCDF	2.9E-08	--	2.9E-08
			OCDF	1.9E-09	--	1.9E-09
			KM TEQ DF	2.7E-04	--	2.7E-04
			PCB-77	1.3E-06	--	1.3E-06
			PCB-81	1.6E-07	--	1.6E-07
			PCB-105	6.2E-06	--	6.2E-06
			PCB-114	4.8E-07	--	4.8E-07
			PCB-118	2.5E-05	--	2.5E-05
			PCB-123	4.6E-07	--	4.6E-07
			PCB-126	2.5E-04	--	2.5E-04
			PCB-156/157	2.3E-06	--	2.3E-06
			PCB-167	1.0E-06	--	1.0E-06
			PCB-169	3.1E-06	--	3.1E-06
			PCB-189	1.8E-07	--	1.8E-07
			KM TEQ PCB	3.1E-04	--	3.1E-04
			Non-DL PCBs			
			Total Non-DL PCBs	1.5E-04	--	1.5E-04
			PAHs			
			Benz(a)anthracene	3.1E-07	--	3.1E-07
			Benzo(a)pyrene	3.1E-06	--	3.1E-06
			Benzo(b)fluoranthene	3.1E-07	--	3.1E-07

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Chrysene	3.1E-09	--	3.1E-09
			Dibenz(a,h)anthracene	3.1E-06	--	3.1E-06
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07
			Pesticides & Organics			
			2,4'-DDD	7.9E-07	--	7.9E-07
			2,4'-DDE	3.6E-07	--	3.6E-07
			2,4'-DDT	2.1E-07	--	2.1E-07
			4,4'-DDD	3.9E-06	--	3.9E-06
			4,4'-DDE	7.7E-06	--	7.7E-06
			4,4'-DDT	8.8E-07	--	8.8E-07
			Benzaldehyde	9.4E-07	--	9.4E-07
			Chlordane, alpha (cis)	1.0E-06	--	1.0E-06
			Chlordane, gamma (trans)	2.3E-07	--	2.3E-07
			Dieldrin	2.2E-05	--	2.2E-05
			Heptachlor epoxide, cis-	3.1E-06	--	3.1E-06
			Heptachlor epoxide, trans-	1.5E-07	--	1.5E-07
			Hexachlorobenzene	4.3E-07	--	4.3E-07
			Mirex	8.3E-07	--	8.3E-07
			Nonachlor, cis-	4.1E-07	--	4.1E-07
			Nonachlor, trans-	9.9E-07	--	9.9E-07
			Oxychlordane	2.9E-07	--	2.9E-07
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	3.1E-05	--	3.1E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			5.6E-04
			Total DLCs (based on KM TEQs)			5.8E-04
			Total PCDD/Fs (excluding KM TEQ)			2.7E-04
			Total PCDD/Fs (based on KM TEQ)			2.7E-04
			Total DL-PCBs (excluding KM TEQ)			2.9E-04
			Total DL-PCBs (based on KM TEQ)			3.1E-04
			Total Non-DL PCBs			1.5E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			4.3E-04
			Total PCBs (DL & NDL; based on KM TEQ)			4.6E-04
			Total PAHs			7.1E-06
			Total Organics			4.4E-05
			Total Inorganics			3.1E-05
	Mixed Fish/All Species Total (excluding KM TEQs)					7.9E-04
	Mixed Fish/All Species Total (based on KM TEQs)					8.1E-04
Fish	American Eel	American Eel	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.4E-04	--	2.4E-04
			1,2,3,7,8-PeCDD	1.9E-05	--	1.9E-05
			1,2,3,4,7,8-HxCDD	1.1E-06	--	1.1E-06
			1,2,3,6,7,8-HxCDD	5.2E-06	--	5.2E-06
			1,2,3,7,8,9-HxCDD	9.4E-07	--	9.4E-07
			1,2,3,4,6,7,8-HpCDD	3.5E-07	--	3.5E-07
			OCDD	2.6E-08	--	2.6E-08
			2,3,7,8-TCDF	2.9E-07	--	2.9E-07
			1,2,3,7,8-PeCDF	1.1E-06	--	1.1E-06
			2,3,4,7,8-PeCDF	3.2E-05	--	3.2E-05
			1,2,3,4,7,8-HxCDF	7.3E-06	--	7.3E-06
			1,2,3,6,7,8-HxCDF	5.5E-06	--	5.5E-06
			1,2,3,7,8,9-HxCDF	3.1E-07	--	3.1E-07
			2,3,4,6,7,8-HxCDF	9.9E-07	--	9.9E-07
			1,2,3,4,6,7,8-HpCDF	1.3E-06	--	1.3E-06
			1,2,3,4,7,8,9-HpCDF	4.4E-08	--	4.4E-08
			OCDF	2.9E-09	--	2.9E-09
			KM TEQ DF	3.1E-04	--	3.1E-04

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-77	2.0E-07	--	2.0E-07
			PCB-81	9.6E-08	--	9.6E-08
			PCB-105	1.7E-05	--	1.7E-05
			PCB-114	1.1E-06	--	1.1E-06
			PCB-118	5.8E-05	--	5.8E-05
			PCB-123	1.2E-06	--	1.2E-06
			PCB-126	3.3E-04	--	3.3E-04
			PCB-156/157	5.1E-06	--	5.1E-06
			PCB-167	2.2E-06	--	2.2E-06
			PCB-169	3.6E-06	--	3.6E-06
			PCB-189	3.9E-07	--	3.9E-07
			KM TEQ PCB	5.9E-04	--	5.9E-04
			Non-DL PCBs			
			Total Non-DL PCBs	2.1E-04	--	2.1E-04
			PAHs			
			Benz(a)anthracene	4.8E-07	--	4.8E-07
			Benzo(a)pyrene	4.8E-06	--	4.8E-06
			Benzo(b)fluoranthene	4.8E-07	--	4.8E-07
			Chrysene	4.8E-09	--	4.8E-09
			Dibenz(a,h)anthracene	4.8E-06	--	4.8E-06
			Indeno(1,2,3-c,d)-pyrene	4.8E-07	--	4.8E-07
			Pesticides & Organics			
			2,4'-DDD	1.3E-07	--	1.3E-07
			2,4'-DDE	1.2E-07	--	1.2E-07
			2,4'-DDT	2.2E-08	--	2.2E-08
			4,4'-DDD	5.7E-06	--	5.7E-06
			4,4'-DDE	1.7E-05	--	1.7E-05
			4,4'-DDT	4.8E-07	--	4.8E-07
			Benzaldehyde	9.4E-07	--	9.4E-07
			Chlordane, alpha (cis)	8.9E-07	--	8.9E-07
			Chlordane, gamma (trans)	2.5E-07	--	2.5E-07
			Dieldrin	4.2E-05	--	4.2E-05
			Heptachlor epoxide, cis-	6.2E-06	--	6.2E-06
			Heptachlor epoxide, trans-	6.3E-07	--	6.3E-07
			Hexachlorobenzene	1.2E-06	--	1.2E-06
			Mirex	1.4E-06	--	1.4E-06
			Nonachlor, cis-	6.9E-07	--	6.9E-07

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Nonachlor, trans-	1.7E-06	--	1.7E-06
			Oxychlordane	9.1E-07	--	9.1E-07
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	3.2E-05	--	3.2E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			7.3E-04
			Total DLCs (based on KM TEQs)			9.0E-04
			Total PCDD/Fs (excluding KM TEQ)			3.1E-04
			Total PCDD/Fs (based on KM TEQ)			3.1E-04
			Total DL-PCBs (excluding KM TEQ)			4.1E-04
			Total DL-PCBs (based on KM TEQ)			5.9E-04
			Total Non-DL PCBs			2.1E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			6.3E-04
			Total PCBs (DL & NDL; based on KM TEQ)			8.0E-04
			Total PAHs			1.1E-05
			Total Organics			8.0E-05
			Total Inorganics			3.2E-05
	American Eel Total (excluding KM TEQs)					1.1E-03
	American Eel Total (based on KM TEQs)					1.2E-03
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**			

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDD	4.0E-05	--	4.0E-05
			1,2,3,7,8-PeCDD	8.1E-06	--	8.1E-06
			1,2,3,4,7,8-HxCDD	2.0E-07	--	2.0E-07
			1,2,3,6,7,8-HxCDD	5.4E-07	--	5.4E-07
			1,2,3,7,8,9-HxCDD	1.9E-07	--	1.9E-07
			1,2,3,4,6,7,8-HpCDD	3.9E-08	--	3.9E-08
			OCDD	2.1E-09	--	2.1E-09
			2,3,7,8-TCDF	1.0E-06	--	1.0E-06
			1,2,3,7,8-PeCDF	5.4E-07	--	5.4E-07
			2,3,4,7,8-PeCDF	6.1E-06	--	6.1E-06
			1,2,3,4,7,8-HxCDF	2.6E-07	--	2.6E-07
			1,2,3,6,7,8-HxCDF	6.2E-07	--	6.2E-07
			1,2,3,7,8,9-HxCDF	2.3E-07	--	2.3E-07
			2,3,4,6,7,8-HxCDF	1.5E-07	--	1.5E-07
			1,2,3,4,6,7,8-HpCDF	1.8E-07	--	1.8E-07
			1,2,3,4,7,8,9-HpCDF	2.1E-08	--	2.1E-08
			OCDF	1.4E-09	--	1.4E-09
			KM TEQ DF	5.5E-05	--	5.5E-05
			PCB-77	2.7E-07	--	2.7E-07
			PCB-81	2.9E-08	--	2.9E-08
			PCB-105	1.0E-06	--	1.0E-06
			PCB-114	6.2E-08	--	6.2E-08
			PCB-118	4.3E-06	--	4.3E-06
			PCB-123	6.1E-08	--	6.1E-08
			PCB-126	1.0E-04	--	1.0E-04
			PCB-156/157	4.6E-07	--	4.6E-07
			PCB-167	2.4E-07	--	2.4E-07
			PCB-169	1.5E-06	--	1.5E-06
			PCB-189	4.6E-08	--	4.6E-08
			KM TEQ PCB	1.1E-04	--	1.1E-04
			Non-DL PCBs			
			Total Non-DL PCBs	4.3E-05	--	4.3E-05
			PAHs			
			Benz(a)anthracene	1.9E-07	--	1.9E-07
			Benzo(a)pyrene	1.9E-06	--	1.9E-06
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07
			Chrysene	1.9E-09	--	1.9E-09

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07
			Pesticides & Organics			
			2,4'-DDD	2.5E-08	--	2.5E-08
			2,4'-DDE	6.4E-08	--	6.4E-08
			2,4'-DDT	1.4E-08	--	1.4E-08
			4,4'-DDD	2.8E-07	--	2.8E-07
			4,4'-DDE	1.9E-06	--	1.9E-06
			4,4'-DDT	1.3E-06	--	1.3E-06
			Benzaldehyde	9.4E-07	--	9.4E-07
			Chlordane, alpha (cis)	3.7E-07	--	3.7E-07
			Chlordane, gamma (trans)	1.4E-07	--	1.4E-07
			Dieldrin	1.3E-05	--	1.3E-05
			Heptachlor epoxide, cis-	2.0E-06	--	2.0E-06
			Heptachlor epoxide, trans-	2.8E-08	--	2.8E-08
			Hexachlorobenzene	1.6E-07	--	1.6E-07
			Mirex	4.4E-07	--	4.4E-07
			Nonachlor, cis-	1.1E-07	--	1.1E-07
			Nonachlor, trans-	1.9E-07	--	1.9E-07
			Oxychlordane	2.2E-08	--	2.2E-08
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	2.0E-05	--	2.0E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.7E-04
			Total DLCs (based on KM TEQs)			1.6E-04
			Total PCDD/Fs (excluding KM TEQ)			5.9E-05
			Total PCDD/Fs (based on KM TEQ)			5.5E-05
			Total DL-PCBs (excluding KM TEQ)			1.1E-04
			Total DL-PCBs (based on KM TEQ)			1.1E-04
			Total Non-DL PCBs			4.3E-05
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-04
			Total PCBs (DL & NDL; based on KM TEQ)			1.5E-04
			Total PAHs			4.5E-06
			Total Organics			2.1E-05
			Total Inorganics			2.0E-05
	Bluefish Total (excluding KM TEQs)					2.6E-04
	Bluefish Total (based on KM TEQs)					2.5E-04
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.6E-04	--	2.6E-04
			1,2,3,7,8-PeCDD	1.5E-05	--	1.5E-05
			1,2,3,4,7,8-HxCDD	5.6E-07	--	5.6E-07
			1,2,3,6,7,8-HxCDD	5.7E-07	--	5.7E-07
			1,2,3,7,8,9-HxCDD	2.3E-07	--	2.3E-07
			1,2,3,4,6,7,8-HpCDD	3.9E-07	--	3.9E-07
			OCDD	1.3E-07	--	1.3E-07
			2,3,7,8-TCDF	1.0E-05	--	1.0E-05
			1,2,3,7,8-PeCDF	1.8E-06	--	1.8E-06
			2,3,4,7,8-PeCDF	2.7E-05	--	2.7E-05
			1,2,3,4,7,8-HxCDF	1.1E-06	--	1.1E-06
			1,2,3,6,7,8-HxCDF	3.3E-06	--	3.3E-06
			1,2,3,7,8,9-HxCDF	3.3E-07	--	3.3E-07
			2,3,4,6,7,8-HxCDF	2.7E-07	--	2.7E-07
			1,2,3,4,6,7,8-HpCDF	9.0E-07	--	9.0E-07
			1,2,3,4,7,8,9-HpCDF	3.0E-08	--	3.0E-08
			OCDF	1.5E-09	--	1.5E-09
			KM TEQ DF	3.2E-04	--	3.2E-04
			PCB-77	3.1E-06	--	3.1E-06

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-81	2.3E-07	--	2.3E-07
			PCB-105	4.8E-06	--	4.8E-06
			PCB-114	5.9E-07	--	5.9E-07
			PCB-118	3.1E-05	--	3.1E-05
			PCB-123	4.6E-07	--	4.6E-07
			PCB-126	5.1E-04	--	5.1E-04
			PCB-156/157	2.7E-06	--	2.7E-06
			PCB-167	1.2E-06	--	1.2E-06
			PCB-169	2.7E-06	--	2.7E-06
			PCB-189	2.3E-07	--	2.3E-07
			KM TEQ PCB	5.3E-04	--	5.3E-04
			Non-DL PCBs			
			Total Non-DL PCBs	2.6E-04	--	2.6E-04
			PAHs			
			Benz(a)anthracene	1.9E-07	--	1.9E-07
			Benzo(a)pyrene	1.9E-06	--	1.9E-06
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07
			Chrysene	1.9E-09	--	1.9E-09
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07
			Pesticides & Organics			
			2,4'-DDD	1.4E-06	--	1.4E-06
			2,4'-DDE	8.0E-07	--	8.0E-07
			2,4'-DDT	1.6E-07	--	1.6E-07
			4,4'-DDD	5.9E-06	--	5.9E-06
			4,4'-DDE	9.6E-06	--	9.6E-06
			4,4'-DDT	8.2E-07	--	8.2E-07
			Benzaldehyde	9.4E-07	--	9.4E-07
			Chlordane, alpha (cis)	2.2E-06	--	2.2E-06
			Chlordane, gamma (trans)	4.0E-07	--	4.0E-07
			Dieldrin	3.1E-05	--	3.1E-05
			Heptachlor epoxide, cis-	3.0E-06	--	3.0E-06
			Heptachlor epoxide, trans-	2.8E-08	--	2.8E-08
			Hexachlorobenzene	3.0E-07	--	3.0E-07
			Mirex	9.7E-07	--	9.7E-07
			Nonachlor, cis-	7.0E-07	--	7.0E-07
			Nonachlor, trans-	1.7E-06	--	1.7E-06

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Oxychlordane	2.5E-07	--	2.5E-07
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	3.5E-05	--	3.5E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			8.8E-04
			Total DLCs (based on KM TEQs)			8.5E-04
			Total PCDD/Fs (excluding KM TEQ)			3.2E-04
			Total PCDD/Fs (based on KM TEQ)			3.2E-04
			Total DL-PCBs (excluding KM TEQ)			5.6E-04
			Total DL-PCBs (based on KM TEQ)			5.3E-04
			Total Non-DL PCBs			2.6E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			8.2E-04
			Total PCBs (DL & NDL; based on KM TEQ)			7.9E-04
			Total PAHs			4.5E-06
			Total Organics			6.1E-05
			Total Inorganics			3.5E-05
	Striped Bass Total (excluding KM TEQs)					1.2E-03
	Striped Bass Total (based on KM TEQs)					1.2E-03
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-04	--	1.5E-04

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8-PeCDD	6.6E-06	--	6.6E-06
			1,2,3,4,7,8-HxCDD	2.2E-07	--	2.2E-07
			1,2,3,6,7,8-HxCDD	6.9E-07	--	6.9E-07
			1,2,3,7,8,9-HxCDD	2.9E-07	--	2.9E-07
			1,2,3,4,6,7,8-HpCDD	8.5E-08	--	8.5E-08
			OCDD	3.7E-09	--	3.7E-09
			2,3,7,8-TCDF	7.3E-07	--	7.3E-07
			1,2,3,7,8-PeCDF	2.9E-07	--	2.9E-07
			2,3,4,7,8-PeCDF	7.3E-06	--	7.3E-06
			1,2,3,4,7,8-HxCDF	1.8E-06	--	1.8E-06
			1,2,3,6,7,8-HxCDF	7.2E-07	--	7.2E-07
			1,2,3,7,8,9-HxCDF	3.9E-07	--	3.9E-07
			2,3,4,6,7,8-HxCDF	3.0E-07	--	3.0E-07
			1,2,3,4,6,7,8-HpCDF	1.3E-07	--	1.3E-07
			1,2,3,4,7,8,9-HpCDF	2.9E-08	--	2.9E-08
			OCDF	1.6E-09	--	1.6E-09
			KM TEQ DF	1.6E-04	--	1.6E-04
			PCB-77	3.9E-07	--	3.9E-07
			PCB-81	1.2E-07	--	1.2E-07
			PCB-105	2.2E-06	--	2.2E-06
			PCB-114	1.9E-07	--	1.9E-07
			PCB-118	9.6E-06	--	9.6E-06
			PCB-123	1.5E-07	--	1.5E-07
			PCB-126	1.2E-04	--	1.2E-04
			PCB-156/157	9.4E-07	--	9.4E-07
			PCB-167	4.3E-07	--	4.3E-07
			PCB-169	1.7E-06	--	1.7E-06
			PCB-189	6.4E-08	--	6.4E-08
			KM TEQ PCB	1.3E-04	--	1.3E-04
			Non-DL PCBs			
			Total Non-DL PCBs	5.4E-05	--	5.4E-05
			PAHs			
			Benz(a)anthracene	1.9E-07	--	1.9E-07
			Benzo(a)pyrene	1.9E-06	--	1.9E-06
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07
			Chrysene	1.9E-09	--	1.9E-09
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07
			Pesticides & Organics			
			2,4'-DDD	1.4E-07	--	1.4E-07
			2,4'-DDE	1.7E-07	--	1.7E-07
			2,4'-DDT	1.3E-08	--	1.3E-08
			4,4'-DDD	8.2E-07	--	8.2E-07
			4,4'-DDE	2.5E-06	--	2.5E-06
			4,4'-DDT	9.0E-08	--	9.0E-08
			Benzaldehyde	9.4E-07	--	9.4E-07
			Chlordane, alpha (cis)	1.3E-07	--	1.3E-07
			Chlordane, gamma (trans)	4.4E-08	--	4.4E-08
			Dieldrin	4.1E-06	--	4.1E-06
			Heptachlor epoxide, cis-	5.7E-07	--	5.7E-07
			Heptachlor epoxide, trans-	2.8E-08	--	2.8E-08
			Hexachlorobenzene	1.4E-07	--	1.4E-07
			Mirex	2.1E-07	--	2.1E-07
			Nonachlor, cis-	7.1E-08	--	7.1E-08
			Nonachlor, trans-	1.8E-07	--	1.8E-07
			Oxychlordane	8.1E-08	--	8.1E-08
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	5.0E-05	--	5.0E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			3.0E-04
			Total DLCs (based on KM TEQs)			3.0E-04
			Total PCDD/Fs (excluding KM TEQ)			1.7E-04
			Total PCDD/Fs (based on KM TEQ)			1.6E-04
			Total DL-PCBs (excluding KM TEQ)			1.3E-04
			Total DL-PCBs (based on KM TEQ)			1.3E-04
			Total Non-DL PCBs			5.4E-05
			Total PCBs (DL & NDL; excluding KM TEQ)			1.9E-04
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-04
			Total PAHs			4.5E-06
			Total Organics			1.0E-05
			Total Inorganics			5.0E-05
	Summer Flounder Total (excluding KM TEQs)					4.2E-04
	Summer Flounder Total (based on KM TEQs)					4.1E-04
Fish	White Perch	White Perch	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.4E-04	--	4.4E-04
			1,2,3,7,8-PeCDD	1.2E-05	--	1.2E-05
			1,2,3,4,7,8-HxCDD	6.6E-07	--	6.6E-07
			1,2,3,6,7,8-HxCDD	1.6E-06	--	1.6E-06
			1,2,3,7,8,9-HxCDD	3.8E-07	--	3.8E-07
			1,2,3,4,6,7,8-HpCDD	1.0E-07	--	1.0E-07
			OCDD	6.9E-09	--	6.9E-09
			2,3,7,8-TCDF	1.1E-05	--	1.1E-05
			1,2,3,7,8-PeCDF	2.5E-06	--	2.5E-06
			2,3,4,7,8-PeCDF	2.8E-05	--	2.8E-05
			1,2,3,4,7,8-HxCDF	4.4E-06	--	4.4E-06
			1,2,3,6,7,8-HxCDF	3.2E-06	--	3.2E-06
			1,2,3,7,8,9-HxCDF	2.9E-07	--	2.9E-07
			2,3,4,6,7,8-HxCDF	5.8E-07	--	5.8E-07
			1,2,3,4,6,7,8-HpCDF	6.5E-07	--	6.5E-07
			1,2,3,4,7,8,9-HpCDF	2.4E-08	--	2.4E-08
			OCDF	1.8E-09	--	1.8E-09
			KM TEQ DF	4.9E-04	--	4.9E-04
			PCB-77	2.7E-06	--	2.7E-06
			PCB-81	3.0E-07	--	3.0E-07

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	6.1E-06	--	6.1E-06
			PCB-114	4.6E-07	--	4.6E-07
			PCB-118	2.3E-05	--	2.3E-05
			PCB-123	4.6E-07	--	4.6E-07
			PCB-126	1.6E-04	--	1.6E-04
			PCB-156/157	2.3E-06	--	2.3E-06
			PCB-167	9.5E-07	--	9.5E-07
			PCB-169	6.1E-06	--	6.1E-06
			PCB-189	1.8E-07	--	1.8E-07
			KM TEQ PCB	2.0E-04	--	2.0E-04
			Non-DL PCBs			
			Total Non-DL PCBs	1.7E-04	--	1.7E-04
			PAHs			
			Benz(a)anthracene	4.8E-07	--	4.8E-07
			Benzo(a)pyrene	4.8E-06	--	4.8E-06
			Benzo(b)fluoranthene	4.8E-07	--	4.8E-07
			Chrysene	4.8E-09	--	4.8E-09
			Dibenz(a,h)anthracene	4.8E-06	--	4.8E-06
			Indeno(1,2,3-c,d)-pyrene	4.8E-07	--	4.8E-07
			Pesticides & Organics			
			2,4'-DDD	2.2E-06	--	2.2E-06
			2,4'-DDE	6.4E-07	--	6.4E-07
			2,4'-DDT	8.6E-07	--	8.6E-07
			4,4'-DDD	6.8E-06	--	6.8E-06
			4,4'-DDE	7.4E-06	--	7.4E-06
			4,4'-DDT	1.7E-06	--	1.7E-06
			Benzaldehyde	9.4E-07	--	9.4E-07
			Chlordane, alpha (cis)	1.5E-06	--	1.5E-06
			Chlordane, gamma (trans)	3.1E-07	--	3.1E-07
			Dieldrin	2.1E-05	--	2.1E-05
			Heptachlor epoxide, cis-	3.5E-06	--	3.5E-06
			Heptachlor epoxide, trans-	2.8E-08	--	2.8E-08
			Hexachlorobenzene	3.7E-07	--	3.7E-07
			Mirex	1.2E-06	--	1.2E-06
			Nonachlor, cis-	4.8E-07	--	4.8E-07
			Nonachlor, trans-	1.2E-06	--	1.2E-06
			Oxychlordane	2.0E-07	--	2.0E-07

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	2.1E-05	--	2.1E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			7.1E-04
			Total DLCs (based on KM TEQs)			7.0E-04
			Total PCDD/Fs (excluding KM TEQ)			5.0E-04
			Total PCDD/Fs (based on KM TEQ)			4.9E-04
			Total DL-PCBs (excluding KM TEQ)			2.1E-04
			Total DL-PCBs (based on KM TEQ)			2.0E-04
			Total Non-DL PCBs			1.7E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			3.8E-04
			Total PCBs (DL & NDL; based on KM TEQ)			3.7E-04
			Total PAHs			1.1E-05
			Total Organics			5.0E-05
			Total Inorganics			2.1E-05
	White Perch Total (excluding KM TEQs)					9.6E-04
	White Perch Total (based on KM TEQs)					9.5E-04
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.3E-04	--	4.3E-04
			1,2,3,7,8-PeCDD	1.1E-05	--	1.1E-05

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	3.3E-07	--	3.3E-07
			1,2,3,6,7,8-HxCDD	9.7E-07	--	9.7E-07
			1,2,3,7,8,9-HxCDD	3.5E-07	--	3.5E-07
			1,2,3,4,6,7,8-HpCDD	1.1E-07	--	1.1E-07
			OCDD	9.9E-09	--	9.9E-09
			2,3,7,8-TCDF	1.6E-05	--	1.6E-05
			1,2,3,7,8-PeCDF	1.0E-06	--	1.0E-06
			2,3,4,7,8-PeCDF	2.4E-05	--	2.4E-05
			1,2,3,4,7,8-HxCDF	7.7E-06	--	7.7E-06
			1,2,3,6,7,8-HxCDF	2.3E-06	--	2.3E-06
			1,2,3,7,8,9-HxCDF	1.4E-07	--	1.4E-07
			2,3,4,6,7,8-HxCDF	6.1E-07	--	6.1E-07
			1,2,3,4,6,7,8-HpCDF	7.7E-07	--	7.7E-07
			1,2,3,4,7,8,9-HpCDF	1.1E-08	--	1.1E-08
			OCDF	1.2E-09	--	1.2E-09
			KM TEQ DF	5.0E-04	--	5.0E-04
			PCB-77	3.2E-06	--	3.2E-06
			PCB-81	4.2E-07	--	4.2E-07
			PCB-105	5.1E-06	--	5.1E-06
			PCB-114	4.3E-07	--	4.3E-07
			PCB-118	2.3E-05	--	2.3E-05
			PCB-123	4.0E-07	--	4.0E-07
			PCB-126	1.6E-04	--	1.6E-04
			PCB-156/157	1.8E-06	--	1.8E-06
			PCB-167	7.7E-07	--	7.7E-07
			PCB-169	5.4E-06	--	5.4E-06
			PCB-189	1.3E-07	--	1.3E-07
			KM TEQ PCB	1.9E-04	--	1.9E-04
			Non-DL PCBs			
			Total Non-DL PCBs	7.0E-05	--	7.0E-05
			PAHs			
			Benz(a)anthracene	6.2E-08	--	6.2E-08
			Benzo(a)pyrene	5.9E-07	--	5.9E-07
			Benzo(b)fluoranthene	5.8E-08	--	5.8E-08
			Chrysene	8.1E-10	--	8.1E-10
			Dibenz(a,h)anthracene	5.9E-07	--	5.9E-07
			Indeno(1,2,3-c,d)-pyrene	4.7E-07	--	4.7E-07

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pesticides & Organics			
			2,4'-DDD	5.8E-09	--	5.8E-09
			2,4'-DDE	1.7E-08	--	1.7E-08
			2,4'-DDT	7.4E-09	--	7.4E-09
			4,4'-DDD	9.2E-07	--	9.2E-07
			4,4'-DDE	3.5E-06	--	3.5E-06
			4,4'-DDT	4.0E-08	--	4.0E-08
			Benzaldehyde	5.2E-07	--	5.2E-07
			Chlordane, alpha (cis)	7.8E-08	--	7.8E-08
			Chlordane, gamma (trans)	9.7E-09	--	9.7E-09
			Dieldrin	1.1E-05	--	1.1E-05
			Heptachlor epoxide, cis-	3.6E-06	--	3.6E-06
			Heptachlor epoxide, trans-	1.1E-06	--	1.1E-06
			Hexachlorobenzene	1.9E-07	--	1.9E-07
			Mirex	4.0E-07	--	4.0E-07
			Nonachlor, cis-	2.0E-07	--	2.0E-07
			Nonachlor, trans-	4.0E-07	--	4.0E-07
			Oxychlordane	6.0E-07	--	6.0E-07
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	4.6E-05	--	4.6E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			7.0E-04
			Total DLCs (based on KM TEQs)			6.9E-04
			Total PCDD/Fs (excluding KM TEQ)			5.0E-04
			Total PCDD/Fs (based on KM TEQ)			5.0E-04
			Total DL-PCBs (excluding KM TEQ)			2.0E-04
			Total DL-PCBs (based on KM TEQ)			1.9E-04
			Total Non-DL PCBs			7.0E-05
			Total PCBs (DL & NDL; excluding KM TEQ)			2.7E-04
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-04
			Total PAHs			1.8E-06
			Total Organics			2.2E-05
			Total Inorganics			4.6E-05
	Crab (H+M) Total (excluding KM TEQs)					8.4E-04
	Crab (H+M) Total (based on KM TEQs)					8.3E-04
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	6.4E-05	--	6.4E-05
			1,2,3,7,8-PeCDD	4.1E-06	--	4.1E-06
			1,2,3,4,7,8-HxCDD	4.5E-08	--	4.5E-08
			1,2,3,6,7,8-HxCDD	1.1E-07	--	1.1E-07
			1,2,3,7,8,9-HxCDD	5.8E-08	--	5.8E-08
			1,2,3,4,6,7,8-HpCDD	2.2E-08	--	2.2E-08
			OCDD	2.3E-09	--	2.3E-09
			2,3,7,8-TCDF	1.9E-06	--	1.9E-06
			1,2,3,7,8-PeCDF	1.3E-07	--	1.3E-07
			2,3,4,7,8-PeCDF	2.4E-06	--	2.4E-06
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06
			1,2,3,6,7,8-HxCDF	3.0E-07	--	3.0E-07
			1,2,3,7,8,9-HxCDF	1.2E-07	--	1.2E-07
			2,3,4,6,7,8-HxCDF	7.6E-08	--	7.6E-08
			1,2,3,4,6,7,8-HpCDF	6.5E-08	--	6.5E-08
			1,2,3,4,7,8,9-HpCDF	5.5E-09	--	5.5E-09
			OCDF	4.6E-10	--	4.6E-10
			KM TEQ DF	7.2E-05	--	7.2E-05
			PCB-77	3.3E-07	--	3.3E-07
			PCB-81	4.5E-08	--	4.5E-08

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	5.2E-07	--	5.2E-07
			PCB-114	4.6E-08	--	4.6E-08
			PCB-118	2.0E-06	--	2.0E-06
			PCB-123	3.9E-08	--	3.9E-08
			PCB-126	1.4E-05	--	1.4E-05
			PCB-156/157	1.6E-07	--	1.6E-07
			PCB-167	6.1E-08	--	6.1E-08
			PCB-169	5.6E-06	--	5.6E-06
			PCB-189	7.7E-09	--	7.7E-09
			KM TEQ PCB	1.7E-05	--	1.7E-05
			Non-DL PCBs			
			Total Non-DL PCBs	6.1E-06	--	6.1E-06
			PAHs			
			Benz(a)anthracene	2.9E-07	--	2.9E-07
			Benzo(a)pyrene	2.9E-06	--	2.9E-06
			Benzo(b)fluoranthene	2.9E-07	--	2.9E-07
			Chrysene	2.9E-09	--	2.9E-09
			Dibenz(a,h)anthracene	2.9E-06	--	2.9E-06
			Indeno(1,2,3-c,d)-pyrene	2.9E-07	--	2.9E-07
			Pesticides & Organics			
			2,4'-DDD	6.3E-10	--	6.3E-10
			2,4'-DDE	1.8E-09	--	1.8E-09
			2,4'-DDT	1.4E-09	--	1.4E-09
			4,4'-DDD	1.4E-07	--	1.4E-07
			4,4'-DDE	5.4E-07	--	5.4E-07
			4,4'-DDT	5.6E-09	--	5.6E-09
			Benzaldehyde	5.7E-07	--	5.7E-07
			Chlordane, alpha (cis)	2.2E-08	--	2.2E-08
			Chlordane, gamma (trans)	1.0E-09	--	1.0E-09
			Dieldrin	2.4E-06	--	2.4E-06
			Heptachlor epoxide, cis-	3.3E-07	--	3.3E-07
			Heptachlor epoxide, trans-	2.3E-07	--	2.3E-07
			Hexachlorobenzene	3.9E-08	--	3.9E-08
			Mirex	1.0E-07	--	1.0E-07
			Nonachlor, cis-	2.5E-08	--	2.5E-08
			Nonachlor, trans-	4.6E-08	--	4.6E-08
			Oxychlordane	6.5E-08	--	6.5E-08

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	4.3E-05	--	4.3E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			9.7E-05
			Total DLCs (based on KM TEQs)			8.9E-05
			Total PCDD/Fs (excluding KM TEQ)			7.4E-05
			Total PCDD/Fs (based on KM TEQ)			7.2E-05
			Total DL-PCBs (excluding KM TEQ)			2.3E-05
			Total DL-PCBs (based on KM TEQ)			1.7E-05
			Total Non-DL PCBs			6.1E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			2.9E-05
			Total PCBs (DL & NDL; based on KM TEQ)			2.3E-05
			Total PAHs			6.6E-06
			Total Organics			4.5E-06
			Total Inorganics			4.3E-05
	Crab (Muscle) Total (excluding KM TEQs)					1.6E-04
	Crab (Muscle) Total (based on KM TEQs)					1.5E-04
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-03	--	1.5E-03
			1,2,3,7,8-PeCDD	3.6E-05	--	3.6E-05

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SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	1.1E-06	--	1.1E-06
			1,2,3,6,7,8-HxCDD	3.4E-06	--	3.4E-06
			1,2,3,7,8,9-HxCDD	1.2E-06	--	1.2E-06
			1,2,3,4,6,7,8-HpCDD	3.7E-07	--	3.7E-07
			OCDD	3.2E-08	--	3.2E-08
			2,3,7,8-TCDF	5.6E-05	--	5.6E-05
			1,2,3,7,8-PeCDF	3.6E-06	--	3.6E-06
			2,3,4,7,8-PeCDF	8.7E-05	--	8.7E-05
			1,2,3,4,7,8-HxCDF	2.7E-05	--	2.7E-05
			1,2,3,6,7,8-HxCDF	8.2E-06	--	8.2E-06
			1,2,3,7,8,9-HxCDF	2.2E-07	--	2.2E-07
			2,3,4,6,7,8-HxCDF	2.1E-06	--	2.1E-06
			1,2,3,4,6,7,8-HpCDF	2.8E-06	--	2.8E-06
			1,2,3,4,7,8,9-HpCDF	2.3E-08	--	2.3E-08
			OCDF	4.1E-09	--	4.1E-09
			KM TEQ DF	1.7E-03	--	1.7E-03
			PCB-77	1.1E-05	--	1.1E-05
			PCB-81	1.5E-06	--	1.5E-06
			PCB-105	1.8E-05	--	1.8E-05
			PCB-114	1.6E-06	--	1.6E-06
			PCB-118	8.3E-05	--	8.3E-05
			PCB-123	1.5E-06	--	1.5E-06
			PCB-126	5.8E-04	--	5.8E-04
			PCB-156/157	6.7E-06	--	6.7E-06
			PCB-167	2.8E-06	--	2.8E-06
			PCB-169	1.8E-05	--	1.8E-05
			PCB-189	4.9E-07	--	4.9E-07
			KM TEQ PCB	6.9E-04	--	6.9E-04
			Non-DL PCBs			
			Total Non-DL PCBs	2.6E-04	--	2.6E-04
			PAHs			
			Benz(a)anthracene	7.1E-08	--	7.1E-08
			Benzo(a)pyrene	6.3E-07	--	6.3E-07
			Benzo(b)fluoranthene	5.9E-08	--	5.9E-08
			Chrysene	9.9E-10	--	9.9E-10
			Dibenz(a,h)anthracene	6.1E-07	--	6.1E-07
			Indeno(1,2,3-c,d)-pyrene	1.7E-06	--	1.7E-06

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pesticides & Organics			
			2,4'-DDD	2.0E-08	--	2.0E-08
			2,4'-DDE	5.9E-08	--	5.9E-08
			2,4'-DDT	2.4E-08	--	2.4E-08
			4,4'-DDD	3.2E-06	--	3.2E-06
			4,4'-DDE	1.2E-05	--	1.2E-05
			4,4'-DDT	1.4E-07	--	1.4E-07
			Benzaldehyde	1.1E-06	--	1.1E-06
			Chlordane, alpha (cis)	2.5E-07	--	2.5E-07
			Chlordane, gamma (trans)	3.5E-08	--	3.5E-08
			Dieldrin	3.5E-05	--	3.5E-05
			Heptachlor epoxide, cis-	1.3E-05	--	1.3E-05
			Heptachlor epoxide, trans-	3.8E-06	--	3.8E-06
			Hexachlorobenzene	6.4E-07	--	6.4E-07
			Mirex	1.3E-06	--	1.3E-06
			Nonachlor, cis-	7.1E-07	--	7.1E-07
			Nonachlor, trans-	1.4E-06	--	1.4E-06
			Oxychlordane	2.1E-06	--	2.1E-06
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	5.7E-05	--	5.7E-05
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--

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SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			2.5E-03
			Total DLCs (based on KM TEQs)			2.4E-03
			Total PCDD/Fs (excluding KM TEQ)			1.7E-03
			Total PCDD/Fs (based on KM TEQ)			1.7E-03
			Total DL-PCBs (excluding KM TEQ)			7.2E-04
			Total DL-PCBs (based on KM TEQ)			6.9E-04
			Total Non-DL PCBs			2.6E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			9.8E-04
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-04
			Total PAHs			3.0E-06
			Total Organics			7.6E-05
			Total Inorganics			5.7E-05
	Crab (Hepatopancreas) Total (excluding KM TEQs)					2.8E-03
	Crab (Hepatopancreas) Total (based on KM TEQs)					2.8E-03
Sediment	Sediment	Angler - Fishing Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.7E-07	3.1E-07	5.8E-07
			1,2,3,7,8-PeCDD	1.4E-08	1.7E-08	3.1E-08
			1,2,3,4,7,8-HxCDD	1.3E-09	1.5E-09	2.8E-09
			1,2,3,6,7,8-HxCDD	5.1E-09	6.0E-09	1.1E-08
			1,2,3,7,8,9-HxCDD	3.0E-09	3.5E-09	6.6E-09
			1,2,3,4,6,7,8-HpCDD	9.0E-09	1.1E-08	2.0E-08
			OCDD	2.8E-09	3.2E-09	6.0E-09
			2,3,7,8-TCDF	4.8E-09	5.7E-09	1.1E-08
			1,2,3,7,8-PeCDF	1.0E-09	1.2E-09	2.2E-09
			2,3,4,7,8-PeCDF	1.7E-08	1.9E-08	3.6E-08
			1,2,3,4,7,8-HxCDF	2.5E-08	3.0E-08	5.5E-08
			1,2,3,6,7,8-HxCDF	6.6E-09	7.7E-09	1.4E-08
			1,2,3,7,8,9-HxCDF	5.0E-10	5.8E-10	1.1E-09
			2,3,4,6,7,8-HxCDF	3.7E-09	4.3E-09	8.0E-09
			1,2,3,4,6,7,8-HpCDF	1.1E-08	1.3E-08	2.4E-08
			1,2,3,4,7,8,9-HpCDF	3.8E-10	4.5E-10	8.3E-10
			OCDF	4.7E-10	5.5E-10	1.0E-09
			KM TEQ DF	3.7E-07	4.3E-07	8.0E-07
			PCB-77	2.7E-09	3.2E-09	5.9E-09
			PCB-81	3.1E-10	3.7E-10	6.8E-10

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.3E-09	1.5E-09	2.8E-09
			PCB-114	9.0E-11	1.1E-10	2.0E-10
			PCB-118	3.8E-09	4.5E-09	8.3E-09
			PCB-123	1.1E-10	1.3E-10	2.4E-10
			PCB-126	8.6E-08	1.0E-07	1.9E-07
			PCB-156/157	3.4E-10	4.0E-10	7.4E-10
			PCB-167	1.2E-10	1.4E-10	2.7E-10
			PCB-169	2.7E-08	3.1E-08	5.8E-08
			PCB-189	2.6E-11	3.0E-11	5.6E-11
			KM TEQ PCB	1.1E-07	1.3E-07	2.3E-07
			Non-DL PCBs			
			Total Non-DL PCBs	3.1E-08	1.7E-07	2.0E-07
			PAHs			
			Benz(a)anthracene	4.9E-09	2.5E-08	3.0E-08
			Benzo(a)pyrene	4.8E-08	2.4E-07	2.9E-07
			Benzo(b)fluoranthene	4.3E-09	2.2E-08	2.6E-08
			Benzo(k)fluoranthene	2.8E-10	1.4E-09	1.7E-09
			Chrysene	4.7E-11	2.4E-10	2.8E-10
			Dibenz(a,h)anthracene	9.9E-09	5.0E-08	6.0E-08
			Indeno(1,2,3-c,d)-pyrene	1.8E-09	9.0E-09	1.1E-08
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	6.5E-07	1.3E-06	1.9E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	1.6E-08	--	1.6E-08
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.1E-06
			Total DLCs (based on KM TEQs)			1.0E-06
			Total PCDD/Fs (excluding KM TEQ)			8.1E-07
			Total PCDD/Fs (based on KM TEQ)			8.0E-07
			Total DL-PCBs (excluding KM TEQ)			2.6E-07
			Total DL-PCBs (based on KM TEQ)			2.3E-07
			Total Non-DL PCBs			2.0E-07
			Total PCBs (DL & NDL; excluding KM TEQ)			4.6E-07
			Total PCBs (DL & NDL; based on KM TEQ)			4.3E-07
			Total PAHs			4.2E-07
			Total Organics			0.0E+00
			Total Inorganics			1.9E-06
	Fishing - Sediment Total (excluding KM TEQs)					3.6E-06
	Fishing - Sediment Total (based on KM TEQs)					3.6E-06
Surface Water	Surface Water	Angler - Fishing	**Dioxin-like Compounds**			
		Surface Water	2,3,7,8-TCDD	9.5E-10	--	9.5E-10
			1,2,3,7,8-PeCDD	3.3E-10	--	3.3E-10
			1,2,3,4,7,8-HxCDD	2.4E-10	--	2.4E-10
			1,2,3,6,7,8-HxCDD	3.8E-11	--	3.8E-11
			1,2,3,7,8,9-HxCDD	6.7E-11	--	6.7E-11
			1,2,3,4,6,7,8-HpCDD	4.8E-11	--	4.8E-11
			OCDD	1.5E-11	--	1.5E-11
			2,3,7,8-TCDF	3.7E-11	--	3.7E-11
			1,2,3,7,8-PeCDF	8.8E-12	--	8.8E-12
			2,3,4,7,8-PeCDF	1.5E-10	--	1.5E-10
			1,2,3,4,7,8-HxCDF	1.4E-10	--	1.4E-10
			1,2,3,6,7,8-HxCDF	3.4E-11	--	3.4E-11
			1,2,3,7,8,9-HxCDF	2.0E-10	--	2.0E-10
			2,3,4,6,7,8-HxCDF	2.2E-11	--	2.2E-11
			1,2,3,4,6,7,8-HpCDF	6.0E-11	--	6.0E-11
			1,2,3,4,7,8,9-HpCDF	3.8E-12	--	3.8E-12
			OCDF	3.4E-12	--	3.4E-12

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SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
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Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	1.9E-09	--	1.9E-09
			PCB-77	1.6E-12	--	1.6E-12
			PCB-81	1.6E-13	--	1.6E-13
			PCB-105	1.7E-12	--	1.7E-12
			PCB-114	8.9E-14	--	8.9E-14
			PCB-118	3.8E-12	--	3.8E-12
			PCB-123	7.4E-14	--	7.4E-14
			PCB-126	5.2E-11	--	5.2E-11
			PCB-156/157	4.5E-13	--	4.5E-13
			PCB-167	1.5E-13	--	1.5E-13
			PCB-169	9.4E-12	--	9.4E-12
			PCB-189	2.0E-14	--	2.0E-14
			KM TEQ PCB	8.4E-11	--	8.4E-11
			PAHs			
			Benz(a)anthracene	6.1E-12	--	6.1E-12
			Benzo(a)pyrene	7.8E-11	--	7.8E-11
			Benzo(b)fluoranthene	1.1E-11	--	1.1E-11
			Benzo(k)fluoranthene	4.8E-13	--	4.8E-13
			Chrysene	1.0E-13	--	1.0E-13
			Dibenz(a,h)anthracene	2.0E-11	--	2.0E-11
			Indeno(1,2,3-c,d)-pyrene	4.5E-12	--	4.5E-12
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	1.9E-11	1.5E-10	1.7E-10
			Trichloroethylene	3.1E-11	4.5E-10	4.8E-10
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	9.9E-09	5.8E-09	1.6E-08
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	5.7E-10	2.7E-08	2.8E-08
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			2.4E-09

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (based on KM TEQs)			2.0E-09
			Total PCDD/Fs (excluding KM TEQ)			2.4E-09
			Total PCDD/Fs (based on KM TEQ)			1.9E-09
			Total DL-PCBs (excluding KM TEQ)			7.0E-11
			Total DL-PCBs (based on KM TEQ)			8.4E-11
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.0E-11
			Total PCBs (DL & NDL; based on KM TEQ)			8.4E-11
			Total PAHs			1.2E-10
			Total Organics			6.5E-10
			Total Inorganics			4.3E-08
	Fishing - Surface Water Total (excluding KM TEQs)					4.7E-08
	Fishing - Surface Water Total (based on KM TEQs)					4.6E-08
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						7.9E-04
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						8.1E-04
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.1E-03
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.2E-03
Sediment	Sediment	Angler - Crabbing Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.7E-07	2.0E-07	3.7E-07
			1,2,3,7,8-PeCDD	8.8E-09	1.0E-08	1.9E-08
			1,2,3,4,7,8-HxCDD	7.9E-10	9.3E-10	1.7E-09
			1,2,3,6,7,8-HxCDD	3.2E-09	3.7E-09	7.0E-09
			1,2,3,7,8,9-HxCDD	1.9E-09	2.2E-09	4.1E-09
			1,2,3,4,6,7,8-HpCDD	5.6E-09	6.6E-09	1.2E-08
			OCDD	1.7E-09	2.0E-09	3.7E-09
			2,3,7,8-TCDF	3.0E-09	3.5E-09	6.6E-09
			1,2,3,7,8-PeCDF	6.2E-10	7.3E-10	1.4E-09
			2,3,4,7,8-PeCDF	1.0E-08	1.2E-08	2.3E-08
			1,2,3,4,7,8-HxCDF	1.6E-08	1.9E-08	3.4E-08
			1,2,3,6,7,8-HxCDF	4.1E-09	4.8E-09	9.0E-09
			1,2,3,7,8,9-HxCDF	3.1E-10	3.6E-10	6.7E-10
			2,3,4,6,7,8-HxCDF	2.3E-09	2.7E-09	5.0E-09
			1,2,3,4,6,7,8-HpCDF	7.0E-09	8.2E-09	1.5E-08
			1,2,3,4,7,8,9-HpCDF	2.4E-10	2.8E-10	5.2E-10

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			OCDF	3.0E-10	3.5E-10	6.4E-10
			KM TEQ DF	2.3E-07	2.7E-07	5.0E-07
			PCB-77	1.7E-09	2.0E-09	3.7E-09
			PCB-81	2.0E-10	2.3E-10	4.3E-10
			PCB-105	8.2E-10	9.6E-10	1.8E-09
			PCB-114	5.6E-11	6.6E-11	1.2E-10
			PCB-118	2.4E-09	2.8E-09	5.2E-09
			PCB-123	6.9E-11	8.1E-11	1.5E-10
			PCB-126	5.4E-08	6.3E-08	1.2E-07
			PCB-156/157	2.1E-10	2.5E-10	4.6E-10
			PCB-167	7.7E-11	9.0E-11	1.7E-10
			PCB-169	1.7E-08	1.9E-08	3.6E-08
			PCB-189	1.6E-11	1.9E-11	3.5E-11
			KM TEQ PCB	6.7E-08	7.9E-08	1.5E-07
			Non-DL PCBs			
			Total Non-DL PCBs	1.9E-08	1.1E-07	1.3E-07
			PAHs			
			Benz(a)anthracene	3.1E-09	1.6E-08	1.9E-08
			Benzo(a)pyrene	3.0E-08	1.5E-07	1.8E-07
			Benzo(b)fluoranthene	2.7E-09	1.4E-08	1.6E-08
			Benzo(k)fluoranthene	1.7E-10	8.8E-10	1.1E-09
			Chrysene	2.9E-11	1.5E-10	1.8E-10
			Dibenz(a,h)anthracene	6.2E-09	3.1E-08	3.7E-08
			Indeno(1,2,3-c,d)-pyrene	1.1E-09	5.6E-09	6.7E-09
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	4.1E-07	7.9E-07	1.2E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	1.0E-08	--	1.0E-08
			Iron	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			6.7E-07
			Total DLCs (based on KM TEQs)			6.4E-07
			Total PCDD/Fs (excluding KM TEQ)			5.1E-07
			Total PCDD/Fs (based on KM TEQ)			5.0E-07
			Total DL-PCBs (excluding KM TEQ)			1.6E-07
			Total DL-PCBs (based on KM TEQ)			1.5E-07
			Total Non-DL PCBs			1.3E-07
			Total PCBs (DL & NDL; excluding KM TEQ)			2.9E-07
			Total PCBs (DL & NDL; based on KM TEQ)			2.7E-07
			Total PAHs			2.6E-07
			Total Organics			0.0E+00
			Total Inorganics			1.2E-06
	Crabbing - Sediment Total (excluding KM TEQs)					2.3E-06
	Crabbing - Sediment Total (based on KM TEQs)					2.2E-06
Surface Water	Surface Water	Angler - Crabbing Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.9E-10	--	5.9E-10
			1,2,3,7,8-PeCDD	2.0E-10	--	2.0E-10
			1,2,3,4,7,8-HxCDD	1.5E-10	--	1.5E-10
			1,2,3,6,7,8-HxCDD	2.4E-11	--	2.4E-11
			1,2,3,7,8,9-HxCDD	4.2E-11	--	4.2E-11
			1,2,3,4,6,7,8-HpCDD	3.0E-11	--	3.0E-11
			OCDD	9.4E-12	--	9.4E-12
			2,3,7,8-TCDF	2.3E-11	--	2.3E-11
			1,2,3,7,8-PeCDF	5.5E-12	--	5.5E-12
			2,3,4,7,8-PeCDF	9.6E-11	--	9.6E-11
			1,2,3,4,7,8-HxCDF	8.9E-11	--	8.9E-11
			1,2,3,6,7,8-HxCDF	2.1E-11	--	2.1E-11
			1,2,3,7,8,9-HxCDF	1.3E-10	--	1.3E-10

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	1.4E-11	--	1.4E-11
			1,2,3,4,6,7,8-HpCDF	3.8E-11	--	3.8E-11
			1,2,3,4,7,8,9-HpCDF	2.4E-12	--	2.4E-12
			OCDF	2.1E-12	--	2.1E-12
			KM TEQ DF	1.2E-09	--	1.2E-09
			PCB-77	1.0E-12	--	1.0E-12
			PCB-81	9.9E-14	--	9.9E-14
			PCB-105	1.1E-12	--	1.1E-12
			PCB-114	5.5E-14	--	5.5E-14
			PCB-118	2.4E-12	--	2.4E-12
			PCB-123	4.6E-14	--	4.6E-14
			PCB-126	3.3E-11	--	3.3E-11
			PCB-156/157	2.8E-13	--	2.8E-13
			PCB-167	9.5E-14	--	9.5E-14
			PCB-169	5.9E-12	--	5.9E-12
			PCB-189	1.2E-14	--	1.2E-14
			KM TEQ PCB	5.3E-11	--	5.3E-11
			PAHs			
			Benz(a)anthracene	3.8E-12	--	3.8E-12
			Benzo(a)pyrene	4.9E-11	--	4.9E-11
			Benzo(b)fluoranthene	6.7E-12	--	6.7E-12
			Benzo(k)fluoranthene	3.0E-13	--	3.0E-13
			Chrysene	6.5E-14	--	6.5E-14
			Dibenz(a,h)anthracene	1.3E-11	--	1.3E-11
			Indeno(1,2,3-c,d)-pyrene	2.8E-12	--	2.8E-12
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	1.2E-11	9.3E-11	1.1E-10
			Trichloroethylene	1.9E-11	2.8E-10	3.0E-10
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	6.2E-09	3.6E-09	9.8E-09
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	3.6E-10	1.7E-08	1.7E-08
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--

TABLE 9.A.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			1.5E-09
			Total DLCs (based on KM TEQs)			1.2E-09
			Total PCDD/Fs (excluding KM TEQ)			1.5E-09
			Total PCDD/Fs (based on KM TEQ)			1.2E-09
			Total DL-PCBs (excluding KM TEQ)			4.4E-11
			Total DL-PCBs (based on KM TEQ)			5.3E-11
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.4E-11
			Total PCBs (DL & NDL; based on KM TEQ)			5.3E-11
			Total PAHs			7.5E-11
			Total Organics			4.0E-10
			Total Inorganics			2.7E-08
	Crabbing - Surface Water Total (excluding KM TEQs)					2.9E-08
	Crabbing - Surface Water Total (based on KM TEQs)					2.9E-08
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						8.4E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						8.3E-04
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						1.6E-04
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						1.5E-04

Note: Sediment and surface water risks are for adult only, since the child is not assumed to accompany the adult angler on fishing or crabbing trips.

Note: For fish ingestion, summary risks are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Worker Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.5E-07	2.2E-07	5.7E-07	Reproductive	9.4E-03	5.9E-03	1.5E-02
			1,2,3,7,8-PeCDD	1.8E-08	1.2E-08	3.0E-08	Reproductive	4.9E-04	3.1E-04	8.0E-04
			1,2,3,4,7,8-HxCDD	1.7E-09	1.0E-09	2.7E-09	Reproductive	4.4E-05	2.8E-05	7.2E-05
			1,2,3,6,7,8-HxCDD	6.7E-09	4.2E-09	1.1E-08	Reproductive	1.8E-04	1.1E-04	2.9E-04
			1,2,3,7,8,9-HxCDD	3.9E-09	2.5E-09	6.4E-09	Reproductive	1.1E-04	6.7E-05	1.7E-04
			1,2,3,4,6,7,8-HpCDD	1.2E-08	7.5E-09	1.9E-08	Reproductive	3.1E-04	2.0E-04	5.1E-04
			OCDD	3.6E-09	2.3E-09	5.9E-09	Reproductive	9.6E-05	6.1E-05	1.6E-04
			2,3,7,8-TCDF	6.3E-09	4.0E-09	1.0E-08	Reproductive	1.7E-04	1.1E-04	2.8E-04
			1,2,3,7,8-PeCDF	1.3E-09	8.2E-10	2.1E-09	Reproductive	3.5E-05	2.2E-05	5.7E-05
			2,3,4,7,8-PeCDF	2.2E-08	1.4E-08	3.5E-08	Reproductive	5.8E-04	3.7E-04	9.5E-04
			1,2,3,4,7,8-HxCDF	3.3E-08	2.1E-08	5.4E-08	Reproductive	8.8E-04	5.6E-04	1.4E-03
			1,2,3,6,7,8-HxCDF	8.6E-09	5.5E-09	1.4E-08	Reproductive	2.3E-04	1.5E-04	3.8E-04
			1,2,3,7,8,9-HxCDF	6.4E-10	4.1E-10	1.1E-09	Reproductive	1.7E-05	1.1E-05	2.8E-05
			2,3,4,6,7,8-HxCDF	4.8E-09	3.0E-09	7.8E-09	Reproductive	1.3E-04	8.1E-05	2.1E-04
			1,2,3,4,6,7,8-HpCDF	1.5E-08	9.3E-09	2.4E-08	Reproductive	3.9E-04	2.5E-04	6.4E-04
			1,2,3,4,7,8,9-HpCDF	5.0E-10	3.2E-10	8.2E-10	Reproductive	1.3E-05	8.4E-06	2.2E-05
			OCDF	6.2E-10	3.9E-10	1.0E-09	Reproductive	1.6E-05	1.0E-05	2.7E-05
			KM TEQ DF	4.8E-07	3.0E-07	7.8E-07	Reproductive	1.3E-02	8.1E-03	2.1E-02
			PCB-77	3.5E-09	2.2E-09	5.8E-09	Reproductive	9.4E-05	6.0E-05	1.5E-04
			PCB-81	4.1E-10	2.6E-10	6.7E-10	Reproductive	1.1E-05	6.9E-06	1.8E-05
			PCB-105	1.7E-09	1.1E-09	2.8E-09	Reproductive	4.5E-05	2.9E-05	7.4E-05
			PCB-114	1.2E-10	7.4E-11	1.9E-10	Reproductive	3.1E-06	2.0E-06	5.1E-06
			PCB-118	5.0E-09	3.2E-09	8.1E-09	Reproductive	1.3E-04	8.4E-05	2.2E-04
			PCB-123	1.4E-10	9.2E-11	2.4E-10	Reproductive	3.9E-06	2.4E-06	6.3E-06
			PCB-126	1.1E-07	7.1E-08	1.8E-07	Reproductive	3.0E-03	1.9E-03	4.9E-03
			PCB-156/157	4.5E-10	2.8E-10	7.3E-10	Reproductive	1.2E-05	7.5E-06	1.9E-05
			PCB-167	1.6E-10	1.0E-10	2.6E-10	Reproductive	4.3E-06	2.7E-06	7.0E-06
			PCB-169	3.5E-08	2.2E-08	5.7E-08	Reproductive	9.2E-04	5.9E-04	1.5E-03
			PCB-189	3.3E-11	2.1E-11	5.5E-11	Reproductive	8.9E-07	5.7E-07	1.5E-06
			KM TEQ PCB	1.4E-07	8.9E-08	2.3E-07	Reproductive	3.7E-03	2.4E-03	6.1E-03
			Non-DL PCBs							
			Total Non-DL PCBs	4.0E-08	1.2E-07	1.6E-07	Whole Body	2.8E-03	8.4E-03	1.1E-02
			PAHs							
			Benz(a)anthracene	6.4E-09	1.8E-08	2.4E-08	--	--	--	--
			Benzo(a)pyrene	6.2E-08	1.7E-07	2.3E-07	Developmental	5.8E-04	1.6E-03	2.2E-03
			Benzo(b)fluoranthene	5.6E-09	1.5E-08	2.1E-08	--	--	--	--
			Benzo(k)fluoranthene							
			Chrysene	6.1E-11	1.7E-10	2.3E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-08	3.5E-08	4.8E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.3E-09	6.4E-09	8.7E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	1.2E-04	--	1.2E-04
			TPH (C9-C40)	--	--	--	Respiratory	8.8E-03	--	8.8E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	1.0E-03	--	1.0E-03
			Antimony	--	--	--	Whole Body	5.0E-04	--	5.0E-04
			Arsenic, inorganic	8.5E-07	9.0E-07	1.7E-06	Skin, Blood	5.3E-03	5.6E-03	1.1E-02
			Cadmium	--	--	--	Urinary	2.6E-04	2.2E-04	4.9E-04

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	6.1E-06	--	6.1E-06
			Cobalt	--	--	--	Thyroid	4.0E-03	--	4.0E-03
			Copper	--	--	--	GI Tract	1.4E-02	--	1.4E-02
			Chromium (VI)	2.1E-08	--	2.1E-08	No Effect	4.0E-05	--	4.0E-05
			Iron	--	--	--	GI Tract	5.3E-03	--	5.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.3E-03	--	1.3E-03
			Mercury	--	--	--	Immune	5.7E-04	--	5.7E-04
			Nickel	--	--	--	Body Weight, Organ Weights	2.9E-04	--	2.9E-04
			Thallium	--	--	--	Skin, Hair	2.1E-03	--	2.1E-03
			Vanadium	--	--	--	Hair	8.6E-04	--	8.6E-04
			Zinc	--	--	--	Blood	3.5E-04	--	3.5E-04
			Total DLCs (excluding KM TEQs)			1.1E-06				2.8E-02
			Total DLCs (based on KM TEQs)			1.0E-06				2.7E-02
			Total PCDD/Fs (excluding KM TEQ)			8.0E-07				2.1E-02
			Total PCDD/Fs (based on KM TEQ)			7.8E-07				2.1E-02
			Total DL-PCBs (excluding KM TEQ)			2.6E-07				6.9E-03
			Total DL-PCBs (based on KM TEQ)			2.3E-07				6.1E-03
			Total Non-DL PCBs			1.6E-07				1.1E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			4.2E-07				1.8E-02
			Total PCBs (DL & NDL; based on KM TEQ)			3.9E-07				1.7E-02
			Total PAHs			3.4E-07				2.2E-03
			Total Organics			0.0E+00				8.9E-03
			Total Inorganics			1.8E-06				4.2E-02
	Sediment Total (excluding KM TEQs)					3.3E-06				9.3E-02
	Sediment Total (based on KM TEQs)					3.3E-06				9.1E-02

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
						Sediment Total				Sediment Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.1E-02		Blood HI =		1.1E-02
				Body Weight HI =		2.9E-04		Body Weight HI =		2.9E-04
				Developmental HI =		2.2E-03		Developmental HI =		2.2E-03
				GI Tract HI =		2.0E-02		GI Tract HI =		2.0E-02
				Hair HI =		3.0E-03		Hair HI =		3.0E-03
				Immune HI =		6.9E-04		Immune HI =		6.9E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		2.3E-03		Neurological HI =		2.3E-03
				No Effect HI =		4.6E-05		No Effect HI =		4.6E-05
				Organ Weights HI =		2.9E-04		Organ Weights HI =		2.9E-04
				Reproductive HI =		2.8E-02		Reproductive HI =		2.7E-02
				Skin HI =		1.3E-02		Skin HI =		1.3E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		4.0E-03		Thyroid HI =		4.0E-03
				Urinary HI =		4.9E-04		Urinary HI =		4.9E-04
				Whole Body HI =		1.2E-02		Whole Body HI =		1.2E-02

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	7.3E-08	8.5E-08	1.6E-07	Reproductive	2.4E-03	2.8E-03	5.3E-03
			1,2,3,7,8-PeCDD	3.8E-09	4.5E-09	8.3E-09	Reproductive	1.3E-04	1.5E-04	2.8E-04
			1,2,3,4,7,8-HxCDD	3.4E-10	4.0E-10	7.5E-10	Reproductive	1.1E-05	1.3E-05	2.5E-05
			1,2,3,6,7,8-HxCDD	1.4E-09	1.6E-09	3.0E-09	Reproductive	4.6E-05	5.4E-05	1.0E-04
			1,2,3,7,8,9-HxCDD	8.2E-10	9.6E-10	1.8E-09	Reproductive	2.7E-05	3.2E-05	5.9E-05
			1,2,3,4,6,7,8-HpCDD	2.4E-09	2.9E-09	5.3E-09	Reproductive	8.2E-05	9.5E-05	1.8E-04
			OCDD	7.5E-10	8.7E-10	1.6E-09	Reproductive	2.5E-05	2.9E-05	5.4E-05
			2,3,7,8-TCDF	1.3E-09	1.5E-09	2.8E-09	Reproductive	4.4E-05	5.1E-05	9.5E-05
			1,2,3,7,8-PeCDF	2.7E-10	3.2E-10	5.9E-10	Reproductive	9.0E-06	1.1E-05	2.0E-05
			2,3,4,7,8-PeCDF	4.5E-09	5.3E-09	9.8E-09	Reproductive	1.5E-04	1.8E-04	3.3E-04
			1,2,3,4,7,8-HxCDF	6.9E-09	8.1E-09	1.5E-08	Reproductive	2.3E-04	2.7E-04	5.0E-04
			1,2,3,6,7,8-HxCDF	1.8E-09	2.1E-09	3.9E-09	Reproductive	6.0E-05	7.0E-05	1.3E-04
			1,2,3,7,8,9-HxCDF	1.3E-10	1.6E-10	2.9E-10	Reproductive	4.5E-06	5.2E-06	9.7E-06
			2,3,4,6,7,8-HxCDF	1.0E-09	1.2E-09	2.2E-09	Reproductive	3.3E-05	3.9E-05	7.2E-05
			1,2,3,4,6,7,8-HpCDF	3.1E-09	3.6E-09	6.6E-09	Reproductive	1.0E-04	1.2E-04	2.2E-04
			1,2,3,4,7,8,9-HpCDF	1.0E-10	1.2E-10	2.2E-10	Reproductive	3.5E-06	4.0E-06	7.5E-06
			OCDF	1.3E-10	1.5E-10	2.8E-10	Reproductive	4.3E-06	5.0E-06	9.3E-06
			KM TEQ DF	9.9E-08	1.2E-07	2.2E-07	Reproductive	3.3E-03	3.9E-03	7.2E-03
			PCB-77	7.4E-10	8.6E-10	1.6E-09	Reproductive	2.5E-05	2.9E-05	5.3E-05
			PCB-81	8.5E-11	9.9E-11	1.8E-10	Reproductive	2.8E-06	3.3E-06	6.1E-06
			PCB-105	3.5E-10	4.1E-10	7.7E-10	Reproductive	1.2E-05	1.4E-05	2.6E-05
			PCB-114	2.4E-11	2.8E-11	5.3E-11	Reproductive	8.1E-07	9.5E-07	1.8E-06
			PCB-118	1.0E-09	1.2E-09	2.2E-09	Reproductive	3.5E-05	4.0E-05	7.5E-05
			PCB-123	3.0E-11	3.5E-11	6.5E-11	Reproductive	1.0E-06	1.2E-06	2.2E-06
			PCB-126	2.3E-08	2.7E-08	5.1E-08	Reproductive	7.8E-04	9.1E-04	1.7E-03
			PCB-156/157	9.3E-11	1.1E-10	2.0E-10	Reproductive	3.1E-06	3.6E-06	6.7E-06
			PCB-167	3.3E-11	3.9E-11	7.2E-11	Reproductive	1.1E-06	1.3E-06	2.4E-06
			PCB-169	7.2E-09	8.4E-09	1.6E-08	Reproductive	2.4E-04	2.8E-04	5.2E-04
			PCB-189	7.0E-12	8.1E-12	1.5E-11	Reproductive	2.3E-07	2.7E-07	5.0E-07
			KM TEQ PCB	2.9E-08	3.4E-08	6.3E-08	Reproductive	9.7E-04	1.1E-03	2.1E-03
			Non-DL PCBs							
			Total Non-DL PCBs	8.4E-09	4.6E-08	5.4E-08	Whole Body	7.3E-04	4.0E-03	4.7E-03
			PAHs							
			Benz(a)anthracene	1.3E-09	6.7E-09	8.1E-09	--	--	--	--
			Benzo(a)pyrene	1.3E-08	6.6E-08	7.9E-08	Developmental	1.5E-04	7.7E-04	9.2E-04
			Benzo(b)fluoranthene	1.2E-09	5.9E-09	7.1E-09	--	--	--	--
			Benzo(k)fluoranthene	7.6E-11	3.8E-10	4.6E-10	--	--	--	--
			Chrysene	1.3E-11	6.4E-11	7.7E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.7E-09	1.4E-08	1.6E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.8E-10	2.4E-09	2.9E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.2E-05	--	3.2E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.3E-03	--	2.3E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	2.7E-04	--	2.7E-04
			Antimony	--	--	--	Whole Body	1.3E-04	--	1.3E-04
			Arsenic, inorganic	1.8E-07	3.4E-07	5.2E-07	Skin, Blood	1.4E-03	2.7E-03	4.0E-03
			Cadmium	--	--	--	Urinary	6.9E-05	1.1E-04	1.8E-04

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	1.6E-06	--	1.6E-06
			Cobalt	--	--	--	Thyroid	1.0E-03	--	1.0E-03
			Copper	--	--	--	GI Tract	3.7E-03	--	3.7E-03
			Chromium (VI)	4.4E-09	--	4.4E-09	No Effect	1.0E-05	--	1.0E-05
			Iron	--	--	--	GI Tract	1.4E-03	--	1.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.3E-04	--	3.3E-04
			Mercury	--	--	--	Immune	1.5E-04	--	1.5E-04
			Nickel	--	--	--	Body Weight, Organ Weights	7.5E-05	--	7.5E-05
			Thallium	--	--	--	Skin, Hair	5.5E-04	--	5.5E-04
			Vanadium	--	--	--	Hair	2.2E-04	--	2.2E-04
			Zinc	--	--	--	Blood	9.2E-05	--	9.2E-05
			Total DLCs (excluding KM TEQs)			2.9E-07				9.7E-03
			Total DLCs (based on KM TEQs)			2.8E-07				9.3E-03
			Total PCDD/Fs (excluding KM TEQ)			2.2E-07				7.4E-03
			Total PCDD/Fs (based on KM TEQ)			2.2E-07				7.2E-03
			Total DL-PCBs (excluding KM TEQ)			7.1E-08				2.4E-03
			Total DL-PCBs (based on KM TEQ)			6.3E-08				2.1E-03
			Total Non-DL PCBs			5.4E-08				4.7E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-07				7.1E-03
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-07				6.8E-03
			Total PAHs			1.1E-07				9.2E-04
			Total Organics			0.0E+00				2.3E-03
			Total Inorganics			5.2E-07				1.2E-02
	Wader - Sediment Total (excluding KM TEQs)					9.8E-07				3.0E-02
	Wader - Sediment Total (based on KM TEQs)					9.7E-07				2.9E-02
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	7.3E-08	8.5E-08	1.6E-07	Reproductive	2.4E-03	2.8E-03	5.3E-03
			1,2,3,7,8-PeCDD	3.8E-09	4.5E-09	8.3E-09	Reproductive	1.3E-04	1.5E-04	2.8E-04
			1,2,3,4,7,8-HxCDD	3.4E-10	4.0E-10	7.5E-10	Reproductive	1.1E-05	1.3E-05	2.5E-05
			1,2,3,6,7,8-HxCDD	1.4E-09	1.6E-09	3.0E-09	Reproductive	4.6E-05	5.4E-05	1.0E-04
			1,2,3,7,8,9-HxCDD	8.2E-10	9.6E-10	1.8E-09	Reproductive	2.7E-05	3.2E-05	5.9E-05
			1,2,3,4,6,7,8-HpCDD	2.4E-09	2.9E-09	5.3E-09	Reproductive	8.2E-05	9.5E-05	1.8E-04
			OCDD	7.5E-10	8.7E-10	1.6E-09	Reproductive	2.5E-05	2.9E-05	5.4E-05
			2,3,7,8-TCDF	1.3E-09	1.5E-09	2.8E-09	Reproductive	4.4E-05	5.1E-05	9.5E-05
			1,2,3,7,8-PeCDF	2.7E-10	3.2E-10	5.9E-10	Reproductive	9.0E-06	1.1E-05	2.0E-05
			2,3,4,7,8-PeCDF	4.5E-09	5.3E-09	9.8E-09	Reproductive	1.5E-04	1.8E-04	3.3E-04
			1,2,3,4,7,8-HxCDF	6.9E-09	8.1E-09	1.5E-08	Reproductive	2.3E-04	2.7E-04	5.0E-04
			1,2,3,6,7,8-HxCDF	1.8E-09	2.1E-09	3.9E-09	Reproductive	6.0E-05	7.0E-05	1.3E-04
			1,2,3,7,8,9-HxCDF	1.3E-10	1.6E-10	2.9E-10	Reproductive	4.5E-06	5.2E-06	9.7E-06
			2,3,4,6,7,8-HxCDF	1.0E-09	1.2E-09	2.2E-09	Reproductive	3.3E-05	3.9E-05	7.2E-05
			1,2,3,4,6,7,8-HpCDF	3.1E-09	3.6E-09	6.6E-09	Reproductive	1.0E-04	1.2E-04	2.2E-04
			1,2,3,4,7,8,9-HpCDF	1.0E-10	1.2E-10	2.2E-10	Reproductive	3.5E-06	4.0E-06	7.5E-06
			OCDF	1.3E-10	1.5E-10	2.8E-10	Reproductive	4.3E-06	5.0E-06	9.3E-06
			KM TEQ DF	9.9E-08	1.2E-07	2.2E-07	Reproductive	3.3E-03	3.9E-03	7.2E-03
			PCB-77	7.4E-10	8.6E-10	1.6E-09	Reproductive	2.5E-05	2.9E-05	5.3E-05
			PCB-81	8.5E-11	9.9E-11	1.8E-10	Reproductive	2.8E-06	3.3E-06	6.1E-06

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-105	3.5E-10	4.1E-10	7.7E-10	Reproductive	1.2E-05	1.4E-05	2.6E-05
			PCB-114	2.4E-11	2.8E-11	5.3E-11	Reproductive	8.1E-07	9.5E-07	1.8E-06
			PCB-118	1.0E-09	1.2E-09	2.2E-09	Reproductive	3.5E-05	4.0E-05	7.5E-05
			PCB-123	3.0E-11	3.5E-11	6.5E-11	Reproductive	1.0E-06	1.2E-06	2.2E-06
			PCB-126	2.3E-08	2.7E-08	5.1E-08	Reproductive	7.8E-04	9.1E-04	1.7E-03
			PCB-156/157	9.3E-11	1.1E-10	2.0E-10	Reproductive	3.1E-06	3.6E-06	6.7E-06
			PCB-167	3.3E-11	3.9E-11	7.2E-11	Reproductive	1.1E-06	1.3E-06	2.4E-06
			PCB-169	7.2E-09	8.4E-09	1.6E-08	Reproductive	2.4E-04	2.8E-04	5.2E-04
			PCB-189	7.0E-12	8.1E-12	1.5E-11	Reproductive	2.3E-07	2.7E-07	5.0E-07
			KM TEQ PCB	2.9E-08	3.4E-08	6.3E-08	Reproductive	9.7E-04	1.1E-03	2.1E-03
			Non-DL PCBs							
			Total Non-DL PCBs	8.4E-09	4.6E-08	5.4E-08	Whole Body	7.3E-04	4.0E-03	4.7E-03
			PAHs							
			Benz(a)anthracene	1.3E-09	6.7E-09	8.1E-09	--	--	--	--
			Benzo(a)pyrene	1.3E-08	6.6E-08	7.9E-08	Developmental	1.5E-04	7.7E-04	9.2E-04
			Benzo(b)fluoranthene	1.2E-09	5.9E-09	7.1E-09	--	--	--	--
			Benzo(k)fluoranthene	7.6E-11	3.8E-10	4.6E-10	--	--	--	--
			Chrysene	1.3E-11	6.4E-11	7.7E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.7E-09	1.4E-08	1.6E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.8E-10	2.4E-09	2.9E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.2E-05	--	3.2E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.3E-03	--	2.3E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	2.7E-04	--	2.7E-04
			Antimony	--	--	--	Whole Body	1.3E-04	--	1.3E-04
			Arsenic, inorganic	1.8E-07	3.4E-07	5.2E-07	Skin, Blood	1.4E-03	2.7E-03	4.0E-03
			Cadmium	--	--	--	Urinary	6.9E-05	1.1E-04	1.8E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.6E-06	--	1.6E-06
			Cobalt	--	--	--	Thyroid	1.0E-03	--	1.0E-03
			Copper	--	--	--	GI Tract	3.7E-03	--	3.7E-03
			Chromium (VI)	4.4E-09	--	4.4E-09	No Effect	1.0E-05	--	1.0E-05
			Iron	--	--	--	GI Tract	1.4E-03	--	1.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.3E-04	--	3.3E-04
			Mercury	--	--	--	Immune	1.5E-04	--	1.5E-04
			Nickel	--	--	--	Body Weight, Organ Weights	7.5E-05	--	7.5E-05
			Thallium	--	--	--	Skin, Hair	5.5E-04	--	5.5E-04
			Vanadium	--	--	--	Hair	2.2E-04	--	2.2E-04
			Zinc	--	--	--	Blood	9.2E-05	--	9.2E-05
			Total DLCs (excluding KM TEQs)			2.9E-07				9.7E-03
			Total DLCs (based on KM TEQs)			2.8E-07				9.3E-03
			Total PCDD/Fs (excluding KM TEQ)			2.2E-07				7.4E-03
			Total PCDD/Fs (based on KM TEQ)			2.2E-07				7.2E-03
			Total DL-PCBs (excluding KM TEQ)			7.1E-08				2.4E-03
			Total DL-PCBs (based on KM TEQ)			6.3E-08				2.1E-03
			Total Non-DL PCBs			5.4E-08				4.7E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-07				7.1E-03

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-07				6.8E-03
			Total PAHs			1.1E-07				9.2E-04
			Total Organics			0.0E+00				2.3E-03
			Total Inorganics			5.2E-07				1.2E-02
	Swimmer - Sediment Total (excluding KM TEQs)					9.8E-07				3.0E-02
	Swimmer - Sediment Total (based on KM TEQs)					9.7E-07				2.9E-02
Sediment	Sediment	Boater Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.0E-08	2.4E-08	7.5E-08	Reproductive	1.7E-03	8.2E-04	2.5E-03
			1,2,3,7,8-PeCDD	2.7E-09	1.3E-09	3.9E-09	Reproductive	8.8E-05	4.3E-05	1.3E-04
			1,2,3,4,7,8-HxCDD	2.4E-10	1.2E-10	3.5E-10	Reproductive	7.9E-06	3.8E-06	1.2E-05
			1,2,3,6,7,8-HxCDD	9.6E-10	4.7E-10	1.4E-09	Reproductive	3.2E-05	1.6E-05	4.8E-05
			1,2,3,7,8,9-HxCDD	5.7E-10	2.7E-10	8.4E-10	Reproductive	1.9E-05	9.2E-06	2.8E-05
			1,2,3,4,6,7,8-HpCDD	1.7E-09	8.2E-10	2.5E-09	Reproductive	5.6E-05	2.7E-05	8.4E-05
			OCDD	5.2E-10	2.5E-10	7.7E-10	Reproductive	1.7E-05	8.4E-06	2.6E-05
			2,3,7,8-TCDF	9.1E-10	4.4E-10	1.3E-09	Reproductive	3.0E-05	1.5E-05	4.5E-05
			1,2,3,7,8-PeCDF	1.9E-10	9.1E-11	2.8E-10	Reproductive	6.2E-06	3.0E-06	9.3E-06
			2,3,4,7,8-PeCDF	3.1E-09	1.5E-09	4.6E-09	Reproductive	1.0E-04	5.0E-05	1.5E-04
			1,2,3,4,7,8-HxCDF	4.8E-09	2.3E-09	7.1E-09	Reproductive	1.6E-04	7.7E-05	2.4E-04
			1,2,3,6,7,8-HxCDF	1.2E-09	6.0E-10	1.8E-09	Reproductive	4.1E-05	2.0E-05	6.1E-05
			1,2,3,7,8,9-HxCDF	9.3E-11	4.5E-11	1.4E-10	Reproductive	3.1E-06	1.5E-06	4.6E-06
			2,3,4,6,7,8-HxCDF	6.9E-10	3.3E-10	1.0E-09	Reproductive	2.3E-05	1.1E-05	3.4E-05
			1,2,3,4,6,7,8-HpCDF	2.1E-09	1.0E-09	3.1E-09	Reproductive	7.0E-05	3.4E-05	1.0E-04
			1,2,3,4,7,8,9-HpCDF	7.2E-11	3.5E-11	1.1E-10	Reproductive	2.4E-06	1.2E-06	3.6E-06
			OCDF	8.9E-11	4.3E-11	1.3E-10	Reproductive	3.0E-06	1.4E-06	4.4E-06
			KM TEQ DF	6.9E-08	3.3E-08	1.0E-07	Reproductive	2.3E-03	1.1E-03	3.4E-03
			PCB-77	5.1E-10	2.5E-10	7.6E-10	Reproductive	1.7E-05	8.2E-06	2.5E-05
			PCB-81	5.9E-11	2.9E-11	8.7E-11	Reproductive	2.0E-06	9.5E-07	2.9E-06
			PCB-105	2.5E-10	1.2E-10	3.6E-10	Reproductive	8.2E-06	4.0E-06	1.2E-05
			PCB-114	1.7E-11	8.2E-12	2.5E-11	Reproductive	5.6E-07	2.7E-07	8.3E-07
			PCB-118	7.2E-10	3.5E-10	1.1E-09	Reproductive	2.4E-05	1.2E-05	3.5E-05
			PCB-123	2.1E-11	1.0E-11	3.1E-11	Reproductive	6.9E-07	3.4E-07	1.0E-06
			PCB-126	1.6E-08	7.8E-09	2.4E-08	Reproductive	5.4E-04	2.6E-04	8.0E-04
			PCB-156/157	6.4E-11	3.1E-11	9.5E-11	Reproductive	2.1E-06	1.0E-06	3.2E-06
			PCB-167	2.3E-11	1.1E-11	3.4E-11	Reproductive	7.7E-07	3.7E-07	1.1E-06
			PCB-169	5.0E-09	2.4E-09	7.4E-09	Reproductive	1.7E-04	8.1E-05	2.5E-04
			PCB-189	4.8E-12	2.3E-12	7.2E-12	Reproductive	1.6E-07	7.8E-08	2.4E-07
			KM TEQ PCB	2.0E-08	9.8E-09	3.0E-08	Reproductive	6.7E-04	3.3E-04	1.0E-03
			Non-DL PCBs							
			Total Non-DL PCBs	5.8E-09	1.3E-08	1.9E-08	Whole Body	5.1E-04	1.2E-03	1.7E-03
			PAHs							
			Benz(a)anthracene	9.2E-10	1.9E-09	2.8E-09	--	--	--	--
			Benzo(a)pyrene	9.0E-09	1.9E-08	2.8E-08	Developmental	1.0E-04	2.2E-04	3.2E-04
			Benzo(b)fluoranthene	8.1E-10	1.7E-09	2.5E-09	--	--	--	--
			Benzo(k)fluoranthene	5.2E-11	1.1E-10	1.6E-10	--	--	--	--
			Chrysene	8.8E-12	1.8E-11	2.7E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-09	3.9E-09	5.7E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-10	7.0E-10	1.0E-09	--	--	--	--
			Pesticides & Organics							

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PHC as gasoline	--	--	--	Blood, Immune	2.2E-05	--	2.2E-05
			TPH (C9-C40)	--	--	--	Respiratory	1.6E-03	--	1.6E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	1.9E-04	--	1.9E-04
			Antimony	--	--	--	Whole Body	9.0E-05	--	9.0E-05
			Arsenic, inorganic	1.2E-07	9.8E-08	2.2E-07	Skin, Blood	9.5E-04	7.7E-04	1.7E-03
			Cadmium	--	--	--	Urinary	4.8E-05	3.1E-05	7.8E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	1.1E-06	--	1.1E-06
			Cobalt	--	--	--	Thyroid	7.2E-04	--	7.2E-04
			Copper	--	--	--	GI Tract	2.6E-03	--	2.6E-03
			Chromium (VI)	3.1E-09	--	3.1E-09	No Effect	7.1E-06	--	7.1E-06
			Iron	--	--	--	GI Tract	9.6E-04	--	9.6E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.3E-04	--	2.3E-04
			Mercury	--	--	--	Immune	1.0E-04	--	1.0E-04
			Nickel	--	--	--	Body Weight, Organ Weights	5.2E-05	--	5.2E-05
			Thallium	--	--	--	Skin, Hair	3.8E-04	--	3.8E-04
			Vanadium	--	--	--	Hair	1.5E-04	--	1.5E-04
			Zinc	--	--	--	Blood	6.4E-05	--	6.4E-05
			Total DLCs (excluding KM TEQs)			1.4E-07				4.6E-03
			Total DLCs (based on KM TEQs)			1.3E-07				4.4E-03
			Total PCDD/Fs (excluding KM TEQ)			1.0E-07				3.5E-03
			Total PCDD/Fs (based on KM TEQ)			1.0E-07				3.4E-03
			Total DL-PCBs (excluding KM TEQ)			3.4E-08				1.1E-03
			Total DL-PCBs (based on KM TEQ)			3.0E-08				1.0E-03
			Total Non-DL PCBs			1.9E-08				1.7E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			5.3E-08				2.8E-03
			Total PCBs (DL & NDL; based on KM TEQ)			4.9E-08				2.7E-03
			Total PAHs			4.0E-08				3.2E-04
			Total Organics			0.0E+00				1.6E-03
			Total Inorganics			2.2E-07				7.3E-03
	Boater - Sediment Total (excluding KM TEQs)					4.2E-07				1.6E-02
	Boater - Sediment Total (based on KM TEQs)					4.1E-07				1.5E-02
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.6E-10	--	2.6E-10	Reproductive	8.6E-06	--	8.6E-06
			1,2,3,7,8-PeCDD	8.9E-11	--	8.9E-11	Reproductive	3.0E-06	--	3.0E-06
			1,2,3,4,7,8-HxCDD	6.4E-11	--	6.4E-11	Reproductive	2.1E-06	--	2.1E-06
			1,2,3,6,7,8-HxCDD	1.0E-11	--	1.0E-11	Reproductive	3.4E-07	--	3.4E-07
			1,2,3,7,8,9-HxCDD	1.8E-11	--	1.8E-11	Reproductive	6.1E-07	--	6.1E-07
			1,2,3,4,6,7,8-HpCDD	1.3E-11	--	1.3E-11	Reproductive	4.3E-07	--	4.3E-07
			OCDD	4.1E-12	--	4.1E-12	Reproductive	1.4E-07	--	1.4E-07
			2,3,7,8-TCDF	1.0E-11	--	1.0E-11	Reproductive	3.3E-07	--	3.3E-07
			1,2,3,7,8-PeCDF	2.4E-12	--	2.4E-12	Reproductive	8.0E-08	--	8.0E-08
			2,3,4,7,8-PeCDF	4.1E-11	--	4.1E-11	Reproductive	1.4E-06	--	1.4E-06
			1,2,3,4,7,8-HxCDF	3.8E-11	--	3.8E-11	Reproductive	1.3E-06	--	1.3E-06
			1,2,3,6,7,8-HxCDF	9.3E-12	--	9.3E-12	Reproductive	3.1E-07	--	3.1E-07
			1,2,3,7,8,9-HxCDF	5.5E-11	--	5.5E-11	Reproductive	1.8E-06	--	1.8E-06

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	5.9E-12	--	5.9E-12	Reproductive	2.0E-07	--	2.0E-07
			1,2,3,4,6,7,8-HpCDF	1.6E-11	--	1.6E-11	Reproductive	5.4E-07	--	5.4E-07
			1,2,3,4,7,8,9-HpCDF	1.0E-12	--	1.0E-12	Reproductive	3.4E-08	--	3.4E-08
			OCDF	9.2E-13	--	9.2E-13	Reproductive	3.1E-08	--	3.1E-08
			KM TEQ DF	5.1E-10	--	5.1E-10	Reproductive	1.7E-05	--	1.7E-05
			PCB-77	4.3E-13	--	4.3E-13	Reproductive	1.4E-08	--	1.4E-08
			PCB-81	4.3E-14	--	4.3E-14	Reproductive	1.4E-09	--	1.4E-09
			PCB-105	4.6E-13	--	4.6E-13	Reproductive	1.5E-08	--	1.5E-08
			PCB-114	2.4E-14	--	2.4E-14	Reproductive	8.0E-10	--	8.0E-10
			PCB-118	1.0E-12	--	1.0E-12	Reproductive	3.4E-08	--	3.4E-08
			PCB-123	2.0E-14	--	2.0E-14	Reproductive	6.7E-10	--	6.7E-10
			PCB-126	1.4E-11	--	1.4E-11	Reproductive	4.7E-07	--	4.7E-07
			PCB-156/157	1.2E-13	--	1.2E-13	Reproductive	4.1E-09	--	4.1E-09
			PCB-167	4.1E-14	--	4.1E-14	Reproductive	1.4E-09	--	1.4E-09
			PCB-169	2.5E-12	--	2.5E-12	Reproductive	8.5E-08	--	8.5E-08
			PCB-189	5.4E-15	--	5.4E-15	Reproductive	1.8E-10	--	1.8E-10
			KM TEQ PCB	2.3E-11	--	2.3E-11	Reproductive	7.6E-07	--	7.6E-07
			PAHs							
			Benz(a)anthracene	1.7E-12	--	1.7E-12	--	--	--	--
			Benzo(a)pyrene	2.1E-11	--	2.1E-11	Developmental	2.5E-07	--	2.5E-07
			Benzo(b)fluoranthene	2.9E-12	--	2.9E-12	--	--	--	--
			Benzo(k)fluoranthene	1.3E-13	--	1.3E-13	--	--	--	--
			Chrysene	2.8E-14	--	2.8E-14	--	--	--	--
			Dibenz(a,h)anthracene	5.5E-12	--	5.5E-12	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.2E-12	--	1.2E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	8.7E-09	4.9E-07	5.0E-07
			Pesticides & Organics							
			Chloroform	5.2E-12	4.0E-11	4.6E-11	Liver	5.9E-08	4.6E-07	5.2E-07
			Trichloroethylene	8.4E-12	1.2E-10	1.3E-10	Thymus, Blood, Immune, Developmental	1.3E-06	1.8E-05	2.0E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	8.5E-06	3.4E-05	4.2E-05
			Arsenic, inorganic	2.7E-09	1.6E-09	4.3E-09	Skin, Blood	2.1E-05	1.2E-05	3.3E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	4.2E-09	1.9E-07	2.0E-07
			Chromium (VI)	1.6E-10	7.4E-09	7.5E-09	No Effect	3.6E-07	1.7E-05	1.8E-05
			Iron	--	--	--	GI Tract	3.7E-06	2.2E-06	5.9E-06
			Manganese	--	--	--	Neurological	1.4E-05	2.1E-04	2.2E-04
			Mercury	--	--	--	Immune	4.3E-07	3.6E-06	4.1E-06
			Thallium	--	--	--	Skin, Hair	6.1E-06	3.6E-06	9.6E-06
			Titanium	--	--	--	--	--	--	--
Total DLCs (excluding KM TEQs)						6.6E-10				2.2E-05
Total DLCs (based on KM TEQs)						5.3E-10				1.8E-05
Total PCDD/Fs (excluding KM TEQ)						6.4E-10				2.1E-05
Total PCDD/Fs (based on KM TEQ)						5.1E-10				1.7E-05
Total DL-PCBs (excluding KM TEQ)						1.9E-11				6.3E-07
Total DL-PCBs (based on KM TEQ)						2.3E-11				7.6E-07
Total Non-DL PCBs						0.0E+00				0.0E+00
Total PCBs (DL & NDL; excluding KM TEQ)						1.9E-11				6.3E-07

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			2.3E-11				7.6E-07
			Total PAHs			3.3E-11				7.5E-07
			Total Organics			1.7E-10				2.0E-05
			Total Inorganics			1.2E-08				3.3E-04
	Wader - Surface Water Total (excluding KM TEQs)					1.3E-08				3.8E-04
	Wader - Surface Water Total (based on KM TEQs)					1.3E-08				3.7E-04
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						1.0E-06				3.0E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)						9.8E-07				3.0E-02
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.3E-09	--	1.3E-09	Reproductive	4.3E-05	--	4.3E-05
			1,2,3,7,8-PeCDD	4.4E-10	--	4.4E-10	Reproductive	1.5E-05	--	1.5E-05
			1,2,3,4,7,8-HxCDD	3.2E-10	--	3.2E-10	Reproductive	1.1E-05	--	1.1E-05
			1,2,3,6,7,8-HxCDD	5.1E-11	--	5.1E-11	Reproductive	1.7E-06	--	1.7E-06
			1,2,3,7,8,9-HxCDD	9.0E-11	--	9.0E-11	Reproductive	3.0E-06	--	3.0E-06
			1,2,3,4,6,7,8-HpCDD	6.5E-11	--	6.5E-11	Reproductive	2.2E-06	--	2.2E-06
			OCDD	2.0E-11	--	2.0E-11	Reproductive	6.7E-07	--	6.7E-07
			2,3,7,8-TCDF	5.0E-11	--	5.0E-11	Reproductive	1.7E-06	--	1.7E-06
			1,2,3,7,8-PeCDF	1.2E-11	--	1.2E-11	Reproductive	4.0E-07	--	4.0E-07
			2,3,4,7,8-PeCDF	2.1E-10	--	2.1E-10	Reproductive	6.9E-06	--	6.9E-06
			1,2,3,4,7,8-HxCDF	1.9E-10	--	1.9E-10	Reproductive	6.4E-06	--	6.4E-06
			1,2,3,6,7,8-HxCDF	4.6E-11	--	4.6E-11	Reproductive	1.5E-06	--	1.5E-06
			1,2,3,7,8,9-HxCDF	2.8E-10	--	2.8E-10	Reproductive	9.2E-06	--	9.2E-06
			2,3,4,6,7,8-HxCDF	2.9E-11	--	2.9E-11	Reproductive	9.8E-07	--	9.8E-07
			1,2,3,4,6,7,8-HpCDF	8.1E-11	--	8.1E-11	Reproductive	2.7E-06	--	2.7E-06
			1,2,3,4,7,8,9-HpCDF	5.1E-12	--	5.1E-12	Reproductive	1.7E-07	--	1.7E-07
			OCDF	4.5E-12	--	4.5E-12	Reproductive	1.5E-07	--	1.5E-07
			KM TEQ DF	2.5E-09	--	2.5E-09	Reproductive	8.5E-05	--	8.5E-05
			PCB-77	2.1E-12	--	2.1E-12	Reproductive	7.1E-08	--	7.1E-08
			PCB-81	2.1E-13	--	2.1E-13	Reproductive	7.1E-09	--	7.1E-09
			PCB-105	2.3E-12	--	2.3E-12	Reproductive	7.6E-08	--	7.6E-08
			PCB-114	1.2E-13	--	1.2E-13	Reproductive	4.0E-09	--	4.0E-09
			PCB-118	5.1E-12	--	5.1E-12	Reproductive	1.7E-07	--	1.7E-07
			PCB-123	9.9E-14	--	9.9E-14	Reproductive	3.3E-09	--	3.3E-09
			PCB-126	7.0E-11	--	7.0E-11	Reproductive	2.3E-06	--	2.3E-06
			PCB-156/157	6.1E-13	--	6.1E-13	Reproductive	2.0E-08	--	2.0E-08
			PCB-167	2.0E-13	--	2.0E-13	Reproductive	6.8E-09	--	6.8E-09
			PCB-169	1.3E-11	--	1.3E-11	Reproductive	4.2E-07	--	4.2E-07
			PCB-189	2.7E-14	--	2.7E-14	Reproductive	8.9E-10	--	8.9E-10
			KM TEQ PCB	1.1E-10	--	1.1E-10	Reproductive	3.8E-06	--	3.8E-06
			PAHs							
			Benz(a)anthracene	8.2E-12	--	8.2E-12	--	--	--	--
			Benzo(a)pyrene	1.1E-10	--	1.1E-10	Developmental	1.2E-06	--	1.2E-06
			Benzo(b)fluoranthene	1.4E-11	--	1.4E-11	--	--	--	--
			Benzo(k)fluoranthene	6.4E-13	--	6.4E-13	--	--	--	--
			Chrysene	1.4E-13	--	1.4E-13	--	--	--	--
			Dibenz(a,h)anthracene	2.7E-11	--	2.7E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	6.0E-12	--	6.0E-12	--	--	--	--

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Naphthalene	--	--	--	Body Weight	4.3E-08	2.7E-06	2.7E-06
			Pesticides & Organics							
			Chloroform	2.6E-11	2.4E-10	2.6E-10	Liver	2.9E-07	2.7E-06	3.0E-06
			Trichloroethylene	4.2E-11	6.8E-10	7.3E-10	Thymus, Blood, Immune, Developmental	6.4E-06	1.0E-04	1.1E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	4.2E-05	2.8E-04	3.2E-04
			Arsenic, inorganic	1.3E-08	1.3E-08	2.6E-08	Skin, Blood	1.0E-04	1.0E-04	2.1E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	2.1E-08	1.6E-06	1.6E-06
			Chromium (VI)	7.7E-10	6.2E-08	6.2E-08	No Effect	1.8E-06	1.4E-04	1.5E-04
			Iron	--	--	--	GI Tract	1.8E-05	1.8E-05	3.7E-05
			Manganese	--	--	--	Neurological	7.0E-05	1.7E-03	1.8E-03
			Mercury	--	--	--	Immune	2.1E-06	3.0E-05	3.3E-05
			Thallium	--	--	--	Skin, Hair	3.0E-05	3.0E-05	6.0E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			3.3E-09				1.1E-04
			Total DLCs (based on KM TEQs)			2.7E-09				8.8E-05
			Total PCDD/Fs (excluding KM TEQ)			3.2E-09				1.1E-04
			Total PCDD/Fs (based on KM TEQ)			2.5E-09				8.5E-05
			Total DL-PCBs (excluding KM TEQ)			9.4E-11				3.1E-06
			Total DL-PCBs (based on KM TEQ)			1.1E-10				3.8E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			9.4E-11				3.1E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-10				3.8E-06
			Total PAHs			1.6E-10				3.9E-06
			Total Organics			9.9E-10				1.1E-04
			Total Inorganics			8.9E-08				2.6E-03
	Swimmer - Surface Water Total (excluding KM TEQs)					9.3E-08				2.8E-03
	Swimmer - Surface Water Total (based on KM TEQs)					9.3E-08				2.8E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						1.1E-06				3.3E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						1.1E-06				3.2E-02
Surface Water	Surface Water	Boater Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-08	--	1.0E-08	Reproductive	3.4E-04	--	3.4E-04
			1,2,3,7,8-PeCDD	3.5E-09	--	3.5E-09	Reproductive	1.2E-04	--	1.2E-04
			1,2,3,4,7,8-HxCDD	2.6E-09	--	2.6E-09	Reproductive	8.6E-05	--	8.6E-05
			1,2,3,6,7,8-HxCDD	4.1E-10	--	4.1E-10	Reproductive	1.4E-05	--	1.4E-05
			1,2,3,7,8,9-HxCDD	7.3E-10	--	7.3E-10	Reproductive	2.4E-05	--	2.4E-05
			1,2,3,4,6,7,8-HpCDD	5.2E-10	--	5.2E-10	Reproductive	1.7E-05	--	1.7E-05
			OCDD	1.6E-10	--	1.6E-10	Reproductive	5.4E-06	--	5.4E-06
			2,3,7,8-TCDF	4.0E-10	--	4.0E-10	Reproductive	1.3E-05	--	1.3E-05
			1,2,3,7,8-PeCDF	9.5E-11	--	9.5E-11	Reproductive	3.2E-06	--	3.2E-06
			2,3,4,7,8-PeCDF	1.7E-09	--	1.7E-09	Reproductive	5.5E-05	--	5.5E-05
			1,2,3,4,7,8-HxCDF	1.5E-09	--	1.5E-09	Reproductive	5.1E-05	--	5.1E-05
			1,2,3,6,7,8-HxCDF	3.7E-10	--	3.7E-10	Reproductive	1.2E-05	--	1.2E-05
			1,2,3,7,8,9-HxCDF	2.2E-09	--	2.2E-09	Reproductive	7.4E-05	--	7.4E-05
			2,3,4,6,7,8-HxCDF	2.4E-10	--	2.4E-10	Reproductive	7.8E-06	--	7.8E-06
			1,2,3,4,6,7,8-HpCDF	6.5E-10	--	6.5E-10	Reproductive	2.2E-05	--	2.2E-05

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8,9-HpCDF	4.1E-11	--	4.1E-11	Reproductive	1.4E-06	--	1.4E-06
			OCDF	3.6E-11	--	3.6E-11	Reproductive	1.2E-06	--	1.2E-06
			KM TEQ DF	2.0E-08	--	2.0E-08	Reproductive	6.8E-04	--	6.8E-04
			PCB-77	1.7E-11	--	1.7E-11	Reproductive	5.7E-07	--	5.7E-07
			PCB-81	1.7E-12	--	1.7E-12	Reproductive	5.7E-08	--	5.7E-08
			PCB-105	1.8E-11	--	1.8E-11	Reproductive	6.1E-07	--	6.1E-07
			PCB-114	9.6E-13	--	9.6E-13	Reproductive	3.2E-08	--	3.2E-08
			PCB-118	4.1E-11	--	4.1E-11	Reproductive	1.4E-06	--	1.4E-06
			PCB-123	8.0E-13	--	8.0E-13	Reproductive	2.7E-08	--	2.7E-08
			PCB-126	5.6E-10	--	5.6E-10	Reproductive	1.9E-05	--	1.9E-05
			PCB-156/157	4.9E-12	--	4.9E-12	Reproductive	1.6E-07	--	1.6E-07
			PCB-167	1.6E-12	--	1.6E-12	Reproductive	5.5E-08	--	5.5E-08
			PCB-169	1.0E-10	--	1.0E-10	Reproductive	3.4E-06	--	3.4E-06
			PCB-189	2.2E-13	--	2.2E-13	Reproductive	7.2E-09	--	7.2E-09
			KM TEQ PCB	9.1E-10	--	9.1E-10	Reproductive	3.0E-05	--	3.0E-05
			PAHs							
			Benz(a)anthracene	6.6E-11	--	6.6E-11	--	--	--	--
			Benzo(a)pyrene	8.5E-10	--	8.5E-10	Developmental	9.9E-06	--	9.9E-06
			Benzo(b)fluoranthene	1.2E-10	--	1.2E-10	--	--	--	--
			Benzo(k)fluoranthene	5.1E-12	--	5.1E-12	--	--	--	--
			Chrysene	1.1E-12	--	1.1E-12	--	--	--	--
			Dibenz(a,h)anthracene	2.2E-10	--	2.2E-10	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.8E-11	--	4.8E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	3.5E-07	5.9E-06	6.2E-06
			Pesticides & Organics							
			Chloroform	2.1E-10	5.1E-10	7.2E-10	Liver	2.3E-06	5.8E-06	8.1E-06
			Trichloroethylene	3.4E-10	1.5E-09	1.8E-09	Thymus, Blood, Immune, Developmental	5.1E-05	2.3E-04	2.8E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	3.4E-04	5.6E-04	9.0E-04
			Arsenic, inorganic	1.1E-07	2.6E-08	1.3E-07	Skin, Blood	8.3E-04	2.0E-04	1.0E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	1.7E-07	3.2E-06	3.3E-06
			Chromium (VI)	6.2E-09	1.2E-07	1.3E-07	No Effect	1.4E-05	2.8E-04	3.0E-04
			Iron	--	--	--	GI Tract	1.5E-04	3.6E-05	1.8E-04
			Manganese	--	--	--	Neurological	5.6E-04	3.4E-03	4.0E-03
			Mercury	--	--	--	Immune	1.7E-05	6.0E-05	7.7E-05
			Thallium	--	--	--	Skin, Hair	2.4E-04	5.9E-05	3.0E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			2.6E-08				8.7E-04
			Total DLCs (based on KM TEQs)			2.1E-08				7.1E-04
			Total PCDD/Fs (excluding KM TEQ)			2.5E-08				8.5E-04
			Total PCDD/Fs (based on KM TEQ)			2.0E-08				6.8E-04
			Total DL-PCBs (excluding KM TEQ)			7.5E-10				2.5E-05
			Total DL-PCBs (based on KM TEQ)			9.1E-10				3.0E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.5E-10				2.5E-05
			Total PCBs (DL & NDL; based on KM TEQ)			9.1E-10				3.0E-05
			Total PAHs			1.3E-09				1.6E-05

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total Organics			2.5E-09				2.8E-04
			Total Inorganics			2.6E-07				6.8E-03
	Boater - Surface Water Total (excluding KM TEQs)					2.9E-07				8.0E-03
	Boater - Surface Water Total (based on KM TEQs)					2.9E-07				7.8E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)						7.1E-07				2.3E-02
Boater Sediment Total + Surface Water Total (based on KM TEQs)						7.0E-07				2.3E-02

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Wader Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Wader Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.2E-03		Blood HI =		4.2E-03
				Body Weight HI =		7.5E-05		Body Weight HI =		7.5E-05
				Developmental HI =		9.4E-04		Developmental HI =		9.4E-04
				GI Tract HI =		5.1E-03		GI Tract HI =		5.1E-03
				Hair HI =		7.8E-04		Hair HI =		7.8E-04
				Immune HI =		2.0E-04		Immune HI =		2.0E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		5.2E-07		Liver HI =		5.2E-07
				Neurological HI =		8.2E-04		Neurological HI =		8.2E-04
				No Effect HI =		3.0E-05		No Effect HI =		3.0E-05
				Organ Weights HI =		7.5E-05		Organ Weights HI =		7.5E-05
				Reproductive HI =		9.8E-03		Reproductive HI =		9.3E-03
				Skin HI =		4.6E-03		Skin HI =		4.6E-03
				Thymus HI =		2.0E-05		Thymus HI =		2.0E-05
				Thyroid HI =		1.0E-03		Thyroid HI =		1.0E-03
				Urinary HI =		1.8E-04		Urinary HI =		1.8E-04
				Whole Body HI =		4.9E-03		Whole Body HI =		4.9E-03
				Swimmer Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Swimmer Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.5E-03		Blood HI =		4.5E-03
				Body Weight HI =		7.8E-05		Body Weight HI =		7.8E-05
				Developmental HI =		1.0E-03		Developmental HI =		1.0E-03
				GI Tract HI =		5.1E-03		GI Tract HI =		5.1E-03
				Hair HI =		8.3E-04		Hair HI =		8.3E-04
				Immune HI =		3.2E-04		Immune HI =		3.2E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		3.0E-06		Liver HI =		3.0E-06
				Neurological HI =		2.4E-03		Neurological HI =		2.4E-03
				No Effect HI =		1.6E-04		No Effect HI =		1.6E-04
				Organ Weights HI =		7.5E-05		Organ Weights HI =		7.5E-05
				Reproductive HI =		9.8E-03		Reproductive HI =		9.4E-03
				Skin HI =		4.8E-03		Skin HI =		4.8E-03
				Thymus HI =		1.1E-04		Thymus HI =		1.1E-04
				Thyroid HI =		1.0E-03		Thyroid HI =		1.0E-03
				Urinary HI =		1.8E-04		Urinary HI =		1.8E-04
				Whole Body HI =		5.2E-03		Whole Body HI =		5.2E-03

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Boater Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Boater Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.1E-03		Blood HI =		3.1E-03
				Body Weight HI =		5.8E-05		Body Weight HI =		5.8E-05
				Developmental HI =		6.1E-04		Developmental HI =		6.1E-04
				GI Tract HI =		3.7E-03		GI Tract HI =		3.7E-03
				Hair HI =		8.3E-04		Hair HI =		8.3E-04
				Immune HI =		4.8E-04		Immune HI =		4.8E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		8.1E-06		Liver HI =		8.1E-06
				Neurological HI =		4.4E-03		Neurological HI =		4.4E-03
				No Effect HI =		3.1E-04		No Effect HI =		3.1E-04
				Organ Weights HI =		5.2E-05		Organ Weights HI =		5.2E-05
				Reproductive HI =		5.5E-03		Reproductive HI =		5.1E-03
				Skin HI =		3.4E-03		Skin HI =		3.4E-03
				Thymus HI =		2.8E-04		Thymus HI =		2.8E-04
				Thyroid HI =		7.2E-04		Thyroid HI =		7.2E-04
				Urinary HI =		7.8E-05		Urinary HI =		7.8E-05
				Whole Body HI =		2.6E-03		Whole Body HI =		2.6E-03

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-07	1.1E-07	3.1E-07	Reproductive	1.1E-02	6.0E-03	1.7E-02
			1,2,3,7,8-PeCDD	1.1E-08	5.7E-09	1.6E-08	Reproductive	5.9E-04	3.1E-04	9.0E-04
			1,2,3,4,7,8-HxCDD	9.5E-10	5.1E-10	1.5E-09	Reproductive	5.3E-05	2.8E-05	8.1E-05
			1,2,3,6,7,8-HxCDD	3.9E-09	2.0E-09	5.9E-09	Reproductive	2.1E-04	1.1E-04	3.3E-04
			1,2,3,7,8,9-HxCDD	2.3E-09	1.2E-09	3.5E-09	Reproductive	1.3E-04	6.7E-05	1.9E-04
			1,2,3,4,6,7,8-HpCDD	6.8E-09	3.6E-09	1.0E-08	Reproductive	3.8E-04	2.0E-04	5.8E-04
			OCDD	2.1E-09	1.1E-09	3.2E-09	Reproductive	1.1E-04	6.1E-05	1.8E-04
			2,3,7,8-TCDF	3.6E-09	1.9E-09	5.6E-09	Reproductive	2.0E-04	1.1E-04	3.1E-04
			1,2,3,7,8-PeCDF	7.5E-10	4.0E-10	1.1E-09	Reproductive	4.2E-05	2.2E-05	6.4E-05
			2,3,4,7,8-PeCDF	1.2E-08	6.7E-09	1.9E-08	Reproductive	6.9E-04	3.7E-04	1.1E-03
			1,2,3,4,7,8-HxCDF	1.9E-08	1.0E-08	2.9E-08	Reproductive	1.1E-03	5.6E-04	1.6E-03
			1,2,3,6,7,8-HxCDF	5.0E-09	2.6E-09	7.6E-09	Reproductive	2.8E-04	1.5E-04	4.2E-04
			1,2,3,7,8,9-HxCDF	3.7E-10	2.0E-10	5.7E-10	Reproductive	2.1E-05	1.1E-05	3.2E-05
			2,3,4,6,7,8-HxCDF	2.8E-09	1.5E-09	4.2E-09	Reproductive	1.5E-04	8.2E-05	2.4E-04
			1,2,3,4,6,7,8-HpCDF	8.5E-09	4.5E-09	1.3E-08	Reproductive	4.7E-04	2.5E-04	7.2E-04
			1,2,3,4,7,8,9-HpCDF	2.9E-10	1.5E-10	4.4E-10	Reproductive	1.6E-05	8.5E-06	2.4E-05
			OCDF	3.5E-10	1.9E-10	5.4E-10	Reproductive	2.0E-05	1.0E-05	3.0E-05
			KM TEQ DF	2.8E-07	1.5E-07	4.2E-07	Reproductive	1.5E-02	8.1E-03	2.3E-02
			PCB-77	2.0E-09	1.1E-09	3.1E-09	Reproductive	1.1E-04	6.0E-05	1.7E-04
			PCB-81	2.4E-10	1.3E-10	3.6E-10	Reproductive	1.3E-05	7.0E-06	2.0E-05
			PCB-105	9.8E-10	5.2E-10	1.5E-09	Reproductive	5.5E-05	2.9E-05	8.4E-05
			PCB-114	6.7E-11	3.6E-11	1.0E-10	Reproductive	3.7E-06	2.0E-06	5.7E-06
			PCB-118	2.9E-09	1.5E-09	4.4E-09	Reproductive	1.6E-04	8.5E-05	2.4E-04
			PCB-123	8.3E-11	4.4E-11	1.3E-10	Reproductive	4.6E-06	2.5E-06	7.1E-06
			PCB-126	6.5E-08	3.4E-08	9.9E-08	Reproductive	3.6E-03	1.9E-03	5.5E-03
			PCB-156/157	2.6E-10	1.4E-10	3.9E-10	Reproductive	1.4E-05	7.6E-06	2.2E-05
			PCB-167	9.2E-11	4.9E-11	1.4E-10	Reproductive	5.1E-06	2.7E-06	7.8E-06
			PCB-169	2.0E-08	1.1E-08	3.1E-08	Reproductive	1.1E-03	5.9E-04	1.7E-03
			PCB-189	1.9E-11	1.0E-11	3.0E-11	Reproductive	1.1E-06	5.7E-07	1.6E-06
			KM TEQ PCB	8.1E-08	4.3E-08	1.2E-07	Reproductive	4.5E-03	2.4E-03	6.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	2.3E-08	5.8E-08	8.1E-08	Whole Body	3.4E-03	8.4E-03	1.2E-02
			PAHs							
			Benz(a)anthracene	9.2E-09	2.1E-08	3.0E-08	--	--	--	--
			Benzo(a)pyrene	9.0E-08	2.1E-07	3.0E-07	Developmental	7.0E-04	1.6E-03	2.3E-03
			Benzo(b)fluoranthene	8.1E-09	1.9E-08	2.7E-08	--	--	--	--
			Benzo(k)fluoranthene	5.2E-10	1.2E-09	1.7E-09	--	--	--	--
			Chrysene	8.8E-11	2.0E-10	2.9E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-08	4.3E-08	6.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-09	7.7E-09	1.1E-08	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	1.5E-04	--	1.5E-04
			TPH (C9-C40)	--	--	--	Respiratory	1.1E-02	--	1.1E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.3E-03	--	1.3E-03
			Antimony	--	--	--	Whole Body	6.0E-04	--	6.0E-04
			Arsenic, inorganic	4.9E-07	4.3E-07	9.2E-07	Skin, Blood	6.3E-03	5.6E-03	1.2E-02
			Cadmium	--	--	--	Urinary	3.2E-04	2.2E-04	5.4E-04

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	7.4E-06	--	7.4E-06
			Cobalt	--	--	--	Thyroid	4.8E-03	--	4.8E-03
			Copper	--	--	--	GI Tract	1.7E-02	--	1.7E-02
			Chromium (VI)	3.1E-08	--	3.1E-08	No Effect	4.8E-05	--	4.8E-05
			Iron	--	--	--	GI Tract	6.4E-03	--	6.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.5E-03	--	1.5E-03
			Mercury	--	--	--	Immune	6.8E-04	--	6.8E-04
			Nickel	--	--	--	Body Weight, Organ Weights	3.5E-04	--	3.5E-04
			Thallium	--	--	--	Skin, Hair	2.5E-03	--	2.5E-03
			Vanadium	--	--	--	Hair	1.0E-03	--	1.0E-03
			Zinc	--	--	--	Blood	4.2E-04	--	4.2E-04
			Total DLCs (excluding KM TEQs)			5.7E-07				3.2E-02
			Total DLCs (based on KM TEQs)			5.5E-07				3.0E-02
			Total PCDD/Fs (excluding KM TEQ)			4.3E-07				2.4E-02
			Total PCDD/Fs (based on KM TEQ)			4.2E-07				2.3E-02
			Total DL-PCBs (excluding KM TEQ)			1.4E-07				7.8E-03
			Total DL-PCBs (based on KM TEQ)			1.2E-07				6.9E-03
			Total Non-DL PCBs			8.1E-08				1.2E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			2.2E-07				2.0E-02
			Total PCBs (DL & NDL; based on KM TEQ)			2.0E-07				1.9E-02
			Total PAHs			4.3E-07				2.3E-03
			Total Organics			0.0E+00				1.1E-02
			Total Inorganics			9.5E-07				4.9E-02
	Wader - Sediment Total (excluding KM TEQs)					2.0E-06				1.1E-01
	Wader - Sediment Total (based on KM TEQs)					2.0E-06				1.0E-01
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-07	1.1E-07	3.1E-07	Reproductive	1.1E-02	6.0E-03	1.7E-02
			1,2,3,7,8-PeCDD	1.1E-08	5.7E-09	1.6E-08	Reproductive	5.9E-04	3.1E-04	9.0E-04
			1,2,3,4,7,8-HxCDD	9.5E-10	5.1E-10	1.5E-09	Reproductive	5.3E-05	2.8E-05	8.1E-05
			1,2,3,6,7,8-HxCDD	3.9E-09	2.0E-09	5.9E-09	Reproductive	2.1E-04	1.1E-04	3.3E-04
			1,2,3,7,8,9-HxCDD	2.3E-09	1.2E-09	3.5E-09	Reproductive	1.3E-04	6.7E-05	1.9E-04
			1,2,3,4,6,7,8-HpCDD	6.8E-09	3.6E-09	1.0E-08	Reproductive	3.8E-04	2.0E-04	5.8E-04
			OCDD	2.1E-09	1.1E-09	3.2E-09	Reproductive	1.1E-04	6.1E-05	1.8E-04
			2,3,7,8-TCDF	3.6E-09	1.9E-09	5.6E-09	Reproductive	2.0E-04	1.1E-04	3.1E-04
			1,2,3,7,8-PeCDF	7.5E-10	4.0E-10	1.1E-09	Reproductive	4.2E-05	2.2E-05	6.4E-05
			2,3,4,7,8-PeCDF	1.2E-08	6.7E-09	1.9E-08	Reproductive	6.9E-04	3.7E-04	1.1E-03
			1,2,3,4,7,8-HxCDF	1.9E-08	1.0E-08	2.9E-08	Reproductive	1.1E-03	5.6E-04	1.6E-03
			1,2,3,6,7,8-HxCDF	5.0E-09	2.6E-09	7.6E-09	Reproductive	2.8E-04	1.5E-04	4.2E-04
			1,2,3,7,8,9-HxCDF	3.7E-10	2.0E-10	5.7E-10	Reproductive	2.1E-05	1.1E-05	3.2E-05
			2,3,4,6,7,8-HxCDF	2.8E-09	1.5E-09	4.2E-09	Reproductive	1.5E-04	8.2E-05	2.4E-04
			1,2,3,4,6,7,8-HpCDF	8.5E-09	4.5E-09	1.3E-08	Reproductive	4.7E-04	2.5E-04	7.2E-04
			1,2,3,4,7,8,9-HpCDF	2.9E-10	1.5E-10	4.4E-10	Reproductive	1.6E-05	8.5E-06	2.4E-05
			OCDF	3.5E-10	1.9E-10	5.4E-10	Reproductive	2.0E-05	1.0E-05	3.0E-05
			KM TEQ DF	2.8E-07	1.5E-07	4.2E-07	Reproductive	1.5E-02	8.1E-03	2.3E-02
			PCB-77	2.0E-09	1.1E-09	3.1E-09	Reproductive	1.1E-04	6.0E-05	1.7E-04
			PCB-81	2.4E-10	1.3E-10	3.6E-10	Reproductive	1.3E-05	7.0E-06	2.0E-05

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-105	9.8E-10	5.2E-10	1.5E-09	Reproductive	5.5E-05	2.9E-05	8.4E-05
			PCB-114	6.7E-11	3.6E-11	1.0E-10	Reproductive	3.7E-06	2.0E-06	5.7E-06
			PCB-118	2.9E-09	1.5E-09	4.4E-09	Reproductive	1.6E-04	8.5E-05	2.4E-04
			PCB-123	8.3E-11	4.4E-11	1.3E-10	Reproductive	4.6E-06	2.5E-06	7.1E-06
			PCB-126	6.5E-08	3.4E-08	9.9E-08	Reproductive	3.6E-03	1.9E-03	5.5E-03
			PCB-156/157	2.6E-10	1.4E-10	3.9E-10	Reproductive	1.4E-05	7.6E-06	2.2E-05
			PCB-167	9.2E-11	4.9E-11	1.4E-10	Reproductive	5.1E-06	2.7E-06	7.8E-06
			PCB-169	2.0E-08	1.1E-08	3.1E-08	Reproductive	1.1E-03	5.9E-04	1.7E-03
			PCB-189	1.9E-11	1.0E-11	3.0E-11	Reproductive	1.1E-06	5.7E-07	1.6E-06
			KM TEQ PCB	8.1E-08	4.3E-08	1.2E-07	Reproductive	4.5E-03	2.4E-03	6.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	2.3E-08	5.8E-08	8.1E-08	Whole Body	3.4E-03	8.4E-03	1.2E-02
			PAHs							
			Benz(a)anthracene	9.2E-09	2.1E-08	3.0E-08	--	--	--	--
			Benzo(a)pyrene	9.0E-08	2.1E-07	3.0E-07	Developmental	7.0E-04	1.6E-03	2.3E-03
			Benzo(b)fluoranthene	8.1E-09	1.9E-08	2.7E-08	--	--	--	--
			Benzo(k)fluoranthene	5.2E-10	1.2E-09	1.7E-09	--	--	--	--
			Chrysene	8.8E-11	2.0E-10	2.9E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-08	4.3E-08	6.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-09	7.7E-09	1.1E-08	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	1.5E-04	--	1.5E-04
			TPH (C9-C40)	--	--	--	Respiratory	1.1E-02	--	1.1E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.3E-03	--	1.3E-03
			Antimony	--	--	--	Whole Body	6.0E-04	--	6.0E-04
			Arsenic, inorganic	4.9E-07	4.3E-07	9.2E-07	Skin, Blood	6.3E-03	5.6E-03	1.2E-02
			Cadmium	--	--	--	Urinary	3.2E-04	2.2E-04	5.4E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	7.4E-06	--	7.4E-06
			Cobalt	--	--	--	Thyroid	4.8E-03	--	4.8E-03
			Copper	--	--	--	GI Tract	1.7E-02	--	1.7E-02
			Chromium (VI)	3.1E-08	--	3.1E-08	No Effect	4.8E-05	--	4.8E-05
			Iron	--	--	--	GI Tract	6.4E-03	--	6.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.5E-03	--	1.5E-03
			Mercury	--	--	--	Immune	6.8E-04	--	6.8E-04
			Nickel	--	--	--	Body Weight, Organ Weights	3.5E-04	--	3.5E-04
			Thallium	--	--	--	Skin, Hair	2.5E-03	--	2.5E-03
			Vanadium	--	--	--	Hair	1.0E-03	--	1.0E-03
			Zinc	--	--	--	Blood	4.2E-04	--	4.2E-04
			Total DLCs (excluding KM TEQs)			5.7E-07				3.2E-02
			Total DLCs (based on KM TEQs)			5.5E-07				3.0E-02
			Total PCDD/Fs (excluding KM TEQ)			4.3E-07				2.4E-02
			Total PCDD/Fs (based on KM TEQ)			4.2E-07				2.3E-02
			Total DL-PCBs (excluding KM TEQ)			1.4E-07				7.8E-03
			Total DL-PCBs (based on KM TEQ)			1.2E-07				6.9E-03
			Total Non-DL PCBs			8.1E-08				1.2E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			2.2E-07				2.0E-02

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			2.0E-07				1.9E-02
			Total PAHs			4.3E-07				2.3E-03
			Total Organics			0.0E+00				1.1E-02
			Total Inorganics			9.5E-07				4.9E-02
	Swimmer - Sediment Total (excluding KM TEQs)					2.0E-06				1.1E-01
	Swimmer - Sediment Total (based on KM TEQs)					2.0E-06				1.0E-01
Sediment	Sediment	Boater Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-07	1.1E-07	3.1E-07	Reproductive	1.1E-02	6.0E-03	1.7E-02
			1,2,3,7,8-PeCDD	1.1E-08	5.7E-09	1.6E-08	Reproductive	5.9E-04	3.1E-04	9.0E-04
			1,2,3,4,7,8-HxCDD	9.5E-10	5.1E-10	1.5E-09	Reproductive	5.3E-05	2.8E-05	8.1E-05
			1,2,3,6,7,8-HxCDD	3.9E-09	2.0E-09	5.9E-09	Reproductive	2.1E-04	1.1E-04	3.3E-04
			1,2,3,7,8,9-HxCDD	2.3E-09	1.2E-09	3.5E-09	Reproductive	1.3E-04	6.7E-05	1.9E-04
			1,2,3,4,6,7,8-HpCDD	6.8E-09	3.6E-09	1.0E-08	Reproductive	3.8E-04	2.0E-04	5.8E-04
			OCDD	2.1E-09	1.1E-09	3.2E-09	Reproductive	1.1E-04	6.1E-05	1.8E-04
			2,3,7,8-TCDF	3.6E-09	1.9E-09	5.6E-09	Reproductive	2.0E-04	1.1E-04	3.1E-04
			1,2,3,7,8-PeCDF	7.5E-10	4.0E-10	1.1E-09	Reproductive	4.2E-05	2.2E-05	6.4E-05
			2,3,4,7,8-PeCDF	1.2E-08	6.7E-09	1.9E-08	Reproductive	6.9E-04	3.7E-04	1.1E-03
			1,2,3,4,7,8-HxCDF	1.9E-08	1.0E-08	2.9E-08	Reproductive	1.1E-03	5.6E-04	1.6E-03
			1,2,3,6,7,8-HxCDF	5.0E-09	2.6E-09	7.6E-09	Reproductive	2.8E-04	1.5E-04	4.2E-04
			1,2,3,7,8,9-HxCDF	3.7E-10	2.0E-10	5.7E-10	Reproductive	2.1E-05	1.1E-05	3.2E-05
			2,3,4,6,7,8-HxCDF	2.8E-09	1.5E-09	4.2E-09	Reproductive	1.5E-04	8.2E-05	2.4E-04
			1,2,3,4,6,7,8-HpCDF	8.5E-09	4.5E-09	1.3E-08	Reproductive	4.7E-04	2.5E-04	7.2E-04
			1,2,3,4,7,8,9-HpCDF	2.9E-10	1.5E-10	4.4E-10	Reproductive	1.6E-05	8.5E-06	2.4E-05
			OCDF	3.5E-10	1.9E-10	5.4E-10	Reproductive	2.0E-05	1.0E-05	3.0E-05
			KM TEQ DF	2.8E-07	1.5E-07	4.2E-07	Reproductive	1.5E-02	8.1E-03	2.3E-02
			PCB-77	2.0E-09	1.1E-09	3.1E-09	Reproductive	1.1E-04	6.0E-05	1.7E-04
			PCB-81	2.4E-10	1.3E-10	3.6E-10	Reproductive	1.3E-05	7.0E-06	2.0E-05
			PCB-105	9.8E-10	5.2E-10	1.5E-09	Reproductive	5.5E-05	2.9E-05	8.4E-05
			PCB-114	6.7E-11	3.6E-11	1.0E-10	Reproductive	3.7E-06	2.0E-06	5.7E-06
			PCB-118	2.9E-09	1.5E-09	4.4E-09	Reproductive	1.6E-04	8.5E-05	2.4E-04
			PCB-123	8.3E-11	4.4E-11	1.3E-10	Reproductive	4.6E-06	2.5E-06	7.1E-06
			PCB-126	6.5E-08	3.4E-08	9.9E-08	Reproductive	3.6E-03	1.9E-03	5.5E-03
			PCB-156/157	2.6E-10	1.4E-10	3.9E-10	Reproductive	1.4E-05	7.6E-06	2.2E-05
			PCB-167	9.2E-11	4.9E-11	1.4E-10	Reproductive	5.1E-06	2.7E-06	7.8E-06
			PCB-169	2.0E-08	1.1E-08	3.1E-08	Reproductive	1.1E-03	5.9E-04	1.7E-03
			PCB-189	1.9E-11	1.0E-11	3.0E-11	Reproductive	1.1E-06	5.7E-07	1.6E-06
			KM TEQ PCB	8.1E-08	4.3E-08	1.2E-07	Reproductive	4.5E-03	2.4E-03	6.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	2.3E-08	5.8E-08	8.1E-08	Whole Body	3.4E-03	8.4E-03	1.2E-02
			PAHs							
			Benz(a)anthracene	9.2E-09	2.1E-08	3.0E-08	--	--	--	--
			Benzo(a)pyrene	9.0E-08	2.1E-07	3.0E-07	Developmental	7.0E-04	1.6E-03	2.3E-03
			Benzo(b)fluoranthene	8.1E-09	1.9E-08	2.7E-08	--	--	--	--
			Benzo(k)fluoranthene	5.2E-10	1.2E-09	1.7E-09	--	--	--	--
			Chrysene	8.8E-11	2.0E-10	2.9E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-08	4.3E-08	6.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-09	7.7E-09	1.1E-08	--	--	--	--
			Pesticides & Organics							

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PHC as gasoline	--	--	--	Blood, Immune	1.5E-04	--	1.5E-04
			TPH (C9-C40)	--	--	--	Respiratory	1.1E-02	--	1.1E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.3E-03	--	1.3E-03
			Antimony	--	--	--	Whole Body	6.0E-04	--	6.0E-04
			Arsenic, inorganic	4.9E-07	4.3E-07	9.2E-07	Skin, Blood	6.3E-03	5.6E-03	1.2E-02
			Cadmium	--	--	--	Urinary	3.2E-04	2.2E-04	5.4E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	7.4E-06	--	7.4E-06
			Cobalt	--	--	--	Thyroid	4.8E-03	--	4.8E-03
			Copper	--	--	--	GI Tract	1.7E-02	--	1.7E-02
			Chromium (VI)	3.1E-08	--	3.1E-08	No Effect	4.8E-05	--	4.8E-05
			Iron	--	--	--	GI Tract	6.4E-03	--	6.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.5E-03	--	1.5E-03
			Mercury	--	--	--	Immune	6.8E-04	--	6.8E-04
			Nickel	--	--	--	Body Weight, Organ Weights	3.5E-04	--	3.5E-04
			Thallium	--	--	--	Skin, Hair	2.5E-03	--	2.5E-03
			Vanadium	--	--	--	Hair	1.0E-03	--	1.0E-03
			Zinc	--	--	--	Blood	4.2E-04	--	4.2E-04
			Total DLCs (excluding KM TEQs)			5.7E-07				3.2E-02
			Total DLCs (based on KM TEQs)			5.5E-07				3.0E-02
			Total PCDD/Fs (excluding KM TEQ)			4.3E-07				2.4E-02
			Total PCDD/Fs (based on KM TEQ)			4.2E-07				2.3E-02
			Total DL-PCBs (excluding KM TEQ)			1.4E-07				7.8E-03
			Total DL-PCBs (based on KM TEQ)			1.2E-07				6.9E-03
			Total Non-DL PCBs			8.1E-08				1.2E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			2.2E-07				2.0E-02
			Total PCBs (DL & NDL; based on KM TEQ)			2.0E-07				1.9E-02
			Total PAHs			4.3E-07				2.3E-03
			Total Organics			0.0E+00				1.1E-02
			Total Inorganics			9.5E-07				4.9E-02
	Boater - Sediment Total (excluding KM TEQs)					2.0E-06				1.1E-01
	Boater - Sediment Total (based on KM TEQs)					2.0E-06				1.0E-01
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.6E-09	--	1.6E-09	Reproductive	9.0E-05	--	9.0E-05
			1,2,3,7,8-PeCDD	5.6E-10	--	5.6E-10	Reproductive	3.1E-05	--	3.1E-05
			1,2,3,4,7,8-HxCDD	4.1E-10	--	4.1E-10	Reproductive	2.3E-05	--	2.3E-05
			1,2,3,6,7,8-HxCDD	6.5E-11	--	6.5E-11	Reproductive	3.6E-06	--	3.6E-06
			1,2,3,7,8,9-HxCDD	1.1E-10	--	1.1E-10	Reproductive	6.4E-06	--	6.4E-06
			1,2,3,4,6,7,8-HpCDD	8.2E-11	--	8.2E-11	Reproductive	4.5E-06	--	4.5E-06
			OCDD	2.6E-11	--	2.6E-11	Reproductive	1.4E-06	--	1.4E-06
			2,3,7,8-TCDF	6.3E-11	--	6.3E-11	Reproductive	3.5E-06	--	3.5E-06
			1,2,3,7,8-PeCDF	1.5E-11	--	1.5E-11	Reproductive	8.4E-07	--	8.4E-07
			2,3,4,7,8-PeCDF	2.6E-10	--	2.6E-10	Reproductive	1.5E-05	--	1.5E-05
			1,2,3,4,7,8-HxCDF	2.4E-10	--	2.4E-10	Reproductive	1.3E-05	--	1.3E-05
			1,2,3,6,7,8-HxCDF	5.9E-11	--	5.9E-11	Reproductive	3.3E-06	--	3.3E-06
			1,2,3,7,8,9-HxCDF	3.5E-10	--	3.5E-10	Reproductive	1.9E-05	--	1.9E-05

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	3.7E-11	--	3.7E-11	Reproductive	2.1E-06	--	2.1E-06
			1,2,3,4,6,7,8-HpCDF	1.0E-10	--	1.0E-10	Reproductive	5.7E-06	--	5.7E-06
			1,2,3,4,7,8,9-HpCDF	6.4E-12	--	6.4E-12	Reproductive	3.6E-07	--	3.6E-07
			OCDF	5.8E-12	--	5.8E-12	Reproductive	3.2E-07	--	3.2E-07
			KM TEQ DF	3.2E-09	--	3.2E-09	Reproductive	1.8E-04	--	1.8E-04
			PCB-77	2.7E-12	--	2.7E-12	Reproductive	1.5E-07	--	1.5E-07
			PCB-81	2.7E-13	--	2.7E-13	Reproductive	1.5E-08	--	1.5E-08
			PCB-105	2.9E-12	--	2.9E-12	Reproductive	1.6E-07	--	1.6E-07
			PCB-114	1.5E-13	--	1.5E-13	Reproductive	8.4E-09	--	8.4E-09
			PCB-118	6.5E-12	--	6.5E-12	Reproductive	3.6E-07	--	3.6E-07
			PCB-123	1.3E-13	--	1.3E-13	Reproductive	7.0E-09	--	7.0E-09
			PCB-126	8.9E-11	--	8.9E-11	Reproductive	4.9E-06	--	4.9E-06
			PCB-156/157	7.7E-13	--	7.7E-13	Reproductive	4.3E-08	--	4.3E-08
			PCB-167	2.6E-13	--	2.6E-13	Reproductive	1.4E-08	--	1.4E-08
			PCB-169	1.6E-11	--	1.6E-11	Reproductive	8.9E-07	--	8.9E-07
			PCB-189	3.4E-14	--	3.4E-14	Reproductive	1.9E-09	--	1.9E-09
			KM TEQ PCB	1.4E-10	--	1.4E-10	Reproductive	8.0E-06	--	8.0E-06
			PAHs							
			Benz(a)anthracene	2.6E-11	--	2.6E-11	--	--	--	--
			Benzo(a)pyrene	3.3E-10	--	3.3E-10	Developmental	2.6E-06	--	2.6E-06
			Benzo(b)fluoranthene	4.5E-11	--	4.5E-11	--	--	--	--
			Benzo(k)fluoranthene	2.0E-12	--	2.0E-12	--	--	--	--
			Chrysene	4.4E-13	--	4.4E-13	--	--	--	--
			Dibenz(a,h)anthracene	8.6E-11	--	8.6E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.9E-11	--	1.9E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	9.1E-08	1.5E-06	1.6E-06
			Pesticides & Organics							
			Chloroform	3.3E-11	7.7E-11	1.1E-10	Liver	6.1E-07	1.4E-06	2.1E-06
			Trichloroethylene	1.3E-10	5.7E-10	7.0E-10	Thymus, Blood, Immune, Developmental	1.3E-05	5.8E-05	7.1E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	9.0E-05	1.1E-04	2.0E-04
			Arsenic, inorganic	1.7E-08	3.0E-09	2.0E-08	Skin, Blood	2.2E-04	3.9E-05	2.6E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	4.4E-08	6.0E-07	6.5E-07
			Chromium (VI)	2.5E-09	3.5E-08	3.7E-08	No Effect	3.8E-06	5.4E-05	5.8E-05
			Iron	--	--	--	GI Tract	3.9E-05	6.9E-06	4.6E-05
			Manganese	--	--	--	Neurological	1.5E-04	6.6E-04	8.0E-04
			Mercury	--	--	--	Immune	4.5E-06	1.1E-05	1.6E-05
			Thallium	--	--	--	Skin, Hair	6.4E-05	1.1E-05	7.5E-05
			Titanium	--	--	--	--	--	--	--
Total DLCs (excluding KM TEQs)						4.1E-09				2.3E-04
Total DLCs (based on KM TEQs)						3.4E-09				1.9E-04
Total PCDD/Fs (excluding KM TEQ)						4.0E-09				2.2E-04
Total PCDD/Fs (based on KM TEQ)						3.2E-09				1.8E-04
Total DL-PCBs (excluding KM TEQ)						1.2E-10				6.6E-06
Total DL-PCBs (based on KM TEQ)						1.4E-10				8.0E-06
Total Non-DL PCBs						0.0E+00				0.0E+00
Total PCBs (DL & NDL; excluding KM TEQ)						1.2E-10				6.6E-06
Total PCBs (DL & NDL; based on KM TEQ)						1.4E-10				8.0E-06

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PAHs			5.1E-10				4.2E-06
			Total Organics			8.1E-10				7.4E-05
			Total Inorganics			5.7E-08				1.5E-03
	Wader - Surface Water Total (excluding KM TEQs)					6.3E-08				1.8E-03
	Wader - Surface Water Total (based on KM TEQs)					6.2E-08				1.7E-03
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						2.1E-06				1.1E-01
Wader Sediment Total + Surface Water Total (based on KM TEQs)						2.1E-06				1.1E-01
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.4E-09	--	8.4E-09	Reproductive	4.7E-04	--	4.7E-04
			1,2,3,7,8-PeCDD	2.9E-09	--	2.9E-09	Reproductive	1.6E-04	--	1.6E-04
			1,2,3,4,7,8-HxCDD	2.1E-09	--	2.1E-09	Reproductive	1.2E-04	--	1.2E-04
			1,2,3,6,7,8-HxCDD	3.4E-10	--	3.4E-10	Reproductive	1.9E-05	--	1.9E-05
			1,2,3,7,8,9-HxCDD	6.0E-10	--	6.0E-10	Reproductive	3.3E-05	--	3.3E-05
			1,2,3,4,6,7,8-HpCDD	4.3E-10	--	4.3E-10	Reproductive	2.4E-05	--	2.4E-05
			OCDD	1.3E-10	--	1.3E-10	Reproductive	7.4E-06	--	7.4E-06
			2,3,7,8-TCDF	3.3E-10	--	3.3E-10	Reproductive	1.8E-05	--	1.8E-05
			1,2,3,7,8-PeCDF	7.8E-11	--	7.8E-11	Reproductive	4.4E-06	--	4.4E-06
			2,3,4,7,8-PeCDF	1.4E-09	--	1.4E-09	Reproductive	7.5E-05	--	7.5E-05
			1,2,3,4,7,8-HxCDF	1.3E-09	--	1.3E-09	Reproductive	7.0E-05	--	7.0E-05
			1,2,3,6,7,8-HxCDF	3.0E-10	--	3.0E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,7,8,9-HxCDF	1.8E-09	--	1.8E-09	Reproductive	1.0E-04	--	1.0E-04
			2,3,4,6,7,8-HxCDF	1.9E-10	--	1.9E-10	Reproductive	1.1E-05	--	1.1E-05
			1,2,3,4,6,7,8-HpCDF	5.3E-10	--	5.3E-10	Reproductive	3.0E-05	--	3.0E-05
			1,2,3,4,7,8,9-HpCDF	3.4E-11	--	3.4E-11	Reproductive	1.9E-06	--	1.9E-06
			OCDF	3.0E-11	--	3.0E-11	Reproductive	1.7E-06	--	1.7E-06
			KM TEQ DF	1.7E-08	--	1.7E-08	Reproductive	9.3E-04	--	9.3E-04
			PCB-77	1.4E-11	--	1.4E-11	Reproductive	7.8E-07	--	7.8E-07
			PCB-81	1.4E-12	--	1.4E-12	Reproductive	7.8E-08	--	7.8E-08
			PCB-105	1.5E-11	--	1.5E-11	Reproductive	8.4E-07	--	8.4E-07
			PCB-114	7.9E-13	--	7.9E-13	Reproductive	4.4E-08	--	4.4E-08
			PCB-118	3.4E-11	--	3.4E-11	Reproductive	1.9E-06	--	1.9E-06
			PCB-123	6.5E-13	--	6.5E-13	Reproductive	3.6E-08	--	3.6E-08
			PCB-126	4.6E-10	--	4.6E-10	Reproductive	2.6E-05	--	2.6E-05
			PCB-156/157	4.0E-12	--	4.0E-12	Reproductive	2.2E-07	--	2.2E-07
			PCB-167	1.3E-12	--	1.3E-12	Reproductive	7.5E-08	--	7.5E-08
			PCB-169	8.3E-11	--	8.3E-11	Reproductive	4.6E-06	--	4.6E-06
			PCB-189	1.8E-13	--	1.8E-13	Reproductive	9.8E-09	--	9.8E-09
			KM TEQ PCB	7.5E-10	--	7.5E-10	Reproductive	4.2E-05	--	4.2E-05
			PAHs							
			Benz(a)anthracene	1.4E-10	--	1.4E-10	--	--	--	--
			Benzo(a)pyrene	1.7E-09	--	1.7E-09	Developmental	1.4E-05	--	1.4E-05
			Benzo(b)fluoranthene	2.4E-10	--	2.4E-10	--	--	--	--
			Benzo(k)fluoranthene	1.1E-11	--	1.1E-11	--	--	--	--
			Chrysene	2.3E-12	--	2.3E-12	--	--	--	--
			Dibenz(a,h)anthracene	4.5E-10	--	4.5E-10	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	9.9E-11	--	9.9E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	4.7E-07	8.8E-06	9.2E-06
			Pesticides & Organics							

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chloroform	1.7E-10	4.7E-10	6.4E-10	Liver	3.2E-06	8.8E-06	1.2E-05
			Trichloroethylene	6.9E-10	3.4E-09	4.0E-09	Thymus, Blood, Immune, Developmental	7.0E-05	3.4E-04	4.1E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	4.7E-04	9.2E-04	1.4E-03
			Arsenic, inorganic	8.8E-08	2.6E-08	1.1E-07	Skin, Blood	1.1E-03	3.4E-04	1.5E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.3E-07	5.2E-06	5.5E-06
			Chromium (VI)	1.3E-08	3.0E-07	3.1E-07	No Effect	2.0E-05	4.7E-04	4.9E-04
			Iron	--	--	--	GI Tract	2.0E-04	6.0E-05	2.6E-04
			Manganese	--	--	--	Neurological	7.7E-04	5.7E-03	6.5E-03
			Mercury	--	--	--	Immune	2.3E-05	9.9E-05	1.2E-04
			Thallium	--	--	--	Skin, Hair	3.3E-04	9.8E-05	4.3E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			2.1E-08				1.2E-03
			Total DLCs (based on KM TEQs)			1.7E-08				9.7E-04
			Total PCDD/Fs (excluding KM TEQ)			2.1E-08				1.2E-03
			Total PCDD/Fs (based on KM TEQ)			1.7E-08				9.3E-04
			Total DL-PCBs (excluding KM TEQ)			6.2E-10				3.4E-05
			Total DL-PCBs (based on KM TEQ)			7.5E-10				4.2E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.2E-10				3.4E-05
			Total PCBs (DL & NDL; based on KM TEQ)			7.5E-10				4.2E-05
			Total PAHs			2.7E-09				2.3E-05
			Total Organics			4.7E-09				4.2E-04
			Total Inorganics			4.3E-07				1.1E-02
	Swimmer - Surface Water Total (excluding KM TEQs)					4.6E-07				1.2E-02
	Swimmer - Surface Water Total (based on KM TEQs)					4.5E-07				1.2E-02
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						2.5E-06				1.2E-01
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						2.5E-06				1.2E-01
Surface Water	Surface Water	Boater Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.1E-09	--	8.1E-09	Reproductive	4.5E-04	--	4.5E-04
			1,2,3,7,8-PeCDD	2.8E-09	--	2.8E-09	Reproductive	1.6E-04	--	1.6E-04
			1,2,3,4,7,8-HxCDD	2.0E-09	--	2.0E-09	Reproductive	1.1E-04	--	1.1E-04
			1,2,3,6,7,8-HxCDD	3.3E-10	--	3.3E-10	Reproductive	1.8E-05	--	1.8E-05
			1,2,3,7,8,9-HxCDD	5.8E-10	--	5.8E-10	Reproductive	3.2E-05	--	3.2E-05
			1,2,3,4,6,7,8-HpCDD	4.1E-10	--	4.1E-10	Reproductive	2.3E-05	--	2.3E-05
			OCDD	1.3E-10	--	1.3E-10	Reproductive	7.2E-06	--	7.2E-06
			2,3,7,8-TCDF	3.2E-10	--	3.2E-10	Reproductive	1.8E-05	--	1.8E-05
			1,2,3,7,8-PeCDF	7.6E-11	--	7.6E-11	Reproductive	4.2E-06	--	4.2E-06
			2,3,4,7,8-PeCDF	1.3E-09	--	1.3E-09	Reproductive	7.3E-05	--	7.3E-05
			1,2,3,4,7,8-HxCDF	1.2E-09	--	1.2E-09	Reproductive	6.8E-05	--	6.8E-05
			1,2,3,6,7,8-HxCDF	2.9E-10	--	2.9E-10	Reproductive	1.6E-05	--	1.6E-05
			1,2,3,7,8,9-HxCDF	1.8E-09	--	1.8E-09	Reproductive	9.7E-05	--	9.7E-05
			2,3,4,6,7,8-HxCDF	1.9E-10	--	1.9E-10	Reproductive	1.0E-05	--	1.0E-05
			1,2,3,4,6,7,8-HpCDF	5.1E-10	--	5.1E-10	Reproductive	2.9E-05	--	2.9E-05
			1,2,3,4,7,8,9-HpCDF	3.2E-11	--	3.2E-11	Reproductive	1.8E-06	--	1.8E-06
			OCDF	2.9E-11	--	2.9E-11	Reproductive	1.6E-06	--	1.6E-06

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	1.6E-08	--	1.6E-08	Reproductive	9.0E-04	--	9.0E-04
			PCB-77	1.4E-11	--	1.4E-11	Reproductive	7.6E-07	--	7.6E-07
			PCB-81	1.4E-12	--	1.4E-12	Reproductive	7.6E-08	--	7.6E-08
			PCB-105	1.5E-11	--	1.5E-11	Reproductive	8.1E-07	--	8.1E-07
			PCB-114	7.6E-13	--	7.6E-13	Reproductive	4.2E-08	--	4.2E-08
			PCB-118	3.3E-11	--	3.3E-11	Reproductive	1.8E-06	--	1.8E-06
			PCB-123	6.3E-13	--	6.3E-13	Reproductive	3.5E-08	--	3.5E-08
			PCB-126	4.5E-10	--	4.5E-10	Reproductive	2.5E-05	--	2.5E-05
			PCB-156/157	3.9E-12	--	3.9E-12	Reproductive	2.1E-07	--	2.1E-07
			PCB-167	1.3E-12	--	1.3E-12	Reproductive	7.2E-08	--	7.2E-08
			PCB-169	8.0E-11	--	8.0E-11	Reproductive	4.5E-06	--	4.5E-06
			PCB-189	1.7E-13	--	1.7E-13	Reproductive	9.5E-09	--	9.5E-09
			KM TEQ PCB	7.2E-10	--	7.2E-10	Reproductive	4.0E-05	--	4.0E-05
			PAHs							
			Benz(a)anthracene	1.3E-10	--	1.3E-10	--	--	--	--
			Benzo(a)pyrene	1.7E-09	--	1.7E-09	Developmental	1.3E-05	--	1.3E-05
			Benzo(b)fluoranthene	2.3E-10	--	2.3E-10	--	--	--	--
			Benzo(k)fluoranthene	1.0E-11	--	1.0E-11	--	--	--	--
			Chrysene	2.2E-12	--	2.2E-12	--	--	--	--
			Dibenz(a,h)anthracene	4.3E-10	--	4.3E-10	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	9.6E-11	--	9.6E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	4.6E-07	5.6E-06	6.1E-06
			Pesticides & Organics							
			Chloroform	1.6E-10	2.9E-10	4.6E-10	Liver	3.1E-06	5.5E-06	8.6E-06
			Trichloroethylene	6.7E-10	2.1E-09	2.8E-09	Thymus, Blood, Immune, Developmental	6.8E-05	2.2E-04	2.8E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	4.5E-04	5.3E-04	9.8E-04
			Arsenic, inorganic	8.5E-08	1.5E-08	1.0E-07	Skin, Blood	1.1E-03	1.9E-04	1.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.2E-07	3.0E-06	3.3E-06
			Chromium (VI)	1.2E-08	1.7E-07	1.9E-07	No Effect	1.9E-05	2.7E-04	2.9E-04
			Iron	--	--	--	GI Tract	2.0E-04	3.5E-05	2.3E-04
			Manganese	--	--	--	Neurological	7.4E-04	3.3E-03	4.0E-03
			Mercury	--	--	--	Immune	2.3E-05	5.8E-05	8.0E-05
			Thallium	--	--	--	Skin, Hair	3.2E-04	5.7E-05	3.8E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			2.1E-08				1.2E-03
			Total DLCs (based on KM TEQs)			1.7E-08				9.4E-04
			Total PCDD/Fs (excluding KM TEQ)			2.0E-08				1.1E-03
			Total PCDD/Fs (based on KM TEQ)			1.6E-08				9.0E-04
			Total DL-PCBs (excluding KM TEQ)			6.0E-10				3.3E-05
			Total DL-PCBs (based on KM TEQ)			7.2E-10				4.0E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-10				3.3E-05
			Total PCBs (DL & NDL; based on KM TEQ)			7.2E-10				4.0E-05
			Total PAHs			2.6E-09				1.9E-05
			Total Organics			3.3E-09				2.9E-04
			Total Inorganics			2.9E-07				7.3E-03

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Boater - Surface Water Total (excluding KM TEQs)					3.1E-07				8.8E-03
	Boater - Surface Water Total (based on KM TEQs)					3.1E-07				8.6E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)						2.3E-06				1.1E-01
Boater Sediment Total + Surface Water Total (based on KM TEQs)						2.3E-06				1.1E-01

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Wader Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Wader Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.3E-02		Blood HI =		1.3E-02
				Body Weight HI =		3.5E-04		Body Weight HI =		3.5E-04
				Developmental HI =		2.4E-03		Developmental HI =		2.4E-03
				GI Tract HI =		2.4E-02		GI Tract HI =		2.4E-02
				Hair HI =		3.6E-03		Hair HI =		3.6E-03
				Immune HI =		9.1E-04		Immune HI =		9.1E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		2.1E-06		Liver HI =		2.1E-06
				Neurological HI =		3.6E-03		Neurological HI =		3.6E-03
				No Effect HI =		1.1E-04		No Effect HI =		1.1E-04
				Organ Weights HI =		3.5E-04		Organ Weights HI =		3.5E-04
				Reproductive HI =		3.2E-02		Reproductive HI =		3.1E-02
				Skin HI =		1.5E-02		Skin HI =		1.5E-02
				Thymus HI =		7.1E-05		Thymus HI =		7.1E-05
				Thyroid HI =		4.8E-03		Thyroid HI =		4.8E-03
				Urinary HI =		5.4E-04		Urinary HI =		5.4E-04
				Whole Body HI =		1.3E-02		Whole Body HI =		1.3E-02
				Swimmer Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Swimmer Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.4E-02		Blood HI =		1.4E-02
				Body Weight HI =		3.5E-04		Body Weight HI =		3.5E-04
				Developmental HI =		2.7E-03		Developmental HI =		2.7E-03
				GI Tract HI =		2.4E-02		GI Tract HI =		2.4E-02
				Hair HI =		4.0E-03		Hair HI =		4.0E-03
				Immune HI =		1.4E-03		Immune HI =		1.4E-03
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.2E-05		Liver HI =		1.2E-05
				Neurological HI =		9.2E-03		Neurological HI =		9.2E-03
				No Effect HI =		5.5E-04		No Effect HI =		5.5E-04
				Organ Weights HI =		3.5E-04		Organ Weights HI =		3.5E-04
				Reproductive HI =		3.3E-02		Reproductive HI =		3.1E-02
				Skin HI =		1.6E-02		Skin HI =		1.6E-02
				Thymus HI =		4.1E-04		Thymus HI =		4.1E-04
				Thyroid HI =		4.8E-03		Thyroid HI =		4.8E-03
				Urinary HI =		5.4E-04		Urinary HI =		5.4E-04
				Whole Body HI =		1.4E-02		Whole Body HI =		1.4E-02

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Boater Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Boater Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.4E-02		Blood HI =		1.4E-02
				Body Weight HI =		3.5E-04		Body Weight HI =		3.5E-04
				Developmental HI =		2.6E-03		Developmental HI =		2.6E-03
				GI Tract HI =		2.4E-02		GI Tract HI =		2.4E-02
				Hair HI =		3.9E-03		Hair HI =		3.9E-03
				Immune HI =		1.2E-03		Immune HI =		1.2E-03
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		8.6E-06		Liver HI =		8.6E-06
				Neurological HI =		6.8E-03		Neurological HI =		6.8E-03
				No Effect HI =		3.5E-04		No Effect HI =		3.5E-04
				Organ Weights HI =		3.5E-04		Organ Weights HI =		3.5E-04
				Reproductive HI =		3.3E-02		Reproductive HI =		3.1E-02
				Skin HI =		1.6E-02		Skin HI =		1.6E-02
				Thymus HI =		2.8E-04		Thymus HI =		2.8E-04
				Thyroid HI =		4.8E-03		Thyroid HI =		4.8E-03
				Urinary HI =		5.4E-04		Urinary HI =		5.4E-04
				Whole Body HI =		1.3E-02		Whole Body HI =		1.3E-02

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.1E-07	2.8E-08	2.3E-07	Reproductive	2.3E-02	3.1E-03	2.6E-02
			1,2,3,7,8-PeCDD	1.1E-08	1.5E-09	1.2E-08	Reproductive	1.2E-03	1.6E-04	1.4E-03
			1,2,3,4,7,8-HxCDD	9.7E-10	1.3E-10	1.1E-09	Reproductive	1.1E-04	1.5E-05	1.2E-04
			1,2,3,6,7,8-HxCDD	3.9E-09	5.4E-10	4.5E-09	Reproductive	4.4E-04	5.9E-05	5.0E-04
			1,2,3,7,8,9-HxCDD	2.3E-09	3.2E-10	2.6E-09	Reproductive	2.6E-04	3.5E-05	2.9E-04
			1,2,3,4,6,7,8-HpCDD	6.9E-09	9.4E-10	7.9E-09	Reproductive	7.7E-04	1.0E-04	8.7E-04
			OCDD	2.1E-09	2.9E-10	2.4E-09	Reproductive	2.3E-04	3.2E-05	2.7E-04
			2,3,7,8-TCDF	3.7E-09	5.1E-10	4.2E-09	Reproductive	4.1E-04	5.6E-05	4.7E-04
			1,2,3,7,8-PeCDF	7.6E-10	1.0E-10	8.7E-10	Reproductive	8.5E-05	1.2E-05	9.6E-05
			2,3,4,7,8-PeCDF	1.3E-08	1.7E-09	1.4E-08	Reproductive	1.4E-03	1.9E-04	1.6E-03
			1,2,3,4,7,8-HxCDF	1.9E-08	2.7E-09	2.2E-08	Reproductive	2.2E-03	2.9E-04	2.5E-03
			1,2,3,6,7,8-HxCDF	5.1E-09	6.9E-10	5.8E-09	Reproductive	5.6E-04	7.7E-05	6.4E-04
			1,2,3,7,8,9-HxCDF	3.8E-10	5.2E-11	4.3E-10	Reproductive	4.2E-05	5.7E-06	4.8E-05
			2,3,4,6,7,8-HxCDF	2.8E-09	3.8E-10	3.2E-09	Reproductive	3.1E-04	4.3E-05	3.6E-04
			1,2,3,4,6,7,8-HpCDF	8.6E-09	1.2E-09	9.8E-09	Reproductive	9.6E-04	1.3E-04	1.1E-03
			1,2,3,4,7,8,9-HpCDF	2.9E-10	4.0E-11	3.3E-10	Reproductive	3.3E-05	4.4E-06	3.7E-05
			OCDF	3.6E-10	4.9E-11	4.1E-10	Reproductive	4.0E-05	5.5E-06	4.6E-05
			KM TEQ DF	2.8E-07	3.8E-08	3.2E-07	Reproductive	3.1E-02	4.3E-03	3.5E-02
			PCB-77	2.1E-09	2.8E-10	2.4E-09	Reproductive	2.3E-04	3.1E-05	2.6E-04
			PCB-81	2.4E-10	3.3E-11	2.7E-10	Reproductive	2.7E-05	3.6E-06	3.0E-05
			PCB-105	1.0E-09	1.4E-10	1.1E-09	Reproductive	1.1E-04	1.5E-05	1.3E-04
			PCB-114	6.9E-11	9.4E-12	7.8E-11	Reproductive	7.6E-06	1.0E-06	8.7E-06
			PCB-118	2.9E-09	4.0E-10	3.3E-09	Reproductive	3.3E-04	4.4E-05	3.7E-04
			PCB-123	8.5E-11	1.2E-11	9.6E-11	Reproductive	9.4E-06	1.3E-06	1.1E-05
			PCB-126	6.6E-08	9.0E-09	7.5E-08	Reproductive	7.3E-03	1.0E-03	8.3E-03
			PCB-156/157	2.6E-10	3.6E-11	3.0E-10	Reproductive	2.9E-05	4.0E-06	3.3E-05
			PCB-167	9.4E-11	1.3E-11	1.1E-10	Reproductive	1.0E-05	1.4E-06	1.2E-05
			PCB-169	2.0E-08	2.8E-09	2.3E-08	Reproductive	2.3E-03	3.1E-04	2.6E-03
			PCB-189	2.0E-11	2.7E-12	2.2E-11	Reproductive	2.2E-06	3.0E-07	2.5E-06
			KM TEQ PCB	8.2E-08	1.1E-08	9.3E-08	Reproductive	9.1E-03	1.2E-03	1.0E-02
			Non-DL PCBs							
			Total Non-DL PCBs	2.4E-08	1.5E-08	3.9E-08	Whole Body	6.9E-03	4.4E-03	1.1E-02
			PAHs							
			Benz(a)anthracene	1.6E-08	9.2E-09	2.5E-08	--	--	--	--
			Benzo(a)pyrene	1.5E-07	9.0E-08	2.4E-07	Developmental	1.4E-03	8.4E-04	2.3E-03
			Benzo(b)fluoranthene	1.4E-08	8.1E-09	2.2E-08	--	--	--	--
			Benzo(k)fluoranthene	8.9E-10	5.3E-10	1.4E-09	--	--	--	--
			Chrysene	1.5E-10	8.8E-11	2.4E-10	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-08	1.9E-08	5.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.7E-09	3.3E-09	9.0E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.0E-04	--	3.0E-04
			TPH (C9-C40)	--	--	--	Respiratory	2.2E-02	--	2.2E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.5E-03	--	2.5E-03
			Antimony	--	--	--	Whole Body	1.2E-03	--	1.2E-03
			Arsenic, inorganic	5.0E-07	1.1E-07	6.1E-07	Skin, Blood	1.3E-02	2.9E-03	1.6E-02
			Cadmium	--	--	--	Urinary	6.5E-04	1.2E-04	7.6E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.5E-05	--	1.5E-05
			Cobalt	--	--	--	Thyroid	9.8E-03	--	9.8E-03

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Copper	--	--	--	GI Tract	3.5E-02	--	3.5E-02
			Chromium (VI)	5.2E-08	--	5.2E-08	No Effect	9.7E-05	--	9.7E-05
			Iron	--	--	--	GI Tract	1.3E-02	--	1.3E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.1E-03	--	3.1E-03
			Mercury	--	--	--	Immune	1.4E-03	--	1.4E-03
			Nickel	--	--	--	Body Weight, Organ Weights	7.0E-04	--	7.0E-04
			Thallium	--	--	--	Skin, Hair	5.1E-03	--	5.1E-03
			Vanadium	--	--	--	Hair	2.1E-03	--	2.1E-03
			Zinc	--	--	--	Blood	8.6E-04	--	8.6E-04
			Total DLCs (excluding KM TEQs)			4.3E-07				4.8E-02
			Total DLCs (based on KM TEQs)			4.1E-07				4.6E-02
			Total PCDD/Fs (excluding KM TEQ)			3.3E-07				3.6E-02
			Total PCDD/Fs (based on KM TEQ)			3.2E-07				3.5E-02
			Total DL-PCBs (excluding KM TEQ)			1.1E-07				1.2E-02
			Total DL-PCBs (based on KM TEQ)			9.3E-08				1.0E-02
			Total Non-DL PCBs			3.9E-08				1.1E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			1.4E-07				2.3E-02
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-07				2.2E-02
			Total PAHs			3.5E-07				2.3E-03
			Total Organics			0.0E+00				2.2E-02
			Total Inorganics			6.6E-07				9.2E-02
	Wader - Sediment Total (excluding KM TEQs)					1.5E-06				1.8E-01
	Wader - Sediment Total (based on KM TEQs)					1.5E-06				1.7E-01
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.1E-07	2.8E-08	2.3E-07	Reproductive	2.3E-02	3.1E-03	2.6E-02
			1,2,3,7,8-PeCDD	1.1E-08	1.5E-09	1.2E-08	Reproductive	1.2E-03	1.6E-04	1.4E-03
			1,2,3,4,7,8-HxCDD	9.7E-10	1.3E-10	1.1E-09	Reproductive	1.1E-04	1.5E-05	1.2E-04
			1,2,3,6,7,8-HxCDD	3.9E-09	5.4E-10	4.5E-09	Reproductive	4.4E-04	5.9E-05	5.0E-04
			1,2,3,7,8,9-HxCDD	2.3E-09	3.2E-10	2.6E-09	Reproductive	2.6E-04	3.5E-05	2.9E-04
			1,2,3,4,6,7,8-HpCDD	6.9E-09	9.4E-10	7.9E-09	Reproductive	7.7E-04	1.0E-04	8.7E-04
			OCDD	2.1E-09	2.9E-10	2.4E-09	Reproductive	2.3E-04	3.2E-05	2.7E-04
			2,3,7,8-TCDF	3.7E-09	5.1E-10	4.2E-09	Reproductive	4.1E-04	5.6E-05	4.7E-04
			1,2,3,7,8-PeCDF	7.6E-10	1.0E-10	8.7E-10	Reproductive	8.5E-05	1.2E-05	9.6E-05
			2,3,4,7,8-PeCDF	1.3E-08	1.7E-09	1.4E-08	Reproductive	1.4E-03	1.9E-04	1.6E-03
			1,2,3,4,7,8-HxCDF	1.9E-08	2.7E-09	2.2E-08	Reproductive	2.2E-03	2.9E-04	2.5E-03
			1,2,3,6,7,8-HxCDF	5.1E-09	6.9E-10	5.8E-09	Reproductive	5.6E-04	7.7E-05	6.4E-04
			1,2,3,7,8,9-HxCDF	3.8E-10	5.2E-11	4.3E-10	Reproductive	4.2E-05	5.7E-06	4.8E-05
			2,3,4,6,7,8-HxCDF	2.8E-09	3.8E-10	3.2E-09	Reproductive	3.1E-04	4.3E-05	3.6E-04
			1,2,3,4,6,7,8-HpCDF	8.6E-09	1.2E-09	9.8E-09	Reproductive	9.6E-04	1.3E-04	1.1E-03
			1,2,3,4,7,8,9-HpCDF	2.9E-10	4.0E-11	3.3E-10	Reproductive	3.3E-05	4.4E-06	3.7E-05
			OCDF	3.6E-10	4.9E-11	4.1E-10	Reproductive	4.0E-05	5.5E-06	4.6E-05
			KM TEQ DF	2.8E-07	3.8E-08	3.2E-07	Reproductive	3.1E-02	4.3E-03	3.5E-02
			PCB-77	2.1E-09	2.8E-10	2.4E-09	Reproductive	2.3E-04	3.1E-05	2.6E-04
			PCB-81	2.4E-10	3.3E-11	2.7E-10	Reproductive	2.7E-05	3.6E-06	3.0E-05
			PCB-105	1.0E-09	1.4E-10	1.1E-09	Reproductive	1.1E-04	1.5E-05	1.3E-04
			PCB-114	6.9E-11	9.4E-12	7.8E-11	Reproductive	7.6E-06	1.0E-06	8.7E-06
			PCB-118	2.9E-09	4.0E-10	3.3E-09	Reproductive	3.3E-04	4.4E-05	3.7E-04

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	8.5E-11	1.2E-11	9.6E-11	Reproductive	9.4E-06	1.3E-06	1.1E-05
			PCB-126	6.6E-08	9.0E-09	7.5E-08	Reproductive	7.3E-03	1.0E-03	8.3E-03
			PCB-156/157	2.6E-10	3.6E-11	3.0E-10	Reproductive	2.9E-05	4.0E-06	3.3E-05
			PCB-167	9.4E-11	1.3E-11	1.1E-10	Reproductive	1.0E-05	1.4E-06	1.2E-05
			PCB-169	2.0E-08	2.8E-09	2.3E-08	Reproductive	2.3E-03	3.1E-04	2.6E-03
			PCB-189	2.0E-11	2.7E-12	2.2E-11	Reproductive	2.2E-06	3.0E-07	2.5E-06
			KM TEQ PCB	8.2E-08	1.1E-08	9.3E-08	Reproductive	9.1E-03	1.2E-03	1.0E-02
			Non-DL PCBs							
			Total Non-DL PCBs	2.4E-08	1.5E-08	3.9E-08	Whole Body	6.9E-03	4.4E-03	1.1E-02
			PAHs							
			Benz(a)anthracene	1.6E-08	9.2E-09	2.5E-08	--	--	--	--
			Benzo(a)pyrene	1.5E-07	9.0E-08	2.4E-07	Developmental	1.4E-03	8.4E-04	2.3E-03
			Benzo(b)fluoranthene	1.4E-08	8.1E-09	2.2E-08	--	--	--	--
			Benzo(k)fluoranthene	8.9E-10	5.3E-10	1.4E-09	--	--	--	--
			Chrysene	1.5E-10	8.8E-11	2.4E-10	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-08	1.9E-08	5.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.7E-09	3.3E-09	9.0E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.0E-04	--	3.0E-04
			TPH (C9-C40)	--	--	--	Respiratory	2.2E-02	--	2.2E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.5E-03	--	2.5E-03
			Antimony	--	--	--	Whole Body	1.2E-03	--	1.2E-03
			Arsenic, inorganic	5.0E-07	1.1E-07	6.1E-07	Skin, Blood	1.3E-02	2.9E-03	1.6E-02
			Cadmium	--	--	--	Urinary	6.5E-04	1.2E-04	7.6E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.5E-05	--	1.5E-05
			Cobalt	--	--	--	Thyroid	9.8E-03	--	9.8E-03
			Copper	--	--	--	GI Tract	3.5E-02	--	3.5E-02
			Chromium (VI)	5.2E-08	--	5.2E-08	No Effect	9.7E-05	--	9.7E-05
			Iron	--	--	--	GI Tract	1.3E-02	--	1.3E-02
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.1E-03	--	3.1E-03
			Mercury	--	--	--	Immune	1.4E-03	--	1.4E-03
			Nickel	--	--	--	Body Weight, Organ Weights	7.0E-04	--	7.0E-04
			Thallium	--	--	--	Skin, Hair	5.1E-03	--	5.1E-03
			Vanadium	--	--	--	Hair	2.1E-03	--	2.1E-03
			Zinc	--	--	--	Blood	8.6E-04	--	8.6E-04
			Total DLCs (excluding KM TEQs)			4.3E-07				4.8E-02
			Total DLCs (based on KM TEQs)			4.1E-07				4.6E-02
			Total PCDD/Fs (excluding KM TEQ)			3.3E-07				3.6E-02
			Total PCDD/Fs (based on KM TEQ)			3.2E-07				3.5E-02
			Total DL-PCBs (excluding KM TEQ)			1.1E-07				1.2E-02
			Total DL-PCBs (based on KM TEQ)			9.3E-08				1.0E-02
			Total Non-DL PCBs			3.9E-08				1.1E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			1.4E-07				2.3E-02
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-07				2.2E-02
			Total PAHs			3.5E-07				2.3E-03
			Total Organics			0.0E+00				2.2E-02
			Total Inorganics			6.6E-07				9.2E-02

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Swimmer - Sediment Total (excluding KM TEQs)					1.5E-06				1.8E-01
	Swimmer - Sediment Total (based on KM TEQs)					1.5E-06				1.7E-01
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.2E-10	--	8.2E-10	Reproductive	9.2E-05	--	9.2E-05
			1,2,3,7,8-PeCDD	2.8E-10	--	2.8E-10	Reproductive	3.2E-05	--	3.2E-05
			1,2,3,4,7,8-HxCDD	2.1E-10	--	2.1E-10	Reproductive	2.3E-05	--	2.3E-05
			1,2,3,6,7,8-HxCDD	3.3E-11	--	3.3E-11	Reproductive	3.7E-06	--	3.7E-06
			1,2,3,7,8,9-HxCDD	5.8E-11	--	5.8E-11	Reproductive	6.5E-06	--	6.5E-06
			1,2,3,4,6,7,8-HpCDD	4.2E-11	--	4.2E-11	Reproductive	4.6E-06	--	4.6E-06
			OCDD	1.3E-11	--	1.3E-11	Reproductive	1.5E-06	--	1.5E-06
			2,3,7,8-TCDF	3.2E-11	--	3.2E-11	Reproductive	3.6E-06	--	3.6E-06
			1,2,3,7,8-PeCDF	7.7E-12	--	7.7E-12	Reproductive	8.5E-07	--	8.5E-07
			2,3,4,7,8-PeCDF	1.3E-10	--	1.3E-10	Reproductive	1.5E-05	--	1.5E-05
			1,2,3,4,7,8-HxCDF	1.2E-10	--	1.2E-10	Reproductive	1.4E-05	--	1.4E-05
			1,2,3,6,7,8-HxCDF	3.0E-11	--	3.0E-11	Reproductive	3.3E-06	--	3.3E-06
			1,2,3,7,8,9-HxCDF	1.8E-10	--	1.8E-10	Reproductive	2.0E-05	--	2.0E-05
			2,3,4,6,7,8-HxCDF	1.9E-11	--	1.9E-11	Reproductive	2.1E-06	--	2.1E-06
			1,2,3,4,6,7,8-HpCDF	5.2E-11	--	5.2E-11	Reproductive	5.8E-06	--	5.8E-06
			1,2,3,4,7,8,9-HpCDF	3.3E-12	--	3.3E-12	Reproductive	3.7E-07	--	3.7E-07
			OCDF	2.9E-12	--	2.9E-12	Reproductive	3.3E-07	--	3.3E-07
			KM TEQ DF	1.6E-09	--	1.6E-09	Reproductive	1.8E-04	--	1.8E-04
			PCB-77	1.4E-12	--	1.4E-12	Reproductive	1.5E-07	--	1.5E-07
			PCB-81	1.4E-13	--	1.4E-13	Reproductive	1.5E-08	--	1.5E-08
			PCB-105	1.5E-12	--	1.5E-12	Reproductive	1.6E-07	--	1.6E-07
			PCB-114	7.7E-14	--	7.7E-14	Reproductive	8.6E-09	--	8.6E-09
			PCB-118	3.3E-12	--	3.3E-12	Reproductive	3.7E-07	--	3.7E-07
			PCB-123	6.4E-14	--	6.4E-14	Reproductive	7.1E-09	--	7.1E-09
			PCB-126	4.5E-11	--	4.5E-11	Reproductive	5.0E-06	--	5.0E-06
			PCB-156/157	3.9E-13	--	3.9E-13	Reproductive	4.4E-08	--	4.4E-08
			PCB-167	1.3E-13	--	1.3E-13	Reproductive	1.5E-08	--	1.5E-08
			PCB-169	8.1E-12	--	8.1E-12	Reproductive	9.0E-07	--	9.0E-07
			PCB-189	1.7E-14	--	1.7E-14	Reproductive	1.9E-09	--	1.9E-09
			KM TEQ PCB	7.3E-11	--	7.3E-11	Reproductive	8.2E-06	--	8.2E-06
			PAHs							
			Benz(a)anthracene	2.2E-11	--	2.2E-11	--	--	--	--
			Benzo(a)pyrene	2.8E-10	--	2.8E-10	Developmental	2.6E-06	--	2.6E-06
			Benzo(b)fluoranthene	3.9E-11	--	3.9E-11	--	--	--	--
			Benzo(k)fluoranthene	1.7E-12	--	1.7E-12	--	--	--	--
			Chrysene	3.8E-13	--	3.8E-13	--	--	--	--
			Dibenz(a,h)anthracene	7.3E-11	--	7.3E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-11	--	1.6E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	9.3E-08	8.1E-07	9.0E-07
			Pesticides & Organics							
			Chloroform	1.7E-11	2.0E-11	3.7E-11	Liver	6.3E-07	7.5E-07	1.4E-06
			Trichloroethylene	1.1E-10	2.5E-10	3.6E-10	Thymus, Blood, Immune, Developmental	1.4E-05	3.0E-05	4.4E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	9.1E-05	5.5E-05	1.5E-04
			Arsenic, inorganic	8.6E-09	7.8E-10	9.4E-09	Skin, Blood	2.2E-04	2.0E-05	2.4E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	4.5E-08	3.2E-07	3.6E-07
			Chromium (VI)	2.1E-09	1.5E-08	1.7E-08	No Effect	3.9E-06	2.8E-05	3.2E-05
			Iron	--	--	--	GI Tract	4.0E-05	3.6E-06	4.3E-05

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Manganese	--	--	--	Neurological	1.5E-04	3.4E-04	4.9E-04
			Mercury	--	--	--	Immune	4.6E-06	6.0E-06	1.1E-05
			Thallium	--	--	--	Skin, Hair	6.5E-05	5.9E-06	7.1E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			2.1E-09				2.3E-04
			Total DLCs (based on KM TEQs)			1.7E-09				1.9E-04
			Total PCDD/Fs (excluding KM TEQ)			2.0E-09				2.3E-04
			Total PCDD/Fs (based on KM TEQ)			1.6E-09				1.8E-04
			Total DL-PCBs (excluding KM TEQ)			6.1E-11				6.7E-06
			Total DL-PCBs (based on KM TEQ)			7.3E-11				8.2E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.1E-11				6.7E-06
			Total PCBs (DL & NDL; based on KM TEQ)			7.3E-11				8.2E-06
			Total PAHs			4.4E-10				3.5E-06
			Total Organics			4.0E-10				4.5E-05
			Total Inorganics			2.7E-08				1.0E-03
	Wader - Surface Water Total (excluding KM TEQs)					3.0E-08				1.3E-03
	Wader - Surface Water Total (based on KM TEQs)					2.9E-08				1.3E-03
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						1.5E-06				1.8E-01
Wader Sediment Total + Surface Water Total (based on KM TEQs)						1.5E-06				1.7E-01
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.3E-09	--	4.3E-09	Reproductive	4.8E-04	--	4.8E-04
			1,2,3,7,8-PeCDD	1.5E-09	--	1.5E-09	Reproductive	1.6E-04	--	1.6E-04
			1,2,3,4,7,8-HxCDD	1.1E-09	--	1.1E-09	Reproductive	1.2E-04	--	1.2E-04
			1,2,3,6,7,8-HxCDD	1.7E-10	--	1.7E-10	Reproductive	1.9E-05	--	1.9E-05
			1,2,3,7,8,9-HxCDD	3.0E-10	--	3.0E-10	Reproductive	3.4E-05	--	3.4E-05
			1,2,3,4,6,7,8-HpCDD	2.2E-10	--	2.2E-10	Reproductive	2.4E-05	--	2.4E-05
			OCDD	6.8E-11	--	6.8E-11	Reproductive	7.6E-06	--	7.6E-06
			2,3,7,8-TCDF	1.7E-10	--	1.7E-10	Reproductive	1.9E-05	--	1.9E-05
			1,2,3,7,8-PeCDF	4.0E-11	--	4.0E-11	Reproductive	4.4E-06	--	4.4E-06
			2,3,4,7,8-PeCDF	6.9E-10	--	6.9E-10	Reproductive	7.7E-05	--	7.7E-05
			1,2,3,4,7,8-HxCDF	6.4E-10	--	6.4E-10	Reproductive	7.1E-05	--	7.1E-05
			1,2,3,6,7,8-HxCDF	1.6E-10	--	1.6E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,7,8,9-HxCDF	9.2E-10	--	9.2E-10	Reproductive	1.0E-04	--	1.0E-04
			2,3,4,6,7,8-HxCDF	9.8E-11	--	9.8E-11	Reproductive	1.1E-05	--	1.1E-05
			1,2,3,4,6,7,8-HpCDF	2.7E-10	--	2.7E-10	Reproductive	3.0E-05	--	3.0E-05
			1,2,3,4,7,8,9-HpCDF	1.7E-11	--	1.7E-11	Reproductive	1.9E-06	--	1.9E-06
			OCDF	1.5E-11	--	1.5E-11	Reproductive	1.7E-06	--	1.7E-06
			KM TEQ DF	8.5E-09	--	8.5E-09	Reproductive	9.5E-04	--	9.5E-04
			PCB-77	7.2E-12	--	7.2E-12	Reproductive	8.0E-07	--	8.0E-07
			PCB-81	7.2E-13	--	7.2E-13	Reproductive	8.0E-08	--	8.0E-08
			PCB-105	7.7E-12	--	7.7E-12	Reproductive	8.6E-07	--	8.6E-07
			PCB-114	4.0E-13	--	4.0E-13	Reproductive	4.4E-08	--	4.4E-08
			PCB-118	1.7E-11	--	1.7E-11	Reproductive	1.9E-06	--	1.9E-06
			PCB-123	3.3E-13	--	3.3E-13	Reproductive	3.7E-08	--	3.7E-08
			PCB-126	2.4E-10	--	2.4E-10	Reproductive	2.6E-05	--	2.6E-05
			PCB-156/157	2.0E-12	--	2.0E-12	Reproductive	2.3E-07	--	2.3E-07
			PCB-167	6.9E-13	--	6.9E-13	Reproductive	7.6E-08	--	7.6E-08

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-169	4.2E-11	--	4.2E-11	Reproductive	4.7E-06	--	4.7E-06
			PCB-189	9.0E-14	--	9.0E-14	Reproductive	1.0E-08	--	1.0E-08
			KM TEQ PCB	3.8E-10	--	3.8E-10	Reproductive	4.2E-05	--	4.2E-05
			PAHs							
			Benz(a)anthracene	1.1E-10	--	1.1E-10	--	--	--	--
			Benzo(a)pyrene	1.5E-09	--	1.5E-09	Developmental	1.4E-05	--	1.4E-05
			Benzo(b)fluoranthene	2.0E-10	--	2.0E-10	--	--	--	--
			Benzo(k)fluoranthene	9.0E-12	--	9.0E-12	--	--	--	--
			Chrysene	2.0E-12	--	2.0E-12	--	--	--	--
			Dibenz(a,h)anthracene	3.8E-10	--	3.8E-10	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	8.4E-11	--	8.4E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	4.8E-07	4.5E-06	5.0E-06
			Pesticides & Organics							
			Chloroform	8.7E-11	1.2E-10	2.1E-10	Liver	3.3E-06	4.5E-06	7.8E-06
			Trichloroethylene	5.9E-10	1.4E-09	2.0E-09	Thymus, Blood, Immune, Developmental	7.1E-05	1.8E-04	2.5E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	4.8E-04	4.8E-04	9.5E-04
			Arsenic, inorganic	4.5E-08	6.7E-09	5.1E-08	Skin, Blood	1.2E-03	1.7E-04	1.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.3E-07	2.7E-06	2.9E-06
			Chromium (VI)	1.1E-08	1.3E-07	1.4E-07	No Effect	2.0E-05	2.4E-04	2.6E-04
			Iron	--	--	--	GI Tract	2.1E-04	3.1E-05	2.4E-04
			Manganese	--	--	--	Neurological	7.8E-04	2.9E-03	3.7E-03
			Mercury	--	--	--	Immune	2.4E-05	5.1E-05	7.5E-05
			Thallium	--	--	--	Skin, Hair	3.4E-04	5.1E-05	3.9E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			1.1E-08				1.2E-03
			Total DLCs (based on KM TEQs)			8.9E-09				9.9E-04
			Total PCDD/Fs (excluding KM TEQ)			1.1E-08				1.2E-03
			Total PCDD/Fs (based on KM TEQ)			8.5E-09				9.5E-04
			Total DL-PCBs (excluding KM TEQ)			3.1E-10				3.5E-05
			Total DL-PCBs (based on KM TEQ)			3.8E-10				4.2E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.1E-10				3.5E-05
			Total PCBs (DL & NDL; based on KM TEQ)			3.8E-10				4.2E-05
			Total PAHs			2.3E-09				1.9E-05
			Total Organics			2.2E-09				2.5E-04
			Total Inorganics			1.9E-07				7.0E-03
	Swimmer - Surface Water Total (excluding KM TEQs)					2.1E-07				8.5E-03
	Swimmer - Surface Water Total (based on KM TEQs)					2.1E-07				8.2E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						1.7E-06				1.8E-01
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						1.7E-06				1.8E-01

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Wader Sediment Total + Surface Water Total			Wader Sediment Total + Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.7E-02		Blood HI =		1.7E-02
				Body Weight HI =		7.0E-04		Body Weight HI =		7.0E-04
				Developmental HI =		2.3E-03		Developmental HI =		2.3E-03
				GI Tract HI =		4.8E-02		GI Tract HI =		4.8E-02
				Hair HI =		7.3E-03		Hair HI =		7.3E-03
				Immune HI =		1.7E-03		Immune HI =		1.7E-03
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.4E-06		Liver HI =		1.4E-06
				Neurological HI =		6.1E-03		Neurological HI =		6.1E-03
				No Effect HI =		1.4E-04		No Effect HI =		1.4E-04
				Organ Weights HI =		7.0E-04		Organ Weights HI =		7.0E-04
				Reproductive HI =		4.8E-02		Reproductive HI =		4.6E-02
				Skin HI =		2.1E-02		Skin HI =		2.1E-02
				Thymus HI =		4.4E-05		Thymus HI =		4.4E-05
				Thyroid HI =		9.8E-03		Thyroid HI =		9.8E-03
				Urinary HI =		7.6E-04		Urinary HI =		7.6E-04
				Whole Body HI =		1.3E-02		Whole Body HI =		1.3E-02
				Swimmer Sediment Total + Surface Water Total			Swimmer Sediment Total + Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-02		Blood HI =		1.9E-02
				Body Weight HI =		7.1E-04		Body Weight HI =		7.1E-04
				Developmental HI =		2.5E-03		Developmental HI =		2.5E-03
				GI Tract HI =		4.8E-02		GI Tract HI =		4.8E-02
				Hair HI =		7.6E-03		Hair HI =		7.6E-03
				Immune HI =		2.0E-03		Immune HI =		2.0E-03
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		7.8E-06		Liver HI =		7.8E-06
				Neurological HI =		9.4E-03		Neurological HI =		9.4E-03
				No Effect HI =		3.8E-04		No Effect HI =		3.8E-04
				Organ Weights HI =		7.0E-04		Organ Weights HI =		7.0E-04
				Reproductive HI =		4.9E-02		Reproductive HI =		4.7E-02
				Skin HI =		2.3E-02		Skin HI =		2.3E-02
				Thymus HI =		2.5E-04		Thymus HI =		2.5E-04
				Thyroid HI =		9.8E-03		Thyroid HI =		9.8E-03
				Urinary HI =		7.6E-04		Urinary HI =		7.6E-04
				Whole Body HI =		1.3E-02		Whole Body HI =		1.3E-02

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.8E-07	1.1E-07	3.9E-07
			1,2,3,7,8-PeCDD	1.5E-08	6.0E-09	2.1E-08
			1,2,3,4,7,8-HxCDD	1.3E-09	5.3E-10	1.8E-09
			1,2,3,6,7,8-HxCDD	5.3E-09	2.2E-09	7.5E-09
			1,2,3,7,8,9-HxCDD	3.1E-09	1.3E-09	4.4E-09
			1,2,3,4,6,7,8-HpCDD	9.4E-09	3.8E-09	1.3E-08
			OCDD	2.9E-09	1.2E-09	4.0E-09
			2,3,7,8-TCDF	5.0E-09	2.0E-09	7.1E-09
			1,2,3,7,8-PeCDF	1.0E-09	4.2E-10	1.5E-09
			2,3,4,7,8-PeCDF	1.7E-08	7.0E-09	2.4E-08
			1,2,3,4,7,8-HxCDF	2.6E-08	1.1E-08	3.7E-08
			1,2,3,6,7,8-HxCDF	6.9E-09	2.8E-09	9.6E-09
			1,2,3,7,8,9-HxCDF	5.1E-10	2.1E-10	7.2E-10
			2,3,4,6,7,8-HxCDF	3.8E-09	1.6E-09	5.4E-09
			1,2,3,4,6,7,8-HpCDF	1.2E-08	4.7E-09	1.6E-08
			1,2,3,4,7,8,9-HpCDF	4.0E-10	1.6E-10	5.6E-10
			OCDF	4.9E-10	2.0E-10	6.9E-10
			KM TEQ DF	3.8E-07	1.5E-07	5.3E-07
			PCB-77	2.8E-09	1.1E-09	4.0E-09
			PCB-81	3.3E-10	1.3E-10	4.6E-10
			PCB-105	1.4E-09	5.5E-10	1.9E-09
			PCB-114	9.3E-11	3.8E-11	1.3E-10
			PCB-118	4.0E-09	1.6E-09	5.6E-09
			PCB-123	1.1E-10	4.7E-11	1.6E-10
			PCB-126	8.9E-08	3.6E-08	1.3E-07
			PCB-156/157	3.5E-10	1.4E-10	5.0E-10
			PCB-167	1.3E-10	5.2E-11	1.8E-10
			PCB-169	2.8E-08	1.1E-08	3.9E-08
			PCB-189	2.7E-11	1.1E-11	3.7E-11
			KM TEQ PCB	1.1E-07	4.5E-08	1.6E-07
			Non-DL PCBs			
			Total Non-DL PCBs	3.2E-08	6.1E-08	9.3E-08
			PAHs			
			Benz(a)anthracene	1.7E-08	1.6E-08	3.3E-08
			Benzo(a)pyrene	1.7E-07	1.6E-07	3.2E-07
			Benzo(b)fluoranthene	1.5E-08	1.4E-08	2.9E-08
			Benzo(k)fluoranthene	9.6E-10	9.1E-10	1.9E-09
			Chrysene	1.6E-10	1.5E-10	3.1E-10
			Dibenz(a,h)anthracene	3.4E-08	3.2E-08	6.6E-08
			Indeno(1,2,3-c,d)-pyrene	6.1E-09	5.8E-09	1.2E-08
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	6.7E-07	4.6E-07	1.1E-06
			Cadmium	--	--	--

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	5.6E-08	--	5.6E-08
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			7.2E-07
			Total DLCs (based on KM TEQs)			6.9E-07
			Total PCDD/Fs (excluding KM TEQ)			5.5E-07
			Total PCDD/Fs (based on KM TEQ)			5.3E-07
			Total DL-PCBs (excluding KM TEQ)			1.8E-07
			Total DL-PCBs (based on KM TEQ)			1.6E-07
			Total Non-DL PCBs			9.3E-08
			Total PCBs (DL & NDL; excluding KM TEQ)			2.7E-07
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-07
			Total PAHs			4.6E-07
			Total Organics			0.0E+00
			Total Inorganics			1.2E-06
	Wader - Sediment Total (excluding KM TEQs)					2.5E-06
	Wader - Sediment Total (based on KM TEQs)					2.4E-06
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.8E-07	1.1E-07	3.9E-07
			1,2,3,7,8-PeCDD	1.5E-08	6.0E-09	2.1E-08
			1,2,3,4,7,8-HxCDD	1.3E-09	5.3E-10	1.8E-09
			1,2,3,6,7,8-HxCDD	5.3E-09	2.2E-09	7.5E-09
			1,2,3,7,8,9-HxCDD	3.1E-09	1.3E-09	4.4E-09
			1,2,3,4,6,7,8-HpCDD	9.4E-09	3.8E-09	1.3E-08
			OCDD	2.9E-09	1.2E-09	4.0E-09
			2,3,7,8-TCDF	5.0E-09	2.0E-09	7.1E-09
			1,2,3,7,8-PeCDF	1.0E-09	4.2E-10	1.5E-09
			2,3,4,7,8-PeCDF	1.7E-08	7.0E-09	2.4E-08
			1,2,3,4,7,8-HxCDF	2.6E-08	1.1E-08	3.7E-08
			1,2,3,6,7,8-HxCDF	6.9E-09	2.8E-09	9.6E-09
			1,2,3,7,8,9-HxCDF	5.1E-10	2.1E-10	7.2E-10
			2,3,4,6,7,8-HxCDF	3.8E-09	1.6E-09	5.4E-09
			1,2,3,4,6,7,8-HpCDF	1.2E-08	4.7E-09	1.6E-08
			1,2,3,4,7,8,9-HpCDF	4.0E-10	1.6E-10	5.6E-10
			OCDF	4.9E-10	2.0E-10	6.9E-10
			KM TEQ DF	3.8E-07	1.5E-07	5.3E-07
			PCB-77	2.8E-09	1.1E-09	4.0E-09
			PCB-81	3.3E-10	1.3E-10	4.6E-10

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.4E-09	5.5E-10	1.9E-09
			PCB-114	9.3E-11	3.8E-11	1.3E-10
			PCB-118	4.0E-09	1.6E-09	5.6E-09
			PCB-123	1.1E-10	4.7E-11	1.6E-10
			PCB-126	8.9E-08	3.6E-08	1.3E-07
			PCB-156/157	3.5E-10	1.4E-10	5.0E-10
			PCB-167	1.3E-10	5.2E-11	1.8E-10
			PCB-169	2.8E-08	1.1E-08	3.9E-08
			PCB-189	2.7E-11	1.1E-11	3.7E-11
			KM TEQ PCB	1.1E-07	4.5E-08	1.6E-07
			Non-DL PCBs			
			Total Non-DL PCBs	3.2E-08	6.1E-08	9.3E-08
			PAHs			
			Benz(a)anthracene	1.7E-08	1.6E-08	3.3E-08
			Benzo(a)pyrene	1.7E-07	1.6E-07	3.2E-07
			Benzo(b)fluoranthene	1.5E-08	1.4E-08	2.9E-08
			Benzo(k)fluoranthene	9.6E-10	9.1E-10	1.9E-09
			Chrysene	1.6E-10	1.5E-10	3.1E-10
			Dibenz(a,h)anthracene	3.4E-08	3.2E-08	6.6E-08
			Indeno(1,2,3-c,d)-pyrene	6.1E-09	5.8E-09	1.2E-08
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	6.7E-07	4.6E-07	1.1E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	5.6E-08	--	5.6E-08
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
Total DLCs (excluding KM TEQs)						7.2E-07
Total DLCs (based on KM TEQs)						6.9E-07
Total PCDD/Fs (excluding KM TEQ)						5.5E-07
Total PCDD/Fs (based on KM TEQ)						5.3E-07
Total DL-PCBs (excluding KM TEQ)						1.8E-07
Total DL-PCBs (based on KM TEQ)						1.6E-07
Total Non-DL PCBs						9.3E-08
Total PCBs (DL & NDL; excluding KM TEQ)						2.7E-07

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-07
			Total PAHs			4.6E-07
			Total Organics			0.0E+00
			Total Inorganics			1.2E-06
	Swimmer - Sediment Total (excluding KM TEQs)					2.5E-06
	Swimmer - Sediment Total (based on KM TEQs)					2.4E-06
Sediment	Sediment	Boater Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.0E-08	2.4E-08	7.5E-08
			1,2,3,7,8-PeCDD	2.7E-09	1.3E-09	3.9E-09
			1,2,3,4,7,8-HxCDD	2.4E-10	1.2E-10	3.5E-10
			1,2,3,6,7,8-HxCDD	9.6E-10	4.7E-10	1.4E-09
			1,2,3,7,8,9-HxCDD	5.7E-10	2.7E-10	8.4E-10
			1,2,3,4,6,7,8-HpCDD	1.7E-09	8.2E-10	2.5E-09
			OCDD	5.2E-10	2.5E-10	7.7E-10
			2,3,7,8-TCDF	9.1E-10	4.4E-10	1.3E-09
			1,2,3,7,8-PeCDF	1.9E-10	9.1E-11	2.8E-10
			2,3,4,7,8-PeCDF	3.1E-09	1.5E-09	4.6E-09
			1,2,3,4,7,8-HxCDF	4.8E-09	2.3E-09	7.1E-09
			1,2,3,6,7,8-HxCDF	1.2E-09	6.0E-10	1.8E-09
			1,2,3,7,8,9-HxCDF	9.3E-11	4.5E-11	1.4E-10
			2,3,4,6,7,8-HxCDF	6.9E-10	3.3E-10	1.0E-09
			1,2,3,4,6,7,8-HpCDF	2.1E-09	1.0E-09	3.1E-09
			1,2,3,4,7,8,9-HpCDF	7.2E-11	3.5E-11	1.1E-10
			OCDF	8.9E-11	4.3E-11	1.3E-10
			KM TEQ DF	6.9E-08	3.3E-08	1.0E-07
			PCB-77	5.1E-10	2.5E-10	7.6E-10
			PCB-81	5.9E-11	2.9E-11	8.7E-11
			PCB-105	2.5E-10	1.2E-10	3.6E-10
			PCB-114	1.7E-11	8.2E-12	2.5E-11
			PCB-118	7.2E-10	3.5E-10	1.1E-09
			PCB-123	2.1E-11	1.0E-11	3.1E-11
			PCB-126	1.6E-08	7.8E-09	2.4E-08
			PCB-156/157	6.4E-11	3.1E-11	9.5E-11
			PCB-167	2.3E-11	1.1E-11	3.4E-11
			PCB-169	5.0E-09	2.4E-09	7.4E-09
			PCB-189	4.8E-12	2.3E-12	7.2E-12
			KM TEQ PCB	2.0E-08	9.8E-09	3.0E-08
			Non-DL PCBs			
			Total Non-DL PCBs	5.8E-09	1.3E-08	1.9E-08
			PAHs			
			Benz(a)anthracene	9.2E-10	1.9E-09	2.8E-09
			Benzo(a)pyrene	9.0E-09	1.9E-08	2.8E-08
			Benzo(b)fluoranthene	8.1E-10	1.7E-09	2.5E-09
			Benzo(k)fluoranthene	5.2E-11	1.1E-10	1.6E-10
			Chrysene	8.8E-12	1.8E-11	2.7E-11
			Dibenz(a,h)anthracene	1.8E-09	3.9E-09	5.7E-09
			Indeno(1,2,3-c,d)-pyrene	3.3E-10	7.0E-10	1.0E-09
			Pesticides & Organics			

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	1.2E-07	9.8E-08	2.2E-07
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	3.1E-09	--	3.1E-09
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.4E-07
			Total DLCs (based on KM TEQs)			1.3E-07
			Total PCDD/Fs (excluding KM TEQ)			1.0E-07
			Total PCDD/Fs (based on KM TEQ)			1.0E-07
			Total DL-PCBs (excluding KM TEQ)			3.4E-08
			Total DL-PCBs (based on KM TEQ)			3.0E-08
			Total Non-DL PCBs			1.9E-08
			Total PCBs (DL & NDL; excluding KM TEQ)			5.3E-08
			Total PCBs (DL & NDL; based on KM TEQ)			4.9E-08
			Total PAHs			4.0E-08
			Total Organics			0.0E+00
			Total Inorganics			2.2E-07
	Boater - Sediment Total (excluding KM TEQs)					4.2E-07
	Boater - Sediment Total (based on KM TEQs)					4.1E-07
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.1E-09	--	1.1E-09
			1,2,3,7,8-PeCDD	3.7E-10	--	3.7E-10
			1,2,3,4,7,8-HxCDD	2.7E-10	--	2.7E-10
			1,2,3,6,7,8-HxCDD	4.3E-11	--	4.3E-11
			1,2,3,7,8,9-HxCDD	7.7E-11	--	7.7E-11
			1,2,3,4,6,7,8-HpCDD	5.5E-11	--	5.5E-11
			OCDD	1.7E-11	--	1.7E-11
			2,3,7,8-TCDF	4.2E-11	--	4.2E-11
			1,2,3,7,8-PeCDF	1.0E-11	--	1.0E-11
			2,3,4,7,8-PeCDF	1.7E-10	--	1.7E-10
			1,2,3,4,7,8-HxCDF	1.6E-10	--	1.6E-10
			1,2,3,6,7,8-HxCDF	3.9E-11	--	3.9E-11
			1,2,3,7,8,9-HxCDF	2.3E-10	--	2.3E-10

TABLE 9.B.RME
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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	2.5E-11	--	2.5E-11
			1,2,3,4,6,7,8-HpCDF	6.8E-11	--	6.8E-11
			1,2,3,4,7,8,9-HpCDF	4.3E-12	--	4.3E-12
			OCDF	3.9E-12	--	3.9E-12
			KM TEQ DF	2.2E-09	--	2.2E-09
			PCB-77	1.8E-12	--	1.8E-12
			PCB-81	1.8E-13	--	1.8E-13
			PCB-105	1.9E-12	--	1.9E-12
			PCB-114	1.0E-13	--	1.0E-13
			PCB-118	4.3E-12	--	4.3E-12
			PCB-123	8.4E-14	--	8.4E-14
			PCB-126	6.0E-11	--	6.0E-11
			PCB-156/157	5.1E-13	--	5.1E-13
			PCB-167	1.7E-13	--	1.7E-13
			PCB-169	1.1E-11	--	1.1E-11
			PCB-189	2.3E-14	--	2.3E-14
			KM TEQ PCB	9.6E-11	--	9.6E-11
			PAHs			
			Benz(a)anthracene	2.4E-11	--	2.4E-11
			Benzo(a)pyrene	3.0E-10	--	3.0E-10
			Benzo(b)fluoranthene	4.1E-11	--	4.1E-11
			Benzo(k)fluoranthene	1.9E-12	--	1.9E-12
			Chrysene	4.1E-13	--	4.1E-13
			Dibenz(a,h)anthracene	7.8E-11	--	7.8E-11
			Indeno(1,2,3-c,d)-pyrene	1.7E-11	--	1.7E-11
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	2.2E-11	6.0E-11	8.2E-11
			Trichloroethylene	1.2E-10	3.7E-10	4.9E-10
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	1.1E-08	2.4E-09	1.4E-08
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	2.2E-09	2.2E-08	2.5E-08
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			2.8E-09
			Total DLCs (based on KM TEQs)			2.2E-09
			Total PCDD/Fs (excluding KM TEQ)			2.7E-09
			Total PCDD/Fs (based on KM TEQ)			2.2E-09
			Total DL-PCBs (excluding KM TEQ)			7.9E-11
			Total DL-PCBs (based on KM TEQ)			9.6E-11
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.9E-11
			Total PCBs (DL & NDL; based on KM TEQ)			9.6E-11

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PAHs			4.7E-10
			Total Organics			5.7E-10
			Total Inorganics			3.8E-08
	Wader - Surface Water Total (excluding KM TEQs)					4.2E-08
	Wader - Surface Water Total (based on KM TEQs)					4.2E-08
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						2.5E-06
Wader Sediment Total + Surface Water Total (based on KM TEQs)						2.5E-06
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.6E-09	--	5.6E-09
			1,2,3,7,8-PeCDD	1.9E-09	--	1.9E-09
			1,2,3,4,7,8-HxCDD	1.4E-09	--	1.4E-09
			1,2,3,6,7,8-HxCDD	2.2E-10	--	2.2E-10
			1,2,3,7,8,9-HxCDD	3.9E-10	--	3.9E-10
			1,2,3,4,6,7,8-HpCDD	2.8E-10	--	2.8E-10
			OCDD	8.8E-11	--	8.8E-11
			2,3,7,8-TCDF	2.2E-10	--	2.2E-10
			1,2,3,7,8-PeCDF	5.2E-11	--	5.2E-11
			2,3,4,7,8-PeCDF	9.0E-10	--	9.0E-10
			1,2,3,4,7,8-HxCDF	8.3E-10	--	8.3E-10
			1,2,3,6,7,8-HxCDF	2.0E-10	--	2.0E-10
			1,2,3,7,8,9-HxCDF	1.2E-09	--	1.2E-09
			2,3,4,6,7,8-HxCDF	1.3E-10	--	1.3E-10
			1,2,3,4,6,7,8-HpCDF	3.5E-10	--	3.5E-10
			1,2,3,4,7,8,9-HpCDF	2.2E-11	--	2.2E-11
			OCDF	2.0E-11	--	2.0E-11
			KM TEQ DF	1.1E-08	--	1.1E-08
			PCB-77	9.3E-12	--	9.3E-12
			PCB-81	9.3E-13	--	9.3E-13
			PCB-105	1.0E-11	--	1.0E-11
			PCB-114	5.2E-13	--	5.2E-13
			PCB-118	2.2E-11	--	2.2E-11
			PCB-123	4.3E-13	--	4.3E-13
			PCB-126	3.1E-10	--	3.1E-10
			PCB-156/157	2.6E-12	--	2.6E-12
			PCB-167	8.9E-13	--	8.9E-13
			PCB-169	5.5E-11	--	5.5E-11
			PCB-189	1.2E-13	--	1.2E-13
			KM TEQ PCB	5.0E-10	--	5.0E-10
			PAHs			
			Benz(a)anthracene	1.2E-10	--	1.2E-10
			Benzo(a)pyrene	1.6E-09	--	1.6E-09
			Benzo(b)fluoranthene	2.2E-10	--	2.2E-10
			Benzo(k)fluoranthene	9.6E-12	--	9.6E-12
			Chrysene	2.1E-12	--	2.1E-12
			Dibenz(a,h)anthracene	4.1E-10	--	4.1E-10
			Indeno(1,2,3-c,d)-pyrene	9.0E-11	--	9.0E-11
			Naphthalene	--	--	--
			Pesticides & Organics			

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Chloroform	1.1E-10	3.6E-10	4.7E-10
			Trichloroethylene	6.3E-10	2.1E-09	2.8E-09
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	5.8E-08	2.0E-08	7.8E-08
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	1.2E-08	1.9E-07	2.0E-07
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			1.4E-08
			Total DLCs (based on KM TEQs)			1.2E-08
			Total PCDD/Fs (excluding KM TEQ)			1.4E-08
			Total PCDD/Fs (based on KM TEQ)			1.1E-08
			Total DL-PCBs (excluding KM TEQ)			4.1E-10
			Total DL-PCBs (based on KM TEQ)			5.0E-10
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.1E-10
			Total PCBs (DL & NDL; based on KM TEQ)			5.0E-10
			Total PAHs			2.4E-09
			Total Organics			3.2E-09
			Total Inorganics			2.8E-07
	Swimmer - Surface Water Total (excluding KM TEQs)					3.0E-07
	Swimmer - Surface Water Total (based on KM TEQs)					3.0E-07
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						2.8E-06
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						2.7E-06
Surface Water	Surface Water	Boater Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.0E-08	--	1.0E-08
			1,2,3,7,8-PeCDD	3.5E-09	--	3.5E-09
			1,2,3,4,7,8-HxCDD	2.6E-09	--	2.6E-09
			1,2,3,6,7,8-HxCDD	4.1E-10	--	4.1E-10
			1,2,3,7,8,9-HxCDD	7.3E-10	--	7.3E-10
			1,2,3,4,6,7,8-HpCDD	5.2E-10	--	5.2E-10
			OCDD	1.6E-10	--	1.6E-10
			2,3,7,8-TCDF	4.0E-10	--	4.0E-10
			1,2,3,7,8-PeCDF	9.5E-11	--	9.5E-11
			2,3,4,7,8-PeCDF	1.7E-09	--	1.7E-09
			1,2,3,4,7,8-HxCDF	1.5E-09	--	1.5E-09
			1,2,3,6,7,8-HxCDF	3.7E-10	--	3.7E-10
			1,2,3,7,8,9-HxCDF	2.2E-09	--	2.2E-09
			2,3,4,6,7,8-HxCDF	2.4E-10	--	2.4E-10
			1,2,3,4,6,7,8-HpCDF	6.5E-10	--	6.5E-10
			1,2,3,4,7,8,9-HpCDF	4.1E-11	--	4.1E-11
			OCDF	3.6E-11	--	3.6E-11

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	2.0E-08	--	2.0E-08
			PCB-77	1.7E-11	--	1.7E-11
			PCB-81	1.7E-12	--	1.7E-12
			PCB-105	1.8E-11	--	1.8E-11
			PCB-114	9.6E-13	--	9.6E-13
			PCB-118	4.1E-11	--	4.1E-11
			PCB-123	8.0E-13	--	8.0E-13
			PCB-126	5.6E-10	--	5.6E-10
			PCB-156/157	4.9E-12	--	4.9E-12
			PCB-167	1.6E-12	--	1.6E-12
			PCB-169	1.0E-10	--	1.0E-10
			PCB-189	2.2E-13	--	2.2E-13
			KM TEQ PCB	9.1E-10	--	9.1E-10
			PAHs			
			Benz(a)anthracene	6.6E-11	--	6.6E-11
			Benzo(a)pyrene	8.5E-10	--	8.5E-10
			Benzo(b)fluoranthene	1.2E-10	--	1.2E-10
			Benzo(k)fluoranthene	5.1E-12	--	5.1E-12
			Chrysene	1.1E-12	--	1.1E-12
			Dibenz(a,h)anthracene	2.2E-10	--	2.2E-10
			Indeno(1,2,3-c,d)-pyrene	4.8E-11	--	4.8E-11
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	2.1E-10	5.1E-10	7.2E-10
			Trichloroethylene	3.4E-10	1.5E-09	1.8E-09
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	1.1E-07	2.6E-08	1.3E-07
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	6.2E-09	1.2E-07	1.3E-07
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			2.6E-08
			Total DLCs (based on KM TEQs)			2.1E-08
			Total PCDD/Fs (excluding KM TEQ)			2.5E-08
			Total PCDD/Fs (based on KM TEQ)			2.0E-08
			Total DL-PCBs (excluding KM TEQ)			7.5E-10
			Total DL-PCBs (based on KM TEQ)			9.1E-10
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.5E-10
			Total PCBs (DL & NDL; based on KM TEQ)			9.1E-10
			Total PAHs			1.3E-09
			Total Organics			2.5E-09
			Total Inorganics			2.6E-07

TABLE 9.B.RME
SUMMARY OF RECEPTOR RISKS FOR COPCs - ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
	Boater - Surface Water Total (excluding KM TEQs)					2.9E-07
	Boater - Surface Water Total (based on KM TEQs)					2.9E-07
Boater Sediment Total + Surface Water Total (excluding KM TEQs)						7.1E-07
Boater Sediment Total + Surface Water Total (based on KM TEQs)						7.0E-07

Note: Sediment and surface water boater risks are for adult only, since the child is not expected to participate in boating activities on the Bay.

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.0E-06	--	5.0E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDD	2.7E-07	--	2.7E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8-HxCDD	1.2E-08	--	1.2E-08	Reproductive	9.2E-04	--	9.2E-04
			1,2,3,6,7,8-HxCDD	3.8E-08	--	3.8E-08	Reproductive	2.8E-03	--	2.8E-03
			1,2,3,7,8,9-HxCDD	9.1E-09	--	9.1E-09	Reproductive	6.7E-04	--	6.7E-04
			1,2,3,4,6,7,8-HpCDD	4.3E-09	--	4.3E-09	Reproductive	3.2E-04	--	3.2E-04
			OCDD	7.6E-10	--	7.6E-10	Reproductive	5.6E-05	--	5.6E-05
			2,3,7,8-TCDF	1.0E-07	--	1.0E-07	Reproductive	7.6E-03	--	7.6E-03
			1,2,3,7,8-PeCDF	2.8E-08	--	2.8E-08	Reproductive	2.1E-03	--	2.1E-03
			2,3,4,7,8-PeCDF	4.4E-07	--	4.4E-07	Reproductive	3.3E-02	--	3.3E-02
			1,2,3,4,7,8-HxCDF	6.7E-08	--	6.7E-08	Reproductive	4.9E-03	--	4.9E-03
			1,2,3,6,7,8-HxCDF	6.0E-08	--	6.0E-08	Reproductive	4.4E-03	--	4.4E-03
			1,2,3,7,8,9-HxCDF	6.9E-09	--	6.9E-09	Reproductive	5.1E-04	--	5.1E-04
			2,3,4,6,7,8-HxCDF	1.0E-08	--	1.0E-08	Reproductive	7.6E-04	--	7.6E-04
			1,2,3,4,6,7,8-HpCDF	1.4E-08	--	1.4E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,4,7,8,9-HpCDF	6.6E-10	--	6.6E-10	Reproductive	4.9E-05	--	4.9E-05
			OCDF	4.1E-11	--	4.1E-11	Reproductive	3.1E-06	--	3.1E-06
			KM TEQ DF	6.0E-06	--	6.0E-06	Reproductive	4.4E-01	--	4.4E-01
			PCB-77	3.3E-08	--	3.3E-08	Reproductive	2.4E-03	--	2.4E-03
			PCB-81	3.8E-09	--	3.8E-09	Reproductive	2.8E-04	--	2.8E-04
			PCB-105	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-114	1.2E-08	--	1.2E-08	Reproductive	8.7E-04	--	8.7E-04
			PCB-118	6.1E-07	--	6.1E-07	Reproductive	4.6E-02	--	4.6E-02
			PCB-123	1.1E-08	--	1.1E-08	Reproductive	8.3E-04	--	8.3E-04
			PCB-126	6.0E-06	--	6.0E-06	Reproductive	4.5E-01	--	4.5E-01
			PCB-156/157	5.6E-08	--	5.6E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-167	2.5E-08	--	2.5E-08	Reproductive	1.8E-03	--	1.8E-03
			PCB-169	7.6E-08	--	7.6E-08	Reproductive	5.6E-03	--	5.6E-03
			PCB-189	4.5E-09	--	4.5E-09	Reproductive	3.3E-04	--	3.3E-04
			KM TEQ PCB	7.7E-06	--	7.7E-06	Reproductive	5.7E-01	--	5.7E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-06	--	1.8E-06	Whole Body	7.1E-01	--	7.1E-01
			PAHs							
			Benz(a)anthracene	5.2E-09	--	5.2E-09	--	--	--	--
			Benzo(a)pyrene	5.2E-08	--	5.2E-08	Developmental	1.3E-03	--	1.3E-03
			Benzo(b)fluoranthene	5.2E-09	--	5.2E-09	--	--	--	--
			Chrysene	5.2E-11	--	5.2E-11	--	--	--	--
			Dibenz(a,h)anthracene	5.2E-08	--	5.2E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.2E-09	--	5.2E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.9E-08	--	1.9E-08	Liver	2.0E-02	--	2.0E-02
			2,4'-DDE	8.3E-09	--	8.3E-09	Liver	6.3E-04	--	6.3E-04
			2,4'-DDT	5.6E-09	--	5.6E-09	Liver	2.6E-04	--	2.6E-04
			4,4'-DDD	9.2E-08	--	9.2E-08	Liver	9.9E-02	--	9.9E-02
			4,4'-DDE	1.8E-07	--	1.8E-07	Liver	1.4E-02	--	1.4E-02
			4,4'-DDT	2.3E-08	--	2.3E-08	Liver	1.1E-03	--	1.1E-03
			Benzaldehyde	3.2E-08	--	3.2E-08	GI Tract, Kidney	6.3E-04	--	6.3E-04
			Chlordane, alpha (cis)	2.2E-08	--	2.2E-08	Liver	9.8E-04	--	9.8E-04

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, gamma (trans)	5.3E-09	--	5.3E-09	Liver	2.4E-04	--	2.4E-04
			Dieldrin	5.3E-07	--	5.3E-07	Liver	5.2E-03	--	5.2E-03
			Heptachlor epoxide, cis-	6.6E-08	--	6.6E-08	Liver	4.3E-03	--	4.3E-03
			Heptachlor epoxide, trans-	3.2E-09	--	3.2E-09	Liver	2.1E-04	--	2.1E-04
			Hexachlorobenzene	9.8E-09	--	9.8E-09	Liver	6.0E-05	--	6.0E-05
			Mirex	1.2E-08	--	1.2E-08	Liver, Thyroid	2.6E-05	--	2.6E-05
			Nonachlor, cis-	9.2E-09	--	9.2E-09	Liver	2.0E-03	--	2.0E-03
			Nonachlor, trans-	2.4E-08	--	2.4E-08	Liver	3.5E-02	--	3.5E-02
			Oxychlordane	6.6E-09	--	6.6E-09	Liver	1.6E-03	--	1.6E-03
			Pyridine	--	--	--	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.1E-04	--	3.1E-04
			Arsenic, organic	--	--	--	Urinary	2.5E-03	--	2.5E-03
			Arsenic, inorganic	1.1E-06	--	1.1E-06	Skin, Blood	1.9E-02	--	1.9E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.1E-05	--	2.1E-05
			Cobalt	--	--	--	Thyroid	3.6E-02	--	3.6E-02
			Copper	--	--	--	GI Tract	2.3E-02	--	2.3E-02
			Iron	--	--	--	GI Tract	4.9E-04	--	4.9E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	9.9E-05	--	9.9E-05
			Mercury	--	--	--	Immune	4.9E-02	--	4.9E-02
			Methyl Mercury	--	--	--	Neurological	1.7E-01	--	1.7E-01
			Selenium	--	--	--	Whole Body	5.2E-03	--	5.2E-03
			Silver	--	--	--	Skin	1.9E-04	--	1.9E-04
			Vanadium	--	--	--	Hair	2.7E-04	--	2.7E-04
			Zinc	--	--	--	Blood	2.4E-03	--	2.4E-03
			Total DLCs (excluding KM TEQs)			1.3E-05				9.7E-01
			Total DLCs (based on KM TEQs)			1.4E-05				1.0E+00
			Total PCDD/Fs (excluding KM TEQ)			6.1E-06				4.5E-01
			Total PCDD/Fs (based on KM TEQ)			6.0E-06				4.4E-01
			Total DL-PCBs (excluding KM TEQ)			7.0E-06				5.2E-01
			Total DL-PCBs (based on KM TEQ)			7.7E-06				5.7E-01
			Total Non-DL PCBs			1.8E-06				7.1E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			8.8E-06				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-06				1.3E+00
			Total PAHs			1.2E-07				1.3E-03
			Total Organics			1.0E-06				2.5E-01
			Total Inorganics			1.1E-06				3.1E-01
	Mixed Fish/All Species Total (excluding KM TEQs)					1.7E-05				2.2E+00
	Mixed Fish/All Species Total (based on KM TEQs)					1.8E-05				2.3E+00
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.3E-06	--	5.3E-06	Reproductive	4.0E-01	--	4.0E-01
			1,2,3,7,8-PeCDD	4.3E-07	--	4.3E-07	Reproductive	3.2E-02	--	3.2E-02
			1,2,3,4,7,8-HxCDD	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDD	1.2E-07	--	1.2E-07	Reproductive	8.5E-03	--	8.5E-03
			1,2,3,7,8,9-HxCDD	2.1E-08	--	2.1E-08	Reproductive	1.6E-03	--	1.6E-03

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	7.9E-09	--	7.9E-09	Reproductive	5.8E-04	--	5.8E-04
			OCDD	5.8E-10	--	5.8E-10	Reproductive	4.3E-05	--	4.3E-05
			2,3,7,8-TCDF	6.4E-09	--	6.4E-09	Reproductive	4.7E-04	--	4.7E-04
			1,2,3,7,8-PeCDF	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			2,3,4,7,8-PeCDF	7.0E-07	--	7.0E-07	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,4,7,8-HxCDF	1.6E-07	--	1.6E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,6,7,8-HxCDF	1.2E-07	--	1.2E-07	Reproductive	9.1E-03	--	9.1E-03
			1,2,3,7,8,9-HxCDF	6.9E-09	--	6.9E-09	Reproductive	5.1E-04	--	5.1E-04
			2,3,4,6,7,8-HxCDF	2.2E-08	--	2.2E-08	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,4,6,7,8-HpCDF	2.9E-08	--	2.9E-08	Reproductive	2.1E-03	--	2.1E-03
			1,2,3,4,7,8,9-HpCDF	9.8E-10	--	9.8E-10	Reproductive	7.3E-05	--	7.3E-05
			OCDF	6.6E-11	--	6.6E-11	Reproductive	4.9E-06	--	4.9E-06
			KM TEQ DF	6.8E-06	--	6.8E-06	Reproductive	5.1E-01	--	5.1E-01
			PCB-77	5.0E-09	--	5.0E-09	Reproductive	3.7E-04	--	3.7E-04
			PCB-81	2.3E-09	--	2.3E-09	Reproductive	1.7E-04	--	1.7E-04
			PCB-105	4.1E-07	--	4.1E-07	Reproductive	3.1E-02	--	3.1E-02
			PCB-114	2.6E-08	--	2.6E-08	Reproductive	2.0E-03	--	2.0E-03
			PCB-118	1.4E-06	--	1.4E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-123	2.8E-08	--	2.8E-08	Reproductive	2.1E-03	--	2.1E-03
			PCB-126	8.0E-06	--	8.0E-06	Reproductive	5.9E-01	--	5.9E-01
			PCB-156/157	1.2E-07	--	1.2E-07	Reproductive	9.2E-03	--	9.2E-03
			PCB-167	5.4E-08	--	5.4E-08	Reproductive	4.0E-03	--	4.0E-03
			PCB-169	8.7E-08	--	8.7E-08	Reproductive	6.5E-03	--	6.5E-03
			PCB-189	9.7E-09	--	9.7E-09	Reproductive	7.2E-04	--	7.2E-04
			KM TEQ PCB	1.4E-05	--	1.4E-05	Reproductive	1.1E+00	--	1.1E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.6E-06	--	2.6E-06	Whole Body	1.0E+00	--	1.0E+00
			PAHs							
			Benz(a)anthracene	8.0E-09	--	8.0E-09	--	--	--	--
			Benzo(a)pyrene	8.0E-08	--	8.0E-08	Developmental	2.1E-03	--	2.1E-03
			Benzo(b)fluoranthene	8.0E-09	--	8.0E-09	--	--	--	--
			Chrysene	8.0E-11	--	8.0E-11	--	--	--	--
			Dibenz(a,h)anthracene	8.0E-08	--	8.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	8.0E-09	--	8.0E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	3.1E-09	--	3.1E-09	Liver	3.4E-03	--	3.4E-03
			2,4'-DDE	2.8E-09	--	2.8E-09	Liver	2.1E-04	--	2.1E-04
			2,4'-DDT	5.8E-10	--	5.8E-10	Liver	2.6E-05	--	2.6E-05
			4,4'-DDD	1.3E-07	--	1.3E-07	Liver	1.5E-01	--	1.5E-01
			4,4'-DDE	4.0E-07	--	4.0E-07	Liver	3.0E-02	--	3.0E-02
			4,4'-DDT	1.2E-08	--	1.2E-08	Liver	5.7E-04	--	5.7E-04
			Benzaldehyde	3.2E-08	--	3.2E-08	GI Tract, Kidney	6.3E-04	--	6.3E-04
			Chlordane, alpha (cis)	1.9E-08	--	1.9E-08	Liver	8.5E-04	--	8.5E-04
			Chlordane, gamma (trans)	5.7E-09	--	5.7E-09	Liver	2.5E-04	--	2.5E-04
			Dieldrin	9.9E-07	--	9.9E-07	Liver	9.6E-03	--	9.6E-03
			Heptachlor epoxide, cis-	1.3E-07	--	1.3E-07	Liver	8.7E-03	--	8.7E-03
			Heptachlor epoxide, trans-	1.4E-08	--	1.4E-08	Liver	8.9E-04	--	8.9E-04
			Hexachlorobenzene	2.7E-08	--	2.7E-08	Liver	1.6E-04	--	1.6E-04
			Mirex	2.0E-08	--	2.0E-08	Liver, Thyroid	4.3E-05	--	4.3E-05

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Nonachlor, cis-	1.5E-08	--	1.5E-08	Liver	3.4E-03	--	3.4E-03
			Nonachlor, trans-	4.1E-08	--	4.1E-08	Liver	5.9E-02	--	5.9E-02
			Oxychlordane	2.0E-08	--	2.0E-08	Liver	5.1E-03	--	5.1E-03
			Pyridine	--	--	--	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.0E-04	--	3.0E-04
			Arsenic, organic	--	--	--	Urinary	2.6E-03	--	2.6E-03
			Arsenic, inorganic	1.1E-06	--	1.1E-06	Skin, Blood	1.9E-02	--	1.9E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	7.8E-05	--	7.8E-05
			Cobalt	--	--	--	Thyroid	1.1E-03	--	1.1E-03
			Copper	--	--	--	GI Tract	1.0E-02	--	1.0E-02
			Iron	--	--	--	GI Tract	5.2E-04	--	5.2E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-04	--	1.2E-04
			Mercury	--	--	--	Immune	6.7E-02	--	6.7E-02
			Methyl Mercury	--	--	--	Neurological	2.2E-01	--	2.2E-01
			Selenium	--	--	--	Whole Body	4.9E-03	--	4.9E-03
			Silver	--	--	--	Skin	1.9E-04	--	1.9E-04
			Vanadium	--	--	--	Hair	2.2E-04	--	2.2E-04
			Zinc	--	--	--	Blood	4.7E-03	--	4.7E-03
			Total DLCs (excluding KM TEQs)			1.7E-05				1.3E+00
			Total DLCs (based on KM TEQs)			2.1E-05				1.6E+00
			Total PCDD/Fs (excluding KM TEQ)			7.0E-06				5.2E-01
			Total PCDD/Fs (based on KM TEQ)			6.8E-06				5.1E-01
			Total DL-PCBs (excluding KM TEQ)			1.0E-05				7.5E-01
			Total DL-PCBs (based on KM TEQ)			1.4E-05				1.1E+00
			Total Non-DL PCBs			2.6E-06				1.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-05				1.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.7E-05				2.1E+00
			Total PAHs			1.9E-07				2.1E-03
			Total Organics			1.9E-06				3.3E-01
			Total Inorganics			1.1E-06				3.3E-01
	American Eel Total (excluding KM TEQs)					2.3E-05				3.0E+00
	American Eel Total (based on KM TEQs)					2.7E-05				3.3E+00
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.0E-07	--	9.0E-07	Reproductive	6.7E-02	--	6.7E-02
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,7,8-HxCDD	4.4E-09	--	4.4E-09	Reproductive	3.3E-04	--	3.3E-04
			1,2,3,6,7,8-HxCDD	1.2E-08	--	1.2E-08	Reproductive	9.0E-04	--	9.0E-04
			1,2,3,7,8,9-HxCDD	4.2E-09	--	4.2E-09	Reproductive	3.1E-04	--	3.1E-04
			1,2,3,4,6,7,8-HpCDD	8.6E-10	--	8.6E-10	Reproductive	6.4E-05	--	6.4E-05
			OCDD	4.7E-11	--	4.7E-11	Reproductive	3.5E-06	--	3.5E-06
			2,3,7,8-TCDF	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,7,8-PeCDF	1.2E-08	--	1.2E-08	Reproductive	9.0E-04	--	9.0E-04
			2,3,4,7,8-PeCDF	1.4E-07	--	1.4E-07	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,7,8-HxCDF	5.7E-09	--	5.7E-09	Reproductive	4.2E-04	--	4.2E-04

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDF	1.4E-08	--	1.4E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,7,8,9-HxCDF	5.2E-09	--	5.2E-09	Reproductive	3.8E-04	--	3.8E-04
			2,3,4,6,7,8-HxCDF	3.4E-09	--	3.4E-09	Reproductive	2.5E-04	--	2.5E-04
			1,2,3,4,6,7,8-HpCDF	4.0E-09	--	4.0E-09	Reproductive	3.0E-04	--	3.0E-04
			1,2,3,4,7,8,9-HpCDF	4.6E-10	--	4.6E-10	Reproductive	3.4E-05	--	3.4E-05
			OCDF	3.1E-11	--	3.1E-11	Reproductive	2.3E-06	--	2.3E-06
			KM TEQ DF	1.2E-06	--	1.2E-06	Reproductive	9.1E-02	--	9.1E-02
			PCB-77	6.5E-09	--	6.5E-09	Reproductive	4.8E-04	--	4.8E-04
			PCB-81	7.2E-10	--	7.2E-10	Reproductive	5.3E-05	--	5.3E-05
			PCB-105	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			PCB-114	1.5E-09	--	1.5E-09	Reproductive	1.1E-04	--	1.1E-04
			PCB-118	1.1E-07	--	1.1E-07	Reproductive	7.8E-03	--	7.8E-03
			PCB-123	1.5E-09	--	1.5E-09	Reproductive	1.1E-04	--	1.1E-04
			PCB-126	2.6E-06	--	2.6E-06	Reproductive	1.9E-01	--	1.9E-01
			PCB-156/157	1.1E-08	--	1.1E-08	Reproductive	8.4E-04	--	8.4E-04
			PCB-167	5.8E-09	--	5.8E-09	Reproductive	4.3E-04	--	4.3E-04
			PCB-169	3.6E-08	--	3.6E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-189	1.1E-09	--	1.1E-09	Reproductive	8.4E-05	--	8.4E-05
			KM TEQ PCB	2.7E-06	--	2.7E-06	Reproductive	2.0E-01	--	2.0E-01
			Non-DL PCBs							
			Total Non-DL PCBs	5.3E-07	--	5.3E-07	Whole Body	2.1E-01	--	2.1E-01
			PAHs							
			Benz(a)anthracene	3.3E-09	--	3.3E-09	--	--	--	--
			Benzo(a)pyrene	3.3E-08	--	3.3E-08	Developmental	8.5E-04	--	8.5E-04
			Benzo(b)fluoranthene	3.3E-09	--	3.3E-09	--	--	--	--
			Chrysene	3.3E-11	--	3.3E-11	--	--	--	--
			Dibenz(a,h)anthracene	3.3E-08	--	3.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-09	--	3.3E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	5.8E-10	--	5.8E-10	Liver	6.3E-04	--	6.3E-04
			2,4'-DDE	1.5E-09	--	1.5E-09	Liver	1.1E-04	--	1.1E-04
			2,4'-DDT	3.5E-10	--	3.5E-10	Liver	1.6E-05	--	1.6E-05
			4,4'-DDD	6.6E-09	--	6.6E-09	Liver	7.2E-03	--	7.2E-03
			4,4'-DDE	4.3E-08	--	4.3E-08	Liver	3.3E-03	--	3.3E-03
			4,4'-DDT	3.4E-08	--	3.4E-08	Liver	1.5E-03	--	1.5E-03
			Benzaldehyde	3.2E-08	--	3.2E-08	GI Tract, Kidney	6.3E-04	--	6.3E-04
			Chlordane, alpha (cis)	8.0E-09	--	8.0E-09	Liver	3.6E-04	--	3.6E-04
			Chlordane, gamma (trans)	3.3E-09	--	3.3E-09	Liver	1.5E-04	--	1.5E-04
			Dieldrin	3.1E-07	--	3.1E-07	Liver	3.0E-03	--	3.0E-03
			Heptachlor epoxide, cis-	4.3E-08	--	4.3E-08	Liver	2.8E-03	--	2.8E-03
			Heptachlor epoxide, trans-	6.0E-10	--	6.0E-10	Liver	4.0E-05	--	4.0E-05
			Hexachlorobenzene	3.6E-09	--	3.6E-09	Liver	2.2E-05	--	2.2E-05
			Mirex	6.4E-09	--	6.4E-09	Liver, Thyroid	1.4E-05	--	1.4E-05
			Nonachlor, cis-	2.4E-09	--	2.4E-09	Liver	5.3E-04	--	5.3E-04
			Nonachlor, trans-	4.8E-09	--	4.8E-09	Liver	6.8E-03	--	6.8E-03
			Oxychlordane	5.0E-10	--	5.0E-10	Liver	1.2E-04	--	1.2E-04
			Pyridine	--	--	--	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.9E-04	--	2.9E-04

TABLE 9.1.CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Arsenic, organic	--	--	--	Urinary	1.6E-03	--	1.6E-03
			Arsenic, inorganic	6.7E-07	--	6.7E-07	Skin, Blood	1.2E-02	--	1.2E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.8E-06	--	2.8E-06
			Cobalt	--	--	--	Thyroid	3.6E-02	--	3.6E-02
			Copper	--	--	--	GI Tract	3.8E-02	--	3.8E-02
			Iron	--	--	--	GI Tract	6.8E-04	--	6.8E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	6.3E-05	--	6.3E-05
			Mercury	--	--	--	Immune	5.2E-02	--	5.2E-02
			Methyl Mercury	--	--	--	Neurological	1.9E-01	--	1.9E-01
			Selenium	--	--	--	Whole Body	5.2E-03	--	5.2E-03
			Silver	--	--	--	Skin	1.9E-04	--	1.9E-04
			Vanadium	--	--	--	Hair	2.2E-04	--	2.2E-04
			Zinc	--	--	--	Blood	2.8E-03	--	2.8E-03
			Total DLCs (excluding KM TEQs)			4.1E-06				3.0E-01
			Total DLCs (based on KM TEQs)			3.9E-06				2.9E-01
			Total PCDD/Fs (excluding KM TEQ)			1.3E-06				9.7E-02
			Total PCDD/Fs (based on KM TEQ)			1.2E-06				9.1E-02
			Total DL-PCBs (excluding KM TEQ)			2.8E-06				2.0E-01
			Total DL-PCBs (based on KM TEQ)			2.7E-06				2.0E-01
			Total Non-DL PCBs			5.3E-07				2.1E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			3.3E-06				4.1E-01
			Total PCBs (DL & NDL; based on KM TEQ)			3.2E-06				4.1E-01
			Total PAHs			7.5E-08				8.5E-04
			Total Organics			5.0E-07				9.0E-02
			Total Inorganics			6.7E-07				3.4E-01
	Bluefish Total (excluding KM TEQs)					5.8E-06				9.4E-01
	Bluefish Total (based on KM TEQs)					5.7E-06				9.2E-01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.7E-06	--	5.7E-06	Reproductive	4.2E-01	--	4.2E-01
			1,2,3,7,8-PeCDD	3.3E-07	--	3.3E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,4,7,8-HxCDD	1.2E-08	--	1.2E-08	Reproductive	9.2E-04	--	9.2E-04
			1,2,3,6,7,8-HxCDD	1.3E-08	--	1.3E-08	Reproductive	9.4E-04	--	9.4E-04
			1,2,3,7,8,9-HxCDD	5.2E-09	--	5.2E-09	Reproductive	3.9E-04	--	3.9E-04
			1,2,3,4,6,7,8-HpCDD	8.7E-09	--	8.7E-09	Reproductive	6.5E-04	--	6.5E-04
			OCDD	2.9E-09	--	2.9E-09	Reproductive	2.2E-04	--	2.2E-04
			2,3,7,8-TCDF	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	4.0E-08	--	4.0E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,4,7,8-PeCDF	6.0E-07	--	6.0E-07	Reproductive	4.4E-02	--	4.4E-02
			1,2,3,4,7,8-HxCDF	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDF	7.4E-08	--	7.4E-08	Reproductive	5.5E-03	--	5.5E-03
			1,2,3,7,8,9-HxCDF	7.3E-09	--	7.3E-09	Reproductive	5.4E-04	--	5.4E-04
			2,3,4,6,7,8-HxCDF	6.0E-09	--	6.0E-09	Reproductive	4.4E-04	--	4.4E-04
			1,2,3,4,6,7,8-HpCDF	2.0E-08	--	2.0E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	6.6E-10	--	6.6E-10	Reproductive	4.9E-05	--	4.9E-05
			OCDF	3.4E-11	--	3.4E-11	Reproductive	2.6E-06	--	2.6E-06

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	7.1E-06	--	7.1E-06	Reproductive	5.2E-01	--	5.2E-01
			PCB-77	7.6E-08	--	7.6E-08	Reproductive	5.6E-03	--	5.6E-03
			PCB-81	5.7E-09	--	5.7E-09	Reproductive	4.2E-04	--	4.2E-04
			PCB-105	1.2E-07	--	1.2E-07	Reproductive	8.8E-03	--	8.8E-03
			PCB-114	1.4E-08	--	1.4E-08	Reproductive	1.1E-03	--	1.1E-03
			PCB-118	7.5E-07	--	7.5E-07	Reproductive	5.5E-02	--	5.5E-02
			PCB-123	1.1E-08	--	1.1E-08	Reproductive	8.4E-04	--	8.4E-04
			PCB-126	1.3E-05	--	1.3E-05	Reproductive	9.3E-01	--	9.3E-01
			PCB-156/157	6.6E-08	--	6.6E-08	Reproductive	4.9E-03	--	4.9E-03
			PCB-167	2.9E-08	--	2.9E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-169	6.7E-08	--	6.7E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-189	5.7E-09	--	5.7E-09	Reproductive	4.2E-04	--	4.2E-04
			KM TEQ PCB	1.3E-05	--	1.3E-05	Reproductive	9.6E-01	--	9.6E-01
			Non-DL PCBs							
			Total Non-DL PCBs	3.2E-06	--	3.2E-06	Whole Body	1.2E+00	--	1.2E+00
			PAHs							
			Benz(a)anthracene	3.3E-09	--	3.3E-09	--	--	--	--
			Benzo(a)pyrene	3.3E-08	--	3.3E-08	Developmental	8.5E-04	--	8.5E-04
			Benzo(b)fluoranthene	3.3E-09	--	3.3E-09	--	--	--	--
			Chrysene	3.3E-11	--	3.3E-11	--	--	--	--
			Dibenz(a,h)anthracene	3.3E-08	--	3.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-09	--	3.3E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	3.4E-08	--	3.4E-08	Liver	3.6E-02	--	3.6E-02
			2,4'-DDE	1.8E-08	--	1.8E-08	Liver	1.4E-03	--	1.4E-03
			2,4'-DDT	4.3E-09	--	4.3E-09	Liver	2.0E-04	--	2.0E-04
			4,4'-DDD	1.4E-07	--	1.4E-07	Liver	1.5E-01	--	1.5E-01
			4,4'-DDE	2.2E-07	--	2.2E-07	Liver	1.7E-02	--	1.7E-02
			4,4'-DDT	2.1E-08	--	2.1E-08	Liver	9.8E-04	--	9.8E-04
			Benzaldehyde	3.2E-08	--	3.2E-08	GI Tract, Kidney	6.3E-04	--	6.3E-04
			Chlordane, alpha (cis)	4.8E-08	--	4.8E-08	Liver	2.1E-03	--	2.1E-03
			Chlordane, gamma (trans)	9.3E-09	--	9.3E-09	Liver	4.1E-04	--	4.1E-04
			Dieldrin	7.5E-07	--	7.5E-07	Liver	7.3E-03	--	7.3E-03
			Heptachlor epoxide, cis-	6.5E-08	--	6.5E-08	Liver	4.3E-03	--	4.3E-03
			Heptachlor epoxide, trans-	6.0E-10	--	6.0E-10	Liver	4.0E-05	--	4.0E-05
			Hexachlorobenzene	6.9E-09	--	6.9E-09	Liver	4.2E-05	--	4.2E-05
			Mirex	1.4E-08	--	1.4E-08	Liver, Thyroid	3.1E-05	--	3.1E-05
			Nonachlor, cis-	1.6E-08	--	1.6E-08	Liver	3.5E-03	--	3.5E-03
			Nonachlor, trans-	4.1E-08	--	4.1E-08	Liver	5.9E-02	--	5.9E-02
			Oxychlordane	5.6E-09	--	5.6E-09	Liver	1.4E-03	--	1.4E-03
			Pyridine	--	--	--	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.7E-04	--	2.7E-04
			Arsenic, organic	--	--	--	Urinary	2.8E-03	--	2.8E-03
			Arsenic, inorganic	1.2E-06	--	1.2E-06	Skin, Blood	2.0E-02	--	2.0E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	3.9E-06	--	3.9E-06
			Cobalt	--	--	--	Thyroid	3.2E-03	--	3.2E-03
			Copper	--	--	--	GI Tract	2.7E-02	--	2.7E-02

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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Iron	--	--	--	GI Tract	4.6E-04	--	4.6E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	7.4E-05	--	7.4E-05
			Mercury	--	--	--	Immune	4.5E-02	--	4.5E-02
			Methyl Mercury	--	--	--	Neurological	1.6E-01	--	1.6E-01
			Selenium	--	--	--	Whole Body	3.6E-03	--	3.6E-03
			Silver	--	--	--	Skin	1.9E-04	--	1.9E-04
			Vanadium	--	--	--	Hair	2.9E-04	--	2.9E-04
			Zinc	--	--	--	Blood	1.2E-03	--	1.2E-03
			Total DLCs (excluding KM TEQs)			2.1E-05				1.5E+00
			Total DLCs (based on KM TEQs)			2.0E-05				1.5E+00
			Total PCDD/Fs (excluding KM TEQ)			7.1E-06				5.2E-01
			Total PCDD/Fs (based on KM TEQ)			7.1E-06				5.2E-01
			Total DL-PCBs (excluding KM TEQ)			1.4E-05				1.0E+00
			Total DL-PCBs (based on KM TEQ)			1.3E-05				9.6E-01
			Total Non-DL PCBs			3.2E-06				1.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.7E-05				2.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-05				2.2E+00
			Total PAHs			7.5E-08				8.5E-04
			Total Organics			1.4E-06				3.5E-01
			Total Inorganics			1.2E-06				2.7E-01
	Striped Bass Total (excluding KM TEQs)					2.7E-05				3.4E+00
	Striped Bass Total (based on KM TEQs)					2.6E-05				3.3E+00
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.3E-06	--	3.3E-06	Reproductive	2.5E-01	--	2.5E-01
			1,2,3,7,8-PeCDD	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,7,8-HxCDD	4.9E-09	--	4.9E-09	Reproductive	3.6E-04	--	3.6E-04
			1,2,3,6,7,8-HxCDD	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,7,8,9-HxCDD	6.5E-09	--	6.5E-09	Reproductive	4.8E-04	--	4.8E-04
			1,2,3,4,6,7,8-HpCDD	1.9E-09	--	1.9E-09	Reproductive	1.4E-04	--	1.4E-04
			OCDD	8.2E-11	--	8.2E-11	Reproductive	6.1E-06	--	6.1E-06
			2,3,7,8-TCDF	1.6E-08	--	1.6E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8-PeCDF	6.4E-09	--	6.4E-09	Reproductive	4.7E-04	--	4.7E-04
			2,3,4,7,8-PeCDF	1.6E-07	--	1.6E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,7,8-HxCDF	4.0E-08	--	4.0E-08	Reproductive	2.9E-03	--	2.9E-03
			1,2,3,6,7,8-HxCDF	1.6E-08	--	1.6E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8,9-HxCDF	8.7E-09	--	8.7E-09	Reproductive	6.4E-04	--	6.4E-04
			2,3,4,6,7,8-HxCDF	6.6E-09	--	6.6E-09	Reproductive	4.9E-04	--	4.9E-04
			1,2,3,4,6,7,8-HpCDF	3.0E-09	--	3.0E-09	Reproductive	2.2E-04	--	2.2E-04
			1,2,3,4,7,8,9-HpCDF	6.5E-10	--	6.5E-10	Reproductive	4.8E-05	--	4.8E-05
			OCDF	3.6E-11	--	3.6E-11	Reproductive	2.7E-06	--	2.7E-06
			KM TEQ DF	3.7E-06	--	3.7E-06	Reproductive	2.7E-01	--	2.7E-01
			PCB-77	9.5E-09	--	9.5E-09	Reproductive	7.1E-04	--	7.1E-04
			PCB-81	3.0E-09	--	3.0E-09	Reproductive	2.2E-04	--	2.2E-04
			PCB-105	5.5E-08	--	5.5E-08	Reproductive	4.1E-03	--	4.1E-03
			PCB-114	4.7E-09	--	4.7E-09	Reproductive	3.5E-04	--	3.5E-04
			PCB-118	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	3.6E-09	--	3.6E-09	Reproductive	2.7E-04	--	2.7E-04
			PCB-126	2.9E-06	--	2.9E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-156/157	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-167	1.1E-08	--	1.1E-08	Reproductive	7.9E-04	--	7.9E-04
			PCB-169	4.1E-08	--	4.1E-08	Reproductive	3.0E-03	--	3.0E-03
			PCB-189	1.6E-09	--	1.6E-09	Reproductive	1.2E-04	--	1.2E-04
			KM TEQ PCB	3.2E-06	--	3.2E-06	Reproductive	2.4E-01	--	2.4E-01
			Non-DL PCBs							
			Total Non-DL PCBs	6.6E-07	--	6.6E-07	Whole Body	2.6E-01	--	2.6E-01
			PAHs							
			Benz(a)anthracene	3.3E-09	--	3.3E-09	--	--	--	--
			Benzo(a)pyrene	3.3E-08	--	3.3E-08	Developmental	8.5E-04	--	8.5E-04
			Benzo(b)fluoranthene	3.3E-09	--	3.3E-09	--	--	--	--
			Chrysene	3.3E-11	--	3.3E-11	--	--	--	--
			Dibenz(a,h)anthracene	3.3E-08	--	3.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-09	--	3.3E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	3.4E-09	--	3.4E-09	Liver	3.7E-03	--	3.7E-03
			2,4'-DDE	4.0E-09	--	4.0E-09	Liver	3.0E-04	--	3.0E-04
			2,4'-DDT	3.5E-10	--	3.5E-10	Liver	1.6E-05	--	1.6E-05
			4,4'-DDD	1.9E-08	--	1.9E-08	Liver	2.1E-02	--	2.1E-02
			4,4'-DDE	5.8E-08	--	5.8E-08	Liver	4.4E-03	--	4.4E-03
			4,4'-DDT	2.3E-09	--	2.3E-09	Liver	1.1E-04	--	1.1E-04
			Benzaldehyde	3.2E-08	--	3.2E-08	GI Tract, Kidney	6.3E-04	--	6.3E-04
			Chlordane, alpha (cis)	2.9E-09	--	2.9E-09	Liver	1.3E-04	--	1.3E-04
			Chlordane, gamma (trans)	1.0E-09	--	1.0E-09	Liver	4.5E-05	--	4.5E-05
			Dieldrin	9.8E-08	--	9.8E-08	Liver	9.6E-04	--	9.6E-04
			Heptachlor epoxide, cis-	1.2E-08	--	1.2E-08	Liver	8.0E-04	--	8.0E-04
			Heptachlor epoxide, trans-	6.0E-10	--	6.0E-10	Liver	4.0E-05	--	4.0E-05
			Hexachlorobenzene	3.2E-09	--	3.2E-09	Liver	2.0E-05	--	2.0E-05
			Mirex	3.0E-09	--	3.0E-09	Liver, Thyroid	6.5E-06	--	6.5E-06
			Nonachlor, cis-	1.6E-09	--	1.6E-09	Liver	3.6E-04	--	3.6E-04
			Nonachlor, trans-	4.4E-09	--	4.4E-09	Liver	6.3E-03	--	6.3E-03
			Oxychlordane	1.8E-09	--	1.8E-09	Liver	4.5E-04	--	4.5E-04
			Pyridine	--	--	--	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.7E-04	--	2.7E-04
			Arsenic, organic	--	--	--	Urinary	4.0E-03	--	4.0E-03
			Arsenic, inorganic	1.7E-06	--	1.7E-06	Skin, Blood	2.9E-02	--	2.9E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	1.5E-05	--	1.5E-05
			Cobalt	--	--	--	Thyroid	1.4E-01	--	1.4E-01
			Copper	--	--	--	GI Tract	1.0E-02	--	1.0E-02
			Iron	--	--	--	GI Tract	3.5E-04	--	3.5E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.1E-04	--	1.1E-04
			Mercury	--	--	--	Immune	2.9E-02	--	2.9E-02
			Methyl Mercury	--	--	--	Neurological	1.0E-01	--	1.0E-01
			Selenium	--	--	--	Whole Body	6.2E-03	--	6.2E-03

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Silver	--	--	--	Skin	1.9E-04	--	1.9E-04
			Vanadium	--	--	--	Hair	2.9E-04	--	2.9E-04
			Zinc	--	--	--	Blood	1.1E-03	--	1.1E-03
			Total DLCs (excluding KM TEQs)			7.1E-06				5.2E-01
			Total DLCs (based on KM TEQs)			6.9E-06				5.1E-01
			Total PCDD/Fs (excluding KM TEQ)			3.8E-06				2.8E-01
			Total PCDD/Fs (based on KM TEQ)			3.7E-06				2.7E-01
			Total DL-PCBs (excluding KM TEQ)			3.3E-06				2.4E-01
			Total DL-PCBs (based on KM TEQ)			3.2E-06				2.4E-01
			Total Non-DL PCBs			6.6E-07				2.6E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.0E-06				5.0E-01
			Total PCBs (DL & NDL; based on KM TEQ)			3.9E-06				4.9E-01
			Total PAHs			7.5E-08				8.5E-04
			Total Organics			2.5E-07				1.0E-01
			Total Inorganics			1.7E-06				3.2E-01
	Summer Flounder Total (excluding KM TEQs)					9.7E-06				1.2E+00
	Summer Flounder Total (based on KM TEQs)					9.6E-06				1.2E+00
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.8E-06	--	9.8E-06	Reproductive	7.2E-01	--	7.2E-01
			1,2,3,7,8-PeCDD	2.6E-07	--	2.6E-07	Reproductive	1.9E-02	--	1.9E-02
			1,2,3,4,7,8-HxCDD	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	3.7E-08	--	3.7E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,7,8,9-HxCDD	8.5E-09	--	8.5E-09	Reproductive	6.3E-04	--	6.3E-04
			1,2,3,4,6,7,8-HpCDD	2.2E-09	--	2.2E-09	Reproductive	1.7E-04	--	1.7E-04
			OCDD	1.5E-10	--	1.5E-10	Reproductive	1.1E-05	--	1.1E-05
			2,3,7,8-TCDF	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	5.5E-08	--	5.5E-08	Reproductive	4.1E-03	--	4.1E-03
			2,3,4,7,8-PeCDF	6.2E-07	--	6.2E-07	Reproductive	4.6E-02	--	4.6E-02
			1,2,3,4,7,8-HxCDF	9.9E-08	--	9.9E-08	Reproductive	7.3E-03	--	7.3E-03
			1,2,3,6,7,8-HxCDF	7.2E-08	--	7.2E-08	Reproductive	5.4E-03	--	5.4E-03
			1,2,3,7,8,9-HxCDF	6.4E-09	--	6.4E-09	Reproductive	4.7E-04	--	4.7E-04
			2,3,4,6,7,8-HxCDF	1.3E-08	--	1.3E-08	Reproductive	9.6E-04	--	9.6E-04
			1,2,3,4,6,7,8-HpCDF	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,7,8,9-HpCDF	5.3E-10	--	5.3E-10	Reproductive	3.9E-05	--	3.9E-05
			OCDF	4.0E-11	--	4.0E-11	Reproductive	2.9E-06	--	2.9E-06
			KM TEQ DF	1.1E-05	--	1.1E-05	Reproductive	8.2E-01	--	8.2E-01
			PCB-77	6.5E-08	--	6.5E-08	Reproductive	4.8E-03	--	4.8E-03
			PCB-81	7.4E-09	--	7.4E-09	Reproductive	5.5E-04	--	5.5E-04
			PCB-105	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-114	1.1E-08	--	1.1E-08	Reproductive	8.4E-04	--	8.4E-04
			PCB-118	5.6E-07	--	5.6E-07	Reproductive	4.2E-02	--	4.2E-02
			PCB-123	1.1E-08	--	1.1E-08	Reproductive	8.3E-04	--	8.3E-04
			PCB-126	4.0E-06	--	4.0E-06	Reproductive	3.0E-01	--	3.0E-01
			PCB-156/157	5.7E-08	--	5.7E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-167	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-169	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-189	4.5E-09	--	4.5E-09	Reproductive	3.3E-04	--	3.3E-04

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ PCB	5.0E-06	--	5.0E-06	Reproductive	3.7E-01	--	3.7E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.1E-06	--	2.1E-06	Whole Body	8.2E-01	--	8.2E-01
			PAHs							
			Benz(a)anthracene	8.0E-09	--	8.0E-09	--	--	--	--
			Benzo(a)pyrene	8.0E-08	--	8.0E-08	Developmental	2.1E-03	--	2.1E-03
			Benzo(b)fluoranthene	8.0E-09	--	8.0E-09	--	--	--	--
			Chrysene	8.0E-11	--	8.0E-11	--	--	--	--
			Dibenz(a,h)anthracene	8.0E-08	--	8.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	8.0E-09	--	8.0E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	5.2E-08	--	5.2E-08	Liver	5.7E-02	--	5.7E-02
			2,4'-DDE	1.5E-08	--	1.5E-08	Liver	1.1E-03	--	1.1E-03
			2,4'-DDT	2.3E-08	--	2.3E-08	Liver	1.0E-03	--	1.0E-03
			4,4'-DDD	1.6E-07	--	1.6E-07	Liver	1.7E-01	--	1.7E-01
			4,4'-DDE	1.7E-07	--	1.7E-07	Liver	1.3E-02	--	1.3E-02
			4,4'-DDT	4.5E-08	--	4.5E-08	Liver	2.1E-03	--	2.1E-03
			Benzaldehyde	3.2E-08	--	3.2E-08	GI Tract, Kidney	6.3E-04	--	6.3E-04
			Chlordane, alpha (cis)	3.2E-08	--	3.2E-08	Liver	1.4E-03	--	1.4E-03
			Chlordane, gamma (trans)	7.1E-09	--	7.1E-09	Liver	3.2E-04	--	3.2E-04
			Dieldrin	5.1E-07	--	5.1E-07	Liver	4.9E-03	--	4.9E-03
			Heptachlor epoxide, cis-	7.5E-08	--	7.5E-08	Liver	4.9E-03	--	4.9E-03
			Heptachlor epoxide, trans-	6.0E-10	--	6.0E-10	Liver	4.0E-05	--	4.0E-05
			Hexachlorobenzene	8.4E-09	--	8.4E-09	Liver	5.1E-05	--	5.1E-05
			Mirex	1.7E-08	--	1.7E-08	Liver, Thyroid	3.7E-05	--	3.7E-05
			Nonachlor, cis-	1.1E-08	--	1.1E-08	Liver	2.4E-03	--	2.4E-03
			Nonachlor, trans-	3.0E-08	--	3.0E-08	Liver	4.3E-02	--	4.3E-02
			Oxychlordane	4.4E-09	--	4.4E-09	Liver	1.1E-03	--	1.1E-03
			Pyridine	--	--	--	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	4.2E-04	--	4.2E-04
			Arsenic, organic	--	--	--	Urinary	1.7E-03	--	1.7E-03
			Arsenic, inorganic	7.1E-07	--	7.1E-07	Skin, Blood	1.2E-02	--	1.2E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	4.6E-06	--	4.6E-06
			Cobalt	--	--	--	Thyroid	3.2E-03	--	3.2E-03
			Copper	--	--	--	GI Tract	3.0E-02	--	3.0E-02
			Iron	--	--	--	GI Tract	4.2E-04	--	4.2E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.3E-04	--	1.3E-04
			Mercury	--	--	--	Immune	4.9E-02	--	4.9E-02
			Methyl Mercury	--	--	--	Neurological	2.0E-01	--	2.0E-01
			Selenium	--	--	--	Whole Body	6.3E-03	--	6.3E-03
			Silver	--	--	--	Skin	1.9E-04	--	1.9E-04
			Vanadium	--	--	--	Hair	3.3E-04	--	3.3E-04
			Zinc	--	--	--	Blood	2.0E-03	--	2.0E-03
			Total DLCs (excluding KM TEQs)			1.6E-05				1.2E+00
			Total DLCs (based on KM TEQs)			1.6E-05				1.2E+00
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05				8.3E-01

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			1.1E-05				8.2E-01
			Total DL-PCBs (excluding KM TEQ)			5.1E-06				3.8E-01
			Total DL-PCBs (based on KM TEQ)			5.0E-06				3.7E-01
			Total Non-DL PCBs			2.1E-06				8.2E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			7.2E-06				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			7.1E-06				1.2E+00
			Total PAHs			1.9E-07				2.1E-03
			Total Organics			1.2E-06				3.7E-01
			Total Inorganics			7.1E-07				3.1E-01
	White Perch Total (excluding KM TEQs)					2.0E-05				2.7E+00
	White Perch Total (based on KM TEQs)					2.0E-05				2.7E+00
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.9E-05	--	1.9E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	5.0E-07	--	5.0E-07	Reproductive	3.7E-02	--	3.7E-02
			1,2,3,4,7,8-HxCDD	1.4E-08	--	1.4E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	4.3E-08	--	4.3E-08	Reproductive	3.2E-03	--	3.2E-03
			1,2,3,7,8,9-HxCDD	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,6,7,8-HpCDD	4.9E-09	--	4.9E-09	Reproductive	3.6E-04	--	3.6E-04
			OCDD	4.4E-10	--	4.4E-10	Reproductive	3.2E-05	--	3.2E-05
			2,3,7,8-TCDF	7.0E-07	--	7.0E-07	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,7,8-PeCDF	4.6E-08	--	4.6E-08	Reproductive	3.4E-03	--	3.4E-03
			2,3,4,7,8-PeCDF	1.1E-06	--	1.1E-06	Reproductive	7.8E-02	--	7.8E-02
			1,2,3,4,7,8-HxCDF	3.4E-07	--	3.4E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,6,7,8-HxCDF	1.0E-07	--	1.0E-07	Reproductive	7.5E-03	--	7.5E-03
			1,2,3,7,8,9-HxCDF	6.2E-09	--	6.2E-09	Reproductive	4.6E-04	--	4.6E-04
			2,3,4,6,7,8-HxCDF	2.7E-08	--	2.7E-08	Reproductive	2.0E-03	--	2.0E-03
			1,2,3,4,6,7,8-HpCDF	3.4E-08	--	3.4E-08	Reproductive	2.5E-03	--	2.5E-03
			1,2,3,4,7,8,9-HpCDF	4.8E-10	--	4.8E-10	Reproductive	3.6E-05	--	3.6E-05
			OCDF	5.3E-11	--	5.3E-11	Reproductive	3.9E-06	--	3.9E-06
			KM TEQ DF	2.2E-05	--	2.2E-05	Reproductive	1.6E+00	--	1.6E+00
			PCB-77	1.4E-07	--	1.4E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-81	1.8E-08	--	1.8E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-105	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-114	1.9E-08	--	1.9E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	1.0E-06	--	1.0E-06	Reproductive	7.5E-02	--	7.5E-02
			PCB-123	1.8E-08	--	1.8E-08	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	7.0E-06	--	7.0E-06	Reproductive	5.2E-01	--	5.2E-01
			PCB-156/157	8.1E-08	--	8.1E-08	Reproductive	6.0E-03	--	6.0E-03
			PCB-167	3.4E-08	--	3.4E-08	Reproductive	2.5E-03	--	2.5E-03
			PCB-169	2.4E-07	--	2.4E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-189	5.8E-09	--	5.8E-09	Reproductive	4.3E-04	--	4.3E-04
			KM TEQ PCB	8.4E-06	--	8.4E-06	Reproductive	6.2E-01	--	6.2E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-06	--	1.5E-06	Whole Body	6.0E-01	--	6.0E-01
			PAHs							
			Benz(a)anthracene	1.4E-09	--	1.4E-09	--	--	--	--
			Benzo(a)pyrene	1.3E-08	--	1.3E-08	Developmental	3.4E-04	--	3.4E-04

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Benzo(b)fluoranthene	1.3E-09	--	1.3E-09	--	--	--	--
			Chrysene	1.8E-11	--	1.8E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-08	--	1.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-08	--	1.0E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.5E-10	--	2.5E-10	Liver	2.7E-04	--	2.7E-04
			2,4'-DDE	7.3E-10	--	7.3E-10	Liver	5.6E-05	--	5.6E-05
			2,4'-DDT	3.2E-10	--	3.2E-10	Liver	1.5E-05	--	1.5E-05
			4,4'-DDD	4.0E-08	--	4.0E-08	Liver	4.4E-02	--	4.4E-02
			4,4'-DDE	1.5E-07	--	1.5E-07	Liver	1.2E-02	--	1.2E-02
			4,4'-DDT	1.8E-09	--	1.8E-09	Liver	8.1E-05	--	8.1E-05
			Benzaldehyde	2.3E-08	--	2.3E-08	GI Tract, Kidney	4.5E-04	--	4.5E-04
			Chlordane, alpha (cis)	3.4E-09	--	3.4E-09	Liver	1.5E-04	--	1.5E-04
			Chlordane, gamma (trans)	4.3E-10	--	4.3E-10	Liver	1.9E-05	--	1.9E-05
			Dieldrin	4.7E-07	--	4.7E-07	Liver	4.6E-03	--	4.6E-03
			Heptachlor epoxide, cis-	1.6E-07	--	1.6E-07	Liver	1.0E-02	--	1.0E-02
			Heptachlor epoxide, trans-	5.0E-08	--	5.0E-08	Liver	3.3E-03	--	3.3E-03
			Hexachlorobenzene	8.5E-09	--	8.5E-09	Liver	5.2E-05	--	5.2E-05
			Mirex	1.7E-08	--	1.7E-08	Liver, Thyroid	3.8E-05	--	3.8E-05
			Nonachlor, cis-	8.9E-09	--	8.9E-09	Liver	2.0E-03	--	2.0E-03
			Nonachlor, trans-	1.8E-08	--	1.8E-08	Liver	2.5E-02	--	2.5E-02
			Oxychlordane	2.6E-08	--	2.6E-08	Liver	6.6E-03	--	6.6E-03
			Pyridine	--	--	--	Liver	1.9E-02	--	1.9E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.4E-04	--	3.4E-04
			Arsenic, organic	--	--	--	Urinary	4.7E-03	--	4.7E-03
			Arsenic, inorganic	2.0E-06	--	2.0E-06	Skin, Blood	3.5E-02	--	3.5E-02
			Cadmium	--	--	--	Urinary	1.5E-02	--	1.5E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	4.2E-06	--	4.2E-06
			Cobalt	--	--	--	Thyroid	1.1E-02	--	1.1E-02
			Copper	--	--	--	GI Tract	1.1E+00	--	1.1E+00
			Iron	--	--	--	GI Tract	2.1E-03	--	2.1E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.7E-03	--	2.7E-03
			Mercury	--	--	--	Immune	1.9E-02	--	1.9E-02
			Methyl Mercury	--	--	--	Neurological	6.5E-02	--	6.5E-02
			Selenium	--	--	--	Whole Body	8.5E-03	--	8.5E-03
			Silver	--	--	--	Skin	5.9E-03	--	5.9E-03
			Vanadium	--	--	--	Hair	5.5E-04	--	5.5E-04
			Zinc	--	--	--	Blood	5.8E-03	--	5.8E-03
			Total DLCs (excluding KM TEQs)			3.1E-05				2.3E+00
			Total DLCs (based on KM TEQs)			3.0E-05				2.2E+00
			Total PCDD/Fs (excluding KM TEQ)			2.2E-05				1.6E+00
			Total PCDD/Fs (based on KM TEQ)			2.2E-05				1.6E+00
			Total DL-PCBs (excluding KM TEQ)			8.8E-06				6.5E-01
			Total DL-PCBs (based on KM TEQ)			8.4E-06				6.2E-01
			Total Non-DL PCBs			1.5E-06				6.0E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.0E-05				1.2E+00

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			9.9E-06				1.2E+00
			Total PAHs			3.9E-08				3.4E-04
			Total Organics			9.8E-07				1.3E-01
			Total Inorganics			2.0E-06				1.2E+00
	Crab (H+M) Total (excluding KM TEQs)					3.5E-05				4.2E+00
	Crab (H+M) Total (based on KM TEQs)					3.5E-05				4.2E+00
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.8E-06	--	2.8E-06	Reproductive	2.1E-01	--	2.1E-01
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,7,8-HxCDD	2.0E-09	--	2.0E-09	Reproductive	1.5E-04	--	1.5E-04
			1,2,3,6,7,8-HxCDD	5.0E-09	--	5.0E-09	Reproductive	3.7E-04	--	3.7E-04
			1,2,3,7,8,9-HxCDD	2.6E-09	--	2.6E-09	Reproductive	1.9E-04	--	1.9E-04
			1,2,3,4,6,7,8-HpCDD	9.7E-10	--	9.7E-10	Reproductive	7.2E-05	--	7.2E-05
			OCDD	1.0E-10	--	1.0E-10	Reproductive	7.4E-06	--	7.4E-06
			2,3,7,8-TCDF	8.4E-08	--	8.4E-08	Reproductive	6.2E-03	--	6.2E-03
			1,2,3,7,8-PeCDF	5.8E-09	--	5.8E-09	Reproductive	4.3E-04	--	4.3E-04
			2,3,4,7,8-PeCDF	1.0E-07	--	1.0E-07	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,4,7,8-HxCDF	5.2E-08	--	5.2E-08	Reproductive	3.8E-03	--	3.8E-03
			1,2,3,6,7,8-HxCDF	1.3E-08	--	1.3E-08	Reproductive	9.7E-04	--	9.7E-04
			1,2,3,7,8,9-HxCDF	5.1E-09	--	5.1E-09	Reproductive	3.8E-04	--	3.8E-04
			2,3,4,6,7,8-HxCDF	3.3E-09	--	3.3E-09	Reproductive	2.5E-04	--	2.5E-04
			1,2,3,4,6,7,8-HpCDF	2.8E-09	--	2.8E-09	Reproductive	2.1E-04	--	2.1E-04
			1,2,3,4,7,8,9-HpCDF	2.4E-10	--	2.4E-10	Reproductive	1.8E-05	--	1.8E-05
			OCDF	2.0E-11	--	2.0E-11	Reproductive	1.5E-06	--	1.5E-06
			KM TEQ DF	3.2E-06	--	3.2E-06	Reproductive	2.4E-01	--	2.4E-01
			PCB-77	1.4E-08	--	1.4E-08	Reproductive	1.1E-03	--	1.1E-03
			PCB-81	2.0E-09	--	2.0E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-105	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-114	2.0E-09	--	2.0E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-118	8.6E-08	--	8.6E-08	Reproductive	6.4E-03	--	6.4E-03
			PCB-123	1.7E-09	--	1.7E-09	Reproductive	1.3E-04	--	1.3E-04
			PCB-126	6.1E-07	--	6.1E-07	Reproductive	4.5E-02	--	4.5E-02
			PCB-156/157	7.0E-09	--	7.0E-09	Reproductive	5.2E-04	--	5.2E-04
			PCB-167	2.7E-09	--	2.7E-09	Reproductive	2.0E-04	--	2.0E-04
			PCB-169	2.5E-07	--	2.5E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-189	3.4E-10	--	3.4E-10	Reproductive	2.5E-05	--	2.5E-05
			KM TEQ PCB	7.4E-07	--	7.4E-07	Reproductive	5.4E-02	--	5.4E-02
			Non-DL PCBs							
			Total Non-DL PCBs	1.3E-07	--	1.3E-07	Whole Body	5.2E-02	--	5.2E-02
			PAHs							
			Benz(a)anthracene	6.3E-09	--	6.3E-09	--	--	--	--
			Benzo(a)pyrene	6.3E-08	--	6.3E-08	Developmental	1.6E-03	--	1.6E-03
			Benzo(b)fluoranthene	6.3E-09	--	6.3E-09	--	--	--	--
			Chrysene	6.3E-11	--	6.3E-11	--	--	--	--
			Dibenz(a,h)anthracene	6.3E-08	--	6.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	6.3E-09	--	6.3E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.8E-11	--	2.8E-11	Liver	3.0E-05	--	3.0E-05

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,4'-DDE	7.9E-11	--	7.9E-11	Liver	6.0E-06	--	6.0E-06
			2,4'-DDT	6.1E-11	--	6.1E-11	Liver	2.8E-06	--	2.8E-06
			4,4'-DDD	6.0E-09	--	6.0E-09	Liver	6.5E-03	--	6.5E-03
			4,4'-DDE	2.4E-08	--	2.4E-08	Liver	1.8E-03	--	1.8E-03
			4,4'-DDT	2.5E-10	--	2.5E-10	Liver	1.1E-05	--	1.1E-05
			Benzaldehyde	2.5E-08	--	2.5E-08	GI Tract, Kidney	4.9E-04	--	4.9E-04
			Chlordane, alpha (cis)	9.8E-10	--	9.8E-10	Liver	4.4E-05	--	4.4E-05
			Chlordane, gamma (trans)	4.5E-11	--	4.5E-11	Liver	2.0E-06	--	2.0E-06
			Dieldrin	1.0E-07	--	1.0E-07	Liver	1.0E-03	--	1.0E-03
			Heptachlor epoxide, cis-	1.4E-08	--	1.4E-08	Liver	9.4E-04	--	9.4E-04
			Heptachlor epoxide, trans-	9.9E-09	--	9.9E-09	Liver	6.5E-04	--	6.5E-04
			Hexachlorobenzene	1.7E-09	--	1.7E-09	Liver	1.0E-05	--	1.0E-05
			Mirex	4.4E-09	--	4.4E-09	Liver, Thyroid	9.5E-06	--	9.5E-06
			Nonachlor, cis-	1.1E-09	--	1.1E-09	Liver	2.5E-04	--	2.5E-04
			Nonachlor, trans-	2.0E-09	--	2.0E-09	Liver	2.9E-03	--	2.9E-03
			Oxychlordane	2.9E-09	--	2.9E-09	Liver	7.2E-04	--	7.2E-04
			Pyridine	--	--	--	Liver	1.6E-02	--	1.6E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.1E-04	--	2.1E-04
			Arsenic, organic	--	--	--	Urinary	4.4E-03	--	4.4E-03
			Arsenic, inorganic	1.9E-06	--	1.9E-06	Skin, Blood	3.3E-02	--	3.3E-02
			Cadmium	--	--	--	Urinary	6.2E-03	--	6.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	3.8E-06	--	3.8E-06
			Cobalt	--	--	--	Thyroid	8.8E-03	--	8.8E-03
			Copper	--	--	--	GI Tract	6.9E-01	--	6.9E-01
			Iron	--	--	--	GI Tract	1.0E-03	--	1.0E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.6E-03	--	1.6E-03
			Mercury	--	--	--	Immune	2.3E-02	--	2.3E-02
			Methyl Mercury	--	--	--	Neurological	8.0E-02	--	8.0E-02
			Selenium	--	--	--	Whole Body	7.0E-03	--	7.0E-03
			Silver	--	--	--	Skin	3.6E-03	--	3.6E-03
			Vanadium	--	--	--	Hair	3.2E-04	--	3.2E-04
			Zinc	--	--	--	Blood	5.9E-03	--	5.9E-03
			Total DLCs (excluding KM TEQs)			4.3E-06				3.2E-01
			Total DLCs (based on KM TEQs)			3.9E-06				2.9E-01
			Total PCDD/Fs (excluding KM TEQ)			3.3E-06				2.4E-01
			Total PCDD/Fs (based on KM TEQ)			3.2E-06				2.4E-01
			Total DL-PCBs (excluding KM TEQ)			1.0E-06				7.4E-02
			Total DL-PCBs (based on KM TEQ)			7.4E-07				5.4E-02
			Total Non-DL PCBs			1.3E-07				5.2E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-06				1.3E-01
			Total PCBs (DL & NDL; based on KM TEQ)			8.7E-07				1.1E-01
			Total PAHs			1.4E-07				1.6E-03
			Total Organics			2.0E-07				3.1E-02
			Total Inorganics			1.9E-06				8.6E-01
Crab (Muscle) Total (excluding KM TEQs)						6.6E-06				1.3E+00

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Crab (Muscle) Total (based on KM TEQs)					6.3E-06				1.2E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.6E-05	--	6.6E-05	Reproductive	4.9E+00	--	4.9E+00
			1,2,3,7,8-PeCDD	1.6E-06	--	1.6E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,4,7,8-HxCDD	5.0E-08	--	5.0E-08	Reproductive	3.7E-03	--	3.7E-03
			1,2,3,6,7,8-HxCDD	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,7,8,9-HxCDD	5.2E-08	--	5.2E-08	Reproductive	3.8E-03	--	3.8E-03
			1,2,3,4,6,7,8-HpCDD	1.6E-08	--	1.6E-08	Reproductive	1.2E-03	--	1.2E-03
			OCDD	1.4E-09	--	1.4E-09	Reproductive	1.0E-04	--	1.0E-04
			2,3,7,8-TCDF	2.5E-06	--	2.5E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,7,8-PeCDF	1.6E-07	--	1.6E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,7,8-PeCDF	3.8E-06	--	3.8E-06	Reproductive	2.8E-01	--	2.8E-01
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06	Reproductive	8.9E-02	--	8.9E-02
			1,2,3,6,7,8-HxCDF	3.6E-07	--	3.6E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,7,8,9-HxCDF	9.8E-09	--	9.8E-09	Reproductive	7.3E-04	--	7.3E-04
			2,3,4,6,7,8-HxCDF	9.4E-08	--	9.4E-08	Reproductive	7.0E-03	--	7.0E-03
			1,2,3,4,6,7,8-HpCDF	1.2E-07	--	1.2E-07	Reproductive	9.1E-03	--	9.1E-03
			1,2,3,4,7,8,9-HpCDF	9.9E-10	--	9.9E-10	Reproductive	7.4E-05	--	7.4E-05
			OCDF	1.8E-10	--	1.8E-10	Reproductive	1.3E-05	--	1.3E-05
			KM TEQ DF	7.6E-05	--	7.6E-05	Reproductive	5.6E+00	--	5.6E+00
			PCB-77	5.0E-07	--	5.0E-07	Reproductive	3.7E-02	--	3.7E-02
			PCB-81	6.6E-08	--	6.6E-08	Reproductive	4.9E-03	--	4.9E-03
			PCB-105	8.1E-07	--	8.1E-07	Reproductive	6.0E-02	--	6.0E-02
			PCB-114	6.9E-08	--	6.9E-08	Reproductive	5.1E-03	--	5.1E-03
			PCB-118	3.7E-06	--	3.7E-06	Reproductive	2.7E-01	--	2.7E-01
			PCB-123	6.4E-08	--	6.4E-08	Reproductive	4.7E-03	--	4.7E-03
			PCB-126	2.5E-05	--	2.5E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-156/157	2.9E-07	--	2.9E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-167	1.2E-07	--	1.2E-07	Reproductive	9.1E-03	--	9.1E-03
			PCB-169	7.9E-07	--	7.9E-07	Reproductive	5.8E-02	--	5.8E-02
			PCB-189	2.2E-08	--	2.2E-08	Reproductive	1.6E-03	--	1.6E-03
			KM TEQ PCB	3.0E-05	--	3.0E-05	Reproductive	2.2E+00	--	2.2E+00
			Non-DL PCBs							
			Total Non-DL PCBs	5.6E-06	--	5.6E-06	Whole Body	2.2E+00	--	2.2E+00
			PAHs							
			Benz(a)anthracene	1.6E-09	--	1.6E-09	--	--	--	--
			Benzo(a)pyrene	1.4E-08	--	1.4E-08	Developmental	3.6E-04	--	3.6E-04
			Benzo(b)fluoranthene	1.3E-09	--	1.3E-09	--	--	--	--
			Chrysene	2.2E-11	--	2.2E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-08	--	1.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.6E-08	--	3.6E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	8.8E-10	--	8.8E-10	Liver	9.5E-04	--	9.5E-04
			2,4'-DDE	2.6E-09	--	2.6E-09	Liver	2.0E-04	--	2.0E-04
			2,4'-DDT	1.1E-09	--	1.1E-09	Liver	4.9E-05	--	4.9E-05
			4,4'-DDD	1.4E-07	--	1.4E-07	Liver	1.5E-01	--	1.5E-01
			4,4'-DDE	5.3E-07	--	5.3E-07	Liver	4.0E-02	--	4.0E-02
			4,4'-DDT	6.1E-09	--	6.1E-09	Liver	2.8E-04	--	2.8E-04
			Benzaldehyde	4.9E-08	--	4.9E-08	GI Tract, Kidney	9.5E-04	--	9.5E-04

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, alpha (cis)	1.1E-08	--	1.1E-08	Liver	5.0E-04	--	5.0E-04
			Chlordane, gamma (trans)	1.5E-09	--	1.5E-09	Liver	6.8E-05	--	6.8E-05
			Dieldrin	1.6E-06	--	1.6E-06	Liver	1.5E-02	--	1.5E-02
			Heptachlor epoxide, cis-	5.7E-07	--	5.7E-07	Liver	3.8E-02	--	3.8E-02
			Heptachlor epoxide, trans-	1.7E-07	--	1.7E-07	Liver	1.1E-02	--	1.1E-02
			Hexachlorobenzene	2.8E-08	--	2.8E-08	Liver	1.7E-04	--	1.7E-04
			Mirex	5.8E-08	--	5.8E-08	Liver, Thyroid	1.2E-04	--	1.2E-04
			Nonachlor, cis-	3.1E-08	--	3.1E-08	Liver	6.9E-03	--	6.9E-03
			Nonachlor, trans-	6.3E-08	--	6.3E-08	Liver	9.0E-02	--	9.0E-02
			Oxychlordane	9.3E-08	--	9.3E-08	Liver	2.3E-02	--	2.3E-02
			Pyridine	--	--	--	Liver	3.0E-02	--	3.0E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.1E-03	--	1.1E-03
			Arsenic, organic	--	--	--	Urinary	5.8E-03	--	5.8E-03
			Arsenic, inorganic	2.5E-06	--	2.5E-06	Skin, Blood	4.3E-02	--	4.3E-02
			Cadmium	--	--	--	Urinary	4.8E-02	--	4.8E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	7.1E-06	--	7.1E-06
			Cobalt	--	--	--	Thyroid	2.8E-02	--	2.8E-02
			Copper	--	--	--	GI Tract	2.8E+00	--	2.8E+00
			Iron	--	--	--	GI Tract	5.4E-03	--	5.4E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	5.0E-03	--	5.0E-03
			Mercury	--	--	--	Immune	9.4E-03	--	9.4E-03
			Methyl Mercury	--	--	--	Neurological	2.2E-02	--	2.2E-02
			Selenium	--	--	--	Whole Body	1.4E-02	--	1.4E-02
			Silver	--	--	--	Skin	1.4E-02	--	1.4E-02
			Vanadium	--	--	--	Hair	1.3E-03	--	1.3E-03
			Zinc	--	--	--	Blood	5.9E-03	--	5.9E-03
			Total DLCs (excluding KM TEQs)			1.1E-04				8.0E+00
			Total DLCs (based on KM TEQs)			1.1E-04				7.8E+00
			Total PCDD/Fs (excluding KM TEQ)			7.6E-05				5.6E+00
			Total PCDD/Fs (based on KM TEQ)			7.6E-05				5.6E+00
			Total DL-PCBs (excluding KM TEQ)			3.2E-05				2.4E+00
			Total DL-PCBs (based on KM TEQ)			3.0E-05				2.2E+00
			Total Non-DL PCBs			5.6E-06				2.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.7E-05				4.5E+00
			Total PCBs (DL & NDL; based on KM TEQ)			3.6E-05				4.4E+00
			Total PAHs			6.6E-08				3.6E-04
			Total Organics			3.3E-06				4.1E-01
			Total Inorganics			2.5E-06				3.0E+00
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.2E-04				1.4E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.2E-04				1.3E+01
Sediment	Sediment	Angler - Fishing Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.0E-08	7.1E-08	1.0E-07	Reproductive	2.2E-03	5.2E-03	7.5E-03
			1,2,3,7,8-PeCDD	1.6E-09	3.7E-09	5.3E-09	Reproductive	1.2E-04	2.8E-04	3.9E-04
			1,2,3,4,7,8-HxCDD	1.4E-10	3.3E-10	4.8E-10	Reproductive	1.1E-05	2.5E-05	3.5E-05
			1,2,3,6,7,8-HxCDD	5.8E-10	1.3E-09	1.9E-09	Reproductive	4.3E-05	1.0E-04	1.4E-04

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NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8,9-HxCDD	3.4E-10	8.0E-10	1.1E-09	Reproductive	2.5E-05	5.9E-05	8.4E-05
			1,2,3,4,6,7,8-HpCDD	1.0E-09	2.4E-09	3.4E-09	Reproductive	7.5E-05	1.8E-04	2.5E-04
			OCDD	3.1E-10	7.3E-10	1.0E-09	Reproductive	2.3E-05	5.4E-05	7.7E-05
			2,3,7,8-TCDF	5.5E-10	1.3E-09	1.8E-09	Reproductive	4.0E-05	9.4E-05	1.3E-04
			1,2,3,7,8-PeCDF	1.1E-10	2.6E-10	3.7E-10	Reproductive	8.3E-06	1.9E-05	2.8E-05
			2,3,4,7,8-PeCDF	1.9E-09	4.4E-09	6.3E-09	Reproductive	1.4E-04	3.2E-04	4.6E-04
			1,2,3,4,7,8-HxCDF	2.9E-09	6.7E-09	9.6E-09	Reproductive	2.1E-04	5.0E-04	7.1E-04
			1,2,3,6,7,8-HxCDF	7.5E-10	1.7E-09	2.5E-09	Reproductive	5.5E-05	1.3E-04	1.8E-04
			1,2,3,7,8,9-HxCDF	5.6E-11	1.3E-10	1.9E-10	Reproductive	4.1E-06	9.6E-06	1.4E-05
			2,3,4,6,7,8-HxCDF	4.1E-10	9.7E-10	1.4E-09	Reproductive	3.1E-05	7.2E-05	1.0E-04
			1,2,3,4,6,7,8-HpCDF	1.3E-09	3.0E-09	4.2E-09	Reproductive	9.4E-05	2.2E-04	3.1E-04
			1,2,3,4,7,8,9-HpCDF	4.3E-11	1.0E-10	1.4E-10	Reproductive	3.2E-06	7.5E-06	1.1E-05
			OCDF	5.3E-11	1.2E-10	1.8E-10	Reproductive	3.9E-06	9.2E-06	1.3E-05
			KM TEQ DF	4.1E-08	9.7E-08	1.4E-07	Reproductive	3.1E-03	7.2E-03	1.0E-02
			PCB-77	3.1E-10	7.1E-10	1.0E-09	Reproductive	2.3E-05	5.3E-05	7.6E-05
			PCB-81	3.5E-11	8.3E-11	1.2E-10	Reproductive	2.6E-06	6.1E-06	8.7E-06
			PCB-105	1.5E-10	3.4E-10	4.9E-10	Reproductive	1.1E-05	2.6E-05	3.6E-05
			PCB-114	1.0E-11	2.4E-11	3.4E-11	Reproductive	7.5E-07	1.8E-06	2.5E-06
			PCB-118	4.3E-10	1.0E-09	1.4E-09	Reproductive	3.2E-05	7.5E-05	1.1E-04
			PCB-123	1.2E-11	2.9E-11	4.2E-11	Reproductive	9.2E-07	2.2E-06	3.1E-06
			PCB-126	9.7E-09	2.3E-08	3.2E-08	Reproductive	7.2E-04	1.7E-03	2.4E-03
			PCB-156/157	3.9E-11	9.0E-11	1.3E-10	Reproductive	2.9E-06	6.7E-06	9.5E-06
			PCB-167	1.4E-11	3.2E-11	4.6E-11	Reproductive	1.0E-06	2.4E-06	3.4E-06
			PCB-169	3.0E-09	7.0E-09	1.0E-08	Reproductive	2.2E-04	5.2E-04	7.4E-04
			PCB-189	2.9E-12	6.8E-12	9.6E-12	Reproductive	2.1E-07	5.0E-07	7.1E-07
			KM TEQ PCB	1.2E-08	2.8E-08	4.0E-08	Reproductive	9.0E-04	2.1E-03	3.0E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-09	1.9E-08	2.1E-08	Whole Body	6.8E-04	7.4E-03	8.1E-03
			PAHs							
			Benz(a)anthracene	5.5E-10	5.6E-09	6.1E-09	--	--	--	--
			Benzo(a)pyrene	5.4E-09	5.5E-08	6.0E-08	Developmental	1.4E-04	1.4E-03	1.6E-03
			Benzo(b)fluoranthene	4.8E-10	4.9E-09	5.4E-09	--	--	--	--
			Benzo(k)fluoranthene	3.1E-11	3.2E-10	3.5E-10	--	--	--	--
			Chrysene	5.3E-12	5.3E-11	5.9E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.1E-09	1.1E-08	1.2E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.0E-10	2.0E-09	2.2E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	2.9E-05	--	2.9E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.1E-03	--	2.1E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	2.5E-04	--	2.5E-04
			Antimony	--	--	--	Whole Body	1.2E-04	--	1.2E-04
			Arsenic, inorganic	7.3E-08	2.8E-07	3.6E-07	Skin, Blood	1.3E-03	4.9E-03	6.2E-03
			Cadmium	--	--	--	Urinary	6.3E-05	2.0E-04	2.6E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.5E-06	--	1.5E-06
			Cobalt	--	--	--	Thyroid	9.6E-04	--	9.6E-04
			Copper	--	--	--	GI Tract	3.4E-03	--	3.4E-03
			Chromium (VI)	1.8E-09	--	1.8E-09	No Effect	9.5E-06	--	9.5E-06
			Iron	--	--	--	GI Tract	1.3E-03	--	1.3E-03

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SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.0E-04	--	3.0E-04
			Mercury	--	--	--	Immune	1.4E-04	--	1.4E-04
			Nickel	--	--	--	Body Weight, Organ Weights	6.9E-05	--	6.9E-05
			Thallium	--	--	--	Skin, Hair	5.0E-04	--	5.0E-04
			Vanadium	--	--	--	Hair	2.1E-04	--	2.1E-04
			Zinc	--	--	--	Blood	8.5E-05	--	8.5E-05
			Total DLCs (excluding KM TEQs)			1.9E-07				1.4E-02
			Total DLCs (based on KM TEQs)			1.8E-07				1.3E-02
			Total PCDD/Fs (excluding KM TEQ)			1.4E-07				1.0E-02
			Total PCDD/Fs (based on KM TEQ)			1.4E-07				1.0E-02
			Total DL-PCBs (excluding KM TEQ)			4.6E-08				3.4E-03
			Total DL-PCBs (based on KM TEQ)			4.0E-08				3.0E-03
			Total Non-DL PCBs			2.1E-08				8.1E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			6.6E-08				1.1E-02
			Total PCBs (DL & NDL; based on KM TEQ)			6.1E-08				1.1E-02
			Total PAHs			8.6E-08				1.6E-03
			Total Organics			0.0E+00				2.1E-03
			Total Inorganics			3.6E-07				1.4E-02
	Fishing - Sediment Total (excluding KM TEQs)					6.5E-07				3.9E-02
	Fishing - Sediment Total (based on KM TEQs)					6.5E-07				3.9E-02
Surface Water	Surface Water	Angler - Fishing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.1E-10	--	1.1E-10	Reproductive	7.9E-06	--	7.9E-06
			1,2,3,7,8-PeCDD	3.7E-11	--	3.7E-11	Reproductive	2.7E-06	--	2.7E-06
			1,2,3,4,7,8-HxCDD	2.7E-11	--	2.7E-11	Reproductive	2.0E-06	--	2.0E-06
			1,2,3,6,7,8-HxCDD	4.3E-12	--	4.3E-12	Reproductive	3.2E-07	--	3.2E-07
			1,2,3,7,8,9-HxCDD	7.6E-12	--	7.6E-12	Reproductive	5.6E-07	--	5.6E-07
			1,2,3,4,6,7,8-HpCDD	5.4E-12	--	5.4E-12	Reproductive	4.0E-07	--	4.0E-07
			OCDD	1.7E-12	--	1.7E-12	Reproductive	1.3E-07	--	1.3E-07
			2,3,7,8-TCDF	4.1E-12	--	4.1E-12	Reproductive	3.1E-07	--	3.1E-07
			1,2,3,7,8-PeCDF	9.9E-13	--	9.9E-13	Reproductive	7.4E-08	--	7.4E-08
			2,3,4,7,8-PeCDF	1.7E-11	--	1.7E-11	Reproductive	1.3E-06	--	1.3E-06
			1,2,3,4,7,8-HxCDF	1.6E-11	--	1.6E-11	Reproductive	1.2E-06	--	1.2E-06
			1,2,3,6,7,8-HxCDF	3.9E-12	--	3.9E-12	Reproductive	2.9E-07	--	2.9E-07
			1,2,3,7,8,9-HxCDF	2.3E-11	--	2.3E-11	Reproductive	1.7E-06	--	1.7E-06
			2,3,4,6,7,8-HxCDF	2.4E-12	--	2.4E-12	Reproductive	1.8E-07	--	1.8E-07
			1,2,3,4,6,7,8-HpCDF	6.8E-12	--	6.8E-12	Reproductive	5.0E-07	--	5.0E-07
			1,2,3,4,7,8,9-HpCDF	4.3E-13	--	4.3E-13	Reproductive	3.2E-08	--	3.2E-08
			OCDF	3.8E-13	--	3.8E-13	Reproductive	2.8E-08	--	2.8E-08
			KM TEQ DF	2.1E-10	--	2.1E-10	Reproductive	1.6E-05	--	1.6E-05
			PCB-77	1.8E-13	--	1.8E-13	Reproductive	1.3E-08	--	1.3E-08
			PCB-81	1.8E-14	--	1.8E-14	Reproductive	1.3E-09	--	1.3E-09
			PCB-105	1.9E-13	--	1.9E-13	Reproductive	1.4E-08	--	1.4E-08
			PCB-114	1.0E-14	--	1.0E-14	Reproductive	7.4E-10	--	7.4E-10
			PCB-118	4.3E-13	--	4.3E-13	Reproductive	3.2E-08	--	3.2E-08
			PCB-123	8.3E-15	--	8.3E-15	Reproductive	6.1E-10	--	6.1E-10
			PCB-126	5.9E-12	--	5.9E-12	Reproductive	4.4E-07	--	4.4E-07

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-156/157	5.1E-14	--	5.1E-14	Reproductive	3.8E-09	--	3.8E-09
			PCB-167	1.7E-14	--	1.7E-14	Reproductive	1.3E-09	--	1.3E-09
			PCB-169	1.1E-12	--	1.1E-12	Reproductive	7.8E-08	--	7.8E-08
			PCB-189	2.2E-15	--	2.2E-15	Reproductive	1.7E-10	--	1.7E-10
			KM TEQ PCB	9.5E-12	--	9.5E-12	Reproductive	7.0E-07	--	7.0E-07
			PAHs							
			Benz(a)anthracene	6.9E-13	--	6.9E-13	--	--	--	--
			Benzo(a)pyrene	8.8E-12	--	8.8E-12	Developmental	2.3E-07	--	2.3E-07
			Benzo(b)fluoranthene	1.2E-12	--	1.2E-12	--	--	--	--
			Benzo(k)fluoranthene	5.4E-14	--	5.4E-14	--	--	--	--
			Chrysene	1.2E-14	--	1.2E-14	--	--	--	--
			Dibenz(a,h)anthracene	2.3E-12	--	2.3E-12	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.0E-13	--	5.0E-13	--	--	--	--
			Naphthalene	--	--	--	Body Weight	8.0E-09	6.4E-07	6.5E-07
			Pesticides & Organics							
			Chloroform	2.2E-12	2.4E-11	2.6E-11	Liver	5.4E-08	6.0E-07	6.5E-07
			Trichloroethylene	3.5E-12	7.1E-11	7.4E-11	Thymus, Blood, Immune, Developmental	1.2E-06	2.4E-05	2.5E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	7.9E-06	3.1E-05	3.9E-05
			Arsenic, inorganic	1.1E-09	6.6E-10	1.8E-09	Skin, Blood	1.9E-05	1.1E-05	3.1E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	3.9E-09	1.8E-07	1.8E-07
			Chromium (VI)	6.5E-11	3.1E-09	3.1E-09	No Effect	3.4E-07	1.6E-05	1.6E-05
			Iron	--	--	--	GI Tract	3.4E-06	2.0E-06	5.5E-06
			Manganese	--	--	--	Neurological	1.3E-05	1.9E-04	2.1E-04
			Mercury	--	--	--	Immune	4.0E-07	3.4E-06	3.7E-06
			Thallium	--	--	--	Skin, Hair	5.6E-06	3.3E-06	8.9E-06
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			2.7E-10				2.0E-05
			Total DLCs (based on KM TEQs)			2.2E-10				1.6E-05
			Total PCDD/Fs (excluding KM TEQ)			2.6E-10				2.0E-05
			Total PCDD/Fs (based on KM TEQ)			2.1E-10				1.6E-05
			Total DL-PCBs (excluding KM TEQ)			7.8E-12				5.8E-07
			Total DL-PCBs (based on KM TEQ)			9.5E-12				7.0E-07
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.8E-12				5.8E-07
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-12				7.0E-07
			Total PAHs			1.4E-11				8.8E-07
			Total Organics			1.0E-10				2.6E-05
			Total Inorganics			4.9E-09				3.1E-04
	Fishing - Surface Water Total (excluding KM TEQs)					5.3E-09				3.6E-04
	Fishing - Surface Water Total (based on KM TEQs)					5.2E-09				3.5E-04
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.8E-05				2.3E+00
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.8E-05				2.3E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						2.4E-05				3.0E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						2.8E-05				3.3E+00
Sediment	Sediment	Angler - Crabbing	**Dioxin-like Compounds**							

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
		Sediment	2,3,7,8-TCDD	1.9E-08	4.4E-08	6.3E-08	Reproductive	1.4E-03	3.3E-03	4.7E-03
			1,2,3,7,8-PeCDD	1.0E-09	2.3E-09	3.3E-09	Reproductive	7.4E-05	1.7E-04	2.5E-04
			1,2,3,4,7,8-HxCDD	8.9E-11	2.1E-10	3.0E-10	Reproductive	6.6E-06	1.5E-05	2.2E-05
			1,2,3,6,7,8-HxCDD	3.6E-10	8.4E-10	1.2E-09	Reproductive	2.7E-05	6.2E-05	8.9E-05
			1,2,3,7,8,9-HxCDD	2.1E-10	5.0E-10	7.1E-10	Reproductive	1.6E-05	3.7E-05	5.3E-05
			1,2,3,4,6,7,8-HpCDD	6.4E-10	1.5E-09	2.1E-09	Reproductive	4.7E-05	1.1E-04	1.6E-04
			OCDD	1.9E-10	4.5E-10	6.5E-10	Reproductive	1.4E-05	3.4E-05	4.8E-05
			2,3,7,8-TCDF	3.4E-10	8.0E-10	1.1E-09	Reproductive	2.5E-05	5.9E-05	8.4E-05
			1,2,3,7,8-PeCDF	7.0E-11	1.6E-10	2.3E-10	Reproductive	5.2E-06	1.2E-05	1.7E-05
			2,3,4,7,8-PeCDF	1.2E-09	2.7E-09	3.9E-09	Reproductive	8.7E-05	2.0E-04	2.9E-04
			1,2,3,4,7,8-HxCDF	1.8E-09	4.2E-09	6.0E-09	Reproductive	1.3E-04	3.1E-04	4.4E-04
			1,2,3,6,7,8-HxCDF	4.7E-10	1.1E-09	1.6E-09	Reproductive	3.5E-05	8.1E-05	1.2E-04
			1,2,3,7,8,9-HxCDF	3.5E-11	8.1E-11	1.2E-10	Reproductive	2.6E-06	6.0E-06	8.6E-06
			2,3,4,6,7,8-HxCDF	2.6E-10	6.1E-10	8.6E-10	Reproductive	1.9E-05	4.5E-05	6.4E-05
			1,2,3,4,6,7,8-HpCDF	7.9E-10	1.9E-09	2.6E-09	Reproductive	5.9E-05	1.4E-04	2.0E-04
			1,2,3,4,7,8,9-HpCDF	2.7E-11	6.3E-11	9.0E-11	Reproductive	2.0E-06	4.7E-06	6.7E-06
			OCDF	3.3E-11	7.8E-11	1.1E-10	Reproductive	2.5E-06	5.8E-06	8.2E-06
			KM TEQ DF	2.6E-08	6.0E-08	8.6E-08	Reproductive	1.9E-03	4.5E-03	6.4E-03
			PCB-77	1.9E-10	4.5E-10	6.4E-10	Reproductive	1.4E-05	3.3E-05	4.7E-05
			PCB-81	2.2E-11	5.2E-11	7.4E-11	Reproductive	1.6E-06	3.8E-06	5.5E-06
			PCB-105	9.2E-11	2.2E-10	3.1E-10	Reproductive	6.8E-06	1.6E-05	2.3E-05
			PCB-114	6.3E-12	1.5E-11	2.1E-11	Reproductive	4.7E-07	1.1E-06	1.6E-06
			PCB-118	2.7E-10	6.3E-10	9.0E-10	Reproductive	2.0E-05	4.7E-05	6.6E-05
			PCB-123	7.8E-12	1.8E-11	2.6E-11	Reproductive	5.8E-07	1.4E-06	1.9E-06
			PCB-126	6.1E-09	1.4E-08	2.0E-08	Reproductive	4.5E-04	1.0E-03	1.5E-03
			PCB-156/157	2.4E-11	5.6E-11	8.0E-11	Reproductive	1.8E-06	4.2E-06	6.0E-06
			PCB-167	8.6E-12	2.0E-11	2.9E-11	Reproductive	6.4E-07	1.5E-06	2.1E-06
			PCB-169	1.9E-09	4.4E-09	6.2E-09	Reproductive	1.4E-04	3.2E-04	4.6E-04
			PCB-189	1.8E-12	4.2E-12	6.0E-12	Reproductive	1.3E-07	3.1E-07	4.5E-07
			KM TEQ PCB	7.6E-09	1.8E-08	2.5E-08	Reproductive	5.6E-04	1.3E-03	1.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-09	1.2E-08	1.3E-08	Whole Body	4.2E-04	4.6E-03	5.0E-03
			PAHs							
			Benz(a)anthracene	3.4E-10	3.5E-09	3.8E-09	--	--	--	--
			Benzo(a)pyrene	3.4E-09	3.4E-08	3.7E-08	Developmental	8.7E-05	8.8E-04	9.7E-04
			Benzo(b)fluoranthene	3.0E-10	3.1E-09	3.4E-09	--	--	--	--
			Benzo(k)fluoranthene	2.0E-11	2.0E-10	2.2E-10	--	--	--	--
			Chrysene	3.3E-12	3.3E-11	3.7E-11	--	--	--	--
			Dibenz(a,h)anthracene	6.9E-10	7.0E-09	7.7E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.2E-10	1.3E-09	1.4E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	1.8E-05	--	1.8E-05
			TPH (C9-C40)	--	--	--	Respiratory	1.3E-03	--	1.3E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	1.6E-04	--	1.6E-04
			Antimony	--	--	--	Whole Body	7.5E-05	--	7.5E-05
			Arsenic, inorganic	4.6E-08	1.8E-07	2.2E-07	Skin, Blood	7.9E-04	3.1E-03	3.9E-03
			Cadmium	--	--	--	Urinary	4.0E-05	1.2E-04	1.6E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	9.2E-07	--	9.2E-07

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Cobalt	--	--	--	Thyroid	6.0E-04	--	6.0E-04
			Copper	--	--	--	GI Tract	2.1E-03	--	2.1E-03
			Chromium (VI)	1.1E-09	--	1.1E-09	No Effect	6.0E-06	--	6.0E-06
			Iron	--	--	--	GI Tract	8.0E-04	--	8.0E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.9E-04	--	1.9E-04
			Mercury	--	--	--	Immune	8.5E-05	--	8.5E-05
			Nickel	--	--	--	Body Weight, Organ Weights	4.3E-05	--	4.3E-05
			Thallium	--	--	--	Skin, Hair	3.1E-04	--	3.1E-04
			Vanadium	--	--	--	Hair	1.3E-04	--	1.3E-04
			Zinc	--	--	--	Blood	5.3E-05	--	5.3E-05
			Total DLCs (excluding KM TEQs)			1.2E-07				8.6E-03
			Total DLCs (based on KM TEQs)			1.1E-07				8.3E-03
			Total PCDD/Fs (excluding KM TEQ)			8.8E-08				6.5E-03
			Total PCDD/Fs (based on KM TEQ)			8.6E-08				6.4E-03
			Total DL-PCBs (excluding KM TEQ)			2.9E-08				2.1E-03
			Total DL-PCBs (based on KM TEQ)			2.5E-08				1.9E-03
			Total Non-DL PCBs			1.3E-08				5.0E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			4.2E-08				7.2E-03
			Total PCBs (DL & NDL; based on KM TEQ)			3.8E-08				6.9E-03
			Total PAHs			5.4E-08				9.7E-04
			Total Organics			0.0E+00				1.3E-03
			Total Inorganics			2.2E-07				8.6E-03
	Crabbing - Sediment Total (excluding KM TEQs)					4.1E-07				2.5E-02
	Crabbing - Sediment Total (based on KM TEQs)					4.0E-07				2.4E-02
Surface Water	Surface Water	Angler - Crabbing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.7E-11	--	6.7E-11	Reproductive	4.9E-06	--	4.9E-06
			1,2,3,7,8-PeCDD	2.3E-11	--	2.3E-11	Reproductive	1.7E-06	--	1.7E-06
			1,2,3,4,7,8-HxCDD	1.7E-11	--	1.7E-11	Reproductive	1.2E-06	--	1.2E-06
			1,2,3,6,7,8-HxCDD	2.7E-12	--	2.7E-12	Reproductive	2.0E-07	--	2.0E-07
			1,2,3,7,8,9-HxCDD	4.7E-12	--	4.7E-12	Reproductive	3.5E-07	--	3.5E-07
			1,2,3,4,6,7,8-HpCDD	3.4E-12	--	3.4E-12	Reproductive	2.5E-07	--	2.5E-07
			OCDD	1.1E-12	--	1.1E-12	Reproductive	7.8E-08	--	7.8E-08
			2,3,7,8-TCDF	2.6E-12	--	2.6E-12	Reproductive	1.9E-07	--	1.9E-07
			1,2,3,7,8-PeCDF	6.2E-13	--	6.2E-13	Reproductive	4.6E-08	--	4.6E-08
			2,3,4,7,8-PeCDF	1.1E-11	--	1.1E-11	Reproductive	8.0E-07	--	8.0E-07
			1,2,3,4,7,8-HxCDF	1.0E-11	--	1.0E-11	Reproductive	7.4E-07	--	7.4E-07
			1,2,3,6,7,8-HxCDF	2.4E-12	--	2.4E-12	Reproductive	1.8E-07	--	1.8E-07
			1,2,3,7,8,9-HxCDF	1.4E-11	--	1.4E-11	Reproductive	1.1E-06	--	1.1E-06
			2,3,4,6,7,8-HxCDF	1.5E-12	--	1.5E-12	Reproductive	1.1E-07	--	1.1E-07
			1,2,3,4,6,7,8-HpCDF	4.2E-12	--	4.2E-12	Reproductive	3.1E-07	--	3.1E-07
			1,2,3,4,7,8,9-HpCDF	2.7E-13	--	2.7E-13	Reproductive	2.0E-08	--	2.0E-08
			OCDF	2.4E-13	--	2.4E-13	Reproductive	1.8E-08	--	1.8E-08
			KM TEQ DF	1.3E-10	--	1.3E-10	Reproductive	9.8E-06	--	9.8E-06
			PCB-77	1.1E-13	--	1.1E-13	Reproductive	8.3E-09	--	8.3E-09
			PCB-81	1.1E-14	--	1.1E-14	Reproductive	8.3E-10	--	8.3E-10
			PCB-105	1.2E-13	--	1.2E-13	Reproductive	8.9E-09	--	8.9E-09

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-114	6.2E-15	--	6.2E-15	Reproductive	4.6E-10	--	4.6E-10
			PCB-118	2.7E-13	--	2.7E-13	Reproductive	2.0E-08	--	2.0E-08
			PCB-123	5.2E-15	--	5.2E-15	Reproductive	3.8E-10	--	3.8E-10
			PCB-126	3.7E-12	--	3.7E-12	Reproductive	2.7E-07	--	2.7E-07
			PCB-156/157	3.2E-14	--	3.2E-14	Reproductive	2.3E-09	--	2.3E-09
			PCB-167	1.1E-14	--	1.1E-14	Reproductive	7.9E-10	--	7.9E-10
			PCB-169	6.6E-13	--	6.6E-13	Reproductive	4.9E-08	--	4.9E-08
			PCB-189	1.4E-15	--	1.4E-15	Reproductive	1.0E-10	--	1.0E-10
			KM TEQ PCB	5.9E-12	--	5.9E-12	Reproductive	4.4E-07	--	4.4E-07
			PAHs							
			Benz(a)anthracene	4.3E-13	--	4.3E-13	--	--	--	--
			Benzo(a)pyrene	5.5E-12	--	5.5E-12	Developmental	1.4E-07	--	1.4E-07
			Benzo(b)fluoranthene	7.5E-13	--	7.5E-13	--	--	--	--
			Benzo(k)fluoranthene	3.3E-14	--	3.3E-14	--	--	--	--
			Chrysene	7.3E-15	--	7.3E-15	--	--	--	--
			Dibenz(a,h)anthracene	1.4E-12	--	1.4E-12	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.1E-13	--	3.1E-13	--	--	--	--
			Naphthalene	--	--	--	Body Weight	5.0E-09	4.0E-07	4.0E-07
			Pesticides & Organics							
			Chloroform	1.3E-12	1.5E-11	1.6E-11	Liver	3.4E-08	3.7E-07	4.1E-07
			Trichloroethylene	2.2E-12	4.4E-11	4.7E-11	Thymus, Blood, Immune, Developmental	7.4E-07	1.5E-05	1.6E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	4.9E-06	1.9E-05	2.4E-05
			Arsenic, inorganic	6.9E-10	4.1E-10	1.1E-09	Skin, Blood	1.2E-05	7.1E-06	1.9E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	2.4E-09	1.1E-07	1.1E-07
			Chromium (VI)	4.0E-11	1.9E-09	1.9E-09	No Effect	2.1E-07	9.9E-06	1.0E-05
			Iron	--	--	--	GI Tract	2.2E-06	1.3E-06	3.4E-06
			Manganese	--	--	--	Neurological	8.1E-06	1.2E-04	1.3E-04
			Mercury	--	--	--	Immune	2.5E-07	2.1E-06	2.3E-06
			Thallium	--	--	--	Skin, Hair	3.5E-06	2.1E-06	5.6E-06
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			1.7E-10				1.3E-05
			Total DLCs (based on KM TEQs)			1.4E-10				1.0E-05
			Total PCDD/Fs (excluding KM TEQ)			1.7E-10				1.2E-05
			Total PCDD/Fs (based on KM TEQ)			1.3E-10				9.8E-06
			Total DL-PCBs (excluding KM TEQ)			4.9E-12				3.6E-07
			Total DL-PCBs (based on KM TEQ)			5.9E-12				4.4E-07
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.9E-12				3.6E-07
			Total PCBs (DL & NDL; based on KM TEQ)			5.9E-12				4.4E-07
			Total PAHs			8.5E-12				5.5E-07
			Total Organics			6.3E-11				1.6E-05
			Total Inorganics			3.1E-09				1.9E-04
	Crabbing - Surface Water Total (excluding KM TEQs)					3.3E-09				2.2E-04
	Crabbing - Surface Water Total (based on KM TEQs)					3.3E-09				2.2E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						3.6E-05				4.3E+00

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						3.5E-05				4.2E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						7.0E-06				1.3E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						6.7E-06				1.3E+00

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.7E-02		Blood HI =		2.7E-02
				Body Weight HI =		7.0E-05		Body Weight HI =		7.0E-05
				Developmental HI =		2.9E-03		Developmental HI =		2.9E-03
				GI Tract HI =		2.9E-02		GI Tract HI =		2.9E-02
				Hair HI =		9.9E-04		Hair HI =		9.9E-04
				Immune HI =		4.9E-02		Immune HI =		4.9E-02
				Kidney HI =		6.3E-04		Kidney HI =		6.3E-04
				Liver HI =		2.5E-01		Liver HI =		2.5E-01
				Neurological HI =		1.8E-01		Neurological HI =		1.8E-01
				No Effect HI =		4.8E-05		No Effect HI =		4.8E-05
				Organ Weights HI =		6.9E-05		Organ Weights HI =		6.9E-05
				Reproductive HI =		9.8E-01		Reproductive HI =		1.0E+00
				Skin HI =		2.5E-02		Skin HI =		2.5E-02
				Thymus HI =		2.5E-05		Thymus HI =		2.5E-05
				Thyroid HI =		3.7E-02		Thyroid HI =		3.7E-02
				Urinary HI =		5.0E-03		Urinary HI =		5.0E-03
				Whole Body HI =		7.2E-01		Whole Body HI =		7.2E-01
			American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.0E-02		Blood HI =		3.0E-02
				Body Weight HI =		7.0E-05		Body Weight HI =		7.0E-05
				Developmental HI =		3.7E-03		Developmental HI =		3.7E-03
				GI Tract HI =		1.6E-02		GI Tract HI =		1.6E-02
				Hair HI =		9.4E-04		Hair HI =		9.4E-04
				Immune HI =		6.7E-02		Immune HI =		6.7E-02
				Kidney HI =		6.3E-04		Kidney HI =		6.3E-04
				Liver HI =		3.3E-01		Liver HI =		3.3E-01
				Neurological HI =		2.2E-01		Neurological HI =		2.2E-01
				No Effect HI =		1.0E-04		No Effect HI =		1.0E-04
				Organ Weights HI =		6.9E-05		Organ Weights HI =		6.9E-05
				Reproductive HI =		1.3E+00		Reproductive HI =		1.6E+00
				Skin HI =		2.6E-02		Skin HI =		2.6E-02
				Thymus HI =		2.5E-05		Thymus HI =		2.5E-05
				Thyroid HI =		2.1E-03		Thyroid HI =		2.1E-03
				Urinary HI =		5.0E-03		Urinary HI =		5.0E-03
				Whole Body HI =		1.0E+00		Whole Body HI =		1.0E+00

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.5E-02		Blood HI =		4.5E-02
				Body Weight HI =		4.4E-05		Body Weight HI =		4.4E-05
				Developmental HI =		1.3E-03		Developmental HI =		1.3E-03
				GI Tract HI =		1.1E+00		GI Tract HI =		1.1E+00
				Hair HI =		1.0E-03		Hair HI =		1.0E-03
				Immune HI =		1.9E-02		Immune HI =		1.9E-02
				Kidney HI =		4.5E-04		Kidney HI =		4.5E-04
				Liver HI =		1.3E-01		Liver HI =		1.3E-01
				Neurological HI =		6.8E-02		Neurological HI =		6.8E-02
				No Effect HI =		2.1E-05		No Effect HI =		2.1E-05
				Organ Weights HI =		4.3E-05		Organ Weights HI =		4.3E-05
				Reproductive HI =		2.3E+00		Reproductive HI =		2.2E+00
				Skin HI =		4.5E-02		Skin HI =		4.5E-02
				Thymus HI =		1.6E-05		Thymus HI =		1.6E-05
				Thyroid HI =		1.2E-02		Thyroid HI =		1.2E-02
				Urinary HI =		2.0E-02		Urinary HI =		2.0E-02
				Whole Body HI =		6.1E-01		Whole Body HI =		6.1E-01
			Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.3E-02		Blood HI =		4.3E-02
				Body Weight HI =		4.4E-05		Body Weight HI =		4.4E-05
				Developmental HI =		2.6E-03		Developmental HI =		2.6E-03
				GI Tract HI =		6.9E-01		GI Tract HI =		6.9E-01
				Hair HI =		7.7E-04		Hair HI =		7.7E-04
				Immune HI =		2.3E-02		Immune HI =		2.3E-02
				Kidney HI =		4.9E-04		Kidney HI =		4.9E-04
				Liver HI =		3.0E-02		Liver HI =		3.0E-02
				Neurological HI =		8.2E-02		Neurological HI =		8.2E-02
				No Effect HI =		2.1E-05		No Effect HI =		2.1E-05
				Organ Weights HI =		4.3E-05		Organ Weights HI =		4.3E-05
				Reproductive HI =		3.2E-01		Reproductive HI =		3.0E-01
				Skin HI =		4.1E-02		Skin HI =		4.1E-02
				Thymus HI =		1.6E-05		Thymus HI =		1.6E-05
				Thyroid HI =		9.4E-03		Thyroid HI =		9.4E-03
				Urinary HI =		1.1E-02		Urinary HI =		1.1E-02
				Whole Body HI =		6.4E-02		Whole Body HI =		6.4E-02

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.4E-06	--	3.4E-06	Reproductive	3.8E-01	--	3.8E-01
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8-HxCDD	8.5E-09	--	8.5E-09	Reproductive	9.4E-04	--	9.4E-04
			1,2,3,6,7,8-HxCDD	2.6E-08	--	2.6E-08	Reproductive	2.9E-03	--	2.9E-03
			1,2,3,7,8,9-HxCDD	6.2E-09	--	6.2E-09	Reproductive	6.9E-04	--	6.9E-04
			1,2,3,4,6,7,8-HpCDD	2.9E-09	--	2.9E-09	Reproductive	3.3E-04	--	3.3E-04
			OCDD	5.2E-10	--	5.2E-10	Reproductive	5.8E-05	--	5.8E-05
			2,3,7,8-TCDF	7.0E-08	--	7.0E-08	Reproductive	7.8E-03	--	7.8E-03
			1,2,3,7,8-PeCDF	1.9E-08	--	1.9E-08	Reproductive	2.1E-03	--	2.1E-03
			2,3,4,7,8-PeCDF	3.0E-07	--	3.0E-07	Reproductive	3.4E-02	--	3.4E-02
			1,2,3,4,7,8-HxCDF	4.5E-08	--	4.5E-08	Reproductive	5.1E-03	--	5.1E-03
			1,2,3,6,7,8-HxCDF	4.1E-08	--	4.1E-08	Reproductive	4.5E-03	--	4.5E-03
			1,2,3,7,8,9-HxCDF	4.7E-09	--	4.7E-09	Reproductive	5.2E-04	--	5.2E-04
			2,3,4,6,7,8-HxCDF	7.0E-09	--	7.0E-09	Reproductive	7.8E-04	--	7.8E-04
			1,2,3,4,6,7,8-HpCDF	9.7E-09	--	9.7E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,7,8,9-HpCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			OCDF	2.8E-11	--	2.8E-11	Reproductive	3.2E-06	--	3.2E-06
			KM TEQ DF	4.1E-06	--	4.1E-06	Reproductive	4.5E-01	--	4.5E-01
			PCB-77	2.2E-08	--	2.2E-08	Reproductive	2.5E-03	--	2.5E-03
			PCB-81	2.6E-09	--	2.6E-09	Reproductive	2.9E-04	--	2.9E-04
			PCB-105	1.0E-07	--	1.0E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-114	8.0E-09	--	8.0E-09	Reproductive	8.9E-04	--	8.9E-04
			PCB-118	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			PCB-123	7.6E-09	--	7.6E-09	Reproductive	8.5E-04	--	8.5E-04
			PCB-126	4.1E-06	--	4.1E-06	Reproductive	4.6E-01	--	4.6E-01
			PCB-156/157	3.8E-08	--	3.8E-08	Reproductive	4.3E-03	--	4.3E-03
			PCB-167	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			PCB-169	5.2E-08	--	5.2E-08	Reproductive	5.8E-03	--	5.8E-03
			PCB-189	3.1E-09	--	3.1E-09	Reproductive	3.4E-04	--	3.4E-04
			KM TEQ PCB	5.2E-06	--	5.2E-06	Reproductive	5.8E-01	--	5.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.2E-06	--	1.2E-06	Whole Body	7.3E-01	--	7.3E-01
			PAHs							
			Benz(a)anthracene	7.1E-09	--	7.1E-09	--	--	--	--
			Benzo(a)pyrene	7.1E-08	--	7.1E-08	Developmental	1.4E-03	--	1.4E-03
			Benzo(b)fluoranthene	7.1E-09	--	7.1E-09	--	--	--	--
			Chrysene	7.1E-11	--	7.1E-11	--	--	--	--
			Dibenz(a,h)anthracene	7.1E-08	--	7.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	7.1E-09	--	7.1E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.3E-08	--	1.3E-08	Liver	2.1E-02	--	2.1E-02
			2,4'-DDE	5.7E-09	--	5.7E-09	Liver	6.5E-04	--	6.5E-04
			2,4'-DDT	3.8E-09	--	3.8E-09	Liver	2.6E-04	--	2.6E-04
			4,4'-DDD	6.3E-08	--	6.3E-08	Liver	1.0E-01	--	1.0E-01
			4,4'-DDE	1.2E-07	--	1.2E-07	Liver	1.4E-02	--	1.4E-02
			4,4'-DDT	1.6E-08	--	1.6E-08	Liver	1.1E-03	--	1.1E-03
			Benzaldehyde	2.2E-08	--	2.2E-08	GI Tract, Kidney	6.4E-04	--	6.4E-04
			Chlordane, alpha (cis)	1.5E-08	--	1.5E-08	Liver	1.0E-03	--	1.0E-03

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, gamma (trans)	3.6E-09	--	3.6E-09	Liver	2.4E-04	--	2.4E-04
			Dieldrin	3.6E-07	--	3.6E-07	Liver	5.3E-03	--	5.3E-03
			Heptachlor epoxide, cis-	4.5E-08	--	4.5E-08	Liver	4.4E-03	--	4.4E-03
			Heptachlor epoxide, trans-	2.2E-09	--	2.2E-09	Liver	2.1E-04	--	2.1E-04
			Hexachlorobenzene	6.7E-09	--	6.7E-09	Liver	6.1E-05	--	6.1E-05
			Mirex	8.3E-09	--	8.3E-09	Liver, Thyroid	2.7E-05	--	2.7E-05
			Nonachlor, cis-	6.3E-09	--	6.3E-09	Liver	2.1E-03	--	2.1E-03
			Nonachlor, trans-	1.7E-08	--	1.7E-08	Liver	3.6E-02	--	3.6E-02
			Oxychlordane	4.5E-09	--	4.5E-09	Liver	1.7E-03	--	1.7E-03
			Pyridine	--	--	--	Liver	6.4E-02	--	6.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.2E-04	--	3.2E-04
			Arsenic, organic	--	--	--	Urinary	2.6E-03	--	2.6E-03
			Arsenic, inorganic	7.3E-07	--	7.3E-07	Skin, Blood	1.9E-02	--	1.9E-02
			Cadmium	--	--	--	Urinary	2.3E-03	--	2.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.1E-05	--	2.1E-05
			Cobalt	--	--	--	Thyroid	3.7E-02	--	3.7E-02
			Copper	--	--	--	GI Tract	2.4E-02	--	2.4E-02
			Iron	--	--	--	GI Tract	5.0E-04	--	5.0E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.0E-04	--	1.0E-04
			Mercury	--	--	--	Immune	5.0E-02	--	5.0E-02
			Methyl Mercury	--	--	--	Neurological	1.8E-01	--	1.8E-01
			Selenium	--	--	--	Whole Body	5.4E-03	--	5.4E-03
			Silver	--	--	--	Skin	2.0E-04	--	2.0E-04
			Vanadium	--	--	--	Hair	2.8E-04	--	2.8E-04
			Zinc	--	--	--	Blood	2.4E-03	--	2.4E-03
			Total DLCs (excluding KM TEQs)			8.9E-06				9.9E-01
			Total DLCs (based on KM TEQs)			9.3E-06				1.0E+00
			Total PCDD/Fs (excluding KM TEQ)			4.2E-06				4.6E-01
			Total PCDD/Fs (based on KM TEQ)			4.1E-06				4.5E-01
			Total DL-PCBs (excluding KM TEQ)			4.8E-06				5.3E-01
			Total DL-PCBs (based on KM TEQ)			5.2E-06				5.8E-01
			Total Non-DL PCBs			1.2E-06				7.3E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-06				1.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			6.5E-06				1.3E+00
			Total PAHs			1.6E-07				1.4E-03
			Total Organics			7.2E-07				2.5E-01
			Total Inorganics			7.3E-07				3.2E-01
	Mixed Fish/All Species Total (excluding KM TEQs)					1.2E-05				2.3E+00
	Mixed Fish/All Species Total (based on KM TEQs)					1.2E-05				2.3E+00
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.6E-06	--	3.6E-06	Reproductive	4.1E-01	--	4.1E-01
			1,2,3,7,8-PeCDD	2.9E-07	--	2.9E-07	Reproductive	3.2E-02	--	3.2E-02
			1,2,3,4,7,8-HxCDD	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDD	7.9E-08	--	7.9E-08	Reproductive	8.7E-03	--	8.7E-03
			1,2,3,7,8,9-HxCDD	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	5.4E-09	--	5.4E-09	Reproductive	6.0E-04	--	6.0E-04
			OCDD	3.9E-10	--	3.9E-10	Reproductive	4.4E-05	--	4.4E-05
			2,3,7,8-TCDF	4.4E-09	--	4.4E-09	Reproductive	4.8E-04	--	4.8E-04
			1,2,3,7,8-PeCDF	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			2,3,4,7,8-PeCDF	4.8E-07	--	4.8E-07	Reproductive	5.3E-02	--	5.3E-02
			1,2,3,4,7,8-HxCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,6,7,8-HxCDF	8.4E-08	--	8.4E-08	Reproductive	9.3E-03	--	9.3E-03
			1,2,3,7,8,9-HxCDF	4.7E-09	--	4.7E-09	Reproductive	5.3E-04	--	5.3E-04
			2,3,4,6,7,8-HxCDF	1.5E-08	--	1.5E-08	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,4,6,7,8-HpCDF	2.0E-08	--	2.0E-08	Reproductive	2.2E-03	--	2.2E-03
			1,2,3,4,7,8,9-HpCDF	6.7E-10	--	6.7E-10	Reproductive	7.4E-05	--	7.4E-05
			OCDF	4.5E-11	--	4.5E-11	Reproductive	5.0E-06	--	5.0E-06
			KM TEQ DF	4.7E-06	--	4.7E-06	Reproductive	5.2E-01	--	5.2E-01
			PCB-77	3.4E-09	--	3.4E-09	Reproductive	3.8E-04	--	3.8E-04
			PCB-81	1.6E-09	--	1.6E-09	Reproductive	1.8E-04	--	1.8E-04
			PCB-105	2.8E-07	--	2.8E-07	Reproductive	3.2E-02	--	3.2E-02
			PCB-114	1.8E-08	--	1.8E-08	Reproductive	2.0E-03	--	2.0E-03
			PCB-118	9.7E-07	--	9.7E-07	Reproductive	1.1E-01	--	1.1E-01
			PCB-123	1.9E-08	--	1.9E-08	Reproductive	2.1E-03	--	2.1E-03
			PCB-126	5.5E-06	--	5.5E-06	Reproductive	6.1E-01	--	6.1E-01
			PCB-156/157	8.5E-08	--	8.5E-08	Reproductive	9.4E-03	--	9.4E-03
			PCB-167	3.7E-08	--	3.7E-08	Reproductive	4.1E-03	--	4.1E-03
			PCB-169	6.0E-08	--	6.0E-08	Reproductive	6.6E-03	--	6.6E-03
			PCB-189	6.6E-09	--	6.6E-09	Reproductive	7.4E-04	--	7.4E-04
			KM TEQ PCB	9.9E-06	--	9.9E-06	Reproductive	1.1E+00	--	1.1E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-06	--	1.8E-06	Whole Body	1.1E+00	--	1.1E+00
			PAHs							
			Benz(a)anthracene	1.1E-08	--	1.1E-08	--	--	--	--
			Benzo(a)pyrene	1.1E-07	--	1.1E-07	Developmental	2.1E-03	--	2.1E-03
			Benzo(b)fluoranthene	1.1E-08	--	1.1E-08	--	--	--	--
			Chrysene	1.1E-10	--	1.1E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.1E-07	--	1.1E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.1E-08	--	1.1E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.2E-09	--	2.2E-09	Liver	3.5E-03	--	3.5E-03
			2,4'-DDE	1.9E-09	--	1.9E-09	Liver	2.2E-04	--	2.2E-04
			2,4'-DDT	4.0E-10	--	4.0E-10	Liver	2.7E-05	--	2.7E-05
			4,4'-DDD	9.2E-08	--	9.2E-08	Liver	1.5E-01	--	1.5E-01
			4,4'-DDE	2.7E-07	--	2.7E-07	Liver	3.1E-02	--	3.1E-02
			4,4'-DDT	8.5E-09	--	8.5E-09	Liver	5.8E-04	--	5.8E-04
			Benzaldehyde	2.2E-08	--	2.2E-08	GI Tract, Kidney	6.4E-04	--	6.4E-04
			Chlordane, alpha (cis)	1.3E-08	--	1.3E-08	Liver	8.7E-04	--	8.7E-04
			Chlordane, gamma (trans)	3.9E-09	--	3.9E-09	Liver	2.6E-04	--	2.6E-04
			Dieldrin	6.8E-07	--	6.8E-07	Liver	9.9E-03	--	9.9E-03
			Heptachlor epoxide, cis-	9.1E-08	--	9.1E-08	Liver	9.0E-03	--	9.0E-03
			Heptachlor epoxide, trans-	9.2E-09	--	9.2E-09	Liver	9.1E-04	--	9.1E-04
			Hexachlorobenzene	1.8E-08	--	1.8E-08	Liver	1.7E-04	--	1.7E-04
			Mirex	1.4E-08	--	1.4E-08	Liver, Thyroid	4.4E-05	--	4.4E-05

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Nonachlor, cis-	1.1E-08	--	1.1E-08	Liver	3.5E-03	--	3.5E-03
			Nonachlor, trans-	2.8E-08	--	2.8E-08	Liver	6.0E-02	--	6.0E-02
			Oxychlordane	1.4E-08	--	1.4E-08	Liver	5.2E-03	--	5.2E-03
			Pyridine	--	--	--	Liver	6.4E-02	--	6.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.1E-04	--	3.1E-04
			Arsenic, organic	--	--	--	Urinary	2.6E-03	--	2.6E-03
			Arsenic, inorganic	7.6E-07	--	7.6E-07	Skin, Blood	2.0E-02	--	2.0E-02
			Cadmium	--	--	--	Urinary	2.2E-03	--	2.2E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	8.0E-05	--	8.0E-05
			Cobalt	--	--	--	Thyroid	1.2E-03	--	1.2E-03
			Copper	--	--	--	GI Tract	1.0E-02	--	1.0E-02
			Iron	--	--	--	GI Tract	5.3E-04	--	5.3E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-04	--	1.2E-04
			Mercury	--	--	--	Immune	6.9E-02	--	6.9E-02
			Methyl Mercury	--	--	--	Neurological	2.3E-01	--	2.3E-01
			Selenium	--	--	--	Whole Body	5.1E-03	--	5.1E-03
			Silver	--	--	--	Skin	2.0E-04	--	2.0E-04
			Vanadium	--	--	--	Hair	2.2E-04	--	2.2E-04
			Zinc	--	--	--	Blood	4.8E-03	--	4.8E-03
			Total DLCs (excluding KM TEQs)			1.2E-05				1.3E+00
			Total DLCs (based on KM TEQs)			1.5E-05				1.6E+00
			Total PCDD/Fs (excluding KM TEQ)			4.8E-06				5.3E-01
			Total PCDD/Fs (based on KM TEQ)			4.7E-06				5.2E-01
			Total DL-PCBs (excluding KM TEQ)			6.9E-06				7.7E-01
			Total DL-PCBs (based on KM TEQ)			9.9E-06				1.1E+00
			Total Non-DL PCBs			1.8E-06				1.1E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			8.7E-06				1.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-05				2.1E+00
			Total PAHs			2.5E-07				2.1E-03
			Total Organics			1.3E-06				3.4E-01
			Total Inorganics			7.6E-07				3.4E-01
	American Eel Total (excluding KM TEQs)					1.6E-05				3.0E+00
	American Eel Total (based on KM TEQs)					1.9E-05				3.4E+00
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.2E-07	--	6.2E-07	Reproductive	6.9E-02	--	6.9E-02
			1,2,3,7,8-PeCDD	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8-HxCDD	3.0E-09	--	3.0E-09	Reproductive	3.4E-04	--	3.4E-04
			1,2,3,6,7,8-HxCDD	8.3E-09	--	8.3E-09	Reproductive	9.2E-04	--	9.2E-04
			1,2,3,7,8,9-HxCDD	2.9E-09	--	2.9E-09	Reproductive	3.2E-04	--	3.2E-04
			1,2,3,4,6,7,8-HpCDD	5.9E-10	--	5.9E-10	Reproductive	6.5E-05	--	6.5E-05
			OCDD	3.2E-11	--	3.2E-11	Reproductive	3.6E-06	--	3.6E-06
			2,3,7,8-TCDF	1.6E-08	--	1.6E-08	Reproductive	1.8E-03	--	1.8E-03
			1,2,3,7,8-PeCDF	8.3E-09	--	8.3E-09	Reproductive	9.2E-04	--	9.2E-04
			2,3,4,7,8-PeCDF	9.4E-08	--	9.4E-08	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,7,8-HxCDF	3.9E-09	--	3.9E-09	Reproductive	4.3E-04	--	4.3E-04

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDF	9.5E-09	--	9.5E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,7,8,9-HxCDF	3.5E-09	--	3.5E-09	Reproductive	3.9E-04	--	3.9E-04
			2,3,4,6,7,8-HxCDF	2.3E-09	--	2.3E-09	Reproductive	2.6E-04	--	2.6E-04
			1,2,3,4,6,7,8-HpCDF	2.7E-09	--	2.7E-09	Reproductive	3.0E-04	--	3.0E-04
			1,2,3,4,7,8,9-HpCDF	3.2E-10	--	3.2E-10	Reproductive	3.5E-05	--	3.5E-05
			OCDF	2.1E-11	--	2.1E-11	Reproductive	2.4E-06	--	2.4E-06
			KM TEQ DF	8.4E-07	--	8.4E-07	Reproductive	9.3E-02	--	9.3E-02
			PCB-77	4.5E-09	--	4.5E-09	Reproductive	5.0E-04	--	5.0E-04
			PCB-81	4.9E-10	--	4.9E-10	Reproductive	5.5E-05	--	5.5E-05
			PCB-105	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			PCB-114	1.0E-09	--	1.0E-09	Reproductive	1.2E-04	--	1.2E-04
			PCB-118	7.2E-08	--	7.2E-08	Reproductive	8.0E-03	--	8.0E-03
			PCB-123	1.0E-09	--	1.0E-09	Reproductive	1.1E-04	--	1.1E-04
			PCB-126	1.8E-06	--	1.8E-06	Reproductive	1.9E-01	--	1.9E-01
			PCB-156/157	7.8E-09	--	7.8E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-167	4.0E-09	--	4.0E-09	Reproductive	4.4E-04	--	4.4E-04
			PCB-169	2.4E-08	--	2.4E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-189	7.7E-10	--	7.7E-10	Reproductive	8.6E-05	--	8.6E-05
			KM TEQ PCB	1.8E-06	--	1.8E-06	Reproductive	2.0E-01	--	2.0E-01
			Non-DL PCBs							
			Total Non-DL PCBs	3.6E-07	--	3.6E-07	Whole Body	2.1E-01	--	2.1E-01
			PAHs							
			Benz(a)anthracene	4.5E-09	--	4.5E-09	--	--	--	--
			Benzo(a)pyrene	4.5E-08	--	4.5E-08	Developmental	8.7E-04	--	8.7E-04
			Benzo(b)fluoranthene	4.5E-09	--	4.5E-09	--	--	--	--
			Chrysene	4.5E-11	--	4.5E-11	--	--	--	--
			Dibenz(a,h)anthracene	4.5E-08	--	4.5E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.5E-09	--	4.5E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	4.0E-10	--	4.0E-10	Liver	6.4E-04	--	6.4E-04
			2,4'-DDE	1.0E-09	--	1.0E-09	Liver	1.2E-04	--	1.2E-04
			2,4'-DDT	2.4E-10	--	2.4E-10	Liver	1.7E-05	--	1.7E-05
			4,4'-DDD	4.5E-09	--	4.5E-09	Liver	7.4E-03	--	7.4E-03
			4,4'-DDE	3.0E-08	--	3.0E-08	Liver	3.4E-03	--	3.4E-03
			4,4'-DDT	2.3E-08	--	2.3E-08	Liver	1.6E-03	--	1.6E-03
			Benzaldehyde	2.2E-08	--	2.2E-08	GI Tract, Kidney	6.4E-04	--	6.4E-04
			Chlordane, alpha (cis)	5.5E-09	--	5.5E-09	Liver	3.6E-04	--	3.6E-04
			Chlordane, gamma (trans)	2.3E-09	--	2.3E-09	Liver	1.5E-04	--	1.5E-04
			Dieldrin	2.1E-07	--	2.1E-07	Liver	3.1E-03	--	3.1E-03
			Heptachlor epoxide, cis-	2.9E-08	--	2.9E-08	Liver	2.9E-03	--	2.9E-03
			Heptachlor epoxide, trans-	4.1E-10	--	4.1E-10	Liver	4.1E-05	--	4.1E-05
			Hexachlorobenzene	2.4E-09	--	2.4E-09	Liver	2.2E-05	--	2.2E-05
			Mirex	4.4E-09	--	4.4E-09	Liver, Thyroid	1.4E-05	--	1.4E-05
			Nonachlor, cis-	1.6E-09	--	1.6E-09	Liver	5.4E-04	--	5.4E-04
			Nonachlor, trans-	3.3E-09	--	3.3E-09	Liver	7.0E-03	--	7.0E-03
			Oxychlordane	3.4E-10	--	3.4E-10	Liver	1.3E-04	--	1.3E-04
			Pyridine	--	--	--	Liver	6.4E-02	--	6.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.9E-04	--	2.9E-04

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Arsenic, organic	--	--	--	Urinary	1.6E-03	--	1.6E-03
			Arsenic, inorganic	4.6E-07	--	4.6E-07	Skin, Blood	1.2E-02	--	1.2E-02
			Cadmium	--	--	--	Urinary	2.3E-03	--	2.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.9E-06	--	2.9E-06
			Cobalt	--	--	--	Thyroid	3.7E-02	--	3.7E-02
			Copper	--	--	--	GI Tract	3.9E-02	--	3.9E-02
			Iron	--	--	--	GI Tract	7.0E-04	--	7.0E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	6.4E-05	--	6.4E-05
			Mercury	--	--	--	Immune	5.4E-02	--	5.4E-02
			Methyl Mercury	--	--	--	Neurological	1.9E-01	--	1.9E-01
			Selenium	--	--	--	Whole Body	5.3E-03	--	5.3E-03
			Silver	--	--	--	Skin	2.0E-04	--	2.0E-04
			Vanadium	--	--	--	Hair	2.3E-04	--	2.3E-04
			Zinc	--	--	--	Blood	2.9E-03	--	2.9E-03
			Total DLCs (excluding KM TEQs)			2.8E-06				3.1E-01
			Total DLCs (based on KM TEQs)			2.7E-06				3.0E-01
			Total PCDD/Fs (excluding KM TEQ)			9.0E-07				1.0E-01
			Total PCDD/Fs (based on KM TEQ)			8.4E-07				9.3E-02
			Total DL-PCBs (excluding KM TEQ)			1.9E-06				2.1E-01
			Total DL-PCBs (based on KM TEQ)			1.8E-06				2.0E-01
			Total Non-DL PCBs			3.6E-07				2.1E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.2E-06				4.2E-01
			Total PCBs (DL & NDL; based on KM TEQ)			2.2E-06				4.2E-01
			Total PAHs			1.0E-07				8.7E-04
			Total Organics			3.4E-07				9.2E-02
			Total Inorganics			4.6E-07				3.5E-01
	Bluefish Total (excluding KM TEQs)					4.0E-06				9.6E-01
	Bluefish Total (based on KM TEQs)					3.9E-06				9.5E-01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.9E-06	--	3.9E-06	Reproductive	4.3E-01	--	4.3E-01
			1,2,3,7,8-PeCDD	2.3E-07	--	2.3E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,4,7,8-HxCDD	8.5E-09	--	8.5E-09	Reproductive	9.4E-04	--	9.4E-04
			1,2,3,6,7,8-HxCDD	8.6E-09	--	8.6E-09	Reproductive	9.6E-04	--	9.6E-04
			1,2,3,7,8,9-HxCDD	3.6E-09	--	3.6E-09	Reproductive	4.0E-04	--	4.0E-04
			1,2,3,4,6,7,8-HpCDD	6.0E-09	--	6.0E-09	Reproductive	6.6E-04	--	6.6E-04
			OCDD	2.0E-09	--	2.0E-09	Reproductive	2.2E-04	--	2.2E-04
			2,3,7,8-TCDF	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,7,8-PeCDF	2.7E-08	--	2.7E-08	Reproductive	3.1E-03	--	3.1E-03
			2,3,4,7,8-PeCDF	4.1E-07	--	4.1E-07	Reproductive	4.5E-02	--	4.5E-02
			1,2,3,4,7,8-HxCDF	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDF	5.1E-08	--	5.1E-08	Reproductive	5.6E-03	--	5.6E-03
			1,2,3,7,8,9-HxCDF	5.0E-09	--	5.0E-09	Reproductive	5.6E-04	--	5.6E-04
			2,3,4,6,7,8-HxCDF	4.1E-09	--	4.1E-09	Reproductive	4.5E-04	--	4.5E-04
			1,2,3,4,6,7,8-HpCDF	1.4E-08	--	1.4E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			OCDF	2.4E-11	--	2.4E-11	Reproductive	2.6E-06	--	2.6E-06

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	4.8E-06	--	4.8E-06	Reproductive	5.4E-01	--	5.4E-01
			PCB-77	5.2E-08	--	5.2E-08	Reproductive	5.8E-03	--	5.8E-03
			PCB-81	3.9E-09	--	3.9E-09	Reproductive	4.3E-04	--	4.3E-04
			PCB-105	8.1E-08	--	8.1E-08	Reproductive	9.0E-03	--	9.0E-03
			PCB-114	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			PCB-118	5.1E-07	--	5.1E-07	Reproductive	5.7E-02	--	5.7E-02
			PCB-123	7.8E-09	--	7.8E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-126	8.6E-06	--	8.6E-06	Reproductive	9.6E-01	--	9.6E-01
			PCB-156/157	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-167	2.0E-08	--	2.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-169	4.6E-08	--	4.6E-08	Reproductive	5.1E-03	--	5.1E-03
			PCB-189	3.9E-09	--	3.9E-09	Reproductive	4.3E-04	--	4.3E-04
			KM TEQ PCB	8.9E-06	--	8.9E-06	Reproductive	9.9E-01	--	9.9E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.2E-06	--	2.2E-06	Whole Body	1.3E+00	--	1.3E+00
			PAHs							
			Benz(a)anthracene	4.5E-09	--	4.5E-09	--	--	--	--
			Benzo(a)pyrene	4.5E-08	--	4.5E-08	Developmental	8.7E-04	--	8.7E-04
			Benzo(b)fluoranthene	4.5E-09	--	4.5E-09	--	--	--	--
			Chrysene	4.5E-11	--	4.5E-11	--	--	--	--
			Dibenz(a,h)anthracene	4.5E-08	--	4.5E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.5E-09	--	4.5E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.3E-08	--	2.3E-08	Liver	3.7E-02	--	3.7E-02
			2,4'-DDE	1.3E-08	--	1.3E-08	Liver	1.4E-03	--	1.4E-03
			2,4'-DDT	3.0E-09	--	3.0E-09	Liver	2.0E-04	--	2.0E-04
			4,4'-DDD	9.5E-08	--	9.5E-08	Liver	1.5E-01	--	1.5E-01
			4,4'-DDE	1.5E-07	--	1.5E-07	Liver	1.7E-02	--	1.7E-02
			4,4'-DDT	1.5E-08	--	1.5E-08	Liver	1.0E-03	--	1.0E-03
			Benzaldehyde	2.2E-08	--	2.2E-08	GI Tract, Kidney	6.4E-04	--	6.4E-04
			Chlordane, alpha (cis)	3.3E-08	--	3.3E-08	Liver	2.2E-03	--	2.2E-03
			Chlordane, gamma (trans)	6.3E-09	--	6.3E-09	Liver	4.2E-04	--	4.2E-04
			Dieldrin	5.1E-07	--	5.1E-07	Liver	7.5E-03	--	7.5E-03
			Heptachlor epoxide, cis-	4.5E-08	--	4.5E-08	Liver	4.4E-03	--	4.4E-03
			Heptachlor epoxide, trans-	4.1E-10	--	4.1E-10	Liver	4.1E-05	--	4.1E-05
			Hexachlorobenzene	4.7E-09	--	4.7E-09	Liver	4.3E-05	--	4.3E-05
			Mirex	9.7E-09	--	9.7E-09	Liver, Thyroid	3.1E-05	--	3.1E-05
			Nonachlor, cis-	1.1E-08	--	1.1E-08	Liver	3.6E-03	--	3.6E-03
			Nonachlor, trans-	2.8E-08	--	2.8E-08	Liver	6.1E-02	--	6.1E-02
			Oxychlordane	3.8E-09	--	3.8E-09	Liver	1.4E-03	--	1.4E-03
			Pyridine	--	--	--	Liver	6.4E-02	--	6.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.8E-04	--	2.8E-04
			Arsenic, organic	--	--	--	Urinary	2.8E-03	--	2.8E-03
			Arsenic, inorganic	8.1E-07	--	8.1E-07	Skin, Blood	2.1E-02	--	2.1E-02
			Cadmium	--	--	--	Urinary	2.3E-03	--	2.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	4.0E-06	--	4.0E-06
			Cobalt	--	--	--	Thyroid	3.3E-03	--	3.3E-03
			Copper	--	--	--	GI Tract	2.8E-02	--	2.8E-02

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Iron	--	--	--	GI Tract	4.7E-04	--	4.7E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	7.6E-05	--	7.6E-05
			Mercury	--	--	--	Immune	4.6E-02	--	4.6E-02
			Methyl Mercury	--	--	--	Neurological	1.7E-01	--	1.7E-01
			Selenium	--	--	--	Whole Body	3.7E-03	--	3.7E-03
			Silver	--	--	--	Skin	2.0E-04	--	2.0E-04
			Vanadium	--	--	--	Hair	3.0E-04	--	3.0E-04
			Zinc	--	--	--	Blood	1.2E-03	--	1.2E-03
			Total DLCs (excluding KM TEQs)			1.4E-05				1.6E+00
			Total DLCs (based on KM TEQs)			1.4E-05				1.5E+00
			Total PCDD/Fs (excluding KM TEQ)			4.8E-06				5.4E-01
			Total PCDD/Fs (based on KM TEQ)			4.8E-06				5.4E-01
			Total DL-PCBs (excluding KM TEQ)			9.4E-06				1.0E+00
			Total DL-PCBs (based on KM TEQ)			8.9E-06				9.9E-01
			Total Non-DL PCBs			2.2E-06				1.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.2E-05				2.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-05				2.2E+00
			Total PAHs			1.0E-07				8.7E-04
			Total Organics			9.8E-07				3.6E-01
			Total Inorganics			8.1E-07				2.8E-01
	Striped Bass Total (excluding KM TEQs)					1.8E-05				3.5E+00
	Striped Bass Total (based on KM TEQs)					1.8E-05				3.4E+00
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.3E-06	--	2.3E-06	Reproductive	2.5E-01	--	2.5E-01
			1,2,3,7,8-PeCDD	1.0E-07	--	1.0E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,7,8-HxCDD	3.4E-09	--	3.4E-09	Reproductive	3.7E-04	--	3.7E-04
			1,2,3,6,7,8-HxCDD	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8,9-HxCDD	4.5E-09	--	4.5E-09	Reproductive	5.0E-04	--	5.0E-04
			1,2,3,4,6,7,8-HpCDD	1.3E-09	--	1.3E-09	Reproductive	1.4E-04	--	1.4E-04
			OCDD	5.6E-11	--	5.6E-11	Reproductive	6.2E-06	--	6.2E-06
			2,3,7,8-TCDF	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8-PeCDF	4.4E-09	--	4.4E-09	Reproductive	4.8E-04	--	4.8E-04
			2,3,4,7,8-PeCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,7,8-HxCDF	2.7E-08	--	2.7E-08	Reproductive	3.0E-03	--	3.0E-03
			1,2,3,6,7,8-HxCDF	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8,9-HxCDF	5.9E-09	--	5.9E-09	Reproductive	6.6E-04	--	6.6E-04
			2,3,4,6,7,8-HxCDF	4.5E-09	--	4.5E-09	Reproductive	5.0E-04	--	5.0E-04
			1,2,3,4,6,7,8-HpCDF	2.1E-09	--	2.1E-09	Reproductive	2.3E-04	--	2.3E-04
			1,2,3,4,7,8,9-HpCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			OCDF	2.5E-11	--	2.5E-11	Reproductive	2.8E-06	--	2.8E-06
			KM TEQ DF	2.5E-06	--	2.5E-06	Reproductive	2.8E-01	--	2.8E-01
			PCB-77	6.5E-09	--	6.5E-09	Reproductive	7.2E-04	--	7.2E-04
			PCB-81	2.0E-09	--	2.0E-09	Reproductive	2.3E-04	--	2.3E-04
			PCB-105	3.8E-08	--	3.8E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-114	3.2E-09	--	3.2E-09	Reproductive	3.6E-04	--	3.6E-04
			PCB-118	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	2.4E-09	--	2.4E-09	Reproductive	2.7E-04	--	2.7E-04
			PCB-126	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-156/157	1.6E-08	--	1.6E-08	Reproductive	1.8E-03	--	1.8E-03
			PCB-167	7.3E-09	--	7.3E-09	Reproductive	8.1E-04	--	8.1E-04
			PCB-169	2.8E-08	--	2.8E-08	Reproductive	3.1E-03	--	3.1E-03
			PCB-189	1.1E-09	--	1.1E-09	Reproductive	1.2E-04	--	1.2E-04
			KM TEQ PCB	2.2E-06	--	2.2E-06	Reproductive	2.4E-01	--	2.4E-01
			Non-DL PCBs							
			Total Non-DL PCBs	4.5E-07	--	4.5E-07	Whole Body	2.6E-01	--	2.6E-01
			PAHs							
			Benz(a)anthracene	4.5E-09	--	4.5E-09	--	--	--	--
			Benzo(a)pyrene	4.5E-08	--	4.5E-08	Developmental	8.7E-04	--	8.7E-04
			Benzo(b)fluoranthene	4.5E-09	--	4.5E-09	--	--	--	--
			Chrysene	4.5E-11	--	4.5E-11	--	--	--	--
			Dibenz(a,h)anthracene	4.5E-08	--	4.5E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.5E-09	--	4.5E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.3E-09	--	2.3E-09	Liver	3.8E-03	--	3.8E-03
			2,4'-DDE	2.7E-09	--	2.7E-09	Liver	3.1E-04	--	3.1E-04
			2,4'-DDT	2.4E-10	--	2.4E-10	Liver	1.7E-05	--	1.7E-05
			4,4'-DDD	1.3E-08	--	1.3E-08	Liver	2.1E-02	--	2.1E-02
			4,4'-DDE	4.0E-08	--	4.0E-08	Liver	4.5E-03	--	4.5E-03
			4,4'-DDT	1.6E-09	--	1.6E-09	Liver	1.1E-04	--	1.1E-04
			Benzaldehyde	2.2E-08	--	2.2E-08	GI Tract, Kidney	6.4E-04	--	6.4E-04
			Chlordane, alpha (cis)	1.9E-09	--	1.9E-09	Liver	1.3E-04	--	1.3E-04
			Chlordane, gamma (trans)	6.9E-10	--	6.9E-10	Liver	4.6E-05	--	4.6E-05
			Dieldrin	6.7E-08	--	6.7E-08	Liver	9.8E-04	--	9.8E-04
			Heptachlor epoxide, cis-	8.3E-09	--	8.3E-09	Liver	8.2E-04	--	8.2E-04
			Heptachlor epoxide, trans-	4.1E-10	--	4.1E-10	Liver	4.1E-05	--	4.1E-05
			Hexachlorobenzene	2.2E-09	--	2.2E-09	Liver	2.0E-05	--	2.0E-05
			Mirex	2.1E-09	--	2.1E-09	Liver, Thyroid	6.7E-06	--	6.7E-06
			Nonachlor, cis-	1.1E-09	--	1.1E-09	Liver	3.6E-04	--	3.6E-04
			Nonachlor, trans-	3.0E-09	--	3.0E-09	Liver	6.4E-03	--	6.4E-03
			Oxychlordane	1.2E-09	--	1.2E-09	Liver	4.6E-04	--	4.6E-04
			Pyridine	--	--	--	Liver	6.4E-02	--	6.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.8E-04	--	2.8E-04
			Arsenic, organic	--	--	--	Urinary	4.1E-03	--	4.1E-03
			Arsenic, inorganic	1.2E-06	--	1.2E-06	Skin, Blood	3.0E-02	--	3.0E-02
			Cadmium	--	--	--	Urinary	2.3E-03	--	2.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	1.5E-05	--	1.5E-05
			Cobalt	--	--	--	Thyroid	1.4E-01	--	1.4E-01
			Copper	--	--	--	GI Tract	1.0E-02	--	1.0E-02
			Iron	--	--	--	GI Tract	3.6E-04	--	3.6E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.1E-04	--	1.1E-04
			Mercury	--	--	--	Immune	3.0E-02	--	3.0E-02
			Methyl Mercury	--	--	--	Neurological	1.1E-01	--	1.1E-01
			Selenium	--	--	--	Whole Body	6.3E-03	--	6.3E-03

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Silver	--	--	--	Skin	2.0E-04	--	2.0E-04
			Vanadium	--	--	--	Hair	3.0E-04	--	3.0E-04
			Zinc	--	--	--	Blood	1.1E-03	--	1.1E-03
			Total DLCs (excluding KM TEQs)			4.8E-06				5.4E-01
			Total DLCs (based on KM TEQs)			4.7E-06				5.2E-01
			Total PCDD/Fs (excluding KM TEQ)			2.6E-06				2.9E-01
			Total PCDD/Fs (based on KM TEQ)			2.5E-06				2.8E-01
			Total DL-PCBs (excluding KM TEQ)			2.3E-06				2.5E-01
			Total DL-PCBs (based on KM TEQ)			2.2E-06				2.4E-01
			Total Non-DL PCBs			4.5E-07				2.6E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.7E-06				5.1E-01
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-06				5.1E-01
			Total PAHs			1.0E-07				8.7E-04
			Total Organics			1.7E-07				1.0E-01
			Total Inorganics			1.2E-06				3.3E-01
	Summer Flounder Total (excluding KM TEQs)					6.7E-06				1.2E+00
	Summer Flounder Total (based on KM TEQs)					6.6E-06				1.2E+00
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.7E-06	--	6.7E-06	Reproductive	7.4E-01	--	7.4E-01
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8-HxCDD	1.0E-08	--	1.0E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	2.5E-08	--	2.5E-08	Reproductive	2.8E-03	--	2.8E-03
			1,2,3,7,8,9-HxCDD	5.8E-09	--	5.8E-09	Reproductive	6.5E-04	--	6.5E-04
			1,2,3,4,6,7,8-HpCDD	1.5E-09	--	1.5E-09	Reproductive	1.7E-04	--	1.7E-04
			OCDD	1.1E-10	--	1.1E-10	Reproductive	1.2E-05	--	1.2E-05
			2,3,7,8-TCDF	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,7,8-PeCDF	3.8E-08	--	3.8E-08	Reproductive	4.2E-03	--	4.2E-03
			2,3,4,7,8-PeCDF	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			1,2,3,4,7,8-HxCDF	6.7E-08	--	6.7E-08	Reproductive	7.5E-03	--	7.5E-03
			1,2,3,6,7,8-HxCDF	4.9E-08	--	4.9E-08	Reproductive	5.5E-03	--	5.5E-03
			1,2,3,7,8,9-HxCDF	4.4E-09	--	4.4E-09	Reproductive	4.8E-04	--	4.8E-04
			2,3,4,6,7,8-HxCDF	8.9E-09	--	8.9E-09	Reproductive	9.9E-04	--	9.9E-04
			1,2,3,4,6,7,8-HpCDF	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,7,8,9-HpCDF	3.6E-10	--	3.6E-10	Reproductive	4.1E-05	--	4.1E-05
			OCDF	2.7E-11	--	2.7E-11	Reproductive	3.0E-06	--	3.0E-06
			KM TEQ DF	7.5E-06	--	7.5E-06	Reproductive	8.4E-01	--	8.4E-01
			PCB-77	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-81	5.0E-09	--	5.0E-09	Reproductive	5.6E-04	--	5.6E-04
			PCB-105	1.0E-07	--	1.0E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-114	7.7E-09	--	7.7E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-118	3.8E-07	--	3.8E-07	Reproductive	4.3E-02	--	4.3E-02
			PCB-123	7.6E-09	--	7.6E-09	Reproductive	8.5E-04	--	8.5E-04
			PCB-126	2.8E-06	--	2.8E-06	Reproductive	3.1E-01	--	3.1E-01
			PCB-156/157	3.9E-08	--	3.9E-08	Reproductive	4.3E-03	--	4.3E-03
			PCB-167	1.6E-08	--	1.6E-08	Reproductive	1.8E-03	--	1.8E-03
			PCB-169	1.0E-07	--	1.0E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-189	3.1E-09	--	3.1E-09	Reproductive	3.4E-04	--	3.4E-04

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ PCB	3.4E-06	--	3.4E-06	Reproductive	3.8E-01	--	3.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-06	--	1.4E-06	Whole Body	8.4E-01	--	8.4E-01
			PAHs							
			Benz(a)anthracene	1.1E-08	--	1.1E-08	--	--	--	--
			Benzo(a)pyrene	1.1E-07	--	1.1E-07	Developmental	2.1E-03	--	2.1E-03
			Benzo(b)fluoranthene	1.1E-08	--	1.1E-08	--	--	--	--
			Chrysene	1.1E-10	--	1.1E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.1E-07	--	1.1E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.1E-08	--	1.1E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	3.6E-08	--	3.6E-08	Liver	5.8E-02	--	5.8E-02
			2,4'-DDE	1.0E-08	--	1.0E-08	Liver	1.2E-03	--	1.2E-03
			2,4'-DDT	1.5E-08	--	1.5E-08	Liver	1.1E-03	--	1.1E-03
			4,4'-DDD	1.1E-07	--	1.1E-07	Liver	1.8E-01	--	1.8E-01
			4,4'-DDE	1.2E-07	--	1.2E-07	Liver	1.3E-02	--	1.3E-02
			4,4'-DDT	3.1E-08	--	3.1E-08	Liver	2.1E-03	--	2.1E-03
			Benzaldehyde	2.2E-08	--	2.2E-08	GI Tract, Kidney	6.4E-04	--	6.4E-04
			Chlordane, alpha (cis)	2.2E-08	--	2.2E-08	Liver	1.5E-03	--	1.5E-03
			Chlordane, gamma (trans)	4.9E-09	--	4.9E-09	Liver	3.2E-04	--	3.2E-04
			Dieldrin	3.5E-07	--	3.5E-07	Liver	5.0E-03	--	5.0E-03
			Heptachlor epoxide, cis-	5.1E-08	--	5.1E-08	Liver	5.0E-03	--	5.0E-03
			Heptachlor epoxide, trans-	4.1E-10	--	4.1E-10	Liver	4.1E-05	--	4.1E-05
			Hexachlorobenzene	5.7E-09	--	5.7E-09	Liver	5.2E-05	--	5.2E-05
			Mirex	1.2E-08	--	1.2E-08	Liver, Thyroid	3.8E-05	--	3.8E-05
			Nonachlor, cis-	7.3E-09	--	7.3E-09	Liver	2.4E-03	--	2.4E-03
			Nonachlor, trans-	2.0E-08	--	2.0E-08	Liver	4.4E-02	--	4.4E-02
			Oxychlordane	3.0E-09	--	3.0E-09	Liver	1.1E-03	--	1.1E-03
			Pyridine	--	--	--	Liver	6.4E-02	--	6.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	4.3E-04	--	4.3E-04
			Arsenic, organic	--	--	--	Urinary	1.7E-03	--	1.7E-03
			Arsenic, inorganic	4.9E-07	--	4.9E-07	Skin, Blood	1.3E-02	--	1.3E-02
			Cadmium	--	--	--	Urinary	2.3E-03	--	2.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	4.7E-06	--	4.7E-06
			Cobalt	--	--	--	Thyroid	3.3E-03	--	3.3E-03
			Copper	--	--	--	GI Tract	3.1E-02	--	3.1E-02
			Iron	--	--	--	GI Tract	4.3E-04	--	4.3E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.3E-04	--	1.3E-04
			Mercury	--	--	--	Immune	5.0E-02	--	5.0E-02
			Methyl Mercury	--	--	--	Neurological	2.0E-01	--	2.0E-01
			Selenium	--	--	--	Whole Body	6.4E-03	--	6.4E-03
			Silver	--	--	--	Skin	2.0E-04	--	2.0E-04
			Vanadium	--	--	--	Hair	3.4E-04	--	3.4E-04
			Zinc	--	--	--	Blood	2.1E-03	--	2.1E-03
			Total DLCs (excluding KM TEQs)			1.1E-05				1.2E+00
			Total DLCs (based on KM TEQs)			1.1E-05				1.2E+00
			Total PCDD/Fs (excluding KM TEQ)			7.7E-06				8.5E-01

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			7.5E-06				8.4E-01
			Total DL-PCBs (excluding KM TEQ)			3.5E-06				3.9E-01
			Total DL-PCBs (based on KM TEQ)			3.4E-06				3.8E-01
			Total Non-DL PCBs			1.4E-06				8.4E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.9E-06				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			4.8E-06				1.2E+00
			Total PAHs			2.5E-07				2.1E-03
			Total Organics			8.1E-07				3.8E-01
			Total Inorganics			4.9E-07				3.2E-01
	White Perch Total (excluding KM TEQs)					1.4E-05				2.8E+00
	White Perch Total (based on KM TEQs)					1.4E-05				2.7E+00
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.3E-05	--	1.3E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	3.4E-07	--	3.4E-07	Reproductive	3.8E-02	--	3.8E-02
			1,2,3,4,7,8-HxCDD	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	2.9E-08	--	2.9E-08	Reproductive	3.2E-03	--	3.2E-03
			1,2,3,7,8,9-HxCDD	1.0E-08	--	1.0E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,4,6,7,8-HpCDD	3.4E-09	--	3.4E-09	Reproductive	3.7E-04	--	3.7E-04
			OCDD	3.0E-10	--	3.0E-10	Reproductive	3.3E-05	--	3.3E-05
			2,3,7,8-TCDF	4.8E-07	--	4.8E-07	Reproductive	5.3E-02	--	5.3E-02
			1,2,3,7,8-PeCDF	3.1E-08	--	3.1E-08	Reproductive	3.5E-03	--	3.5E-03
			2,3,4,7,8-PeCDF	7.2E-07	--	7.2E-07	Reproductive	8.0E-02	--	8.0E-02
			1,2,3,4,7,8-HxCDF	2.3E-07	--	2.3E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDF	6.9E-08	--	6.9E-08	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,7,8,9-HxCDF	4.2E-09	--	4.2E-09	Reproductive	4.7E-04	--	4.7E-04
			2,3,4,6,7,8-HxCDF	1.8E-08	--	1.8E-08	Reproductive	2.0E-03	--	2.0E-03
			1,2,3,4,6,7,8-HpCDF	2.3E-08	--	2.3E-08	Reproductive	2.6E-03	--	2.6E-03
			1,2,3,4,7,8,9-HpCDF	3.3E-10	--	3.3E-10	Reproductive	3.7E-05	--	3.7E-05
			OCDF	3.6E-11	--	3.6E-11	Reproductive	4.0E-06	--	4.0E-06
			KM TEQ DF	1.5E-05	--	1.5E-05	Reproductive	1.7E+00	--	1.7E+00
			PCB-77	9.6E-08	--	9.6E-08	Reproductive	1.1E-02	--	1.1E-02
			PCB-81	1.3E-08	--	1.3E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-105	1.5E-07	--	1.5E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-114	1.3E-08	--	1.3E-08	Reproductive	1.5E-03	--	1.5E-03
			PCB-118	6.9E-07	--	6.9E-07	Reproductive	7.7E-02	--	7.7E-02
			PCB-123	1.2E-08	--	1.2E-08	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	4.8E-06	--	4.8E-06	Reproductive	5.3E-01	--	5.3E-01
			PCB-156/157	5.5E-08	--	5.5E-08	Reproductive	6.1E-03	--	6.1E-03
			PCB-167	2.3E-08	--	2.3E-08	Reproductive	2.6E-03	--	2.6E-03
			PCB-169	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-189	4.0E-09	--	4.0E-09	Reproductive	4.4E-04	--	4.4E-04
			KM TEQ PCB	5.7E-06	--	5.7E-06	Reproductive	6.4E-01	--	6.4E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-06	--	1.1E-06	Whole Body	6.2E-01	--	6.2E-01
			PAHs							
			Benz(a)anthracene	1.9E-09	--	1.9E-09	--	--	--	--
			Benzo(a)pyrene	1.8E-08	--	1.8E-08	Developmental	3.4E-04	--	3.4E-04
			Benzo(b)fluoranthene	1.7E-09	--	1.7E-09	--	--	--	--

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chrysene	2.4E-11	--	2.4E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.7E-08	--	1.7E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.4E-08	--	1.4E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.7E-10	--	1.7E-10	Liver	2.8E-04	--	2.8E-04
			2,4'-DDE	5.0E-10	--	5.0E-10	Liver	5.7E-05	--	5.7E-05
			2,4'-DDT	2.2E-10	--	2.2E-10	Liver	1.5E-05	--	1.5E-05
			4,4'-DDD	2.8E-08	--	2.8E-08	Liver	4.5E-02	--	4.5E-02
			4,4'-DDE	1.1E-07	--	1.1E-07	Liver	1.2E-02	--	1.2E-02
			4,4'-DDT	1.2E-09	--	1.2E-09	Liver	8.3E-05	--	8.3E-05
			Benzaldehyde	1.6E-08	--	1.6E-08	GI Tract, Kidney	4.6E-04	--	4.6E-04
			Chlordane, alpha (cis)	2.3E-09	--	2.3E-09	Liver	1.6E-04	--	1.6E-04
			Chlordane, gamma (trans)	2.9E-10	--	2.9E-10	Liver	2.0E-05	--	2.0E-05
			Dieldrin	3.2E-07	--	3.2E-07	Liver	4.7E-03	--	4.7E-03
			Heptachlor epoxide, cis-	1.1E-07	--	1.1E-07	Liver	1.1E-02	--	1.1E-02
			Heptachlor epoxide, trans-	3.5E-08	--	3.5E-08	Liver	3.4E-03	--	3.4E-03
			Hexachlorobenzene	5.8E-09	--	5.8E-09	Liver	5.3E-05	--	5.3E-05
			Mirex	1.2E-08	--	1.2E-08	Liver, Thyroid	3.9E-05	--	3.9E-05
			Nonachlor, cis-	6.1E-09	--	6.1E-09	Liver	2.0E-03	--	2.0E-03
			Nonachlor, trans-	1.2E-08	--	1.2E-08	Liver	2.6E-02	--	2.6E-02
			Oxychlordane	1.8E-08	--	1.8E-08	Liver	6.7E-03	--	6.7E-03
			Pyridine	--	--	--	Liver	1.9E-02	--	1.9E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.5E-04	--	3.5E-04
			Arsenic, organic	--	--	--	Urinary	4.9E-03	--	4.9E-03
			Arsenic, inorganic	1.4E-06	--	1.4E-06	Skin, Blood	3.6E-02	--	3.6E-02
			Cadmium	--	--	--	Urinary	1.5E-02	--	1.5E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	4.3E-06	--	4.3E-06
			Cobalt	--	--	--	Thyroid	1.1E-02	--	1.1E-02
			Copper	--	--	--	GI Tract	1.1E+00	--	1.1E+00
			Iron	--	--	--	GI Tract	2.1E-03	--	2.1E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.7E-03	--	2.7E-03
			Mercury	--	--	--	Immune	1.9E-02	--	1.9E-02
			Methyl Mercury	--	--	--	Neurological	6.6E-02	--	6.6E-02
			Selenium	--	--	--	Whole Body	8.7E-03	--	8.7E-03
			Silver	--	--	--	Skin	6.0E-03	--	6.0E-03
			Vanadium	--	--	--	Hair	5.6E-04	--	5.6E-04
			Zinc	--	--	--	Blood	6.0E-03	--	6.0E-03
Total DLCs (excluding KM TEQs)						2.1E-05				2.3E+00
Total DLCs (based on KM TEQs)						2.1E-05				2.3E+00
Total PCDD/Fs (excluding KM TEQ)						1.5E-05				1.7E+00
Total PCDD/Fs (based on KM TEQ)						1.5E-05				1.7E+00
Total DL-PCBs (excluding KM TEQ)						6.0E-06				6.7E-01
Total DL-PCBs (based on KM TEQ)						5.7E-06				6.4E-01
Total Non-DL PCBs						1.1E-06				6.2E-01
Total PCBs (DL & NDL; excluding KM TEQ)						7.1E-06				1.3E+00
Total PCBs (DL & NDL; based on KM TEQ)						6.8E-06				1.3E+00

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PAHs			5.3E-08				3.4E-04
			Total Organics			6.7E-07				1.3E-01
			Total Inorganics			1.4E-06				1.3E+00
	Crab (H+M) Total (excluding KM TEQs)					2.4E-05				4.4E+00
	Crab (H+M) Total (based on KM TEQs)					2.4E-05				4.3E+00
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.9E-06	--	1.9E-06	Reproductive	2.1E-01	--	2.1E-01
			1,2,3,7,8-PeCDD	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8-HxCDD	1.4E-09	--	1.4E-09	Reproductive	1.5E-04	--	1.5E-04
			1,2,3,6,7,8-HxCDD	3.4E-09	--	3.4E-09	Reproductive	3.8E-04	--	3.8E-04
			1,2,3,7,8,9-HxCDD	1.8E-09	--	1.8E-09	Reproductive	2.0E-04	--	2.0E-04
			1,2,3,4,6,7,8-HpCDD	6.6E-10	--	6.6E-10	Reproductive	7.4E-05	--	7.4E-05
			OCDD	6.8E-11	--	6.8E-11	Reproductive	7.6E-06	--	7.6E-06
			2,3,7,8-TCDF	5.7E-08	--	5.7E-08	Reproductive	6.3E-03	--	6.3E-03
			1,2,3,7,8-PeCDF	4.0E-09	--	4.0E-09	Reproductive	4.4E-04	--	4.4E-04
			2,3,4,7,8-PeCDF	7.1E-08	--	7.1E-08	Reproductive	7.9E-03	--	7.9E-03
			1,2,3,4,7,8-HxCDF	3.5E-08	--	3.5E-08	Reproductive	3.9E-03	--	3.9E-03
			1,2,3,6,7,8-HxCDF	8.9E-09	--	8.9E-09	Reproductive	9.9E-04	--	9.9E-04
			1,2,3,7,8,9-HxCDF	3.5E-09	--	3.5E-09	Reproductive	3.9E-04	--	3.9E-04
			2,3,4,6,7,8-HxCDF	2.3E-09	--	2.3E-09	Reproductive	2.5E-04	--	2.5E-04
			1,2,3,4,6,7,8-HpCDF	1.9E-09	--	1.9E-09	Reproductive	2.2E-04	--	2.2E-04
			1,2,3,4,7,8,9-HpCDF	1.7E-10	--	1.7E-10	Reproductive	1.9E-05	--	1.9E-05
			OCDF	1.4E-11	--	1.4E-11	Reproductive	1.5E-06	--	1.5E-06
			KM TEQ DF	2.2E-06	--	2.2E-06	Reproductive	2.4E-01	--	2.4E-01
			PCB-77	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			PCB-81	1.3E-09	--	1.3E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-105	1.6E-08	--	1.6E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-114	1.4E-09	--	1.4E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-118	5.9E-08	--	5.9E-08	Reproductive	6.5E-03	--	6.5E-03
			PCB-123	1.2E-09	--	1.2E-09	Reproductive	1.3E-04	--	1.3E-04
			PCB-126	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			PCB-156/157	4.8E-09	--	4.8E-09	Reproductive	5.3E-04	--	5.3E-04
			PCB-167	1.8E-09	--	1.8E-09	Reproductive	2.0E-04	--	2.0E-04
			PCB-169	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			PCB-189	2.3E-10	--	2.3E-10	Reproductive	2.6E-05	--	2.6E-05
			KM TEQ PCB	5.0E-07	--	5.0E-07	Reproductive	5.6E-02	--	5.6E-02
			Non-DL PCBs							
			Total Non-DL PCBs	9.1E-08	--	9.1E-08	Whole Body	5.3E-02	--	5.3E-02
			PAHs							
			Benz(a)anthracene	8.6E-09	--	8.6E-09	--	--	--	--
			Benzo(a)pyrene	8.6E-08	--	8.6E-08	Developmental	1.7E-03	--	1.7E-03
			Benzo(b)fluoranthene	8.6E-09	--	8.6E-09	--	--	--	--
			Chrysene	8.6E-11	--	8.6E-11	--	--	--	--
			Dibenz(a,h)anthracene	8.6E-08	--	8.6E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	8.6E-09	--	8.6E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.9E-11	--	1.9E-11	Liver	3.1E-05	--	3.1E-05
			2,4'-DDE	5.4E-11	--	5.4E-11	Liver	6.2E-06	--	6.2E-06
			2,4'-DDT	4.2E-11	--	4.2E-11	Liver	2.9E-06	--	2.9E-06

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			4,4'-DDD	4.1E-09	--	4.1E-09	Liver	6.6E-03	--	6.6E-03
			4,4'-DDE	1.6E-08	--	1.6E-08	Liver	1.9E-03	--	1.9E-03
			4,4'-DDT	1.7E-10	--	1.7E-10	Liver	1.2E-05	--	1.2E-05
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	5.0E-04	--	5.0E-04
			Chlordane, alpha (cis)	6.7E-10	--	6.7E-10	Liver	4.5E-05	--	4.5E-05
			Chlordane, gamma (trans)	3.0E-11	--	3.0E-11	Liver	2.0E-06	--	2.0E-06
			Dieldrin	7.1E-08	--	7.1E-08	Liver	1.0E-03	--	1.0E-03
			Heptachlor epoxide, cis-	9.8E-09	--	9.8E-09	Liver	9.7E-04	--	9.7E-04
			Heptachlor epoxide, trans-	6.8E-09	--	6.8E-09	Liver	6.7E-04	--	6.7E-04
			Hexachlorobenzene	1.2E-09	--	1.2E-09	Liver	1.1E-05	--	1.1E-05
			Mirex	3.0E-09	--	3.0E-09	Liver, Thyroid	9.8E-06	--	9.8E-06
			Nonachlor, cis-	7.6E-10	--	7.6E-10	Liver	2.5E-04	--	2.5E-04
			Nonachlor, trans-	1.4E-09	--	1.4E-09	Liver	3.0E-03	--	3.0E-03
			Oxychlordane	2.0E-09	--	2.0E-09	Liver	7.3E-04	--	7.3E-04
			Pyridine	--	--	--	Liver	1.6E-02	--	1.6E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	2.2E-04	--	2.2E-04
			Arsenic, organic	--	--	--	Urinary	4.5E-03	--	4.5E-03
			Arsenic, inorganic	1.3E-06	--	1.3E-06	Skin, Blood	3.4E-02	--	3.4E-02
			Cadmium	--	--	--	Urinary	6.3E-03	--	6.3E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	3.9E-06	--	3.9E-06
			Cobalt	--	--	--	Thyroid	9.0E-03	--	9.0E-03
			Copper	--	--	--	GI Tract	7.0E-01	--	7.0E-01
			Iron	--	--	--	GI Tract	1.0E-03	--	1.0E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.7E-03	--	1.7E-03
			Mercury	--	--	--	Immune	2.3E-02	--	2.3E-02
			Methyl Mercury	--	--	--	Neurological	8.2E-02	--	8.2E-02
			Selenium	--	--	--	Whole Body	7.1E-03	--	7.1E-03
			Silver	--	--	--	Skin	3.7E-03	--	3.7E-03
			Vanadium	--	--	--	Hair	3.3E-04	--	3.3E-04
			Zinc	--	--	--	Blood	6.1E-03	--	6.1E-03
			Total DLCs (excluding KM TEQs)			2.9E-06				3.2E-01
			Total DLCs (based on KM TEQs)			2.7E-06				3.0E-01
			Total PCDD/Fs (excluding KM TEQ)			2.2E-06				2.5E-01
			Total PCDD/Fs (based on KM TEQ)			2.2E-06				2.4E-01
			Total DL-PCBs (excluding KM TEQ)			6.8E-07				7.6E-02
			Total DL-PCBs (based on KM TEQ)			5.0E-07				5.6E-02
			Total Non-DL PCBs			9.1E-08				5.3E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			7.7E-07				1.3E-01
			Total PCBs (DL & NDL; based on KM TEQ)			5.9E-07				1.1E-01
			Total PAHs			2.0E-07				1.7E-03
			Total Organics			1.3E-07				3.2E-02
			Total Inorganics			1.3E-06				8.8E-01
	Crab (Muscle) Total (excluding KM TEQs)					4.6E-06				1.3E+00
	Crab (Muscle) Total (based on KM TEQs)					4.4E-06				1.3E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDD	4.5E-05	--	4.5E-05	Reproductive	5.0E+00	--	5.0E+00
			1,2,3,7,8-PeCDD	1.1E-06	--	1.1E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,4,7,8-HxCDD	3.4E-08	--	3.4E-08	Reproductive	3.8E-03	--	3.8E-03
			1,2,3,6,7,8-HxCDD	1.0E-07	--	1.0E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,7,8,9-HxCDD	3.5E-08	--	3.5E-08	Reproductive	3.9E-03	--	3.9E-03
			1,2,3,4,6,7,8-HpCDD	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			OCDD	9.6E-10	--	9.6E-10	Reproductive	1.1E-04	--	1.1E-04
			2,3,7,8-TCDF	1.7E-06	--	1.7E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,7,8-PeCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,7,8-PeCDF	2.6E-06	--	2.6E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,4,7,8-HxCDF	8.2E-07	--	8.2E-07	Reproductive	9.1E-02	--	9.1E-02
			1,2,3,6,7,8-HxCDF	2.5E-07	--	2.5E-07	Reproductive	2.8E-02	--	2.8E-02
			1,2,3,7,8,9-HxCDF	6.7E-09	--	6.7E-09	Reproductive	7.5E-04	--	7.5E-04
			2,3,4,6,7,8-HxCDF	6.4E-08	--	6.4E-08	Reproductive	7.1E-03	--	7.1E-03
			1,2,3,4,6,7,8-HpCDF	8.4E-08	--	8.4E-08	Reproductive	9.3E-03	--	9.3E-03
			1,2,3,4,7,8,9-HpCDF	6.8E-10	--	6.8E-10	Reproductive	7.5E-05	--	7.5E-05
			OCDF	1.2E-10	--	1.2E-10	Reproductive	1.4E-05	--	1.4E-05
			KM TEQ DF	5.2E-05	--	5.2E-05	Reproductive	5.7E+00	--	5.7E+00
			PCB-77	3.4E-07	--	3.4E-07	Reproductive	3.8E-02	--	3.8E-02
			PCB-81	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-105	5.5E-07	--	5.5E-07	Reproductive	6.1E-02	--	6.1E-02
			PCB-114	4.7E-08	--	4.7E-08	Reproductive	5.2E-03	--	5.2E-03
			PCB-118	2.5E-06	--	2.5E-06	Reproductive	2.8E-01	--	2.8E-01
			PCB-123	4.4E-08	--	4.4E-08	Reproductive	4.9E-03	--	4.9E-03
			PCB-126	1.7E-05	--	1.7E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-156/157	2.0E-07	--	2.0E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-167	8.4E-08	--	8.4E-08	Reproductive	9.4E-03	--	9.4E-03
			PCB-169	5.4E-07	--	5.4E-07	Reproductive	6.0E-02	--	6.0E-02
			PCB-189	1.5E-08	--	1.5E-08	Reproductive	1.6E-03	--	1.6E-03
			KM TEQ PCB	2.1E-05	--	2.1E-05	Reproductive	2.3E+00	--	2.3E+00
			Non-DL PCBs							
			Total Non-DL PCBs	3.9E-06	--	3.9E-06	Whole Body	2.3E+00	--	2.3E+00
			PAHs							
			Benz(a)anthracene	2.1E-09	--	2.1E-09	--	--	--	--
			Benzo(a)pyrene	1.9E-08	--	1.9E-08	Developmental	3.6E-04	--	3.6E-04
			Benzo(b)fluoranthene	1.8E-09	--	1.8E-09	--	--	--	--
			Chrysene	3.0E-11	--	3.0E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-08	--	1.8E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.0E-08	--	5.0E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	6.0E-10	--	6.0E-10	Liver	9.7E-04	--	9.7E-04
			2,4'-DDE	1.8E-09	--	1.8E-09	Liver	2.0E-04	--	2.0E-04
			2,4'-DDT	7.3E-10	--	7.3E-10	Liver	5.0E-05	--	5.0E-05
			4,4'-DDD	9.6E-08	--	9.6E-08	Liver	1.6E-01	--	1.6E-01
			4,4'-DDE	3.6E-07	--	3.6E-07	Liver	4.1E-02	--	4.1E-02
			4,4'-DDT	4.2E-09	--	4.2E-09	Liver	2.9E-04	--	2.9E-04
			Benzaldehyde	3.3E-08	--	3.3E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	7.6E-09	--	7.6E-09	Liver	5.1E-04	--	5.1E-04
			Chlordane, gamma (trans)	1.0E-09	--	1.0E-09	Liver	6.9E-05	--	6.9E-05

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Dieldrin	1.1E-06	--	1.1E-06	Liver	1.6E-02	--	1.6E-02
			Heptachlor epoxide, cis-	3.9E-07	--	3.9E-07	Liver	3.9E-02	--	3.9E-02
			Heptachlor epoxide, trans-	1.2E-07	--	1.2E-07	Liver	1.1E-02	--	1.1E-02
			Hexachlorobenzene	1.9E-08	--	1.9E-08	Liver	1.7E-04	--	1.7E-04
			Mirex	4.0E-08	--	4.0E-08	Liver, Thyroid	1.3E-04	--	1.3E-04
			Nonachlor, cis-	2.1E-08	--	2.1E-08	Liver	7.1E-03	--	7.1E-03
			Nonachlor, trans-	4.3E-08	--	4.3E-08	Liver	9.3E-02	--	9.3E-02
			Oxychlordane	6.4E-08	--	6.4E-08	Liver	2.4E-02	--	2.4E-02
			Pyridine	--	--	--	Liver	3.1E-02	--	3.1E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.1E-03	--	1.1E-03
			Arsenic, organic	--	--	--	Urinary	6.0E-03	--	6.0E-03
			Arsenic, inorganic	1.7E-06	--	1.7E-06	Skin, Blood	4.4E-02	--	4.4E-02
			Cadmium	--	--	--	Urinary	4.9E-02	--	4.9E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	7.3E-06	--	7.3E-06
			Cobalt	--	--	--	Thyroid	2.9E-02	--	2.9E-02
			Copper	--	--	--	GI Tract	2.9E+00	--	2.9E+00
			Iron	--	--	--	GI Tract	5.6E-03	--	5.6E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	5.1E-03	--	5.1E-03
			Mercury	--	--	--	Immune	9.6E-03	--	9.6E-03
			Methyl Mercury	--	--	--	Neurological	2.3E-02	--	2.3E-02
			Selenium	--	--	--	Whole Body	1.4E-02	--	1.4E-02
			Silver	--	--	--	Skin	1.5E-02	--	1.5E-02
			Vanadium	--	--	--	Hair	1.3E-03	--	1.3E-03
			Zinc	--	--	--	Blood	6.1E-03	--	6.1E-03
			Total DLCs (excluding KM TEQs)			7.4E-05				8.2E+00
			Total DLCs (based on KM TEQs)			7.2E-05				8.0E+00
			Total PCDD/Fs (excluding KM TEQ)			5.2E-05				5.8E+00
			Total PCDD/Fs (based on KM TEQ)			5.2E-05				5.7E+00
			Total DL-PCBs (excluding KM TEQ)			2.2E-05				2.4E+00
			Total DL-PCBs (based on KM TEQ)			2.1E-05				2.3E+00
			Total Non-DL PCBs			3.9E-06				2.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-05				4.7E+00
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-05				4.6E+00
			Total PAHs			9.0E-08				3.6E-04
			Total Organics			2.3E-06				4.2E-01
			Total Inorganics			1.7E-06				3.1E+00
	Crab (Hepatopancreas) Total (excluding KM TEQs)					8.2E-05				1.4E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					8.0E-05				1.4E+01
Sediment	Sediment	Angler - Fishing Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.1E-08	3.3E-08	6.4E-08	Reproductive	3.5E-03	3.7E-03	7.1E-03
			1,2,3,7,8-PeCDD	1.6E-09	1.7E-09	3.4E-09	Reproductive	1.8E-04	1.9E-04	3.7E-04
			1,2,3,4,7,8-HxCDD	1.5E-10	1.6E-10	3.0E-10	Reproductive	1.6E-05	1.7E-05	3.4E-05
			1,2,3,6,7,8-HxCDD	5.9E-10	6.3E-10	1.2E-09	Reproductive	6.6E-05	7.0E-05	1.4E-04
			1,2,3,7,8,9-HxCDD	3.5E-10	3.7E-10	7.2E-10	Reproductive	3.9E-05	4.1E-05	8.0E-05
			1,2,3,4,6,7,8-HpCDD	1.0E-09	1.1E-09	2.2E-09	Reproductive	1.2E-04	1.2E-04	2.4E-04

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Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			OCDD	3.2E-10	3.4E-10	6.6E-10	Reproductive	3.5E-05	3.8E-05	7.3E-05
			2,3,7,8-TCDF	5.6E-10	6.0E-10	1.2E-09	Reproductive	6.2E-05	6.6E-05	1.3E-04
			1,2,3,7,8-PeCDF	1.2E-10	1.2E-10	2.4E-10	Reproductive	1.3E-05	1.4E-05	2.6E-05
			2,3,4,7,8-PeCDF	1.9E-09	2.0E-09	4.0E-09	Reproductive	2.1E-04	2.3E-04	4.4E-04
			1,2,3,4,7,8-HxCDF	2.9E-09	3.1E-09	6.1E-09	Reproductive	3.3E-04	3.5E-04	6.7E-04
			1,2,3,6,7,8-HxCDF	7.6E-10	8.1E-10	1.6E-09	Reproductive	8.5E-05	9.0E-05	1.8E-04
			1,2,3,7,8,9-HxCDF	5.7E-11	6.1E-11	1.2E-10	Reproductive	6.3E-06	6.8E-06	1.3E-05
			2,3,4,6,7,8-HxCDF	4.3E-10	4.5E-10	8.8E-10	Reproductive	4.7E-05	5.0E-05	9.8E-05
			1,2,3,4,6,7,8-HpCDF	1.3E-09	1.4E-09	2.7E-09	Reproductive	1.4E-04	1.5E-04	3.0E-04
			1,2,3,4,7,8,9-HpCDF	4.4E-11	4.7E-11	9.1E-11	Reproductive	4.9E-06	5.2E-06	1.0E-05
			OCDF	5.5E-11	5.8E-11	1.1E-10	Reproductive	6.1E-06	6.4E-06	1.3E-05
			KM TEQ DF	4.2E-08	4.5E-08	8.7E-08	Reproductive	4.7E-03	5.0E-03	9.7E-03
			PCB-77	3.1E-10	3.3E-10	6.5E-10	Reproductive	3.5E-05	3.7E-05	7.2E-05
			PCB-81	3.6E-11	3.9E-11	7.5E-11	Reproductive	4.0E-06	4.3E-06	8.3E-06
			PCB-105	1.5E-10	1.6E-10	3.1E-10	Reproductive	1.7E-05	1.8E-05	3.5E-05
			PCB-114	1.0E-11	1.1E-11	2.1E-11	Reproductive	1.2E-06	1.2E-06	2.4E-06
			PCB-118	4.4E-10	4.7E-10	9.1E-10	Reproductive	4.9E-05	5.2E-05	1.0E-04
			PCB-123	1.3E-11	1.4E-11	2.6E-11	Reproductive	1.4E-06	1.5E-06	2.9E-06
			PCB-126	9.9E-09	1.1E-08	2.1E-08	Reproductive	1.1E-03	1.2E-03	2.3E-03
			PCB-156/157	4.0E-11	4.2E-11	8.2E-11	Reproductive	4.4E-06	4.7E-06	9.1E-06
			PCB-167	1.4E-11	1.5E-11	2.9E-11	Reproductive	1.6E-06	1.7E-06	3.2E-06
			PCB-169	3.1E-09	3.3E-09	6.3E-09	Reproductive	3.4E-04	3.6E-04	7.0E-04
			PCB-189	3.0E-12	3.2E-12	6.1E-12	Reproductive	3.3E-07	3.5E-07	6.8E-07
			KM TEQ PCB	1.2E-08	1.3E-08	2.6E-08	Reproductive	1.4E-03	1.5E-03	2.8E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-09	8.9E-09	1.1E-08	Whole Body	1.0E-03	5.2E-03	6.2E-03
			PAHs							
			Benz(a)anthracene	1.1E-09	5.2E-09	6.4E-09	--	--	--	--
			Benzo(a)pyrene	1.1E-08	5.1E-08	6.2E-08	Developmental	2.1E-04	9.9E-04	1.2E-03
			Benzo(b)fluoranthene	9.9E-10	4.6E-09	5.6E-09	--	--	--	--
			Benzo(k)fluoranthene	6.4E-11	3.0E-10	3.6E-10	--	--	--	--
			Chrysene	1.1E-11	5.0E-11	6.1E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.3E-09	1.1E-08	1.3E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	4.1E-10	1.9E-09	2.3E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	4.5E-05	--	4.5E-05
			TPH (C9-C40)	--	--	--	Respiratory	3.3E-03	--	3.3E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	3.8E-04	--	3.8E-04
			Antimony	--	--	--	Whole Body	1.9E-04	--	1.9E-04
			Arsenic, inorganic	7.5E-08	1.3E-07	2.1E-07	Skin, Blood	1.9E-03	3.4E-03	5.4E-03
			Cadmium	--	--	--	Urinary	9.7E-05	1.4E-04	2.4E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	2.3E-06	--	2.3E-06
			Cobalt	--	--	--	Thyroid	1.5E-03	--	1.5E-03
			Copper	--	--	--	GI Tract	5.3E-03	--	5.3E-03
			Chromium (VI)	3.8E-09	--	3.8E-09	No Effect	1.5E-05	--	1.5E-05
			Iron	--	--	--	GI Tract	2.0E-03	--	2.0E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	4.7E-04	--	4.7E-04

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mercury	--	--	--	Immune	2.1E-04	--	2.1E-04
			Nickel	--	--	--	Body Weight, Organ Weights	1.1E-04	--	1.1E-04
			Thallium	--	--	--	Skin, Hair	7.7E-04	--	7.7E-04
			Vanadium	--	--	--	Hair	3.2E-04	--	3.2E-04
			Zinc	--	--	--	Blood	1.3E-04	--	1.3E-04
			Total DLCs (excluding KM TEQs)			1.2E-07				1.3E-02
			Total DLCs (based on KM TEQs)			1.1E-07				1.3E-02
			Total PCDD/Fs (excluding KM TEQ)			8.9E-08				9.9E-03
			Total PCDD/Fs (based on KM TEQ)			8.7E-08				9.7E-03
			Total DL-PCBs (excluding KM TEQ)			2.9E-08				3.2E-03
			Total DL-PCBs (based on KM TEQ)			2.6E-08				2.8E-03
			Total Non-DL PCBs			1.1E-08				6.2E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			4.0E-08				9.4E-03
			Total PCBs (DL & NDL; based on KM TEQ)			3.6E-08				9.1E-03
			Total PAHs			8.9E-08				1.2E-03
			Total Organics			0.0E+00				3.3E-03
			Total Inorganics			2.1E-07				1.7E-02
	Fishing - Sediment Total (excluding KM TEQs)					4.3E-07				4.1E-02
	Fishing - Sediment Total (based on KM TEQs)					4.3E-07				4.0E-02
Surface Water	Surface Water	Angler - Fishing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.5E-10	--	2.5E-10	Reproductive	2.8E-05	--	2.8E-05
			1,2,3,7,8-PeCDD	8.6E-11	--	8.6E-11	Reproductive	9.6E-06	--	9.6E-06
			1,2,3,4,7,8-HxCDD	6.2E-11	--	6.2E-11	Reproductive	6.9E-06	--	6.9E-06
			1,2,3,6,7,8-HxCDD	1.0E-11	--	1.0E-11	Reproductive	1.1E-06	--	1.1E-06
			1,2,3,7,8,9-HxCDD	1.8E-11	--	1.8E-11	Reproductive	2.0E-06	--	2.0E-06
			1,2,3,4,6,7,8-HpCDD	1.3E-11	--	1.3E-11	Reproductive	1.4E-06	--	1.4E-06
			OCDD	3.9E-12	--	3.9E-12	Reproductive	4.4E-07	--	4.4E-07
			2,3,7,8-TCDF	9.7E-12	--	9.7E-12	Reproductive	1.1E-06	--	1.1E-06
			1,2,3,7,8-PeCDF	2.3E-12	--	2.3E-12	Reproductive	2.6E-07	--	2.6E-07
			2,3,4,7,8-PeCDF	4.0E-11	--	4.0E-11	Reproductive	4.5E-06	--	4.5E-06
			1,2,3,4,7,8-HxCDF	3.7E-11	--	3.7E-11	Reproductive	4.1E-06	--	4.1E-06
			1,2,3,6,7,8-HxCDF	9.0E-12	--	9.0E-12	Reproductive	1.0E-06	--	1.0E-06
			1,2,3,7,8,9-HxCDF	5.4E-11	--	5.4E-11	Reproductive	6.0E-06	--	6.0E-06
			2,3,4,6,7,8-HxCDF	5.7E-12	--	5.7E-12	Reproductive	6.3E-07	--	6.3E-07
			1,2,3,4,6,7,8-HpCDF	1.6E-11	--	1.6E-11	Reproductive	1.7E-06	--	1.7E-06
			1,2,3,4,7,8,9-HpCDF	9.9E-13	--	9.9E-13	Reproductive	1.1E-07	--	1.1E-07
			OCDF	8.9E-13	--	8.9E-13	Reproductive	9.8E-08	--	9.8E-08
			KM TEQ DF	5.0E-10	--	5.0E-10	Reproductive	5.5E-05	--	5.5E-05
			PCB-77	4.2E-13	--	4.2E-13	Reproductive	4.6E-08	--	4.6E-08
			PCB-81	4.2E-14	--	4.2E-14	Reproductive	4.6E-09	--	4.6E-09
			PCB-105	4.5E-13	--	4.5E-13	Reproductive	5.0E-08	--	5.0E-08
			PCB-114	2.3E-14	--	2.3E-14	Reproductive	2.6E-09	--	2.6E-09
			PCB-118	1.0E-12	--	1.0E-12	Reproductive	1.1E-07	--	1.1E-07
			PCB-123	1.9E-14	--	1.9E-14	Reproductive	2.1E-09	--	2.1E-09
			PCB-126	1.4E-11	--	1.4E-11	Reproductive	1.5E-06	--	1.5E-06
			PCB-156/157	1.2E-13	--	1.2E-13	Reproductive	1.3E-08	--	1.3E-08
			PCB-167	4.0E-14	--	4.0E-14	Reproductive	4.4E-09	--	4.4E-09

TABLE 9.2.CTE
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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-169	2.5E-12	--	2.5E-12	Reproductive	2.7E-07	--	2.7E-07
			PCB-189	5.2E-15	--	5.2E-15	Reproductive	5.8E-10	--	5.8E-10
			KM TEQ PCB	2.2E-11	--	2.2E-11	Reproductive	2.5E-06	--	2.5E-06
			PAHs							
			Benz(a)anthracene	3.2E-12	--	3.2E-12	--	--	--	--
			Benzo(a)pyrene	4.1E-11	--	4.1E-11	Developmental	8.0E-07	--	8.0E-07
			Benzo(b)fluoranthene	5.6E-12	--	5.6E-12	--	--	--	--
			Benzo(k)fluoranthene	2.5E-13	--	2.5E-13	--	--	--	--
			Chrysene	5.5E-14	--	5.5E-14	--	--	--	--
			Dibenz(a,h)anthracene	1.1E-11	--	1.1E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.3E-12	--	2.3E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.8E-08	6.7E-07	7.0E-07
			Pesticides & Organics							
			Chloroform	5.0E-12	1.7E-11	2.2E-11	Liver	1.9E-07	6.3E-07	8.2E-07
			Trichloroethylene	1.6E-11	9.9E-11	1.2E-10	Thymus, Blood, Immune, Developmental	4.1E-06	2.5E-05	2.9E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	2.8E-05	3.3E-05	6.0E-05
			Arsenic, inorganic	2.6E-09	4.6E-10	3.1E-09	Skin, Blood	6.7E-05	1.2E-05	7.9E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	1.4E-08	1.9E-07	2.0E-07
			Chromium (VI)	3.0E-10	4.3E-09	4.6E-09	No Effect	1.2E-06	1.7E-05	1.8E-05
			Iron	--	--	--	GI Tract	1.2E-05	2.1E-06	1.4E-05
			Manganese	--	--	--	Neurological	4.6E-05	2.0E-04	2.5E-04
			Mercury	--	--	--	Immune	1.4E-06	3.5E-06	4.9E-06
			Thallium	--	--	--	Skin, Hair	2.0E-05	3.5E-06	2.3E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			6.3E-10				7.1E-05
			Total DLCs (based on KM TEQs)			5.2E-10				5.7E-05
			Total PCDD/Fs (excluding KM TEQ)			6.2E-10				6.9E-05
			Total PCDD/Fs (based on KM TEQ)			5.0E-10				5.5E-05
			Total DL-PCBs (excluding KM TEQ)			1.8E-11				2.0E-06
			Total DL-PCBs (based on KM TEQ)			2.2E-11				2.5E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-11				2.0E-06
			Total PCBs (DL & NDL; based on KM TEQ)			2.2E-11				2.5E-06
			Total PAHs			6.3E-11				1.5E-06
			Total Organics			1.4E-10				3.0E-05
			Total Inorganics			7.6E-09				4.5E-04
	Fishing - Surface Water Total (excluding KM TEQs)					8.5E-09				5.5E-04
	Fishing - Surface Water Total (based on KM TEQs)					8.4E-09				5.4E-04
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.2E-05				2.3E+00
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.3E-05				2.4E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.6E-05				3.1E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.9E-05				3.4E+00
Sediment	Sediment	Angler - Crabbing Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.9E-08	2.1E-08	4.0E-08	Reproductive	2.2E-03	2.3E-03	4.5E-03
			1,2,3,7,8-PeCDD	1.0E-09	1.1E-09	2.1E-09	Reproductive	1.1E-04	1.2E-04	2.3E-04

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BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	9.2E-11	9.7E-11	1.9E-10	Reproductive	1.0E-05	1.1E-05	2.1E-05
			1,2,3,6,7,8-HxCDD	3.7E-10	3.9E-10	7.6E-10	Reproductive	4.1E-05	4.4E-05	8.5E-05
			1,2,3,7,8,9-HxCDD	2.2E-10	2.3E-10	4.5E-10	Reproductive	2.4E-05	2.6E-05	5.0E-05
			1,2,3,4,6,7,8-HpCDD	6.5E-10	6.9E-10	1.3E-09	Reproductive	7.2E-05	7.7E-05	1.5E-04
			OCDD	2.0E-10	2.1E-10	4.1E-10	Reproductive	2.2E-05	2.4E-05	4.6E-05
			2,3,7,8-TCDF	3.5E-10	3.7E-10	7.2E-10	Reproductive	3.9E-05	4.1E-05	8.0E-05
			1,2,3,7,8-PeCDF	7.2E-11	7.7E-11	1.5E-10	Reproductive	8.0E-06	8.5E-06	1.7E-05
			2,3,4,7,8-PeCDF	1.2E-09	1.3E-09	2.5E-09	Reproductive	1.3E-04	1.4E-04	2.8E-04
			1,2,3,4,7,8-HxCDF	1.8E-09	2.0E-09	3.8E-09	Reproductive	2.0E-04	2.2E-04	4.2E-04
			1,2,3,6,7,8-HxCDF	4.8E-10	5.1E-10	9.9E-10	Reproductive	5.3E-05	5.7E-05	1.1E-04
			1,2,3,7,8,9-HxCDF	3.6E-11	3.8E-11	7.4E-11	Reproductive	4.0E-06	4.2E-06	8.2E-06
			2,3,4,6,7,8-HxCDF	2.7E-10	2.8E-10	5.5E-10	Reproductive	3.0E-05	3.1E-05	6.1E-05
			1,2,3,4,6,7,8-HpCDF	8.1E-10	8.7E-10	1.7E-09	Reproductive	9.0E-05	9.6E-05	1.9E-04
			1,2,3,4,7,8,9-HpCDF	2.8E-11	2.9E-11	5.7E-11	Reproductive	3.1E-06	3.3E-06	6.3E-06
			OCDF	3.4E-11	3.6E-11	7.0E-11	Reproductive	3.8E-06	4.0E-06	7.8E-06
			KM TEQ DF	2.6E-08	2.8E-08	5.5E-08	Reproductive	2.9E-03	3.1E-03	6.1E-03
			PCB-77	2.0E-10	2.1E-10	4.0E-10	Reproductive	2.2E-05	2.3E-05	4.5E-05
			PCB-81	2.3E-11	2.4E-11	4.7E-11	Reproductive	2.5E-06	2.7E-06	5.2E-06
			PCB-105	9.4E-11	1.0E-10	2.0E-10	Reproductive	1.0E-05	1.1E-05	2.2E-05
			PCB-114	6.5E-12	6.9E-12	1.3E-11	Reproductive	7.2E-07	7.7E-07	1.5E-06
			PCB-118	2.8E-10	2.9E-10	5.7E-10	Reproductive	3.1E-05	3.3E-05	6.3E-05
			PCB-123	8.0E-12	8.5E-12	1.7E-11	Reproductive	8.9E-07	9.5E-07	1.8E-06
			PCB-126	6.2E-09	6.6E-09	1.3E-08	Reproductive	6.9E-04	7.4E-04	1.4E-03
			PCB-156/157	2.5E-11	2.6E-11	5.1E-11	Reproductive	2.7E-06	2.9E-06	5.7E-06
			PCB-167	8.8E-12	9.4E-12	1.8E-11	Reproductive	9.8E-07	1.0E-06	2.0E-06
			PCB-169	1.9E-09	2.0E-09	4.0E-09	Reproductive	2.1E-04	2.3E-04	4.4E-04
			PCB-189	1.9E-12	2.0E-12	3.8E-12	Reproductive	2.1E-07	2.2E-07	4.3E-07
			KM TEQ PCB	7.8E-09	8.3E-09	1.6E-08	Reproductive	8.6E-04	9.2E-04	1.8E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-09	5.6E-09	6.7E-09	Whole Body	6.5E-04	3.2E-03	3.9E-03
			PAHs							
			Benz(a)anthracene	7.1E-10	3.3E-09	4.0E-09	--	--	--	--
			Benzo(a)pyrene	6.9E-09	3.2E-08	3.9E-08	Developmental	1.3E-04	6.2E-04	7.5E-04
			Benzo(b)fluoranthene	6.2E-10	2.9E-09	3.5E-09	--	--	--	--
			Benzo(k)fluoranthene	4.0E-11	1.9E-10	2.3E-10	--	--	--	--
			Chrysene	6.8E-12	3.1E-11	3.8E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.4E-09	6.6E-09	8.0E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.6E-10	1.2E-09	1.4E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	2.8E-05	--	2.8E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.0E-03	--	2.0E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	2.4E-04	--	2.4E-04
			Antimony	--	--	--	Whole Body	1.2E-04	--	1.2E-04
			Arsenic, inorganic	4.7E-08	8.3E-08	1.3E-07	Skin, Blood	1.2E-03	2.2E-03	3.4E-03
			Cadmium	--	--	--	Urinary	6.1E-05	8.6E-05	1.5E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.4E-06	--	1.4E-06
			Cobalt	--	--	--	Thyroid	9.3E-04	--	9.3E-04
			Copper	--	--	--	GI Tract	3.3E-03	--	3.3E-03

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium (VI)	2.4E-09	--	2.4E-09	No Effect	9.2E-06	--	9.2E-06
			Iron	--	--	--	GI Tract	1.2E-03	--	1.2E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.9E-04	--	2.9E-04
			Mercury	--	--	--	Immune	1.3E-04	--	1.3E-04
			Nickel	--	--	--	Body Weight, Organ Weights	6.6E-05	--	6.6E-05
			Thallium	--	--	--	Skin, Hair	4.8E-04	--	4.8E-04
			Vanadium	--	--	--	Hair	2.0E-04	--	2.0E-04
			Zinc	--	--	--	Blood	8.1E-05	--	8.1E-05
			Total DLCs (excluding KM TEQs)			7.4E-08				8.2E-03
			Total DLCs (based on KM TEQs)			7.1E-08				7.9E-03
			Total PCDD/Fs (excluding KM TEQ)			5.6E-08				6.2E-03
			Total PCDD/Fs (based on KM TEQ)			5.5E-08				6.1E-03
			Total DL-PCBs (excluding KM TEQ)			1.8E-08				2.0E-03
			Total DL-PCBs (based on KM TEQ)			1.6E-08				1.8E-03
			Total Non-DL PCBs			6.7E-09				3.9E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			2.5E-08				5.9E-03
			Total PCBs (DL & NDL; based on KM TEQ)			2.3E-08				5.7E-03
			Total PAHs			5.6E-08				7.5E-04
			Total Organics			0.0E+00				2.1E-03
			Total Inorganics			1.3E-07				1.1E-02
	Crabbing - Sediment Total (excluding KM TEQs)					2.7E-07				2.6E-02
	Crabbing - Sediment Total (based on KM TEQs)					2.7E-07				2.5E-02
Surface Water	Surface Water	Angler - Crabbing Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.6E-10	--	1.6E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,7,8-PeCDD	5.4E-11	--	5.4E-11	Reproductive	6.0E-06	--	6.0E-06
			1,2,3,4,7,8-HxCDD	3.9E-11	--	3.9E-11	Reproductive	4.3E-06	--	4.3E-06
			1,2,3,6,7,8-HxCDD	6.2E-12	--	6.2E-12	Reproductive	6.9E-07	--	6.9E-07
			1,2,3,7,8,9-HxCDD	1.1E-11	--	1.1E-11	Reproductive	1.2E-06	--	1.2E-06
			1,2,3,4,6,7,8-HpCDD	7.9E-12	--	7.9E-12	Reproductive	8.7E-07	--	8.7E-07
			OCDD	2.5E-12	--	2.5E-12	Reproductive	2.7E-07	--	2.7E-07
			2,3,7,8-TCDF	6.0E-12	--	6.0E-12	Reproductive	6.7E-07	--	6.7E-07
			1,2,3,7,8-PeCDF	1.4E-12	--	1.4E-12	Reproductive	1.6E-07	--	1.6E-07
			2,3,4,7,8-PeCDF	2.5E-11	--	2.5E-11	Reproductive	2.8E-06	--	2.8E-06
			1,2,3,4,7,8-HxCDF	2.3E-11	--	2.3E-11	Reproductive	2.6E-06	--	2.6E-06
			1,2,3,6,7,8-HxCDF	5.6E-12	--	5.6E-12	Reproductive	6.3E-07	--	6.3E-07
			1,2,3,7,8,9-HxCDF	3.4E-11	--	3.4E-11	Reproductive	3.7E-06	--	3.7E-06
			2,3,4,6,7,8-HxCDF	3.6E-12	--	3.6E-12	Reproductive	4.0E-07	--	4.0E-07
			1,2,3,4,6,7,8-HpCDF	9.8E-12	--	9.8E-12	Reproductive	1.1E-06	--	1.1E-06
			1,2,3,4,7,8,9-HpCDF	6.2E-13	--	6.2E-13	Reproductive	6.9E-08	--	6.9E-08
			OCDF	5.5E-13	--	5.5E-13	Reproductive	6.2E-08	--	6.2E-08
			KM TEQ DF	3.1E-10	--	3.1E-10	Reproductive	3.4E-05	--	3.4E-05
			PCB-77	2.6E-13	--	2.6E-13	Reproductive	2.9E-08	--	2.9E-08
			PCB-81	2.6E-14	--	2.6E-14	Reproductive	2.9E-09	--	2.9E-09
			PCB-105	2.8E-13	--	2.8E-13	Reproductive	3.1E-08	--	3.1E-08
			PCB-114	1.5E-14	--	1.5E-14	Reproductive	1.6E-09	--	1.6E-09
			PCB-118	6.2E-13	--	6.2E-13	Reproductive	6.9E-08	--	6.9E-08

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	1.2E-14	--	1.2E-14	Reproductive	1.3E-09	--	1.3E-09
			PCB-126	8.6E-12	--	8.6E-12	Reproductive	9.5E-07	--	9.5E-07
			PCB-156/157	7.4E-14	--	7.4E-14	Reproductive	8.2E-09	--	8.2E-09
			PCB-167	2.5E-14	--	2.5E-14	Reproductive	2.8E-09	--	2.8E-09
			PCB-169	1.5E-12	--	1.5E-12	Reproductive	1.7E-07	--	1.7E-07
			PCB-189	3.3E-15	--	3.3E-15	Reproductive	3.6E-10	--	3.6E-10
			KM TEQ PCB	1.4E-11	--	1.4E-11	Reproductive	1.5E-06	--	1.5E-06
			PAHs							
			Benz(a)anthracene	2.0E-12	--	2.0E-12	--	--	--	--
			Benzo(a)pyrene	2.6E-11	--	2.6E-11	Developmental	5.0E-07	--	5.0E-07
			Benzo(b)fluoranthene	3.5E-12	--	3.5E-12	--	--	--	--
			Benzo(k)fluoranthene	1.6E-13	--	1.6E-13	--	--	--	--
			Chrysene	3.4E-14	--	3.4E-14	--	--	--	--
			Dibenz(a,h)anthracene	6.6E-12	--	6.6E-12	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.5E-12	--	1.5E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	1.8E-08	4.2E-07	4.4E-07
			Pesticides & Organics							
			Chloroform	3.1E-12	1.0E-11	1.4E-11	Liver	1.2E-07	3.9E-07	5.1E-07
			Trichloroethylene	1.0E-11	6.2E-11	7.2E-11	Thymus, Blood, Immune, Developmental	2.6E-06	1.6E-05	1.8E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	1.7E-05	2.0E-05	3.8E-05
			Arsenic, inorganic	1.6E-09	2.9E-10	1.9E-09	Skin, Blood	4.2E-05	7.4E-06	4.9E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	8.5E-09	1.2E-07	1.2E-07
			Chromium (VI)	1.9E-10	2.7E-09	2.9E-09	No Effect	7.3E-07	1.0E-05	1.1E-05
			Iron	--	--	--	GI Tract	7.5E-06	1.3E-06	8.9E-06
			Manganese	--	--	--	Neurological	2.8E-05	1.3E-04	1.5E-04
			Mercury	--	--	--	Immune	8.7E-07	2.2E-06	3.1E-06
			Thallium	--	--	--	Skin, Hair	1.2E-05	2.2E-06	1.4E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			4.0E-10				4.4E-05
			Total DLCs (based on KM TEQs)			3.2E-10				3.6E-05
			Total PCDD/Fs (excluding KM TEQ)			3.9E-10				4.3E-05
			Total PCDD/Fs (based on KM TEQ)			3.1E-10				3.4E-05
			Total DL-PCBs (excluding KM TEQ)			1.1E-11				1.3E-06
			Total DL-PCBs (based on KM TEQ)			1.4E-11				1.5E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-11				1.3E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.4E-11				1.5E-06
			Total PAHs			3.9E-11				9.4E-07
			Total Organics			8.6E-11				1.9E-05
			Total Inorganics			4.8E-09				2.8E-04
	Crabbing - Surface Water Total (excluding KM TEQs)					5.3E-09				3.4E-04
	Crabbing - Surface Water Total (based on KM TEQs)					5.2E-09				3.4E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						2.4E-05				4.4E+00
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						2.4E-05				4.3E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						4.9E-06				1.3E+00

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						4.7E-06				1.3E+00

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.7E-02		Blood HI =		2.7E-02
				Body Weight HI =		1.1E-04		Body Weight HI =		1.1E-04
				Developmental HI =		2.6E-03		Developmental HI =		2.6E-03
				GI Tract HI =		3.2E-02		GI Tract HI =		3.2E-02
				Hair HI =		1.4E-03		Hair HI =		1.4E-03
				Immune HI =		5.0E-02		Immune HI =		5.0E-02
				Kidney HI =		6.4E-04		Kidney HI =		6.4E-04
				Liver HI =		2.5E-01		Liver HI =		2.5E-01
				Neurological HI =		1.8E-01		Neurological HI =		1.8E-01
				No Effect HI =		5.6E-05		No Effect HI =		5.6E-05
				Organ Weights HI =		1.1E-04		Organ Weights HI =		1.1E-04
				Reproductive HI =		1.0E+00		Reproductive HI =		1.0E+00
				Skin HI =		2.5E-02		Skin HI =		2.5E-02
				Thymus HI =		2.9E-05		Thymus HI =		2.9E-05
				Thyroid HI =		3.9E-02		Thyroid HI =		3.9E-02
				Urinary HI =		5.1E-03		Urinary HI =		5.1E-03
				Whole Body HI =		7.4E-01		Whole Body HI =		7.4E-01
				American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.0E-02		Blood HI =		3.0E-02
				Body Weight HI =		1.1E-04		Body Weight HI =		1.1E-04
				Developmental HI =		3.4E-03		Developmental HI =		3.4E-03
				GI Tract HI =		1.9E-02		GI Tract HI =		1.9E-02
				Hair HI =		1.3E-03		Hair HI =		1.3E-03
				Immune HI =		6.9E-02		Immune HI =		6.9E-02
				Kidney HI =		6.4E-04		Kidney HI =		6.4E-04
				Liver HI =		3.4E-01		Liver HI =		3.4E-01
				Neurological HI =		2.3E-01		Neurological HI =		2.3E-01
				No Effect HI =		1.1E-04		No Effect HI =		1.1E-04
				Organ Weights HI =		1.1E-04		Organ Weights HI =		1.1E-04
				Reproductive HI =		1.3E+00		Reproductive HI =		1.6E+00
				Skin HI =		2.6E-02		Skin HI =		2.6E-02
				Thymus HI =		2.9E-05		Thymus HI =		2.9E-05
				Thyroid HI =		2.7E-03		Thyroid HI =		2.7E-03
				Urinary HI =		5.1E-03		Urinary HI =		5.1E-03
				Whole Body HI =		1.1E+00		Whole Body HI =		1.1E+00

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.6E-02		Blood HI =		4.6E-02
				Body Weight HI =		6.7E-05		Body Weight HI =		6.7E-05
				Developmental HI =		1.1E-03		Developmental HI =		1.1E-03
				GI Tract HI =		1.1E+00		GI Tract HI =		1.1E+00
				Hair HI =		1.3E-03		Hair HI =		1.3E-03
				Immune HI =		2.0E-02		Immune HI =		2.0E-02
				Kidney HI =		4.6E-04		Kidney HI =		4.6E-04
				Liver HI =		1.3E-01		Liver HI =		1.3E-01
				Neurological HI =		7.0E-02		Neurological HI =		7.0E-02
				No Effect HI =		2.6E-05		No Effect HI =		2.6E-05
				Organ Weights HI =		6.6E-05		Organ Weights HI =		6.6E-05
				Reproductive HI =		2.3E+00		Reproductive HI =		2.3E+00
				Skin HI =		4.6E-02		Skin HI =		4.6E-02
				Thymus HI =		1.8E-05		Thymus HI =		1.8E-05
				Thyroid HI =		1.2E-02		Thyroid HI =		1.2E-02
				Urinary HI =		2.0E-02		Urinary HI =		2.0E-02
				Whole Body HI =		6.3E-01		Whole Body HI =		6.3E-01
				Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total			Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.3E-02		Blood HI =		4.3E-02
				Body Weight HI =		6.7E-05		Body Weight HI =		6.7E-05
				Developmental HI =		2.4E-03		Developmental HI =		2.4E-03
				GI Tract HI =		7.1E-01		GI Tract HI =		7.1E-01
				Hair HI =		1.0E-03		Hair HI =		1.0E-03
				Immune HI =		2.3E-02		Immune HI =		2.3E-02
				Kidney HI =		5.0E-04		Kidney HI =		5.0E-04
				Liver HI =		3.1E-02		Liver HI =		3.1E-02
				Neurological HI =		8.5E-02		Neurological HI =		8.5E-02
				No Effect HI =		2.6E-05		No Effect HI =		2.6E-05
				Organ Weights HI =		6.6E-05		Organ Weights HI =		6.6E-05
				Reproductive HI =		3.3E-01		Reproductive HI =		3.1E-01
				Skin HI =		4.1E-02		Skin HI =		4.1E-02
				Thymus HI =		1.8E-05		Thymus HI =		1.8E-05
				Thyroid HI =		1.0E-02		Thyroid HI =		1.0E-02
				Urinary HI =		1.1E-02		Urinary HI =		1.1E-02
				Whole Body HI =		6.4E-02		Whole Body HI =		6.4E-02

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.6E-06	--	2.6E-06	Reproductive	5.8E-01	--	5.8E-01
			1,2,3,7,8-PeCDD	1.4E-07	--	1.4E-07	Reproductive	3.1E-02	--	3.1E-02
			1,2,3,4,7,8-HxCDD	6.5E-09	--	6.5E-09	Reproductive	1.4E-03	--	1.4E-03
			1,2,3,6,7,8-HxCDD	2.0E-08	--	2.0E-08	Reproductive	4.5E-03	--	4.5E-03
			1,2,3,7,8,9-HxCDD	4.8E-09	--	4.8E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,6,7,8-HpCDD	2.3E-09	--	2.3E-09	Reproductive	5.0E-04	--	5.0E-04
			OCDD	4.0E-10	--	4.0E-10	Reproductive	8.8E-05	--	8.8E-05
			2,3,7,8-TCDF	5.4E-08	--	5.4E-08	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,7,8-PeCDF	1.5E-08	--	1.5E-08	Reproductive	3.2E-03	--	3.2E-03
			2,3,4,7,8-PeCDF	2.3E-07	--	2.3E-07	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,4,7,8-HxCDF	3.5E-08	--	3.5E-08	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,6,7,8-HxCDF	3.1E-08	--	3.1E-08	Reproductive	7.0E-03	--	7.0E-03
			1,2,3,7,8,9-HxCDF	3.6E-09	--	3.6E-09	Reproductive	8.0E-04	--	8.0E-04
			2,3,4,6,7,8-HxCDF	5.3E-09	--	5.3E-09	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,4,6,7,8-HpCDF	7.4E-09	--	7.4E-09	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,4,7,8,9-HpCDF	3.4E-10	--	3.4E-10	Reproductive	7.6E-05	--	7.6E-05
			OCDF	2.2E-11	--	2.2E-11	Reproductive	4.8E-06	--	4.8E-06
			KM TEQ DF	3.1E-06	--	3.1E-06	Reproductive	6.9E-01	--	6.9E-01
			PCB-77	1.7E-08	--	1.7E-08	Reproductive	3.8E-03	--	3.8E-03
			PCB-81	2.0E-09	--	2.0E-09	Reproductive	4.4E-04	--	4.4E-04
			PCB-105	8.0E-08	--	8.0E-08	Reproductive	1.8E-02	--	1.8E-02
			PCB-114	6.1E-09	--	6.1E-09	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	3.2E-07	--	3.2E-07	Reproductive	7.1E-02	--	7.1E-02
			PCB-123	5.8E-09	--	5.8E-09	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	3.1E-06	--	3.1E-06	Reproductive	7.0E-01	--	7.0E-01
			PCB-156/157	2.9E-08	--	2.9E-08	Reproductive	6.5E-03	--	6.5E-03
			PCB-167	1.3E-08	--	1.3E-08	Reproductive	2.9E-03	--	2.9E-03
			PCB-169	4.0E-08	--	4.0E-08	Reproductive	8.8E-03	--	8.8E-03
			PCB-189	2.4E-09	--	2.4E-09	Reproductive	5.2E-04	--	5.2E-04
			KM TEQ PCB	4.0E-06	--	4.0E-06	Reproductive	8.9E-01	--	8.9E-01
			Non-DL PCBs							
			Total Non-DL PCBs	9.5E-07	--	9.5E-07	Whole Body	1.1E+00	--	1.1E+00
			PAHs							
			Benz(a)anthracene	8.1E-09	--	8.1E-09	--	--	--	--
			Benzo(a)pyrene	8.1E-08	--	8.1E-08	Developmental	2.1E-03	--	2.1E-03
			Benzo(b)fluoranthene	8.1E-09	--	8.1E-09	--	--	--	--
			Chrysene	8.1E-11	--	8.1E-11	--	--	--	--
			Dibenz(a,h)anthracene	8.1E-08	--	8.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	8.1E-09	--	8.1E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	9.7E-09	--	9.7E-09	Liver	3.2E-02	--	3.2E-02
			2,4'-DDE	4.3E-09	--	4.3E-09	Liver	9.9E-04	--	9.9E-04
			2,4'-DDT	2.9E-09	--	2.9E-09	Liver	4.0E-04	--	4.0E-04
			4,4'-DDD	4.8E-08	--	4.8E-08	Liver	1.6E-01	--	1.6E-01
			4,4'-DDE	9.3E-08	--	9.3E-08	Liver	2.1E-02	--	2.1E-02
			4,4'-DDT	1.2E-08	--	1.2E-08	Liver	1.6E-03	--	1.6E-03
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	1.2E-08	--	1.2E-08	Liver	1.5E-03	--	1.5E-03
			Chlordane, gamma (trans)	2.8E-09	--	2.8E-09	Liver	3.7E-04	--	3.7E-04
			Dieldrin	2.8E-07	--	2.8E-07	Liver	8.1E-03	--	8.1E-03

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Heptachlor epoxide, cis-	3.4E-08	--	3.4E-08	Liver	6.8E-03	--	6.8E-03
			Heptachlor epoxide, trans-	1.7E-09	--	1.7E-09	Liver	3.3E-04	--	3.3E-04
			Hexachlorobenzene	5.1E-09	--	5.1E-09	Liver	9.4E-05	--	9.4E-05
			Mirex	6.4E-09	--	6.4E-09	Liver, Thyroid	4.1E-05	--	4.1E-05
			Nonachlor, cis-	4.8E-09	--	4.8E-09	Liver	3.2E-03	--	3.2E-03
			Nonachlor, trans-	1.3E-08	--	1.3E-08	Liver	5.4E-02	--	5.4E-02
			Oxychlordane	3.4E-09	--	3.4E-09	Liver	2.6E-03	--	2.6E-03
			Pyridine	--	--	--	Liver	9.8E-02	--	9.8E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	4.9E-04	--	4.9E-04
			Arsenic, organic	--	--	--	Urinary	3.9E-03	--	3.9E-03
			Arsenic, inorganic	5.6E-07	--	5.6E-07	Skin, Blood	2.9E-02	--	2.9E-02
			Cadmium	--	--	--	Urinary	3.5E-03	--	3.5E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	3.3E-05	--	3.3E-05
			Cobalt	--	--	--	Thyroid	5.7E-02	--	5.7E-02
			Copper	--	--	--	GI Tract	3.6E-02	--	3.6E-02
			Iron	--	--	--	GI Tract	7.6E-04	--	7.6E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.5E-04	--	1.5E-04
			Mercury	--	--	--	Immune	7.6E-02	--	7.6E-02
			Methyl Mercury	--	--	--	Neurological	2.7E-01	--	2.7E-01
			Selenium	--	--	--	Whole Body	8.2E-03	--	8.2E-03
			Silver	--	--	--	Skin	3.0E-04	--	3.0E-04
			Vanadium	--	--	--	Hair	4.2E-04	--	4.2E-04
			Zinc	--	--	--	Blood	3.7E-03	--	3.7E-03
			Total DLCs (excluding KM TEQs)			6.8E-06				1.5E+00
			Total DLCs (based on KM TEQs)			7.1E-06				1.6E+00
			Total PCDD/Fs (excluding KM TEQ)			3.2E-06				7.1E-01
			Total PCDD/Fs (based on KM TEQ)			3.1E-06				6.9E-01
			Total DL-PCBs (excluding KM TEQ)			3.7E-06				8.1E-01
			Total DL-PCBs (based on KM TEQ)			4.0E-06				8.9E-01
			Total Non-DL PCBs			9.5E-07				1.1E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.6E-06				1.9E+00
			Total PCBs (DL & NDL; based on KM TEQ)			5.0E-06				2.0E+00
			Total PAHs			1.9E-07				2.1E-03
			Total Organics			5.5E-07				3.9E-01
			Total Inorganics			5.6E-07				4.9E-01
	Mixed Fish/All Species Total (excluding KM TEQs)					9.1E-06				3.5E+00
	Mixed Fish/All Species Total (based on KM TEQs)					9.4E-06				3.6E+00
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.8E-06	--	2.8E-06	Reproductive	6.2E-01	--	6.2E-01
			1,2,3,7,8-PeCDD	2.2E-07	--	2.2E-07	Reproductive	4.9E-02	--	4.9E-02
			1,2,3,4,7,8-HxCDD	1.3E-08	--	1.3E-08	Reproductive	3.0E-03	--	3.0E-03
			1,2,3,6,7,8-HxCDD	6.0E-08	--	6.0E-08	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	1.1E-08	--	1.1E-08	Reproductive	2.4E-03	--	2.4E-03
			1,2,3,4,6,7,8-HpCDD	4.1E-09	--	4.1E-09	Reproductive	9.1E-04	--	9.1E-04
			OCDD	3.0E-10	--	3.0E-10	Reproductive	6.7E-05	--	6.7E-05
			2,3,7,8-TCDF	3.3E-09	--	3.3E-09	Reproductive	7.4E-04	--	7.4E-04

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8-PeCDF	1.3E-08	--	1.3E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,4,7,8-PeCDF	3.7E-07	--	3.7E-07	Reproductive	8.2E-02	--	8.2E-02
			1,2,3,4,7,8-HxCDF	8.6E-08	--	8.6E-08	Reproductive	1.9E-02	--	1.9E-02
			1,2,3,6,7,8-HxCDF	6.4E-08	--	6.4E-08	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,7,8,9-HxCDF	3.6E-09	--	3.6E-09	Reproductive	8.1E-04	--	8.1E-04
			2,3,4,6,7,8-HxCDF	1.2E-08	--	1.2E-08	Reproductive	2.6E-03	--	2.6E-03
			1,2,3,4,6,7,8-HpCDF	1.5E-08	--	1.5E-08	Reproductive	3.4E-03	--	3.4E-03
			1,2,3,4,7,8,9-HpCDF	5.1E-10	--	5.1E-10	Reproductive	1.1E-04	--	1.1E-04
			OCDF	3.4E-11	--	3.4E-11	Reproductive	7.6E-06	--	7.6E-06
			KM TEQ DF	3.6E-06	--	3.6E-06	Reproductive	7.9E-01	--	7.9E-01
			PCB-77	2.6E-09	--	2.6E-09	Reproductive	5.8E-04	--	5.8E-04
			PCB-81	1.2E-09	--	1.2E-09	Reproductive	2.7E-04	--	2.7E-04
			PCB-105	2.2E-07	--	2.2E-07	Reproductive	4.8E-02	--	4.8E-02
			PCB-114	1.4E-08	--	1.4E-08	Reproductive	3.1E-03	--	3.1E-03
			PCB-118	7.5E-07	--	7.5E-07	Reproductive	1.7E-01	--	1.7E-01
			PCB-123	1.5E-08	--	1.5E-08	Reproductive	3.3E-03	--	3.3E-03
			PCB-126	4.2E-06	--	4.2E-06	Reproductive	9.3E-01	--	9.3E-01
			PCB-156/157	6.5E-08	--	6.5E-08	Reproductive	1.4E-02	--	1.4E-02
			PCB-167	2.8E-08	--	2.8E-08	Reproductive	6.3E-03	--	6.3E-03
			PCB-169	4.6E-08	--	4.6E-08	Reproductive	1.0E-02	--	1.0E-02
			PCB-189	5.1E-09	--	5.1E-09	Reproductive	1.1E-03	--	1.1E-03
			KM TEQ PCB	7.6E-06	--	7.6E-06	Reproductive	1.7E+00	--	1.7E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-06	--	1.4E-06	Whole Body	1.6E+00	--	1.6E+00
			PAHs							
			Benz(a)anthracene	1.3E-08	--	1.3E-08	--	--	--	--
			Benzo(a)pyrene	1.3E-07	--	1.3E-07	Developmental	3.3E-03	--	3.3E-03
			Benzo(b)fluoranthene	1.3E-08	--	1.3E-08	--	--	--	--
			Chrysene	1.3E-10	--	1.3E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-08	--	1.3E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.6E-09	--	1.6E-09	Liver	5.3E-03	--	5.3E-03
			2,4'-DDE	1.5E-09	--	1.5E-09	Liver	3.4E-04	--	3.4E-04
			2,4'-DDT	3.0E-10	--	3.0E-10	Liver	4.2E-05	--	4.2E-05
			4,4'-DDD	7.0E-08	--	7.0E-08	Liver	2.3E-01	--	2.3E-01
			4,4'-DDE	2.1E-07	--	2.1E-07	Liver	4.8E-02	--	4.8E-02
			4,4'-DDT	6.5E-09	--	6.5E-09	Liver	8.9E-04	--	8.9E-04
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	1.0E-08	--	1.0E-08	Liver	1.3E-03	--	1.3E-03
			Chlordane, gamma (trans)	3.0E-09	--	3.0E-09	Liver	4.0E-04	--	4.0E-04
			Dieldrin	5.2E-07	--	5.2E-07	Liver	1.5E-02	--	1.5E-02
			Heptachlor epoxide, cis-	7.0E-08	--	7.0E-08	Liver	1.4E-02	--	1.4E-02
			Heptachlor epoxide, trans-	7.1E-09	--	7.1E-09	Liver	1.4E-03	--	1.4E-03
			Hexachlorobenzene	1.4E-08	--	1.4E-08	Liver	2.6E-04	--	2.6E-04
			Mirex	1.0E-08	--	1.0E-08	Liver, Thyroid	6.8E-05	--	6.8E-05
			Nonachlor, cis-	8.1E-09	--	8.1E-09	Liver	5.4E-03	--	5.4E-03
			Nonachlor, trans-	2.1E-08	--	2.1E-08	Liver	9.2E-02	--	9.2E-02
			Oxychlordane	1.1E-08	--	1.1E-08	Liver	8.0E-03	--	8.0E-03
			Pyridine	--	--	--	Liver	9.8E-02	--	9.8E-02
			Inorganics							

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Aluminum	--	--	--	Neurological	4.7E-04	--	4.7E-04
			Arsenic, organic	--	--	--	Urinary	4.0E-03	--	4.0E-03
			Arsenic, inorganic	5.8E-07	--	5.8E-07	Skin, Blood	3.0E-02	--	3.0E-02
			Cadmium	--	--	--	Urinary	3.4E-03	--	3.4E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	1.2E-04	--	1.2E-04
			Cobalt	--	--	--	Thyroid	1.8E-03	--	1.8E-03
			Copper	--	--	--	GI Tract	1.6E-02	--	1.6E-02
			Iron	--	--	--	GI Tract	8.1E-04	--	8.1E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.8E-04	--	1.8E-04
			Mercury	--	--	--	Immune	1.1E-01	--	1.1E-01
			Methyl Mercury	--	--	--	Neurological	3.5E-01	--	3.5E-01
			Selenium	--	--	--	Whole Body	7.7E-03	--	7.7E-03
			Silver	--	--	--	Skin	3.0E-04	--	3.0E-04
			Vanadium	--	--	--	Hair	3.4E-04	--	3.4E-04
			Zinc	--	--	--	Blood	7.4E-03	--	7.4E-03
			Total DLCs (excluding KM TEQs)			9.0E-06				2.0E+00
			Total DLCs (based on KM TEQs)			1.1E-05				2.5E+00
			Total PCDD/Fs (excluding KM TEQ)			3.7E-06				8.1E-01
			Total PCDD/Fs (based on KM TEQ)			3.6E-06				7.9E-01
			Total DL-PCBs (excluding KM TEQ)			5.3E-06				1.2E+00
			Total DL-PCBs (based on KM TEQ)			7.6E-06				1.7E+00
			Total Non-DL PCBs			1.4E-06				1.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.7E-06				2.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			8.9E-06				3.3E+00
			Total PAHs			2.9E-07				3.3E-03
			Total Organics			9.8E-07				5.2E-01
			Total Inorganics			5.8E-07				5.2E-01
	American Eel Total (excluding KM TEQs)					1.2E-05				4.6E+00
	American Eel Total (based on KM TEQs)					1.4E-05				5.1E+00
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.7E-07	--	4.7E-07	Reproductive	1.0E-01	--	1.0E-01
			1,2,3,7,8-PeCDD	9.5E-08	--	9.5E-08	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,7,8-HxCDD	2.3E-09	--	2.3E-09	Reproductive	5.1E-04	--	5.1E-04
			1,2,3,6,7,8-HxCDD	6.3E-09	--	6.3E-09	Reproductive	1.4E-03	--	1.4E-03
			1,2,3,7,8,9-HxCDD	2.2E-09	--	2.2E-09	Reproductive	4.9E-04	--	4.9E-04
			1,2,3,4,6,7,8-HpCDD	4.5E-10	--	4.5E-10	Reproductive	1.0E-04	--	1.0E-04
			OCDD	2.5E-11	--	2.5E-11	Reproductive	5.5E-06	--	5.5E-06
			2,3,7,8-TCDF	1.2E-08	--	1.2E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,7,8-PeCDF	6.3E-09	--	6.3E-09	Reproductive	1.4E-03	--	1.4E-03
			2,3,4,7,8-PeCDF	7.2E-08	--	7.2E-08	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,4,7,8-HxCDF	3.0E-09	--	3.0E-09	Reproductive	6.6E-04	--	6.6E-04
			1,2,3,6,7,8-HxCDF	7.3E-09	--	7.3E-09	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,7,8,9-HxCDF	2.7E-09	--	2.7E-09	Reproductive	6.0E-04	--	6.0E-04
			2,3,4,6,7,8-HxCDF	1.8E-09	--	1.8E-09	Reproductive	4.0E-04	--	4.0E-04
			1,2,3,4,6,7,8-HpCDF	2.1E-09	--	2.1E-09	Reproductive	4.7E-04	--	4.7E-04
			1,2,3,4,7,8,9-HpCDF	2.4E-10	--	2.4E-10	Reproductive	5.4E-05	--	5.4E-05
			OCDF	1.6E-11	--	1.6E-11	Reproductive	3.6E-06	--	3.6E-06

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	6.4E-07	--	6.4E-07	Reproductive	1.4E-01	--	1.4E-01
			PCB-77	3.4E-09	--	3.4E-09	Reproductive	7.6E-04	--	7.6E-04
			PCB-81	3.8E-10	--	3.8E-10	Reproductive	8.3E-05	--	8.3E-05
			PCB-105	1.3E-08	--	1.3E-08	Reproductive	2.9E-03	--	2.9E-03
			PCB-114	8.0E-10	--	8.0E-10	Reproductive	1.8E-04	--	1.8E-04
			PCB-118	5.5E-08	--	5.5E-08	Reproductive	1.2E-02	--	1.2E-02
			PCB-123	7.8E-10	--	7.8E-10	Reproductive	1.7E-04	--	1.7E-04
			PCB-126	1.3E-06	--	1.3E-06	Reproductive	3.0E-01	--	3.0E-01
			PCB-156/157	5.9E-09	--	5.9E-09	Reproductive	1.3E-03	--	1.3E-03
			PCB-167	3.0E-09	--	3.0E-09	Reproductive	6.8E-04	--	6.8E-04
			PCB-169	1.9E-08	--	1.9E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-189	5.9E-10	--	5.9E-10	Reproductive	1.3E-04	--	1.3E-04
			KM TEQ PCB	1.4E-06	--	1.4E-06	Reproductive	3.1E-01	--	3.1E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.8E-07	--	2.8E-07	Whole Body	3.2E-01	--	3.2E-01
			PAHs							
			Benz(a)anthracene	5.1E-09	--	5.1E-09	--	--	--	--
			Benzo(a)pyrene	5.1E-08	--	5.1E-08	Developmental	1.3E-03	--	1.3E-03
			Benzo(b)fluoranthene	5.1E-09	--	5.1E-09	--	--	--	--
			Chrysene	5.1E-11	--	5.1E-11	--	--	--	--
			Dibenz(a,h)anthracene	5.1E-08	--	5.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.1E-09	--	5.1E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	3.0E-10	--	3.0E-10	Liver	9.8E-04	--	9.8E-04
			2,4'-DDE	7.7E-10	--	7.7E-10	Liver	1.8E-04	--	1.8E-04
			2,4'-DDT	1.9E-10	--	1.9E-10	Liver	2.5E-05	--	2.5E-05
			4,4'-DDD	3.5E-09	--	3.5E-09	Liver	1.1E-02	--	1.1E-02
			4,4'-DDE	2.3E-08	--	2.3E-08	Liver	5.2E-03	--	5.2E-03
			4,4'-DDT	1.8E-08	--	1.8E-08	Liver	2.4E-03	--	2.4E-03
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	4.2E-09	--	4.2E-09	Liver	5.6E-04	--	5.6E-04
			Chlordane, gamma (trans)	1.7E-09	--	1.7E-09	Liver	2.3E-04	--	2.3E-04
			Dieldrin	1.6E-07	--	1.6E-07	Liver	4.8E-03	--	4.8E-03
			Heptachlor epoxide, cis-	2.2E-08	--	2.2E-08	Liver	4.4E-03	--	4.4E-03
			Heptachlor epoxide, trans-	3.2E-10	--	3.2E-10	Liver	6.2E-05	--	6.2E-05
			Hexachlorobenzene	1.9E-09	--	1.9E-09	Liver	3.4E-05	--	3.4E-05
			Mirex	3.3E-09	--	3.3E-09	Liver, Thyroid	2.2E-05	--	2.2E-05
			Nonachlor, cis-	1.2E-09	--	1.2E-09	Liver	8.3E-04	--	8.3E-04
			Nonachlor, trans-	2.5E-09	--	2.5E-09	Liver	1.1E-02	--	1.1E-02
			Oxychlordane	2.6E-10	--	2.6E-10	Liver	1.9E-04	--	1.9E-04
			Pyridine	--	--	--	Liver	9.8E-02	--	9.8E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	4.5E-04	--	4.5E-04
			Arsenic, organic	--	--	--	Urinary	2.4E-03	--	2.4E-03
			Arsenic, inorganic	3.5E-07	--	3.5E-07	Skin, Blood	1.8E-02	--	1.8E-02
			Cadmium	--	--	--	Urinary	3.5E-03	--	3.5E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	4.5E-06	--	4.5E-06
			Cobalt	--	--	--	Thyroid	5.6E-02	--	5.6E-02
			Copper	--	--	--	GI Tract	6.0E-02	--	6.0E-02
			Iron	--	--	--	GI Tract	1.1E-03	--	1.1E-03
			Lead	--	--	--	--	--	--	--

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Manganese	--	--	--	Neurological	9.8E-05	--	9.8E-05
			Mercury	--	--	--	Immune	8.2E-02	--	8.2E-02
			Methyl Mercury	--	--	--	Neurological	2.9E-01	--	2.9E-01
			Selenium	--	--	--	Whole Body	8.1E-03	--	8.1E-03
			Silver	--	--	--	Skin	3.0E-04	--	3.0E-04
			Vanadium	--	--	--	Hair	3.5E-04	--	3.5E-04
			Zinc	--	--	--	Blood	4.4E-03	--	4.4E-03
			Total DLCs (excluding KM TEQs)			2.1E-06				4.7E-01
			Total DLCs (based on KM TEQs)			2.0E-06				4.6E-01
			Total PCDD/Fs (excluding KM TEQ)			6.8E-07				1.5E-01
			Total PCDD/Fs (based on KM TEQ)			6.4E-07				1.4E-01
			Total DL-PCBs (excluding KM TEQ)			1.4E-06				3.2E-01
			Total DL-PCBs (based on KM TEQ)			1.4E-06				3.1E-01
			Total Non-DL PCBs			2.8E-07				3.2E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.7E-06				6.4E-01
			Total PCBs (DL & NDL; based on KM TEQ)			1.7E-06				6.4E-01
			Total PAHs			1.2E-07				1.3E-03
			Total Organics			2.6E-07				1.4E-01
			Total Inorganics			3.5E-07				5.3E-01
	Bluefish Total (excluding KM TEQs)					3.1E-06				1.5E+00
	Bluefish Total (based on KM TEQs)					3.1E-06				1.5E+00
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.0E-06	--	3.0E-06	Reproductive	6.6E-01	--	6.6E-01
			1,2,3,7,8-PeCDD	1.7E-07	--	1.7E-07	Reproductive	3.9E-02	--	3.9E-02
			1,2,3,4,7,8-HxCDD	6.5E-09	--	6.5E-09	Reproductive	1.4E-03	--	1.4E-03
			1,2,3,6,7,8-HxCDD	6.6E-09	--	6.6E-09	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,7,8,9-HxCDD	2.7E-09	--	2.7E-09	Reproductive	6.0E-04	--	6.0E-04
			1,2,3,4,6,7,8-HpCDD	4.6E-09	--	4.6E-09	Reproductive	1.0E-03	--	1.0E-03
			OCDD	1.5E-09	--	1.5E-09	Reproductive	3.4E-04	--	3.4E-04
			2,3,7,8-TCDF	1.2E-07	--	1.2E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,7,8-PeCDF	2.1E-08	--	2.1E-08	Reproductive	4.7E-03	--	4.7E-03
			2,3,4,7,8-PeCDF	3.1E-07	--	3.1E-07	Reproductive	6.9E-02	--	6.9E-02
			1,2,3,4,7,8-HxCDF	1.3E-08	--	1.3E-08	Reproductive	2.9E-03	--	2.9E-03
			1,2,3,6,7,8-HxCDF	3.9E-08	--	3.9E-08	Reproductive	8.6E-03	--	8.6E-03
			1,2,3,7,8,9-HxCDF	3.8E-09	--	3.8E-09	Reproductive	8.5E-04	--	8.5E-04
			2,3,4,6,7,8-HxCDF	3.1E-09	--	3.1E-09	Reproductive	6.9E-04	--	6.9E-04
			1,2,3,4,6,7,8-HpCDF	1.1E-08	--	1.1E-08	Reproductive	2.3E-03	--	2.3E-03
			1,2,3,4,7,8,9-HpCDF	3.4E-10	--	3.4E-10	Reproductive	7.7E-05	--	7.7E-05
			OCDF	1.8E-11	--	1.8E-11	Reproductive	4.0E-06	--	4.0E-06
			KM TEQ DF	3.7E-06	--	3.7E-06	Reproductive	8.2E-01	--	8.2E-01
			PCB-77	4.0E-08	--	4.0E-08	Reproductive	8.9E-03	--	8.9E-03
			PCB-81	3.0E-09	--	3.0E-09	Reproductive	6.6E-04	--	6.6E-04
			PCB-105	6.2E-08	--	6.2E-08	Reproductive	1.4E-02	--	1.4E-02
			PCB-114	7.6E-09	--	7.6E-09	Reproductive	1.7E-03	--	1.7E-03
			PCB-118	3.9E-07	--	3.9E-07	Reproductive	8.7E-02	--	8.7E-02
			PCB-123	5.9E-09	--	5.9E-09	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	6.6E-06	--	6.6E-06	Reproductive	1.5E+00	--	1.5E+00
			PCB-156/157	3.4E-08	--	3.4E-08	Reproductive	7.6E-03	--	7.6E-03

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-167	1.5E-08	--	1.5E-08	Reproductive	3.4E-03	--	3.4E-03
			PCB-169	3.5E-08	--	3.5E-08	Reproductive	7.8E-03	--	7.8E-03
			PCB-189	3.0E-09	--	3.0E-09	Reproductive	6.6E-04	--	6.6E-04
			KM TEQ PCB	6.8E-06	--	6.8E-06	Reproductive	1.5E+00	--	1.5E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-06	--	1.7E-06	Whole Body	1.9E+00	--	1.9E+00
			PAHs							
			Benz(a)anthracene	5.1E-09	--	5.1E-09	--	--	--	--
			Benzo(a)pyrene	5.1E-08	--	5.1E-08	Developmental	1.3E-03	--	1.3E-03
			Benzo(b)fluoranthene	5.1E-09	--	5.1E-09	--	--	--	--
			Chrysene	5.1E-11	--	5.1E-11	--	--	--	--
			Dibenz(a,h)anthracene	5.1E-08	--	5.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.1E-09	--	5.1E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.8E-08	--	1.8E-08	Liver	5.7E-02	--	5.7E-02
			2,4'-DDE	9.6E-09	--	9.6E-09	Liver	2.2E-03	--	2.2E-03
			2,4'-DDT	2.3E-09	--	2.3E-09	Liver	3.1E-04	--	3.1E-04
			4,4'-DDD	7.3E-08	--	7.3E-08	Liver	2.4E-01	--	2.4E-01
			4,4'-DDE	1.2E-07	--	1.2E-07	Liver	2.7E-02	--	2.7E-02
			4,4'-DDT	1.1E-08	--	1.1E-08	Liver	1.5E-03	--	1.5E-03
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	2.5E-08	--	2.5E-08	Liver	3.4E-03	--	3.4E-03
			Chlordane, gamma (trans)	4.9E-09	--	4.9E-09	Liver	6.5E-04	--	6.5E-04
			Dieldrin	3.9E-07	--	3.9E-07	Liver	1.1E-02	--	1.1E-02
			Heptachlor epoxide, cis-	3.4E-08	--	3.4E-08	Liver	6.7E-03	--	6.7E-03
			Heptachlor epoxide, trans-	3.2E-10	--	3.2E-10	Liver	6.2E-05	--	6.2E-05
			Hexachlorobenzene	3.6E-09	--	3.6E-09	Liver	6.6E-05	--	6.6E-05
			Mirex	7.4E-09	--	7.4E-09	Liver, Thyroid	4.8E-05	--	4.8E-05
			Nonachlor, cis-	8.2E-09	--	8.2E-09	Liver	5.5E-03	--	5.5E-03
			Nonachlor, trans-	2.2E-08	--	2.2E-08	Liver	9.3E-02	--	9.3E-02
			Oxychlordane	2.9E-09	--	2.9E-09	Liver	2.2E-03	--	2.2E-03
			Pyridine	--	--	--	Liver	9.8E-02	--	9.8E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	4.2E-04	--	4.2E-04
			Arsenic, organic	--	--	--	Urinary	4.3E-03	--	4.3E-03
			Arsenic, inorganic	6.2E-07	--	6.2E-07	Skin, Blood	3.2E-02	--	3.2E-02
			Cadmium	--	--	--	Urinary	3.5E-03	--	3.5E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	6.2E-06	--	6.2E-06
			Cobalt	--	--	--	Thyroid	5.0E-03	--	5.0E-03
			Copper	--	--	--	GI Tract	4.3E-02	--	4.3E-02
			Iron	--	--	--	GI Tract	7.2E-04	--	7.2E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.2E-04	--	1.2E-04
			Mercury	--	--	--	Immune	7.1E-02	--	7.1E-02
			Methyl Mercury	--	--	--	Neurological	2.6E-01	--	2.6E-01
			Selenium	--	--	--	Whole Body	5.7E-03	--	5.7E-03
			Silver	--	--	--	Skin	3.0E-04	--	3.0E-04
			Vanadium	--	--	--	Hair	4.5E-04	--	4.5E-04
			Zinc	--	--	--	Blood	1.8E-03	--	1.8E-03
Total DLCs (excluding KM TEQs)						1.1E-05				2.4E+00

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total DLCs (based on KM TEQs)			1.0E-05				2.3E+00
			Total PCDD/Fs (excluding KM TEQ)			3.7E-06				8.2E-01
			Total PCDD/Fs (based on KM TEQ)			3.7E-06				8.2E-01
			Total DL-PCBs (excluding KM TEQ)			7.2E-06				1.6E+00
			Total DL-PCBs (based on KM TEQ)			6.8E-06				1.5E+00
			Total Non-DL PCBs			1.7E-06				1.9E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			8.8E-06				3.5E+00
			Total PCBs (DL & NDL; based on KM TEQ)			8.4E-06				3.4E+00
			Total PAHs			1.2E-07				1.3E-03
			Total Organics			7.5E-07				5.5E-01
			Total Inorganics			6.2E-07				4.2E-01
	Striped Bass Total (excluding KM TEQs)					1.4E-05				5.3E+00
	Striped Bass Total (based on KM TEQs)					1.4E-05				5.2E+00
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-06	--	1.7E-06	Reproductive	3.9E-01	--	3.9E-01
			1,2,3,7,8-PeCDD	7.7E-08	--	7.7E-08	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,4,7,8-HxCDD	2.6E-09	--	2.6E-09	Reproductive	5.7E-04	--	5.7E-04
			1,2,3,6,7,8-HxCDD	8.1E-09	--	8.1E-09	Reproductive	1.8E-03	--	1.8E-03
			1,2,3,7,8,9-HxCDD	3.4E-09	--	3.4E-09	Reproductive	7.6E-04	--	7.6E-04
			1,2,3,4,6,7,8-HpCDD	9.9E-10	--	9.9E-10	Reproductive	2.2E-04	--	2.2E-04
			OCDD	4.3E-11	--	4.3E-11	Reproductive	9.5E-06	--	9.5E-06
			2,3,7,8-TCDF	8.5E-09	--	8.5E-09	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,7,8-PeCDF	3.3E-09	--	3.3E-09	Reproductive	7.4E-04	--	7.4E-04
			2,3,4,7,8-PeCDF	8.5E-08	--	8.5E-08	Reproductive	1.9E-02	--	1.9E-02
			1,2,3,4,7,8-HxCDF	2.1E-08	--	2.1E-08	Reproductive	4.6E-03	--	4.6E-03
			1,2,3,6,7,8-HxCDF	8.4E-09	--	8.4E-09	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,7,8,9-HxCDF	4.5E-09	--	4.5E-09	Reproductive	1.0E-03	--	1.0E-03
			2,3,4,6,7,8-HxCDF	3.5E-09	--	3.5E-09	Reproductive	7.7E-04	--	7.7E-04
			1,2,3,4,6,7,8-HpCDF	1.6E-09	--	1.6E-09	Reproductive	3.5E-04	--	3.5E-04
			1,2,3,4,7,8,9-HpCDF	3.4E-10	--	3.4E-10	Reproductive	7.6E-05	--	7.6E-05
			OCDF	1.9E-11	--	1.9E-11	Reproductive	4.2E-06	--	4.2E-06
			KM TEQ DF	1.9E-06	--	1.9E-06	Reproductive	4.3E-01	--	4.3E-01
			PCB-77	5.0E-09	--	5.0E-09	Reproductive	1.1E-03	--	1.1E-03
			PCB-81	1.6E-09	--	1.6E-09	Reproductive	3.5E-04	--	3.5E-04
			PCB-105	2.9E-08	--	2.9E-08	Reproductive	6.4E-03	--	6.4E-03
			PCB-114	2.5E-09	--	2.5E-09	Reproductive	5.5E-04	--	5.5E-04
			PCB-118	1.2E-07	--	1.2E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-123	1.9E-09	--	1.9E-09	Reproductive	4.2E-04	--	4.2E-04
			PCB-126	1.5E-06	--	1.5E-06	Reproductive	3.4E-01	--	3.4E-01
			PCB-156/157	1.2E-08	--	1.2E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-167	5.5E-09	--	5.5E-09	Reproductive	1.2E-03	--	1.2E-03
			PCB-169	2.1E-08	--	2.1E-08	Reproductive	4.7E-03	--	4.7E-03
			PCB-189	8.3E-10	--	8.3E-10	Reproductive	1.8E-04	--	1.8E-04
			KM TEQ PCB	1.7E-06	--	1.7E-06	Reproductive	3.7E-01	--	3.7E-01
			Non-DL PCBs							
			Total Non-DL PCBs	3.4E-07	--	3.4E-07	Whole Body	4.0E-01	--	4.0E-01
			PAHs							
			Benz(a)anthracene	5.1E-09	--	5.1E-09	--	--	--	--
			Benzo(a)pyrene	5.1E-08	--	5.1E-08	Developmental	1.3E-03	--	1.3E-03

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Benzo(b)fluoranthene	5.1E-09	--	5.1E-09	--	--	--	--
			Chrysene	5.1E-11	--	5.1E-11	--	--	--	--
			Dibenz(a,h)anthracene	5.1E-08	--	5.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.1E-09	--	5.1E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.8E-09	--	1.8E-09	Liver	5.8E-03	--	5.8E-03
			2,4'-DDE	2.1E-09	--	2.1E-09	Liver	4.7E-04	--	4.7E-04
			2,4'-DDT	1.8E-10	--	1.8E-10	Liver	2.5E-05	--	2.5E-05
			4,4'-DDD	1.0E-08	--	1.0E-08	Liver	3.3E-02	--	3.3E-02
			4,4'-DDE	3.0E-08	--	3.0E-08	Liver	6.9E-03	--	6.9E-03
			4,4'-DDT	1.2E-09	--	1.2E-09	Liver	1.7E-04	--	1.7E-04
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	1.5E-09	--	1.5E-09	Liver	2.0E-04	--	2.0E-04
			Chlordane, gamma (trans)	5.3E-10	--	5.3E-10	Liver	7.1E-05	--	7.1E-05
			Dieldrin	5.1E-08	--	5.1E-08	Liver	1.5E-03	--	1.5E-03
			Heptachlor epoxide, cis-	6.3E-09	--	6.3E-09	Liver	1.3E-03	--	1.3E-03
			Heptachlor epoxide, trans-	3.2E-10	--	3.2E-10	Liver	6.2E-05	--	6.2E-05
			Hexachlorobenzene	1.7E-09	--	1.7E-09	Liver	3.1E-05	--	3.1E-05
			Mirex	1.6E-09	--	1.6E-09	Liver, Thyroid	1.0E-05	--	1.0E-05
			Nonachlor, cis-	8.4E-10	--	8.4E-10	Liver	5.6E-04	--	5.6E-04
			Nonachlor, trans-	2.3E-09	--	2.3E-09	Liver	9.8E-03	--	9.8E-03
			Oxychlordane	9.5E-10	--	9.5E-10	Liver	7.1E-04	--	7.1E-04
			Pyridine	--	--	--	Liver	9.8E-02	--	9.8E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	4.2E-04	--	4.2E-04
			Arsenic, organic	--	--	--	Urinary	6.2E-03	--	6.2E-03
			Arsenic, inorganic	8.9E-07	--	8.9E-07	Skin, Blood	4.6E-02	--	4.6E-02
			Cadmium	--	--	--	Urinary	3.5E-03	--	3.5E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	2.3E-05	--	2.3E-05
			Cobalt	--	--	--	Thyroid	2.2E-01	--	2.2E-01
			Copper	--	--	--	GI Tract	1.6E-02	--	1.6E-02
			Iron	--	--	--	GI Tract	5.5E-04	--	5.5E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	1.7E-04	--	1.7E-04
			Mercury	--	--	--	Immune	4.6E-02	--	4.6E-02
			Methyl Mercury	--	--	--	Neurological	1.6E-01	--	1.6E-01
			Selenium	--	--	--	Whole Body	9.7E-03	--	9.7E-03
			Silver	--	--	--	Skin	3.0E-04	--	3.0E-04
			Vanadium	--	--	--	Hair	4.5E-04	--	4.5E-04
			Zinc	--	--	--	Blood	1.7E-03	--	1.7E-03
			Total DLCs (excluding KM TEQs)			3.7E-06				8.2E-01
			Total DLCs (based on KM TEQs)			3.6E-06				8.0E-01
			Total PCDD/Fs (excluding KM TEQ)			2.0E-06				4.4E-01
			Total PCDD/Fs (based on KM TEQ)			1.9E-06				4.3E-01
			Total DL-PCBs (excluding KM TEQ)			1.7E-06				3.8E-01
			Total DL-PCBs (based on KM TEQ)			1.7E-06				3.7E-01
			Total Non-DL PCBs			3.4E-07				4.0E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.1E-06				7.8E-01
			Total PCBs (DL & NDL; based on KM TEQ)			2.0E-06				7.8E-01

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PAHs			1.2E-07				1.3E-03
			Total Organics			1.3E-07				1.6E-01
			Total Inorganics			8.9E-07				5.1E-01
	Summer Flounder Total (excluding KM TEQs)					5.2E-06				1.9E+00
	Summer Flounder Total (based on KM TEQs)					5.1E-06				1.9E+00
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.1E-06	--	5.1E-06	Reproductive	1.1E+00	--	1.1E+00
			1,2,3,7,8-PeCDD	1.3E-07	--	1.3E-07	Reproductive	3.0E-02	--	3.0E-02
			1,2,3,4,7,8-HxCDD	7.7E-09	--	7.7E-09	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,6,7,8-HxCDD	1.9E-08	--	1.9E-08	Reproductive	4.3E-03	--	4.3E-03
			1,2,3,7,8,9-HxCDD	4.4E-09	--	4.4E-09	Reproductive	9.9E-04	--	9.9E-04
			1,2,3,4,6,7,8-HpCDD	1.2E-09	--	1.2E-09	Reproductive	2.6E-04	--	2.6E-04
			OCDD	8.1E-11	--	8.1E-11	Reproductive	1.8E-05	--	1.8E-05
			2,3,7,8-TCDF	1.2E-07	--	1.2E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,7,8-PeCDF	2.9E-08	--	2.9E-08	Reproductive	6.4E-03	--	6.4E-03
			2,3,4,7,8-PeCDF	3.2E-07	--	3.2E-07	Reproductive	7.2E-02	--	7.2E-02
			1,2,3,4,7,8-HxCDF	5.2E-08	--	5.2E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,6,7,8-HxCDF	3.8E-08	--	3.8E-08	Reproductive	8.4E-03	--	8.4E-03
			1,2,3,7,8,9-HxCDF	3.3E-09	--	3.3E-09	Reproductive	7.4E-04	--	7.4E-04
			2,3,4,6,7,8-HxCDF	6.8E-09	--	6.8E-09	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,6,7,8-HpCDF	7.6E-09	--	7.6E-09	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,4,7,8,9-HpCDF	2.8E-10	--	2.8E-10	Reproductive	6.2E-05	--	6.2E-05
			OCDF	2.1E-11	--	2.1E-11	Reproductive	4.6E-06	--	4.6E-06
			KM TEQ DF	5.8E-06	--	5.8E-06	Reproductive	1.3E+00	--	1.3E+00
			PCB-77	3.4E-08	--	3.4E-08	Reproductive	7.6E-03	--	7.6E-03
			PCB-81	3.8E-09	--	3.8E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-105	7.8E-08	--	7.8E-08	Reproductive	1.7E-02	--	1.7E-02
			PCB-114	5.9E-09	--	5.9E-09	Reproductive	1.3E-03	--	1.3E-03
			PCB-118	2.9E-07	--	2.9E-07	Reproductive	6.5E-02	--	6.5E-02
			PCB-123	5.8E-09	--	5.8E-09	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	2.1E-06	--	2.1E-06	Reproductive	4.7E-01	--	4.7E-01
			PCB-156/157	3.0E-08	--	3.0E-08	Reproductive	6.6E-03	--	6.6E-03
			PCB-167	1.2E-08	--	1.2E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-169	7.8E-08	--	7.8E-08	Reproductive	1.7E-02	--	1.7E-02
			PCB-189	2.4E-09	--	2.4E-09	Reproductive	5.2E-04	--	5.2E-04
			KM TEQ PCB	2.6E-06	--	2.6E-06	Reproductive	5.8E-01	--	5.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-06	--	1.1E-06	Whole Body	1.3E+00	--	1.3E+00
			PAHs							
			Benz(a)anthracene	1.3E-08	--	1.3E-08	--	--	--	--
			Benzo(a)pyrene	1.3E-07	--	1.3E-07	Developmental	3.3E-03	--	3.3E-03
			Benzo(b)fluoranthene	1.3E-08	--	1.3E-08	--	--	--	--
			Chrysene	1.3E-10	--	1.3E-10	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-08	--	1.3E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	2.7E-08	--	2.7E-08	Liver	8.9E-02	--	8.9E-02
			2,4'-DDE	7.7E-09	--	7.7E-09	Liver	1.8E-03	--	1.8E-03
			2,4'-DDT	1.2E-08	--	1.2E-08	Liver	1.6E-03	--	1.6E-03
			4,4'-DDD	8.3E-08	--	8.3E-08	Liver	2.7E-01	--	2.7E-01

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			4,4'-DDE	8.9E-08	--	8.9E-08	Liver	2.0E-02	--	2.0E-02
			4,4'-DDT	2.4E-08	--	2.4E-08	Liver	3.2E-03	--	3.2E-03
			Benzaldehyde	1.7E-08	--	1.7E-08	GI Tract, Kidney	9.8E-04	--	9.8E-04
			Chlordane, alpha (cis)	1.7E-08	--	1.7E-08	Liver	2.3E-03	--	2.3E-03
			Chlordane, gamma (trans)	3.7E-09	--	3.7E-09	Liver	5.0E-04	--	5.0E-04
			Dieldrin	2.6E-07	--	2.6E-07	Liver	7.7E-03	--	7.7E-03
			Heptachlor epoxide, cis-	3.9E-08	--	3.9E-08	Liver	7.7E-03	--	7.7E-03
			Heptachlor epoxide, trans-	3.2E-10	--	3.2E-10	Liver	6.2E-05	--	6.2E-05
			Hexachlorobenzene	4.4E-09	--	4.4E-09	Liver	8.0E-05	--	8.0E-05
			Mirex	9.0E-09	--	9.0E-09	Liver, Thyroid	5.8E-05	--	5.8E-05
			Nonachlor, cis-	5.6E-09	--	5.6E-09	Liver	3.7E-03	--	3.7E-03
			Nonachlor, trans-	1.6E-08	--	1.6E-08	Liver	6.7E-02	--	6.7E-02
			Oxychlordane	2.3E-09	--	2.3E-09	Liver	1.7E-03	--	1.7E-03
			Pyridine	--	--	--	Liver	9.8E-02	--	9.8E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	6.6E-04	--	6.6E-04
			Arsenic, organic	--	--	--	Urinary	2.6E-03	--	2.6E-03
			Arsenic, inorganic	3.7E-07	--	3.7E-07	Skin, Blood	1.9E-02	--	1.9E-02
			Cadmium	--	--	--	Urinary	3.5E-03	--	3.5E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	7.2E-06	--	7.2E-06
			Cobalt	--	--	--	Thyroid	5.0E-03	--	5.0E-03
			Copper	--	--	--	GI Tract	4.8E-02	--	4.8E-02
			Iron	--	--	--	GI Tract	6.6E-04	--	6.6E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.0E-04	--	2.0E-04
			Mercury	--	--	--	Immune	7.6E-02	--	7.6E-02
			Methyl Mercury	--	--	--	Neurological	3.1E-01	--	3.1E-01
			Selenium	--	--	--	Whole Body	9.8E-03	--	9.8E-03
			Silver	--	--	--	Skin	3.0E-04	--	3.0E-04
			Vanadium	--	--	--	Hair	5.2E-04	--	5.2E-04
			Zinc	--	--	--	Blood	3.1E-03	--	3.1E-03
			Total DLCs (excluding KM TEQs)			8.5E-06				1.9E+00
			Total DLCs (based on KM TEQs)			8.4E-06				1.9E+00
			Total PCDD/Fs (excluding KM TEQ)			5.9E-06				1.3E+00
			Total PCDD/Fs (based on KM TEQ)			5.8E-06				1.3E+00
			Total DL-PCBs (excluding KM TEQ)			2.7E-06				5.9E-01
			Total DL-PCBs (based on KM TEQ)			2.6E-06				5.8E-01
			Total Non-DL PCBs			1.1E-06				1.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.8E-06				1.9E+00
			Total PCBs (DL & NDL; based on KM TEQ)			3.7E-06				1.9E+00
			Total PAHs			2.9E-07				3.3E-03
			Total Organics			6.2E-07				5.8E-01
			Total Inorganics			3.7E-07				4.8E-01
	White Perch Total (excluding KM TEQs)					1.1E-05				4.2E+00
	White Perch Total (based on KM TEQs)					1.1E-05				4.2E+00
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.9E-06	--	9.9E-06	Reproductive	2.2E+00	--	2.2E+00
			1,2,3,7,8-PeCDD	2.6E-07	--	2.6E-07	Reproductive	5.8E-02	--	5.8E-02
			1,2,3,4,7,8-HxCDD	7.6E-09	--	7.6E-09	Reproductive	1.7E-03	--	1.7E-03

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDD	2.2E-08	--	2.2E-08	Reproductive	5.0E-03	--	5.0E-03
			1,2,3,7,8,9-HxCDD	7.9E-09	--	7.9E-09	Reproductive	1.8E-03	--	1.8E-03
			1,2,3,4,6,7,8-HpCDD	2.6E-09	--	2.6E-09	Reproductive	5.7E-04	--	5.7E-04
			OCDD	2.3E-10	--	2.3E-10	Reproductive	5.1E-05	--	5.1E-05
			2,3,7,8-TCDF	3.7E-07	--	3.7E-07	Reproductive	8.1E-02	--	8.1E-02
			1,2,3,7,8-PeCDF	2.4E-08	--	2.4E-08	Reproductive	5.3E-03	--	5.3E-03
			2,3,4,7,8-PeCDF	5.5E-07	--	5.5E-07	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,4,7,8-HxCDF	1.8E-07	--	1.8E-07	Reproductive	3.9E-02	--	3.9E-02
			1,2,3,6,7,8-HxCDF	5.3E-08	--	5.3E-08	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,7,8,9-HxCDF	3.2E-09	--	3.2E-09	Reproductive	7.2E-04	--	7.2E-04
			2,3,4,6,7,8-HxCDF	1.4E-08	--	1.4E-08	Reproductive	3.1E-03	--	3.1E-03
			1,2,3,4,6,7,8-HpCDF	1.8E-08	--	1.8E-08	Reproductive	3.9E-03	--	3.9E-03
			1,2,3,4,7,8,9-HpCDF	2.5E-10	--	2.5E-10	Reproductive	5.6E-05	--	5.6E-05
			OCDF	2.8E-11	--	2.8E-11	Reproductive	6.1E-06	--	6.1E-06
			KM TEQ DF	1.1E-05	--	1.1E-05	Reproductive	2.5E+00	--	2.5E+00
			PCB-77	7.4E-08	--	7.4E-08	Reproductive	1.6E-02	--	1.6E-02
			PCB-81	9.7E-09	--	9.7E-09	Reproductive	2.1E-03	--	2.1E-03
			PCB-105	1.2E-07	--	1.2E-07	Reproductive	2.6E-02	--	2.6E-02
			PCB-114	1.0E-08	--	1.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-118	5.3E-07	--	5.3E-07	Reproductive	1.2E-01	--	1.2E-01
			PCB-123	9.3E-09	--	9.3E-09	Reproductive	2.1E-03	--	2.1E-03
			PCB-126	3.7E-06	--	3.7E-06	Reproductive	8.1E-01	--	8.1E-01
			PCB-156/157	4.2E-08	--	4.2E-08	Reproductive	9.4E-03	--	9.4E-03
			PCB-167	1.8E-08	--	1.8E-08	Reproductive	3.9E-03	--	3.9E-03
			PCB-169	1.2E-07	--	1.2E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-189	3.0E-09	--	3.0E-09	Reproductive	6.8E-04	--	6.8E-04
			KM TEQ PCB	4.4E-06	--	4.4E-06	Reproductive	9.7E-01	--	9.7E-01
			Non-DL PCBs							
			Total Non-DL PCBs	8.1E-07	--	8.1E-07	Whole Body	9.4E-01	--	9.4E-01
			PAHs							
			Benz(a)anthracene	2.1E-09	--	2.1E-09	--	--	--	--
			Benzo(a)pyrene	2.0E-08	--	2.0E-08	Developmental	5.3E-04	--	5.3E-04
			Benzo(b)fluoranthene	2.0E-09	--	2.0E-09	--	--	--	--
			Chrysene	2.8E-11	--	2.8E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.0E-08	--	2.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-08	--	1.6E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.3E-10	--	1.3E-10	Liver	4.3E-04	--	4.3E-04
			2,4'-DDE	3.8E-10	--	3.8E-10	Liver	8.8E-05	--	8.8E-05
			2,4'-DDT	1.7E-10	--	1.7E-10	Liver	2.3E-05	--	2.3E-05
			4,4'-DDD	2.1E-08	--	2.1E-08	Liver	6.8E-02	--	6.8E-02
			4,4'-DDE	8.1E-08	--	8.1E-08	Liver	1.8E-02	--	1.8E-02
			4,4'-DDT	9.3E-10	--	9.3E-10	Liver	1.3E-04	--	1.3E-04
			Benzaldehyde	1.2E-08	--	1.2E-08	GI Tract, Kidney	7.0E-04	--	7.0E-04
			Chlordane, alpha (cis)	1.8E-09	--	1.8E-09	Liver	2.4E-04	--	2.4E-04
			Chlordane, gamma (trans)	2.2E-10	--	2.2E-10	Liver	3.0E-05	--	3.0E-05
			Dieldrin	2.5E-07	--	2.5E-07	Liver	7.2E-03	--	7.2E-03
			Heptachlor epoxide, cis-	8.2E-08	--	8.2E-08	Liver	1.6E-02	--	1.6E-02
			Heptachlor epoxide, trans-	2.6E-08	--	2.6E-08	Liver	5.2E-03	--	5.2E-03
			Hexachlorobenzene	4.4E-09	--	4.4E-09	Liver	8.1E-05	--	8.1E-05
			Mirex	9.1E-09	--	9.1E-09	Liver, Thyroid	5.9E-05	--	5.9E-05

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Nonachlor, cis-	4.7E-09	--	4.7E-09	Liver	3.1E-03	--	3.1E-03
			Nonachlor, trans-	9.2E-09	--	9.2E-09	Liver	3.9E-02	--	3.9E-02
			Oxychlordane	1.4E-08	--	1.4E-08	Liver	1.0E-02	--	1.0E-02
			Pyridine	--	--	--	Liver	3.0E-02	--	3.0E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	5.4E-04	--	5.4E-04
			Arsenic, organic	--	--	--	Urinary	7.4E-03	--	7.4E-03
			Arsenic, inorganic	1.1E-06	--	1.1E-06	Skin, Blood	5.5E-02	--	5.5E-02
			Cadmium	--	--	--	Urinary	2.3E-02	--	2.3E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	6.5E-06	--	6.5E-06
			Cobalt	--	--	--	Thyroid	1.7E-02	--	1.7E-02
			Copper	--	--	--	GI Tract	1.7E+00	--	1.7E+00
			Iron	--	--	--	GI Tract	3.3E-03	--	3.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	4.2E-03	--	4.2E-03
			Mercury	--	--	--	Immune	3.0E-02	--	3.0E-02
			Methyl Mercury	--	--	--	Neurological	1.0E-01	--	1.0E-01
			Selenium	--	--	--	Whole Body	1.3E-02	--	1.3E-02
			Silver	--	--	--	Skin	9.2E-03	--	9.2E-03
			Vanadium	--	--	--	Hair	8.6E-04	--	8.6E-04
			Zinc	--	--	--	Blood	9.1E-03	--	9.1E-03
			Total DLCs (excluding KM TEQs)			1.6E-05				3.6E+00
			Total DLCs (based on KM TEQs)			1.6E-05				3.5E+00
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05				2.5E+00
			Total PCDD/Fs (based on KM TEQ)			1.1E-05				2.5E+00
			Total DL-PCBs (excluding KM TEQ)			4.6E-06				1.0E+00
			Total DL-PCBs (based on KM TEQ)			4.4E-06				9.7E-01
			Total Non-DL PCBs			8.1E-07				9.4E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			5.4E-06				2.0E+00
			Total PCBs (DL & NDL; based on KM TEQ)			5.2E-06				1.9E+00
			Total PAHs			6.1E-08				5.3E-04
			Total Organics			5.1E-07				2.0E-01
			Total Inorganics			1.1E-06				2.0E+00
	Crab (H+M) Total (excluding KM TEQs)					1.8E-05				6.7E+00
	Crab (H+M) Total (based on KM TEQs)					1.8E-05				6.6E+00
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.5E-06	--	1.5E-06	Reproductive	3.2E-01	--	3.2E-01
			1,2,3,7,8-PeCDD	9.5E-08	--	9.5E-08	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,7,8-HxCDD	1.0E-09	--	1.0E-09	Reproductive	2.3E-04	--	2.3E-04
			1,2,3,6,7,8-HxCDD	2.6E-09	--	2.6E-09	Reproductive	5.8E-04	--	5.8E-04
			1,2,3,7,8,9-HxCDD	1.3E-09	--	1.3E-09	Reproductive	3.0E-04	--	3.0E-04
			1,2,3,4,6,7,8-HpCDD	5.1E-10	--	5.1E-10	Reproductive	1.1E-04	--	1.1E-04
			OCDD	5.2E-11	--	5.2E-11	Reproductive	1.2E-05	--	1.2E-05
			2,3,7,8-TCDF	4.4E-08	--	4.4E-08	Reproductive	9.7E-03	--	9.7E-03
			1,2,3,7,8-PeCDF	3.1E-09	--	3.1E-09	Reproductive	6.8E-04	--	6.8E-04
			2,3,4,7,8-PeCDF	5.5E-08	--	5.5E-08	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,7,8-HxCDF	2.7E-08	--	2.7E-08	Reproductive	6.0E-03	--	6.0E-03
			1,2,3,6,7,8-HxCDF	6.8E-09	--	6.8E-09	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,7,8,9-HxCDF	2.7E-09	--	2.7E-09	Reproductive	6.0E-04	--	6.0E-04

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	1.7E-09	--	1.7E-09	Reproductive	3.9E-04	--	3.9E-04
			1,2,3,4,6,7,8-HpCDF	1.5E-09	--	1.5E-09	Reproductive	3.3E-04	--	3.3E-04
			1,2,3,4,7,8,9-HpCDF	1.3E-10	--	1.3E-10	Reproductive	2.8E-05	--	2.8E-05
			OCDF	1.1E-11	--	1.1E-11	Reproductive	2.4E-06	--	2.4E-06
			KM TEQ DF	1.7E-06	--	1.7E-06	Reproductive	3.7E-01	--	3.7E-01
			PCB-77	7.5E-09	--	7.5E-09	Reproductive	1.7E-03	--	1.7E-03
			PCB-81	1.0E-09	--	1.0E-09	Reproductive	2.3E-04	--	2.3E-04
			PCB-105	1.2E-08	--	1.2E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-114	1.1E-09	--	1.1E-09	Reproductive	2.3E-04	--	2.3E-04
			PCB-118	4.5E-08	--	4.5E-08	Reproductive	1.0E-02	--	1.0E-02
			PCB-123	8.9E-10	--	8.9E-10	Reproductive	2.0E-04	--	2.0E-04
			PCB-126	3.2E-07	--	3.2E-07	Reproductive	7.1E-02	--	7.1E-02
			PCB-156/157	3.6E-09	--	3.6E-09	Reproductive	8.1E-04	--	8.1E-04
			PCB-167	1.4E-09	--	1.4E-09	Reproductive	3.1E-04	--	3.1E-04
			PCB-169	1.3E-07	--	1.3E-07	Reproductive	2.9E-02	--	2.9E-02
			PCB-189	1.8E-10	--	1.8E-10	Reproductive	4.0E-05	--	4.0E-05
			KM TEQ PCB	3.8E-07	--	3.8E-07	Reproductive	8.5E-02	--	8.5E-02
			Non-DL PCBs							
			Total Non-DL PCBs	7.0E-08	--	7.0E-08	Whole Body	8.1E-02	--	8.1E-02
			PAHs							
			Benz(a)anthracene	9.8E-09	--	9.8E-09	--	--	--	--
			Benzo(a)pyrene	9.8E-08	--	9.8E-08	Developmental	2.5E-03	--	2.5E-03
			Benzo(b)fluoranthene	9.8E-09	--	9.8E-09	--	--	--	--
			Chrysene	9.8E-11	--	9.8E-11	--	--	--	--
			Dibenz(a,h)anthracene	9.8E-08	--	9.8E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	9.8E-09	--	9.8E-09	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.5E-11	--	1.5E-11	Liver	4.7E-05	--	4.7E-05
			2,4'-DDE	4.1E-11	--	4.1E-11	Liver	9.5E-06	--	9.5E-06
			2,4'-DDT	3.2E-11	--	3.2E-11	Liver	4.4E-06	--	4.4E-06
			4,4'-DDD	3.1E-09	--	3.1E-09	Liver	1.0E-02	--	1.0E-02
			4,4'-DDE	1.3E-08	--	1.3E-08	Liver	2.9E-03	--	2.9E-03
			4,4'-DDT	1.3E-10	--	1.3E-10	Liver	1.8E-05	--	1.8E-05
			Benzaldehyde	1.3E-08	--	1.3E-08	GI Tract, Kidney	7.6E-04	--	7.6E-04
			Chlordane, alpha (cis)	5.1E-10	--	5.1E-10	Liver	6.9E-05	--	6.9E-05
			Chlordane, gamma (trans)	2.3E-11	--	2.3E-11	Liver	3.1E-06	--	3.1E-06
			Dieldrin	5.4E-08	--	5.4E-08	Liver	1.6E-03	--	1.6E-03
			Heptachlor epoxide, cis-	7.5E-09	--	7.5E-09	Liver	1.5E-03	--	1.5E-03
			Heptachlor epoxide, trans-	5.2E-09	--	5.2E-09	Liver	1.0E-03	--	1.0E-03
			Hexachlorobenzene	8.9E-10	--	8.9E-10	Liver	1.6E-05	--	1.6E-05
			Mirex	2.3E-09	--	2.3E-09	Liver, Thyroid	1.5E-05	--	1.5E-05
			Nonachlor, cis-	5.8E-10	--	5.8E-10	Liver	3.9E-04	--	3.9E-04
			Nonachlor, trans-	1.1E-09	--	1.1E-09	Liver	4.6E-03	--	4.6E-03
			Oxychlordane	1.5E-09	--	1.5E-09	Liver	1.1E-03	--	1.1E-03
			Pyridine	--	--	--	Liver	2.4E-02	--	2.4E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	3.3E-04	--	3.3E-04
			Arsenic, organic	--	--	--	Urinary	6.9E-03	--	6.9E-03
			Arsenic, inorganic	9.9E-07	--	9.9E-07	Skin, Blood	5.1E-02	--	5.1E-02
			Cadmium	--	--	--	Urinary	9.6E-03	--	9.6E-03
			Chromium [as Cr(III)]	--	--	--	No Effect	6.0E-06	--	6.0E-06

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Cobalt	--	--	--	Thyroid	1.4E-02	--	1.4E-02
			Copper	--	--	--	GI Tract	1.1E+00	--	1.1E+00
			Iron	--	--	--	GI Tract	1.6E-03	--	1.6E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	2.6E-03	--	2.6E-03
			Mercury	--	--	--	Immune	3.5E-02	--	3.5E-02
			Methyl Mercury	--	--	--	Neurological	1.3E-01	--	1.3E-01
			Selenium	--	--	--	Whole Body	1.1E-02	--	1.1E-02
			Silver	--	--	--	Skin	5.6E-03	--	5.6E-03
			Vanadium	--	--	--	Hair	5.0E-04	--	5.0E-04
			Zinc	--	--	--	Blood	9.3E-03	--	9.3E-03
			Total DLCs (excluding KM TEQs)			2.2E-06				4.9E-01
			Total DLCs (based on KM TEQs)			2.0E-06				4.5E-01
			Total PCDD/Fs (excluding KM TEQ)			1.7E-06				3.8E-01
			Total PCDD/Fs (based on KM TEQ)			1.7E-06				3.7E-01
			Total DL-PCBs (excluding KM TEQ)			5.2E-07				1.2E-01
			Total DL-PCBs (based on KM TEQ)			3.8E-07				8.5E-02
			Total Non-DL PCBs			7.0E-08				8.1E-02
			Total PCBs (DL & NDL; excluding KM TEQ)			5.9E-07				2.0E-01
			Total PCBs (DL & NDL; based on KM TEQ)			4.5E-07				1.7E-01
			Total PAHs			2.3E-07				2.5E-03
			Total Organics			1.0E-07				4.8E-02
			Total Inorganics			9.9E-07				1.3E+00
	Crab (Muscle) Total (excluding KM TEQs)					3.6E-06				2.0E+00
	Crab (Muscle) Total (based on KM TEQs)					3.4E-06				1.9E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.4E-05	--	3.4E-05	Reproductive	7.7E+00	--	7.7E+00
			1,2,3,7,8-PeCDD	8.2E-07	--	8.2E-07	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,4,7,8-HxCDD	2.6E-08	--	2.6E-08	Reproductive	5.8E-03	--	5.8E-03
			1,2,3,6,7,8-HxCDD	7.9E-08	--	7.9E-08	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,7,8,9-HxCDD	2.7E-08	--	2.7E-08	Reproductive	6.0E-03	--	6.0E-03
			1,2,3,4,6,7,8-HpCDD	8.6E-09	--	8.6E-09	Reproductive	1.9E-03	--	1.9E-03
			OCDD	7.3E-10	--	7.3E-10	Reproductive	1.6E-04	--	1.6E-04
			2,3,7,8-TCDF	1.3E-06	--	1.3E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,7,8-PeCDF	8.4E-08	--	8.4E-08	Reproductive	1.9E-02	--	1.9E-02
			2,3,4,7,8-PeCDF	2.0E-06	--	2.0E-06	Reproductive	4.4E-01	--	4.4E-01
			1,2,3,4,7,8-HxCDF	6.3E-07	--	6.3E-07	Reproductive	1.4E-01	--	1.4E-01
			1,2,3,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	4.2E-02	--	4.2E-02
			1,2,3,7,8,9-HxCDF	5.1E-09	--	5.1E-09	Reproductive	1.1E-03	--	1.1E-03
			2,3,4,6,7,8-HxCDF	4.9E-08	--	4.9E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,6,7,8-HpCDF	6.4E-08	--	6.4E-08	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8,9-HpCDF	5.2E-10	--	5.2E-10	Reproductive	1.2E-04	--	1.2E-04
			OCDF	9.5E-11	--	9.5E-11	Reproductive	2.1E-05	--	2.1E-05
			KM TEQ DF	4.0E-05	--	4.0E-05	Reproductive	8.8E+00	--	8.8E+00
			PCB-77	2.6E-07	--	2.6E-07	Reproductive	5.8E-02	--	5.8E-02
			PCB-81	3.5E-08	--	3.5E-08	Reproductive	7.7E-03	--	7.7E-03
			PCB-105	4.2E-07	--	4.2E-07	Reproductive	9.4E-02	--	9.4E-02
			PCB-114	3.6E-08	--	3.6E-08	Reproductive	8.0E-03	--	8.0E-03
			PCB-118	1.9E-06	--	1.9E-06	Reproductive	4.3E-01	--	4.3E-01

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	3.3E-08	--	3.3E-08	Reproductive	7.4E-03	--	7.4E-03
			PCB-126	1.3E-05	--	1.3E-05	Reproductive	2.9E+00	--	2.9E+00
			PCB-156/157	1.5E-07	--	1.5E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-167	6.4E-08	--	6.4E-08	Reproductive	1.4E-02	--	1.4E-02
			PCB-169	4.1E-07	--	4.1E-07	Reproductive	9.1E-02	--	9.1E-02
			PCB-189	1.1E-08	--	1.1E-08	Reproductive	2.5E-03	--	2.5E-03
			KM TEQ PCB	1.6E-05	--	1.6E-05	Reproductive	3.5E+00	--	3.5E+00
			Non-DL PCBs							
			Total Non-DL PCBs	3.0E-06	--	3.0E-06	Whole Body	3.4E+00	--	3.4E+00
			PAHs							
			Benz(a)anthracene	2.4E-09	--	2.4E-09	--	--	--	--
			Benzo(a)pyrene	2.1E-08	--	2.1E-08	Developmental	5.6E-04	--	5.6E-04
			Benzo(b)fluoranthene	2.0E-09	--	2.0E-09	--	--	--	--
			Chrysene	3.4E-11	--	3.4E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.1E-08	--	2.1E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.7E-08	--	5.7E-08	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	4.6E-10	--	4.6E-10	Liver	1.5E-03	--	1.5E-03
			2,4'-DDE	1.4E-09	--	1.4E-09	Liver	3.1E-04	--	3.1E-04
			2,4'-DDT	5.6E-10	--	5.6E-10	Liver	7.7E-05	--	7.7E-05
			4,4'-DDD	7.3E-08	--	7.3E-08	Liver	2.4E-01	--	2.4E-01
			4,4'-DDE	2.8E-07	--	2.8E-07	Liver	6.3E-02	--	6.3E-02
			4,4'-DDT	3.2E-09	--	3.2E-09	Liver	4.4E-04	--	4.4E-04
			Benzaldehyde	2.6E-08	--	2.6E-08	GI Tract, Kidney	1.5E-03	--	1.5E-03
			Chlordane, alpha (cis)	5.8E-09	--	5.8E-09	Liver	7.8E-04	--	7.8E-04
			Chlordane, gamma (trans)	8.0E-10	--	8.0E-10	Liver	1.1E-04	--	1.1E-04
			Dieldrin	8.1E-07	--	8.1E-07	Liver	2.4E-02	--	2.4E-02
			Heptachlor epoxide, cis-	3.0E-07	--	3.0E-07	Liver	5.9E-02	--	5.9E-02
			Heptachlor epoxide, trans-	8.8E-08	--	8.8E-08	Liver	1.7E-02	--	1.7E-02
			Hexachlorobenzene	1.5E-08	--	1.5E-08	Liver	2.7E-04	--	2.7E-04
			Mirex	3.0E-08	--	3.0E-08	Liver, Thyroid	2.0E-04	--	2.0E-04
			Nonachlor, cis-	1.6E-08	--	1.6E-08	Liver	1.1E-02	--	1.1E-02
			Nonachlor, trans-	3.3E-08	--	3.3E-08	Liver	1.4E-01	--	1.4E-01
			Oxychlordane	4.9E-08	--	4.9E-08	Liver	3.7E-02	--	3.7E-02
			Pyridine	--	--	--	Liver	4.7E-02	--	4.7E-02
			Inorganics							
			Aluminum	--	--	--	Neurological	1.7E-03	--	1.7E-03
			Arsenic, organic	--	--	--	Urinary	9.2E-03	--	9.2E-03
			Arsenic, inorganic	1.3E-06	--	1.3E-06	Skin, Blood	6.8E-02	--	6.8E-02
			Cadmium	--	--	--	Urinary	7.5E-02	--	7.5E-02
			Chromium [as Cr(III)]	--	--	--	No Effect	1.1E-05	--	1.1E-05
			Cobalt	--	--	--	Thyroid	4.4E-02	--	4.4E-02
			Copper	--	--	--	GI Tract	4.4E+00	--	4.4E+00
			Iron	--	--	--	GI Tract	8.5E-03	--	8.5E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	7.8E-03	--	7.8E-03
			Mercury	--	--	--	Immune	1.5E-02	--	1.5E-02
			Methyl Mercury	--	--	--	Neurological	3.5E-02	--	3.5E-02
			Selenium	--	--	--	Whole Body	2.1E-02	--	2.1E-02
			Silver	--	--	--	Skin	2.2E-02	--	2.2E-02
			Vanadium	--	--	--	Hair	2.0E-03	--	2.0E-03

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Zinc	--	--	--	Blood	9.3E-03	--	9.3E-03
			Total DLCs (excluding KM TEQs)			5.6E-05				1.3E+01
			Total DLCs (based on KM TEQs)			5.5E-05				1.2E+01
			Total PCDD/Fs (excluding KM TEQ)			4.0E-05				8.8E+00
			Total PCDD/Fs (based on KM TEQ)			4.0E-05				8.8E+00
			Total DL-PCBs (excluding KM TEQ)			1.7E-05				3.7E+00
			Total DL-PCBs (based on KM TEQ)			1.6E-05				3.5E+00
			Total Non-DL PCBs			3.0E-06				3.4E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.0E-05				7.1E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.9E-05				7.0E+00
			Total PAHs			1.0E-07				5.6E-04
			Total Organics			1.7E-06				6.4E-01
			Total Inorganics			1.3E-06				4.7E+00
	Crab (Hepatopancreas) Total (excluding KM TEQs)					6.2E-05				2.1E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					6.1E-05				2.1E+01

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Mixed Fish/All Species Total				Mixed Fish/All Species Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		3.3E-02		Blood HI =		3.3E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		2.1E-03		Developmental HI =		2.1E-03
				GI Tract HI =		3.8E-02		GI Tract HI =		3.8E-02
				Hair HI =		4.2E-04		Hair HI =		4.2E-04
				Immune HI =		7.6E-02		Immune HI =		7.6E-02
				Kidney HI =		9.8E-04		Kidney HI =		9.8E-04
				Liver HI =		3.9E-01		Liver HI =		3.9E-01
				Neurological HI =		2.7E-01		Neurological HI =		2.7E-01
				No Effect HI =		3.3E-05		No Effect HI =		3.3E-05
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.5E+00		Reproductive HI =		1.6E+00
				Skin HI =		2.9E-02		Skin HI =		2.9E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		5.7E-02		Thyroid HI =		5.7E-02
				Urinary HI =		7.4E-03		Urinary HI =		7.4E-03
				Whole Body HI =		1.1E+00		Whole Body HI =		1.1E+00
						American Eel Total				American Eel Total
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		3.7E-02		Blood HI =		3.7E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		3.3E-03		Developmental HI =		3.3E-03
				GI Tract HI =		1.8E-02		GI Tract HI =		1.8E-02
				Hair HI =		3.4E-04		Hair HI =		3.4E-04
				Immune HI =		1.1E-01		Immune HI =		1.1E-01
				Kidney HI =		9.8E-04		Kidney HI =		9.8E-04
				Liver HI =		5.2E-01		Liver HI =		5.2E-01
				Neurological HI =		3.5E-01		Neurological HI =		3.5E-01
				No Effect HI =		1.2E-04		No Effect HI =		1.2E-04
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.0E+00		Reproductive HI =		2.5E+00
				Skin HI =		3.0E-02		Skin HI =		3.0E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		1.8E-03		Thyroid HI =		1.8E-03
				Urinary HI =		7.5E-03		Urinary HI =		7.5E-03
				Whole Body HI =		1.6E+00		Whole Body HI =		1.6E+00

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
						Crab (H+M) Total				Crab (H+M) Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		6.4E-02		Blood HI =		6.4E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		5.3E-04		Developmental HI =		5.3E-04
				GI Tract HI =		1.7E+00		GI Tract HI =		1.7E+00
				Hair HI =		8.6E-04		Hair HI =		8.6E-04
				Immune HI =		3.0E-02		Immune HI =		3.0E-02
				Kidney HI =		7.0E-04		Kidney HI =		7.0E-04
				Liver HI =		2.0E-01		Liver HI =		2.0E-01
				Neurological HI =		1.1E-01		Neurological HI =		1.1E-01
				No Effect HI =		6.5E-06		No Effect HI =		6.5E-06
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		3.6E+00		Reproductive HI =		3.5E+00
				Skin HI =		6.4E-02		Skin HI =		6.4E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		1.8E-02		Thyroid HI =		1.8E-02
				Urinary HI =		3.1E-02		Urinary HI =		3.1E-02
				Whole Body HI =		9.5E-01		Whole Body HI =		9.5E-01
						Crab (Muscle) Total				Crab (Muscle) Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		6.1E-02		Blood HI =		6.1E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		2.5E-03		Developmental HI =		2.5E-03
				GI Tract HI =		1.1E+00		GI Tract HI =		1.1E+00
				Hair HI =		5.0E-04		Hair HI =		5.0E-04
				Immune HI =		3.5E-02		Immune HI =		3.5E-02
				Kidney HI =		7.6E-04		Kidney HI =		7.6E-04
				Liver HI =		4.8E-02		Liver HI =		4.8E-02
				Neurological HI =		1.3E-01		Neurological HI =		1.3E-01
				No Effect HI =		6.0E-06		No Effect HI =		6.0E-06
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		4.9E-01		Reproductive HI =		4.5E-01
				Skin HI =		5.7E-02		Skin HI =		5.7E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		1.4E-02		Thyroid HI =		1.4E-02
				Urinary HI =		1.7E-02		Urinary HI =		1.7E-02
				Whole Body HI =		9.2E-02		Whole Body HI =		9.2E-02

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	7.6E-06	--	7.6E-06
			1,2,3,7,8-PeCDD	4.1E-07	--	4.1E-07
			1,2,3,4,7,8-HxCDD	1.9E-08	--	1.9E-08
			1,2,3,6,7,8-HxCDD	5.8E-08	--	5.8E-08
			1,2,3,7,8,9-HxCDD	1.4E-08	--	1.4E-08
			1,2,3,4,6,7,8-HpCDD	6.6E-09	--	6.6E-09
			OCDD	1.2E-09	--	1.2E-09
			2,3,7,8-TCDF	1.6E-07	--	1.6E-07
			1,2,3,7,8-PeCDF	4.2E-08	--	4.2E-08
			2,3,4,7,8-PeCDF	6.8E-07	--	6.8E-07
			1,2,3,4,7,8-HxCDF	1.0E-07	--	1.0E-07
			1,2,3,6,7,8-HxCDF	9.1E-08	--	9.1E-08
			1,2,3,7,8,9-HxCDF	1.1E-08	--	1.1E-08
			2,3,4,6,7,8-HxCDF	1.6E-08	--	1.6E-08
			1,2,3,4,6,7,8-HpCDF	2.1E-08	--	2.1E-08
			1,2,3,4,7,8,9-HpCDF	1.0E-09	--	1.0E-09
			OCDF	6.3E-11	--	6.3E-11
			KM TEQ DF	9.1E-06	--	9.1E-06
			PCB-77	5.0E-08	--	5.0E-08
			PCB-81	5.8E-09	--	5.8E-09
			PCB-105	2.3E-07	--	2.3E-07
			PCB-114	1.8E-08	--	1.8E-08
			PCB-118	9.4E-07	--	9.4E-07
			PCB-123	1.7E-08	--	1.7E-08
			PCB-126	9.2E-06	--	9.2E-06
			PCB-156/157	8.6E-08	--	8.6E-08
			PCB-167	3.7E-08	--	3.7E-08
			PCB-169	1.2E-07	--	1.2E-07
			PCB-189	6.9E-09	--	6.9E-09
			KM TEQ PCB	1.2E-05	--	1.2E-05
			Non-DL PCBs			
			Total Non-DL PCBs	2.8E-06	--	2.8E-06
			PAHs			
			Benz(a)anthracene	1.3E-08	--	1.3E-08
			Benzo(a)pyrene	1.3E-07	--	1.3E-07
			Benzo(b)fluoranthene	1.3E-08	--	1.3E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Chrysene	1.3E-10	--	1.3E-10
			Dibenz(a,h)anthracene	1.3E-07	--	1.3E-07
			Indeno(1,2,3-c,d)-pyrene	1.3E-08	--	1.3E-08
			Pesticides & Organics			
			2,4'-DDD	2.8E-08	--	2.8E-08
			2,4'-DDE	1.3E-08	--	1.3E-08
			2,4'-DDT	8.6E-09	--	8.6E-09
			4,4'-DDD	1.4E-07	--	1.4E-07
			4,4'-DDE	2.7E-07	--	2.7E-07
			4,4'-DDT	3.5E-08	--	3.5E-08
			Benzaldehyde	4.9E-08	--	4.9E-08
			Chlordane, alpha (cis)	3.4E-08	--	3.4E-08
			Chlordane, gamma (trans)	8.1E-09	--	8.1E-09
			Dieldrin	8.1E-07	--	8.1E-07
			Heptachlor epoxide, cis-	1.0E-07	--	1.0E-07
			Heptachlor epoxide, trans-	4.8E-09	--	4.8E-09
			Hexachlorobenzene	1.5E-08	--	1.5E-08
			Mirex	1.8E-08	--	1.8E-08
			Nonachlor, cis-	1.4E-08	--	1.4E-08
			Nonachlor, trans-	3.7E-08	--	3.7E-08
			Oxychlordane	1.0E-08	--	1.0E-08
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	1.6E-06	--	1.6E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			2.0E-05
			Total DLCs (based on KM TEQs)			2.1E-05
			Total PCDD/Fs (excluding KM TEQ)			9.2E-06
			Total PCDD/Fs (based on KM TEQ)			9.1E-06
			Total DL-PCBs (excluding KM TEQ)			1.1E-05
			Total DL-PCBs (based on KM TEQ)			1.2E-05
			Total Non-DL PCBs			2.8E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.4E-05
			Total PAHs			3.1E-07
			Total Organics			1.6E-06
			Total Inorganics			1.6E-06
	Mixed Fish/All Species Total (excluding KM TEQs)					2.6E-05
	Mixed Fish/All Species Total (based on KM TEQs)					2.7E-05
Fish	American Eel	American Eel	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	8.1E-06	--	8.1E-06
			1,2,3,7,8-PeCDD	6.5E-07	--	6.5E-07
			1,2,3,4,7,8-HxCDD	3.9E-08	--	3.9E-08
			1,2,3,6,7,8-HxCDD	1.8E-07	--	1.8E-07
			1,2,3,7,8,9-HxCDD	3.2E-08	--	3.2E-08
			1,2,3,4,6,7,8-HpCDD	1.2E-08	--	1.2E-08
			OCDD	8.8E-10	--	8.8E-10
			2,3,7,8-TCDF	9.7E-09	--	9.7E-09
			1,2,3,7,8-PeCDF	3.9E-08	--	3.9E-08
			2,3,4,7,8-PeCDF	1.1E-06	--	1.1E-06
			1,2,3,4,7,8-HxCDF	2.5E-07	--	2.5E-07
			1,2,3,6,7,8-HxCDF	1.9E-07	--	1.9E-07
			1,2,3,7,8,9-HxCDF	1.1E-08	--	1.1E-08
			2,3,4,6,7,8-HxCDF	3.4E-08	--	3.4E-08
			1,2,3,4,6,7,8-HpCDF	4.4E-08	--	4.4E-08
			1,2,3,4,7,8,9-HpCDF	1.5E-09	--	1.5E-09
			OCDF	1.0E-10	--	1.0E-10
			KM TEQ DF	1.0E-05	--	1.0E-05

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-77	7.6E-09	--	7.6E-09
			PCB-81	3.6E-09	--	3.6E-09
			PCB-105	6.3E-07	--	6.3E-07
			PCB-114	4.0E-08	--	4.0E-08
			PCB-118	2.2E-06	--	2.2E-06
			PCB-123	4.3E-08	--	4.3E-08
			PCB-126	1.2E-05	--	1.2E-05
			PCB-156/157	1.9E-07	--	1.9E-07
			PCB-167	8.2E-08	--	8.2E-08
			PCB-169	1.3E-07	--	1.3E-07
			PCB-189	1.5E-08	--	1.5E-08
			KM TEQ PCB	2.2E-05	--	2.2E-05
			Non-DL PCBs			
			Total Non-DL PCBs	4.0E-06	--	4.0E-06
			PAHs			
			Benz(a)anthracene	2.1E-08	--	2.1E-08
			Benzo(a)pyrene	2.1E-07	--	2.1E-07
			Benzo(b)fluoranthene	2.1E-08	--	2.1E-08
			Chrysene	2.1E-10	--	2.1E-10
			Dibenz(a,h)anthracene	2.1E-07	--	2.1E-07
			Indeno(1,2,3-c,d)-pyrene	2.1E-08	--	2.1E-08
			Pesticides & Organics			
			2,4'-DDD	4.8E-09	--	4.8E-09
			2,4'-DDE	4.3E-09	--	4.3E-09
			2,4'-DDT	8.8E-10	--	8.8E-10
			4,4'-DDD	2.0E-07	--	2.0E-07
			4,4'-DDE	6.1E-07	--	6.1E-07
			4,4'-DDT	1.9E-08	--	1.9E-08
			Benzaldehyde	4.9E-08	--	4.9E-08
			Chlordane, alpha (cis)	2.9E-08	--	2.9E-08
			Chlordane, gamma (trans)	8.7E-09	--	8.7E-09
			Dieldrin	1.5E-06	--	1.5E-06
			Heptachlor epoxide, cis-	2.0E-07	--	2.0E-07
			Heptachlor epoxide, trans-	2.1E-08	--	2.1E-08
			Hexachlorobenzene	4.1E-08	--	4.1E-08
			Mirex	3.0E-08	--	3.0E-08
			Nonachlor, cis-	2.4E-08	--	2.4E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Nonachlor, trans-	6.2E-08	--	6.2E-08
			Oxychlordane	3.1E-08	--	3.1E-08
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	1.7E-06	--	1.7E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			2.6E-05
			Total DLCs (based on KM TEQs)			3.2E-05
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05
			Total PCDD/Fs (based on KM TEQ)			1.0E-05
			Total DL-PCBs (excluding KM TEQ)			1.5E-05
			Total DL-PCBs (based on KM TEQ)			2.2E-05
			Total Non-DL PCBs			4.0E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.9E-05
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-05
			Total PAHs			4.8E-07
			Total Organics			2.8E-06
			Total Inorganics			1.7E-06
	American Eel Total (excluding KM TEQs)					3.5E-05
	American Eel Total (based on KM TEQs)					4.1E-05
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**			

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDD	1.4E-06	--	1.4E-06
			1,2,3,7,8-PeCDD	2.8E-07	--	2.8E-07
			1,2,3,4,7,8-HxCDD	6.7E-09	--	6.7E-09
			1,2,3,6,7,8-HxCDD	1.8E-08	--	1.8E-08
			1,2,3,7,8,9-HxCDD	6.4E-09	--	6.4E-09
			1,2,3,4,6,7,8-HpCDD	1.3E-09	--	1.3E-09
			OCDD	7.1E-11	--	7.1E-11
			2,3,7,8-TCDF	3.5E-08	--	3.5E-08
			1,2,3,7,8-PeCDF	1.8E-08	--	1.8E-08
			2,3,4,7,8-PeCDF	2.1E-07	--	2.1E-07
			1,2,3,4,7,8-HxCDF	8.7E-09	--	8.7E-09
			1,2,3,6,7,8-HxCDF	2.1E-08	--	2.1E-08
			1,2,3,7,8,9-HxCDF	7.9E-09	--	7.9E-09
			2,3,4,6,7,8-HxCDF	5.2E-09	--	5.2E-09
			1,2,3,4,6,7,8-HpCDF	6.1E-09	--	6.1E-09
			1,2,3,4,7,8,9-HpCDF	7.0E-10	--	7.0E-10
			OCDF	4.7E-11	--	4.7E-11
			KM TEQ DF	1.9E-06	--	1.9E-06
			PCB-77	9.9E-09	--	9.9E-09
			PCB-81	1.1E-09	--	1.1E-09
			PCB-105	3.8E-08	--	3.8E-08
			PCB-114	2.3E-09	--	2.3E-09
			PCB-118	1.6E-07	--	1.6E-07
			PCB-123	2.3E-09	--	2.3E-09
			PCB-126	3.9E-06	--	3.9E-06
			PCB-156/157	1.7E-08	--	1.7E-08
			PCB-167	8.9E-09	--	8.9E-09
			PCB-169	5.4E-08	--	5.4E-08
			PCB-189	1.7E-09	--	1.7E-09
			KM TEQ PCB	4.1E-06	--	4.1E-06
			Non-DL PCBs			
			Total Non-DL PCBs	8.1E-07	--	8.1E-07
			PAHs			
			Benz(a)anthracene	8.4E-09	--	8.4E-09
			Benzo(a)pyrene	8.4E-08	--	8.4E-08
			Benzo(b)fluoranthene	8.4E-09	--	8.4E-09
			Chrysene	8.4E-11	--	8.4E-11

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Dibenz(a,h)anthracene	8.4E-08	--	8.4E-08
			Indeno(1,2,3-c,d)-pyrene	8.4E-09	--	8.4E-09
			Pesticides & Organics			
			2,4'-DDD	8.8E-10	--	8.8E-10
			2,4'-DDE	2.2E-09	--	2.2E-09
			2,4'-DDT	5.4E-10	--	5.4E-10
			4,4'-DDD	1.0E-08	--	1.0E-08
			4,4'-DDE	6.6E-08	--	6.6E-08
			4,4'-DDT	5.1E-08	--	5.1E-08
			Benzaldehyde	4.9E-08	--	4.9E-08
			Chlordane, alpha (cis)	1.2E-08	--	1.2E-08
			Chlordane, gamma (trans)	5.1E-09	--	5.1E-09
			Dieldrin	4.8E-07	--	4.8E-07
			Heptachlor epoxide, cis-	6.5E-08	--	6.5E-08
			Heptachlor epoxide, trans-	9.2E-10	--	9.2E-10
			Hexachlorobenzene	5.4E-09	--	5.4E-09
			Mirex	9.7E-09	--	9.7E-09
			Nonachlor, cis-	3.6E-09	--	3.6E-09
			Nonachlor, trans-	7.3E-09	--	7.3E-09
			Oxychlordane	7.6E-10	--	7.6E-10
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	1.0E-06	--	1.0E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			6.2E-06
			Total DLCs (based on KM TEQs)			6.0E-06
			Total PCDD/Fs (excluding KM TEQ)			2.0E-06
			Total PCDD/Fs (based on KM TEQ)			1.9E-06
			Total DL-PCBs (excluding KM TEQ)			4.2E-06
			Total DL-PCBs (based on KM TEQ)			4.1E-06
			Total Non-DL PCBs			8.1E-07
			Total PCBs (DL & NDL; excluding KM TEQ)			5.0E-06
			Total PCBs (DL & NDL; based on KM TEQ)			4.9E-06
			Total PAHs			1.9E-07
			Total Organics			7.7E-07
			Total Inorganics			1.0E-06
	Bluefish Total (excluding KM TEQs)					9.0E-06
	Bluefish Total (based on KM TEQs)					8.8E-06
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	8.7E-06	--	8.7E-06
			1,2,3,7,8-PeCDD	5.1E-07	--	5.1E-07
			1,2,3,4,7,8-HxCDD	1.9E-08	--	1.9E-08
			1,2,3,6,7,8-HxCDD	1.9E-08	--	1.9E-08
			1,2,3,7,8,9-HxCDD	7.9E-09	--	7.9E-09
			1,2,3,4,6,7,8-HpCDD	1.3E-08	--	1.3E-08
			OCDD	4.5E-09	--	4.5E-09
			2,3,7,8-TCDF	3.5E-07	--	3.5E-07
			1,2,3,7,8-PeCDF	6.1E-08	--	6.1E-08
			2,3,4,7,8-PeCDF	9.1E-07	--	9.1E-07
			1,2,3,4,7,8-HxCDF	3.8E-08	--	3.8E-08
			1,2,3,6,7,8-HxCDF	1.1E-07	--	1.1E-07
			1,2,3,7,8,9-HxCDF	1.1E-08	--	1.1E-08
			2,3,4,6,7,8-HxCDF	9.1E-09	--	9.1E-09
			1,2,3,4,6,7,8-HpCDF	3.1E-08	--	3.1E-08
			1,2,3,4,7,8,9-HpCDF	1.0E-09	--	1.0E-09
			OCDF	5.3E-11	--	5.3E-11
			KM TEQ DF	1.1E-05	--	1.1E-05
			PCB-77	1.2E-07	--	1.2E-07

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-81	8.6E-09	--	8.6E-09
			PCB-105	1.8E-07	--	1.8E-07
			PCB-114	2.2E-08	--	2.2E-08
			PCB-118	1.1E-06	--	1.1E-06
			PCB-123	1.7E-08	--	1.7E-08
			PCB-126	1.9E-05	--	1.9E-05
			PCB-156/157	1.0E-07	--	1.0E-07
			PCB-167	4.5E-08	--	4.5E-08
			PCB-169	1.0E-07	--	1.0E-07
			PCB-189	8.7E-09	--	8.7E-09
			KM TEQ PCB	2.0E-05	--	2.0E-05
			Non-DL PCBs			
			Total Non-DL PCBs	4.8E-06	--	4.8E-06
			PAHs			
			Benz(a)anthracene	8.4E-09	--	8.4E-09
			Benzo(a)pyrene	8.4E-08	--	8.4E-08
			Benzo(b)fluoranthene	8.4E-09	--	8.4E-09
			Chrysene	8.4E-11	--	8.4E-11
			Dibenz(a,h)anthracene	8.4E-08	--	8.4E-08
			Indeno(1,2,3-c,d)-pyrene	8.4E-09	--	8.4E-09
			Pesticides & Organics			
			2,4'-DDD	5.1E-08	--	5.1E-08
			2,4'-DDE	2.8E-08	--	2.8E-08
			2,4'-DDT	6.6E-09	--	6.6E-09
			4,4'-DDD	2.1E-07	--	2.1E-07
			4,4'-DDE	3.4E-07	--	3.4E-07
			4,4'-DDT	3.3E-08	--	3.3E-08
			Benzaldehyde	4.9E-08	--	4.9E-08
			Chlordane, alpha (cis)	7.3E-08	--	7.3E-08
			Chlordane, gamma (trans)	1.4E-08	--	1.4E-08
			Dieldrin	1.1E-06	--	1.1E-06
			Heptachlor epoxide, cis-	9.9E-08	--	9.9E-08
			Heptachlor epoxide, trans-	9.2E-10	--	9.2E-10
			Hexachlorobenzene	1.1E-08	--	1.1E-08
			Mirex	2.2E-08	--	2.2E-08
			Nonachlor, cis-	2.4E-08	--	2.4E-08
			Nonachlor, trans-	6.3E-08	--	6.3E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Oxychlordane	8.5E-09	--	8.5E-09
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	1.8E-06	--	1.8E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			3.2E-05
			Total DLCs (based on KM TEQs)			3.1E-05
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05
			Total PCDD/Fs (based on KM TEQ)			1.1E-05
			Total DL-PCBs (excluding KM TEQ)			2.1E-05
			Total DL-PCBs (based on KM TEQ)			2.0E-05
			Total Non-DL PCBs			4.8E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-05
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-05
			Total PAHs			1.9E-07
			Total Organics			2.2E-06
			Total Inorganics			1.8E-06
	Striped Bass Total (excluding KM TEQs)					4.1E-05
	Striped Bass Total (based on KM TEQs)					4.0E-05
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.1E-06	--	5.1E-06

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8-PeCDD	2.2E-07	--	2.2E-07
			1,2,3,4,7,8-HxCDD	7.5E-09	--	7.5E-09
			1,2,3,6,7,8-HxCDD	2.4E-08	--	2.4E-08
			1,2,3,7,8,9-HxCDD	1.0E-08	--	1.0E-08
			1,2,3,4,6,7,8-HpCDD	2.9E-09	--	2.9E-09
			OCDD	1.3E-10	--	1.3E-10
			2,3,7,8-TCDF	2.5E-08	--	2.5E-08
			1,2,3,7,8-PeCDF	9.7E-09	--	9.7E-09
			2,3,4,7,8-PeCDF	2.5E-07	--	2.5E-07
			1,2,3,4,7,8-HxCDF	6.0E-08	--	6.0E-08
			1,2,3,6,7,8-HxCDF	2.5E-08	--	2.5E-08
			1,2,3,7,8,9-HxCDF	1.3E-08	--	1.3E-08
			2,3,4,6,7,8-HxCDF	1.0E-08	--	1.0E-08
			1,2,3,4,6,7,8-HpCDF	4.6E-09	--	4.6E-09
			1,2,3,4,7,8,9-HpCDF	1.0E-09	--	1.0E-09
			OCDF	5.5E-11	--	5.5E-11
			KM TEQ DF	5.6E-06	--	5.6E-06
			PCB-77	1.5E-08	--	1.5E-08
			PCB-81	4.5E-09	--	4.5E-09
			PCB-105	8.4E-08	--	8.4E-08
			PCB-114	7.2E-09	--	7.2E-09
			PCB-118	3.6E-07	--	3.6E-07
			PCB-123	5.5E-09	--	5.5E-09
			PCB-126	4.4E-06	--	4.4E-06
			PCB-156/157	3.5E-08	--	3.5E-08
			PCB-167	1.6E-08	--	1.6E-08
			PCB-169	6.2E-08	--	6.2E-08
			PCB-189	2.4E-09	--	2.4E-09
			KM TEQ PCB	4.9E-06	--	4.9E-06
			Non-DL PCBs			
			Total Non-DL PCBs	1.0E-06	--	1.0E-06
			PAHs			
			Benz(a)anthracene	8.4E-09	--	8.4E-09
			Benzo(a)pyrene	8.4E-08	--	8.4E-08
			Benzo(b)fluoranthene	8.4E-09	--	8.4E-09
			Chrysene	8.4E-11	--	8.4E-11
			Dibenz(a,h)anthracene	8.4E-08	--	8.4E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Indeno(1,2,3-c,d)-pyrene	8.4E-09	--	8.4E-09
			Pesticides & Organics			
			2,4'-DDD	5.2E-09	--	5.2E-09
			2,4'-DDE	6.0E-09	--	6.0E-09
			2,4'-DDT	5.4E-10	--	5.4E-10
			4,4'-DDD	2.9E-08	--	2.9E-08
			4,4'-DDE	8.8E-08	--	8.8E-08
			4,4'-DDT	3.6E-09	--	3.6E-09
			Benzaldehyde	4.9E-08	--	4.9E-08
			Chlordane, alpha (cis)	4.3E-09	--	4.3E-09
			Chlordane, gamma (trans)	1.5E-09	--	1.5E-09
			Dieldrin	1.5E-07	--	1.5E-07
			Heptachlor epoxide, cis-	1.8E-08	--	1.8E-08
			Heptachlor epoxide, trans-	9.2E-10	--	9.2E-10
			Hexachlorobenzene	4.9E-09	--	4.9E-09
			Mirex	4.6E-09	--	4.6E-09
			Nonachlor, cis-	2.4E-09	--	2.4E-09
			Nonachlor, trans-	6.6E-09	--	6.6E-09
			Oxychlordane	2.8E-09	--	2.8E-09
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	2.6E-06	--	2.6E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			1.1E-05
			Total DLCs (based on KM TEQs)			1.0E-05
			Total PCDD/Fs (excluding KM TEQ)			5.7E-06
			Total PCDD/Fs (based on KM TEQ)			5.6E-06
			Total DL-PCBs (excluding KM TEQ)			5.0E-06
			Total DL-PCBs (based on KM TEQ)			4.9E-06
			Total Non-DL PCBs			1.0E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-06
			Total PCBs (DL & NDL; based on KM TEQ)			5.9E-06
			Total PAHs			1.9E-07
			Total Organics			3.8E-07
			Total Inorganics			2.6E-06
	Summer Flounder Total (excluding KM TEQs)					1.5E-05
	Summer Flounder Total (based on KM TEQs)					1.5E-05
Fish	White Perch	White Perch	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-05	--	1.5E-05
			1,2,3,7,8-PeCDD	3.9E-07	--	3.9E-07
			1,2,3,4,7,8-HxCDD	2.2E-08	--	2.2E-08
			1,2,3,6,7,8-HxCDD	5.6E-08	--	5.6E-08
			1,2,3,7,8,9-HxCDD	1.3E-08	--	1.3E-08
			1,2,3,4,6,7,8-HpCDD	3.4E-09	--	3.4E-09
			OCDD	2.3E-10	--	2.3E-10
			2,3,7,8-TCDF	3.6E-07	--	3.6E-07
			1,2,3,7,8-PeCDF	8.4E-08	--	8.4E-08
			2,3,4,7,8-PeCDF	9.4E-07	--	9.4E-07
			1,2,3,4,7,8-HxCDF	1.5E-07	--	1.5E-07
			1,2,3,6,7,8-HxCDF	1.1E-07	--	1.1E-07
			1,2,3,7,8,9-HxCDF	9.7E-09	--	9.7E-09
			2,3,4,6,7,8-HxCDF	2.0E-08	--	2.0E-08
			1,2,3,4,6,7,8-HpCDF	2.2E-08	--	2.2E-08
			1,2,3,4,7,8,9-HpCDF	8.1E-10	--	8.1E-10
			OCDF	6.1E-11	--	6.1E-11
			KM TEQ DF	1.7E-05	--	1.7E-05
			PCB-77	1.0E-07	--	1.0E-07
			PCB-81	1.1E-08	--	1.1E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	2.3E-07	--	2.3E-07
			PCB-114	1.7E-08	--	1.7E-08
			PCB-118	8.5E-07	--	8.5E-07
			PCB-123	1.7E-08	--	1.7E-08
			PCB-126	6.2E-06	--	6.2E-06
			PCB-156/157	8.7E-08	--	8.7E-08
			PCB-167	3.5E-08	--	3.5E-08
			PCB-169	2.3E-07	--	2.3E-07
			PCB-189	6.8E-09	--	6.8E-09
			KM TEQ PCB	7.5E-06	--	7.5E-06
			Non-DL PCBs			
			Total Non-DL PCBs	3.2E-06	--	3.2E-06
			PAHs			
			Benz(a)anthracene	2.1E-08	--	2.1E-08
			Benzo(a)pyrene	2.1E-07	--	2.1E-07
			Benzo(b)fluoranthene	2.1E-08	--	2.1E-08
			Chrysene	2.1E-10	--	2.1E-10
			Dibenz(a,h)anthracene	2.1E-07	--	2.1E-07
			Indeno(1,2,3-c,d)-pyrene	2.1E-08	--	2.1E-08
			Pesticides & Organics			
			2,4'-DDD	8.0E-08	--	8.0E-08
			2,4'-DDE	2.2E-08	--	2.2E-08
			2,4'-DDT	3.4E-08	--	3.4E-08
			4,4'-DDD	2.4E-07	--	2.4E-07
			4,4'-DDE	2.6E-07	--	2.6E-07
			4,4'-DDT	6.9E-08	--	6.9E-08
			Benzaldehyde	4.9E-08	--	4.9E-08
			Chlordane, alpha (cis)	4.9E-08	--	4.9E-08
			Chlordane, gamma (trans)	1.1E-08	--	1.1E-08
			Dieldrin	7.7E-07	--	7.7E-07
			Heptachlor epoxide, cis-	1.1E-07	--	1.1E-07
			Heptachlor epoxide, trans-	9.2E-10	--	9.2E-10
			Hexachlorobenzene	1.3E-08	--	1.3E-08
			Mirex	2.6E-08	--	2.6E-08
			Nonachlor, cis-	1.6E-08	--	1.6E-08
			Nonachlor, trans-	4.6E-08	--	4.6E-08
			Oxychlordane	6.7E-09	--	6.7E-09

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	1.1E-06	--	1.1E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			2.5E-05
			Total DLCs (based on KM TEQs)			2.4E-05
			Total PCDD/Fs (excluding KM TEQ)			1.7E-05
			Total PCDD/Fs (based on KM TEQ)			1.7E-05
			Total DL-PCBs (excluding KM TEQ)			7.7E-06
			Total DL-PCBs (based on KM TEQ)			7.5E-06
			Total Non-DL PCBs			3.2E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-05
			Total PAHs			4.8E-07
			Total Organics			1.8E-06
			Total Inorganics			1.1E-06
	White Perch Total (excluding KM TEQs)					3.1E-05
	White Perch Total (based on KM TEQs)					3.1E-05
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.9E-05	--	2.9E-05
			1,2,3,7,8-PeCDD	7.6E-07	--	7.6E-07

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	2.2E-08	--	2.2E-08
			1,2,3,6,7,8-HxCDD	6.5E-08	--	6.5E-08
			1,2,3,7,8,9-HxCDD	2.3E-08	--	2.3E-08
			1,2,3,4,6,7,8-HpCDD	7.5E-09	--	7.5E-09
			OCDD	6.6E-10	--	6.6E-10
			2,3,7,8-TCDF	1.1E-06	--	1.1E-06
			1,2,3,7,8-PeCDF	6.9E-08	--	6.9E-08
			2,3,4,7,8-PeCDF	1.6E-06	--	1.6E-06
			1,2,3,4,7,8-HxCDF	5.2E-07	--	5.2E-07
			1,2,3,6,7,8-HxCDF	1.5E-07	--	1.5E-07
			1,2,3,7,8,9-HxCDF	9.5E-09	--	9.5E-09
			2,3,4,6,7,8-HxCDF	4.1E-08	--	4.1E-08
			1,2,3,4,6,7,8-HpCDF	5.2E-08	--	5.2E-08
			1,2,3,4,7,8,9-HpCDF	7.3E-10	--	7.3E-10
			OCDF	8.1E-11	--	8.1E-11
			KM TEQ DF	3.3E-05	--	3.3E-05
			PCB-77	2.1E-07	--	2.1E-07
			PCB-81	2.8E-08	--	2.8E-08
			PCB-105	3.4E-07	--	3.4E-07
			PCB-114	2.9E-08	--	2.9E-08
			PCB-118	1.5E-06	--	1.5E-06
			PCB-123	2.7E-08	--	2.7E-08
			PCB-126	1.1E-05	--	1.1E-05
			PCB-156/157	1.2E-07	--	1.2E-07
			PCB-167	5.1E-08	--	5.1E-08
			PCB-169	3.6E-07	--	3.6E-07
			PCB-189	8.8E-09	--	8.8E-09
			KM TEQ PCB	1.3E-05	--	1.3E-05
			Non-DL PCBs			
			Total Non-DL PCBs	2.3E-06	--	2.3E-06
			PAHs			
			Benz(a)anthracene	3.5E-09	--	3.5E-09
			Benzo(a)pyrene	3.3E-08	--	3.3E-08
			Benzo(b)fluoranthene	3.2E-09	--	3.2E-09
			Chrysene	4.5E-11	--	4.5E-11
			Dibenz(a,h)anthracene	3.3E-08	--	3.3E-08
			Indeno(1,2,3-c,d)-pyrene	2.7E-08	--	2.7E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pesticides & Organics			
			2,4'-DDD	3.8E-10	--	3.8E-10
			2,4'-DDE	1.1E-09	--	1.1E-09
			2,4'-DDT	4.9E-10	--	4.9E-10
			4,4'-DDD	6.2E-08	--	6.2E-08
			4,4'-DDE	2.3E-07	--	2.3E-07
			4,4'-DDT	2.7E-09	--	2.7E-09
			Benzaldehyde	3.5E-08	--	3.5E-08
			Chlordane, alpha (cis)	5.2E-09	--	5.2E-09
			Chlordane, gamma (trans)	6.5E-10	--	6.5E-10
			Dieldrin	7.2E-07	--	7.2E-07
			Heptachlor epoxide, cis-	2.4E-07	--	2.4E-07
			Heptachlor epoxide, trans-	7.7E-08	--	7.7E-08
			Hexachlorobenzene	1.3E-08	--	1.3E-08
			Mirex	2.7E-08	--	2.7E-08
			Nonachlor, cis-	1.4E-08	--	1.4E-08
			Nonachlor, trans-	2.7E-08	--	2.7E-08
			Oxychlordane	4.0E-08	--	4.0E-08
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	3.1E-06	--	3.1E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			4.7E-05
			Total DLCs (based on KM TEQs)			4.6E-05
			Total PCDD/Fs (excluding KM TEQ)			3.3E-05
			Total PCDD/Fs (based on KM TEQ)			3.3E-05
			Total DL-PCBs (excluding KM TEQ)			1.3E-05
			Total DL-PCBs (based on KM TEQ)			1.3E-05
			Total Non-DL PCBs			2.3E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.5E-05
			Total PAHs			9.9E-08
			Total Organics			1.5E-06
			Total Inorganics			3.1E-06
	Crab (H+M) Total (excluding KM TEQs)					5.4E-05
	Crab (H+M) Total (based on KM TEQs)					5.3E-05
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.3E-06	--	4.3E-06
			1,2,3,7,8-PeCDD	2.8E-07	--	2.8E-07
			1,2,3,4,7,8-HxCDD	3.0E-09	--	3.0E-09
			1,2,3,6,7,8-HxCDD	7.6E-09	--	7.6E-09
			1,2,3,7,8,9-HxCDD	3.9E-09	--	3.9E-09
			1,2,3,4,6,7,8-HpCDD	1.5E-09	--	1.5E-09
			OCDD	1.5E-10	--	1.5E-10
			2,3,7,8-TCDF	1.3E-07	--	1.3E-07
			1,2,3,7,8-PeCDF	8.9E-09	--	8.9E-09
			2,3,4,7,8-PeCDF	1.6E-07	--	1.6E-07
			1,2,3,4,7,8-HxCDF	7.9E-08	--	7.9E-08
			1,2,3,6,7,8-HxCDF	2.0E-08	--	2.0E-08
			1,2,3,7,8,9-HxCDF	7.8E-09	--	7.8E-09
			2,3,4,6,7,8-HxCDF	5.1E-09	--	5.1E-09
			1,2,3,4,6,7,8-HpCDF	4.3E-09	--	4.3E-09
			1,2,3,4,7,8,9-HpCDF	3.7E-10	--	3.7E-10
			OCDF	3.1E-11	--	3.1E-11
			KM TEQ DF	4.8E-06	--	4.8E-06
			PCB-77	2.2E-08	--	2.2E-08
			PCB-81	3.0E-09	--	3.0E-09

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	3.5E-08	--	3.5E-08
			PCB-114	3.1E-09	--	3.1E-09
			PCB-118	1.3E-07	--	1.3E-07
			PCB-123	2.6E-09	--	2.6E-09
			PCB-126	9.3E-07	--	9.3E-07
			PCB-156/157	1.1E-08	--	1.1E-08
			PCB-167	4.1E-09	--	4.1E-09
			PCB-169	3.8E-07	--	3.8E-07
			PCB-189	5.2E-10	--	5.2E-10
			KM TEQ PCB	1.1E-06	--	1.1E-06
			Non-DL PCBs			
			Total Non-DL PCBs	2.0E-07	--	2.0E-07
			PAHs			
			Benz(a)anthracene	1.6E-08	--	1.6E-08
			Benzo(a)pyrene	1.6E-07	--	1.6E-07
			Benzo(b)fluoranthene	1.6E-08	--	1.6E-08
			Chrysene	1.6E-10	--	1.6E-10
			Dibenz(a,h)anthracene	1.6E-07	--	1.6E-07
			Indeno(1,2,3-c,d)-pyrene	1.6E-08	--	1.6E-08
			Pesticides & Organics			
			2,4'-DDD	4.2E-11	--	4.2E-11
			2,4'-DDE	1.2E-10	--	1.2E-10
			2,4'-DDT	9.3E-11	--	9.3E-11
			4,4'-DDD	9.1E-09	--	9.1E-09
			4,4'-DDE	3.6E-08	--	3.6E-08
			4,4'-DDT	3.8E-10	--	3.8E-10
			Benzaldehyde	3.8E-08	--	3.8E-08
			Chlordane, alpha (cis)	1.5E-09	--	1.5E-09
			Chlordane, gamma (trans)	6.8E-11	--	6.8E-11
			Dieldrin	1.6E-07	--	1.6E-07
			Heptachlor epoxide, cis-	2.2E-08	--	2.2E-08
			Heptachlor epoxide, trans-	1.5E-08	--	1.5E-08
			Hexachlorobenzene	2.6E-09	--	2.6E-09
			Mirex	6.7E-09	--	6.7E-09
			Nonachlor, cis-	1.7E-09	--	1.7E-09
			Nonachlor, trans-	3.1E-09	--	3.1E-09
			Oxychlordane	4.4E-09	--	4.4E-09

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	2.9E-06	--	2.9E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			6.5E-06
			Total DLCs (based on KM TEQs)			6.0E-06
			Total PCDD/Fs (excluding KM TEQ)			5.0E-06
			Total PCDD/Fs (based on KM TEQ)			4.8E-06
			Total DL-PCBs (excluding KM TEQ)			1.5E-06
			Total DL-PCBs (based on KM TEQ)			1.1E-06
			Total Non-DL PCBs			2.0E-07
			Total PCBs (DL & NDL; excluding KM TEQ)			1.7E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-06
			Total PAHs			3.7E-07
			Total Organics			3.0E-07
			Total Inorganics			2.9E-06
	Crab (Muscle) Total (excluding KM TEQs)					1.0E-05
	Crab (Muscle) Total (based on KM TEQs)					9.7E-06
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.0E-04	--	1.0E-04
			1,2,3,7,8-PeCDD	2.4E-06	--	2.4E-06

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	7.6E-08	--	7.6E-08
			1,2,3,6,7,8-HxCDD	2.3E-07	--	2.3E-07
			1,2,3,7,8,9-HxCDD	7.8E-08	--	7.8E-08
			1,2,3,4,6,7,8-HpCDD	2.5E-08	--	2.5E-08
			OCDD	2.1E-09	--	2.1E-09
			2,3,7,8-TCDF	3.8E-06	--	3.8E-06
			1,2,3,7,8-PeCDF	2.4E-07	--	2.4E-07
			2,3,4,7,8-PeCDF	5.8E-06	--	5.8E-06
			1,2,3,4,7,8-HxCDF	1.8E-06	--	1.8E-06
			1,2,3,6,7,8-HxCDF	5.5E-07	--	5.5E-07
			1,2,3,7,8,9-HxCDF	1.5E-08	--	1.5E-08
			2,3,4,6,7,8-HxCDF	1.4E-07	--	1.4E-07
			1,2,3,4,6,7,8-HpCDF	1.9E-07	--	1.9E-07
			1,2,3,4,7,8,9-HpCDF	1.5E-09	--	1.5E-09
			OCDF	2.8E-10	--	2.8E-10
			KM TEQ DF	1.2E-04	--	1.2E-04
			PCB-77	7.6E-07	--	7.6E-07
			PCB-81	1.0E-07	--	1.0E-07
			PCB-105	1.2E-06	--	1.2E-06
			PCB-114	1.0E-07	--	1.0E-07
			PCB-118	5.6E-06	--	5.6E-06
			PCB-123	9.7E-08	--	9.7E-08
			PCB-126	3.9E-05	--	3.9E-05
			PCB-156/157	4.5E-07	--	4.5E-07
			PCB-167	1.9E-07	--	1.9E-07
			PCB-169	1.2E-06	--	1.2E-06
			PCB-189	3.3E-08	--	3.3E-08
			KM TEQ PCB	4.6E-05	--	4.6E-05
			Non-DL PCBs			
			Total Non-DL PCBs	8.6E-06	--	8.6E-06
			PAHs			
			Benz(a)anthracene	4.0E-09	--	4.0E-09
			Benzo(a)pyrene	3.5E-08	--	3.5E-08
			Benzo(b)fluoranthene	3.3E-09	--	3.3E-09
			Chrysene	5.5E-11	--	5.5E-11
			Dibenz(a,h)anthracene	3.4E-08	--	3.4E-08
			Indeno(1,2,3-c,d)-pyrene	9.3E-08	--	9.3E-08

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Pesticides & Organics			
			2,4'-DDD	1.3E-09	--	1.3E-09
			2,4'-DDE	4.0E-09	--	4.0E-09
			2,4'-DDT	1.6E-09	--	1.6E-09
			4,4'-DDD	2.1E-07	--	2.1E-07
			4,4'-DDE	8.1E-07	--	8.1E-07
			4,4'-DDT	9.3E-09	--	9.3E-09
			Benzaldehyde	7.5E-08	--	7.5E-08
			Chlordane, alpha (cis)	1.7E-08	--	1.7E-08
			Chlordane, gamma (trans)	2.3E-09	--	2.3E-09
			Dieldrin	2.4E-06	--	2.4E-06
			Heptachlor epoxide, cis-	8.8E-07	--	8.8E-07
			Heptachlor epoxide, trans-	2.6E-07	--	2.6E-07
			Hexachlorobenzene	4.3E-08	--	4.3E-08
			Mirex	8.8E-08	--	8.8E-08
			Nonachlor, cis-	4.8E-08	--	4.8E-08
			Nonachlor, trans-	9.6E-08	--	9.6E-08
			Oxychlordane	1.4E-07	--	1.4E-07
			Pyridine	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Arsenic, organic	--	--	--
			Arsenic, inorganic	3.8E-06	--	3.8E-06
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Methyl Mercury	--	--	--
			Selenium	--	--	--
			Silver	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			1.6E-04
			Total DLCs (based on KM TEQs)			1.6E-04
			Total PCDD/Fs (excluding KM TEQ)			1.2E-04
			Total PCDD/Fs (based on KM TEQ)			1.2E-04
			Total DL-PCBs (excluding KM TEQ)			4.8E-05
			Total DL-PCBs (based on KM TEQ)			4.6E-05
			Total Non-DL PCBs			8.6E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			5.7E-05
			Total PCBs (DL & NDL; based on KM TEQ)			5.5E-05
			Total PAHs			1.7E-07
			Total Organics			5.1E-06
			Total Inorganics			3.8E-06
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.8E-04
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.8E-04
Sediment	Sediment	Angler - Fishing Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	3.0E-08	7.1E-08	1.0E-07
			1,2,3,7,8-PeCDD	1.6E-09	3.7E-09	5.3E-09
			1,2,3,4,7,8-HxCDD	1.4E-10	3.3E-10	4.8E-10
			1,2,3,6,7,8-HxCDD	5.8E-10	1.3E-09	1.9E-09
			1,2,3,7,8,9-HxCDD	3.4E-10	8.0E-10	1.1E-09
			1,2,3,4,6,7,8-HpCDD	1.0E-09	2.4E-09	3.4E-09
			OCDD	3.1E-10	7.3E-10	1.0E-09
			2,3,7,8-TCDF	5.5E-10	1.3E-09	1.8E-09
			1,2,3,7,8-PeCDF	1.1E-10	2.6E-10	3.7E-10
			2,3,4,7,8-PeCDF	1.9E-09	4.4E-09	6.3E-09
			1,2,3,4,7,8-HxCDF	2.9E-09	6.7E-09	9.6E-09
			1,2,3,6,7,8-HxCDF	7.5E-10	1.7E-09	2.5E-09
			1,2,3,7,8,9-HxCDF	5.6E-11	1.3E-10	1.9E-10
			2,3,4,6,7,8-HxCDF	4.1E-10	9.7E-10	1.4E-09
			1,2,3,4,6,7,8-HpCDF	1.3E-09	3.0E-09	4.2E-09
			1,2,3,4,7,8,9-HpCDF	4.3E-11	1.0E-10	1.4E-10
			OCDF	5.3E-11	1.2E-10	1.8E-10
			KM TEQ DF	4.1E-08	9.7E-08	1.4E-07
			PCB-77	3.1E-10	7.1E-10	1.0E-09
			PCB-81	3.5E-11	8.3E-11	1.2E-10

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.5E-10	3.4E-10	4.9E-10
			PCB-114	1.0E-11	2.4E-11	3.4E-11
			PCB-118	4.3E-10	1.0E-09	1.4E-09
			PCB-123	1.2E-11	2.9E-11	4.2E-11
			PCB-126	9.7E-09	2.3E-08	3.2E-08
			PCB-156/157	3.9E-11	9.0E-11	1.3E-10
			PCB-167	1.4E-11	3.2E-11	4.6E-11
			PCB-169	3.0E-09	7.0E-09	1.0E-08
			PCB-189	2.9E-12	6.8E-12	9.6E-12
			KM TEQ PCB	1.2E-08	2.8E-08	4.0E-08
			Non-DL PCBs			
			Total Non-DL PCBs	1.7E-09	1.9E-08	2.1E-08
			PAHs			
			Benz(a)anthracene	5.5E-10	5.6E-09	6.1E-09
			Benzo(a)pyrene	5.4E-09	5.5E-08	6.0E-08
			Benzo(b)fluoranthene	4.8E-10	4.9E-09	5.4E-09
			Benzo(k)fluoranthene	3.1E-11	3.2E-10	3.5E-10
			Chrysene	5.3E-12	5.3E-11	5.9E-11
			Dibenz(a,h)anthracene	1.1E-09	1.1E-08	1.2E-08
			Indeno(1,2,3-c,d)-pyrene	2.0E-10	2.0E-09	2.2E-09
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	7.3E-08	2.8E-07	3.6E-07
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	1.8E-09	--	1.8E-09
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.9E-07
			Total DLCs (based on KM TEQs)			1.8E-07
			Total PCDD/Fs (excluding KM TEQ)			1.4E-07
			Total PCDD/Fs (based on KM TEQ)			1.4E-07
			Total DL-PCBs (excluding KM TEQ)			4.6E-08
			Total DL-PCBs (based on KM TEQ)			4.0E-08
			Total Non-DL PCBs			2.1E-08
			Total PCBs (DL & NDL; excluding KM TEQ)			6.6E-08
			Total PCBs (DL & NDL; based on KM TEQ)			6.1E-08
			Total PAHs			8.6E-08
			Total Organics			0.0E+00
			Total Inorganics			3.6E-07
	Fishing - Sediment Total (excluding KM TEQs)					6.5E-07
	Fishing - Sediment Total (based on KM TEQs)					6.5E-07
Surface Water	Surface Water	Angler - Fishing	**Dioxin-like Compounds**			
		Surface Water	2,3,7,8-TCDD	1.1E-10	--	1.1E-10
			1,2,3,7,8-PeCDD	3.7E-11	--	3.7E-11
			1,2,3,4,7,8-HxCDD	2.7E-11	--	2.7E-11
			1,2,3,6,7,8-HxCDD	4.3E-12	--	4.3E-12
			1,2,3,7,8,9-HxCDD	7.6E-12	--	7.6E-12
			1,2,3,4,6,7,8-HpCDD	5.4E-12	--	5.4E-12
			OCDD	1.7E-12	--	1.7E-12
			2,3,7,8-TCDF	4.1E-12	--	4.1E-12
			1,2,3,7,8-PeCDF	9.9E-13	--	9.9E-13
			2,3,4,7,8-PeCDF	1.7E-11	--	1.7E-11
			1,2,3,4,7,8-HxCDF	1.6E-11	--	1.6E-11
			1,2,3,6,7,8-HxCDF	3.9E-12	--	3.9E-12
			1,2,3,7,8,9-HxCDF	2.3E-11	--	2.3E-11
			2,3,4,6,7,8-HxCDF	2.4E-12	--	2.4E-12
			1,2,3,4,6,7,8-HpCDF	6.8E-12	--	6.8E-12
			1,2,3,4,7,8,9-HpCDF	4.3E-13	--	4.3E-13
			OCDF	3.8E-13	--	3.8E-13

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	2.1E-10	--	2.1E-10
			PCB-77	1.8E-13	--	1.8E-13
			PCB-81	1.8E-14	--	1.8E-14
			PCB-105	1.9E-13	--	1.9E-13
			PCB-114	1.0E-14	--	1.0E-14
			PCB-118	4.3E-13	--	4.3E-13
			PCB-123	8.3E-15	--	8.3E-15
			PCB-126	5.9E-12	--	5.9E-12
			PCB-156/157	5.1E-14	--	5.1E-14
			PCB-167	1.7E-14	--	1.7E-14
			PCB-169	1.1E-12	--	1.1E-12
			PCB-189	2.2E-15	--	2.2E-15
			KM TEQ PCB	9.5E-12	--	9.5E-12
			PAHs			
			Benz(a)anthracene	6.9E-13	--	6.9E-13
			Benzo(a)pyrene	8.8E-12	--	8.8E-12
			Benzo(b)fluoranthene	1.2E-12	--	1.2E-12
			Benzo(k)fluoranthene	5.4E-14	--	5.4E-14
			Chrysene	1.2E-14	--	1.2E-14
			Dibenz(a,h)anthracene	2.3E-12	--	2.3E-12
			Indeno(1,2,3-c,d)-pyrene	5.0E-13	--	5.0E-13
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	2.2E-12	2.4E-11	2.6E-11
			Trichloroethylene	3.5E-12	7.1E-11	7.4E-11
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	1.1E-09	6.6E-10	1.8E-09
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	6.5E-11	3.1E-09	3.1E-09
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
Total DLCs (excluding KM TEQs)						2.7E-10

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DLCs (based on KM TEQs)			2.2E-10
			Total PCDD/Fs (excluding KM TEQ)			2.6E-10
			Total PCDD/Fs (based on KM TEQ)			2.1E-10
			Total DL-PCBs (excluding KM TEQ)			7.8E-12
			Total DL-PCBs (based on KM TEQ)			9.5E-12
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.8E-12
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-12
			Total PAHs			1.4E-11
			Total Organics			1.0E-10
			Total Inorganics			4.9E-09
	Fishing - Surface Water Total (excluding KM TEQs)					5.3E-09
	Fishing - Surface Water Total (based on KM TEQs)					5.2E-09
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						2.7E-05
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						2.8E-05
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						3.6E-05
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						4.2E-05
Sediment	Sediment	Angler - Crabbing Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.9E-08	4.4E-08	6.3E-08
			1,2,3,7,8-PeCDD	1.0E-09	2.3E-09	3.3E-09
			1,2,3,4,7,8-HxCDD	8.9E-11	2.1E-10	3.0E-10
			1,2,3,6,7,8-HxCDD	3.6E-10	8.4E-10	1.2E-09
			1,2,3,7,8,9-HxCDD	2.1E-10	5.0E-10	7.1E-10
			1,2,3,4,6,7,8-HpCDD	6.4E-10	1.5E-09	2.1E-09
			OCDD	1.9E-10	4.5E-10	6.5E-10
			2,3,7,8-TCDF	3.4E-10	8.0E-10	1.1E-09
			1,2,3,7,8-PeCDF	7.0E-11	1.6E-10	2.3E-10
			2,3,4,7,8-PeCDF	1.2E-09	2.7E-09	3.9E-09
			1,2,3,4,7,8-HxCDF	1.8E-09	4.2E-09	6.0E-09
			1,2,3,6,7,8-HxCDF	4.7E-10	1.1E-09	1.6E-09
			1,2,3,7,8,9-HxCDF	3.5E-11	8.1E-11	1.2E-10
			2,3,4,6,7,8-HxCDF	2.6E-10	6.1E-10	8.6E-10
			1,2,3,4,6,7,8-HpCDF	7.9E-10	1.9E-09	2.6E-09
			1,2,3,4,7,8,9-HpCDF	2.7E-11	6.3E-11	9.0E-11

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			OCDF	3.3E-11	7.8E-11	1.1E-10
			KM TEQ DF	2.6E-08	6.0E-08	8.6E-08
			PCB-77	1.9E-10	4.5E-10	6.4E-10
			PCB-81	2.2E-11	5.2E-11	7.4E-11
			PCB-105	9.2E-11	2.2E-10	3.1E-10
			PCB-114	6.3E-12	1.5E-11	2.1E-11
			PCB-118	2.7E-10	6.3E-10	9.0E-10
			PCB-123	7.8E-12	1.8E-11	2.6E-11
			PCB-126	6.1E-09	1.4E-08	2.0E-08
			PCB-156/157	2.4E-11	5.6E-11	8.0E-11
			PCB-167	8.6E-12	2.0E-11	2.9E-11
			PCB-169	1.9E-09	4.4E-09	6.2E-09
			PCB-189	1.8E-12	4.2E-12	6.0E-12
			KM TEQ PCB	7.6E-09	1.8E-08	2.5E-08
			Non-DL PCBs			
			Total Non-DL PCBs	1.1E-09	1.2E-08	1.3E-08
			PAHs			
			Benz(a)anthracene	3.4E-10	3.5E-09	3.8E-09
			Benzo(a)pyrene	3.4E-09	3.4E-08	3.7E-08
			Benzo(b)fluoranthene	3.0E-10	3.1E-09	3.4E-09
			Benzo(k)fluoranthene	2.0E-11	2.0E-10	2.2E-10
			Chrysene	3.3E-12	3.3E-11	3.7E-11
			Dibenz(a,h)anthracene	6.9E-10	7.0E-09	7.7E-09
			Indeno(1,2,3-c,d)-pyrene	1.2E-10	1.3E-09	1.4E-09
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	4.6E-08	1.8E-07	2.2E-07
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	1.1E-09	--	1.1E-09
			Iron	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.2E-07
			Total DLCs (based on KM TEQs)			1.1E-07
			Total PCDD/Fs (excluding KM TEQ)			8.8E-08
			Total PCDD/Fs (based on KM TEQ)			8.6E-08
			Total DL-PCBs (excluding KM TEQ)			2.9E-08
			Total DL-PCBs (based on KM TEQ)			2.5E-08
			Total Non-DL PCBs			1.3E-08
			Total PCBs (DL & NDL; excluding KM TEQ)			4.2E-08
			Total PCBs (DL & NDL; based on KM TEQ)			3.8E-08
			Total PAHs			5.4E-08
			Total Organics			0.0E+00
			Total Inorganics			2.2E-07
	Crabbing - Sediment Total (excluding KM TEQs)					4.1E-07
	Crabbing - Sediment Total (based on KM TEQs)					4.0E-07
Surface Water	Surface Water	Angler - Crabbing Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.9E-10	--	5.9E-10
			1,2,3,7,8-PeCDD	2.0E-10	--	2.0E-10
			1,2,3,4,7,8-HxCDD	1.5E-10	--	1.5E-10
			1,2,3,6,7,8-HxCDD	2.4E-11	--	2.4E-11
			1,2,3,7,8,9-HxCDD	4.2E-11	--	4.2E-11
			1,2,3,4,6,7,8-HpCDD	3.0E-11	--	3.0E-11
			OCDD	9.4E-12	--	9.4E-12
			2,3,7,8-TCDF	2.3E-11	--	2.3E-11
			1,2,3,7,8-PeCDF	5.5E-12	--	5.5E-12
			2,3,4,7,8-PeCDF	9.6E-11	--	9.6E-11
			1,2,3,4,7,8-HxCDF	8.9E-11	--	8.9E-11
			1,2,3,6,7,8-HxCDF	2.1E-11	--	2.1E-11
			1,2,3,7,8,9-HxCDF	1.3E-10	--	1.3E-10

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	1.4E-11	--	1.4E-11
			1,2,3,4,6,7,8-HpCDF	3.8E-11	--	3.8E-11
			1,2,3,4,7,8,9-HpCDF	2.4E-12	--	2.4E-12
			OCDF	2.1E-12	--	2.1E-12
			KM TEQ DF	1.2E-09	--	1.2E-09
			PCB-77	1.0E-12	--	1.0E-12
			PCB-81	9.9E-14	--	9.9E-14
			PCB-105	1.1E-12	--	1.1E-12
			PCB-114	5.5E-14	--	5.5E-14
			PCB-118	2.4E-12	--	2.4E-12
			PCB-123	4.6E-14	--	4.6E-14
			PCB-126	3.3E-11	--	3.3E-11
			PCB-156/157	2.8E-13	--	2.8E-13
			PCB-167	9.5E-14	--	9.5E-14
			PCB-169	5.9E-12	--	5.9E-12
			PCB-189	1.2E-14	--	1.2E-14
			KM TEQ PCB	5.3E-11	--	5.3E-11
			PAHs			
			Benz(a)anthracene	3.8E-12	--	3.8E-12
			Benzo(a)pyrene	4.9E-11	--	4.9E-11
			Benzo(b)fluoranthene	6.7E-12	--	6.7E-12
			Benzo(k)fluoranthene	3.0E-13	--	3.0E-13
			Chrysene	6.5E-14	--	6.5E-14
			Dibenz(a,h)anthracene	1.3E-11	--	1.3E-11
			Indeno(1,2,3-c,d)-pyrene	2.8E-12	--	2.8E-12
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	1.2E-11	9.3E-11	1.1E-10
			Trichloroethylene	1.9E-11	2.8E-10	3.0E-10
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	6.2E-09	3.6E-09	9.8E-09
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	3.6E-10	1.7E-08	1.7E-08
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--

TABLE 9.A.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			1.5E-09
			Total DLCs (based on KM TEQs)			1.2E-09
			Total PCDD/Fs (excluding KM TEQ)			1.5E-09
			Total PCDD/Fs (based on KM TEQ)			1.2E-09
			Total DL-PCBs (excluding KM TEQ)			4.4E-11
			Total DL-PCBs (based on KM TEQ)			5.3E-11
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.4E-11
			Total PCBs (DL & NDL; based on KM TEQ)			5.3E-11
			Total PAHs			7.5E-11
			Total Organics			4.0E-10
			Total Inorganics			2.7E-08
	Crabbing - Surface Water Total (excluding KM TEQs)					2.9E-08
	Crabbing - Surface Water Total (based on KM TEQs)					2.9E-08
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						5.4E-05
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						5.3E-05
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						1.1E-05
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						1.0E-05

Note: Sediment and surface water risks are for adult only, since the child is not assumed to accompany the adult angler on fishing or crabbing trips.

Note: For fish ingestion, summary risks are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Worker Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.5E-08	3.1E-08	5.6E-08	Reproductive	2.3E-03	3.0E-03	5.3E-03
			1,2,3,7,8-PeCDD	1.3E-09	1.6E-09	2.9E-09	Reproductive	1.2E-04	1.6E-04	2.8E-04
			1,2,3,4,7,8-HxCDD	1.2E-10	1.5E-10	2.6E-10	Reproductive	1.1E-05	1.4E-05	2.5E-05
			1,2,3,6,7,8-HxCDD	4.7E-10	5.9E-10	1.1E-09	Reproductive	4.5E-05	5.7E-05	1.0E-04
			1,2,3,7,8,9-HxCDD	2.8E-10	3.5E-10	6.3E-10	Reproductive	2.6E-05	3.3E-05	6.0E-05
			1,2,3,4,6,7,8-HpCDD	8.2E-10	1.0E-09	1.9E-09	Reproductive	7.8E-05	1.0E-04	1.8E-04
			OCDD	2.5E-10	3.2E-10	5.7E-10	Reproductive	2.4E-05	3.0E-05	5.4E-05
			2,3,7,8-TCDF	4.4E-10	5.6E-10	1.0E-09	Reproductive	4.2E-05	5.3E-05	9.5E-05
			1,2,3,7,8-PeCDF	9.1E-11	1.2E-10	2.1E-10	Reproductive	8.7E-06	1.1E-05	2.0E-05
			2,3,4,7,8-PeCDF	1.5E-09	1.9E-09	3.4E-09	Reproductive	1.4E-04	1.8E-04	3.3E-04
			1,2,3,4,7,8-HxCDF	2.3E-09	2.9E-09	5.3E-09	Reproductive	2.2E-04	2.8E-04	5.0E-04
			1,2,3,6,7,8-HxCDF	6.0E-10	7.7E-10	1.4E-09	Reproductive	5.8E-05	7.3E-05	1.3E-04
			1,2,3,7,8,9-HxCDF	4.5E-11	5.7E-11	1.0E-10	Reproductive	4.3E-06	5.5E-06	9.8E-06
			2,3,4,6,7,8-HxCDF	3.4E-10	4.3E-10	7.6E-10	Reproductive	3.2E-05	4.1E-05	7.3E-05
			1,2,3,4,6,7,8-HpCDF	1.0E-09	1.3E-09	2.3E-09	Reproductive	9.8E-05	1.2E-04	2.2E-04
			1,2,3,4,7,8,9-HpCDF	3.5E-11	4.4E-11	7.9E-11	Reproductive	3.3E-06	4.2E-06	7.5E-06
			OCDF	4.3E-11	5.5E-11	9.8E-11	Reproductive	4.1E-06	5.2E-06	9.3E-06
			KM TEQ DF	3.3E-08	4.3E-08	7.6E-08	Reproductive	3.2E-03	4.0E-03	7.2E-03
			PCB-77	2.5E-10	3.1E-10	5.6E-10	Reproductive	2.4E-05	3.0E-05	5.4E-05
			PCB-81	2.9E-11	3.6E-11	6.5E-11	Reproductive	2.7E-06	3.5E-06	6.2E-06
			PCB-105	1.2E-10	1.5E-10	2.7E-10	Reproductive	1.1E-05	1.4E-05	2.6E-05
			PCB-114	8.2E-12	1.0E-11	1.9E-11	Reproductive	7.8E-07	9.9E-07	1.8E-06
			PCB-118	3.5E-10	4.4E-10	7.9E-10	Reproductive	3.3E-05	4.2E-05	7.5E-05
			PCB-123	1.0E-11	1.3E-11	2.3E-11	Reproductive	9.6E-07	1.2E-06	2.2E-06
			PCB-126	7.9E-09	1.0E-08	1.8E-08	Reproductive	7.5E-04	9.5E-04	1.7E-03
			PCB-156/157	3.1E-11	4.0E-11	7.1E-11	Reproductive	3.0E-06	3.8E-06	6.7E-06
			PCB-167	1.1E-11	1.4E-11	2.5E-11	Reproductive	1.1E-06	1.4E-06	2.4E-06
			PCB-169	2.4E-09	3.1E-09	5.5E-09	Reproductive	2.3E-04	2.9E-04	5.2E-04
			PCB-189	2.3E-12	3.0E-12	5.3E-12	Reproductive	2.2E-07	2.8E-07	5.1E-07
			KM TEQ PCB	9.8E-09	1.2E-08	2.2E-08	Reproductive	9.3E-04	1.2E-03	2.1E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-09	8.4E-09	9.8E-09	Whole Body	7.1E-04	4.2E-03	4.9E-03
			PAHs							
			Benz(a)anthracene	4.5E-10	2.5E-09	2.9E-09	--	--	--	--
			Benzo(a)pyrene	4.4E-09	2.4E-08	2.8E-08	Developmental	1.5E-04	8.0E-04	9.5E-04
			Benzo(b)fluoranthene	3.9E-10	2.2E-09	2.5E-09	--	--	--	--
			Benzo(k)fluoranthene	2.5E-11	1.4E-10	1.7E-10	--	--	--	--
			Chrysene	4.3E-12	2.3E-11	2.8E-11	--	--	--	--
			Dibenz(a,h)anthracene	9.0E-10	4.9E-09	5.8E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-10	8.9E-10	1.1E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.0E-05	--	3.0E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.2E-03	--	2.2E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	2.6E-04	--	2.6E-04
			Antimony	--	--	--	Whole Body	1.3E-04	--	1.3E-04
			Arsenic, inorganic	5.9E-08	1.3E-07	1.8E-07	Skin, Blood	1.3E-03	2.8E-03	4.1E-03
			Cadmium	--	--	--	Urinary	6.6E-05	1.1E-04	1.8E-04

TABLE 9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	1.5E-06	--	1.5E-06
			Cobalt	--	--	--	Thyroid	1.0E-03	--	1.0E-03
			Copper	--	--	--	GI Tract	3.6E-03	--	3.6E-03
			Chromium (VI)	1.5E-09	--	1.5E-09	No Effect	9.9E-06	--	9.9E-06
			Iron	--	--	--	GI Tract	1.3E-03	--	1.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.2E-04	--	3.2E-04
			Mercury	--	--	--	Immune	1.4E-04	--	1.4E-04
			Nickel	--	--	--	Body Weight, Organ Weights	7.2E-05	--	7.2E-05
			Thallium	--	--	--	Skin, Hair	5.2E-04	--	5.2E-04
			Vanadium	--	--	--	Hair	2.1E-04	--	2.1E-04
			Zinc	--	--	--	Blood	8.8E-05	--	8.8E-05
			Total DLCs (excluding KM TEQs)			1.0E-07				9.8E-03
			Total DLCs (based on KM TEQs)			9.8E-08				9.4E-03
			Total PCDD/Fs (excluding KM TEQ)			7.8E-08				7.4E-03
			Total PCDD/Fs (based on KM TEQ)			7.6E-08				7.2E-03
			Total DL-PCBs (excluding KM TEQ)			2.5E-08				2.4E-03
			Total DL-PCBs (based on KM TEQ)			2.2E-08				2.1E-03
			Total Non-DL PCBs			9.8E-09				4.9E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			3.5E-08				7.3E-03
			Total PCBs (DL & NDL; based on KM TEQ)			3.2E-08				7.0E-03
			Total PAHs			4.1E-08				9.5E-04
			Total Organics			0.0E+00				2.2E-03
			Total Inorganics			1.9E-07				1.2E-02
	Sediment Total (excluding KM TEQs)					3.4E-07				3.0E-02
	Sediment Total (based on KM TEQs)					3.3E-07				2.9E-02

TABLE 9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
						Sediment Total				Sediment Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		4.2E-03		Blood HI =		4.2E-03
				Body Weight HI =		7.2E-05		Body Weight HI =		7.2E-05
				Developmental HI =		9.5E-04		Developmental HI =		9.5E-04
				GI Tract HI =		4.9E-03		GI Tract HI =		4.9E-03
				Hair HI =		7.4E-04		Hair HI =		7.4E-04
				Immune HI =		1.7E-04		Immune HI =		1.7E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		5.8E-04		Neurological HI =		5.8E-04
				No Effect HI =		1.1E-05		No Effect HI =		1.1E-05
				Organ Weights HI =		7.2E-05		Organ Weights HI =		7.2E-05
				Reproductive HI =		9.8E-03		Reproductive HI =		9.4E-03
				Skin HI =		4.6E-03		Skin HI =		4.6E-03
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		1.0E-03		Thyroid HI =		1.0E-03
				Urinary HI =		1.8E-04		Urinary HI =		1.8E-04
				Whole Body HI =		5.0E-03		Whole Body HI =		5.0E-03

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.2E-09	1.9E-08	2.7E-08	Reproductive	6.1E-04	1.4E-03	2.0E-03
			1,2,3,7,8-PeCDD	4.3E-10	1.0E-09	1.4E-09	Reproductive	3.2E-05	7.5E-05	1.1E-04
			1,2,3,4,7,8-HxCDD	3.9E-11	9.0E-11	1.3E-10	Reproductive	2.9E-06	6.7E-06	9.6E-06
			1,2,3,6,7,8-HxCDD	1.6E-10	3.7E-10	5.2E-10	Reproductive	1.2E-05	2.7E-05	3.9E-05
			1,2,3,7,8,9-HxCDD	9.2E-11	2.2E-10	3.1E-10	Reproductive	6.8E-06	1.6E-05	2.3E-05
			1,2,3,4,6,7,8-HpCDD	2.8E-10	6.4E-10	9.2E-10	Reproductive	2.0E-05	4.8E-05	6.8E-05
			OCDD	8.4E-11	2.0E-10	2.8E-10	Reproductive	6.2E-06	1.5E-05	2.1E-05
			2,3,7,8-TCDF	1.5E-10	3.5E-10	4.9E-10	Reproductive	1.1E-05	2.6E-05	3.7E-05
			1,2,3,7,8-PeCDF	3.0E-11	7.1E-11	1.0E-10	Reproductive	2.3E-06	5.3E-06	7.5E-06
			2,3,4,7,8-PeCDF	5.1E-10	1.2E-09	1.7E-09	Reproductive	3.8E-05	8.8E-05	1.3E-04
			1,2,3,4,7,8-HxCDF	7.8E-10	1.8E-09	2.6E-09	Reproductive	5.7E-05	1.3E-04	1.9E-04
			1,2,3,6,7,8-HxCDF	2.0E-10	4.7E-10	6.7E-10	Reproductive	1.5E-05	3.5E-05	5.0E-05
			1,2,3,7,8,9-HxCDF	1.5E-11	3.5E-11	5.0E-11	Reproductive	1.1E-06	2.6E-06	3.7E-06
			2,3,4,6,7,8-HxCDF	1.1E-10	2.6E-10	3.7E-10	Reproductive	8.3E-06	1.9E-05	2.8E-05
			1,2,3,4,6,7,8-HpCDF	3.4E-10	8.0E-10	1.1E-09	Reproductive	2.5E-05	5.9E-05	8.5E-05
			1,2,3,4,7,8,9-HpCDF	1.2E-11	2.7E-11	3.9E-11	Reproductive	8.6E-07	2.0E-06	2.9E-06
			OCDF	1.4E-11	3.4E-11	4.8E-11	Reproductive	1.1E-06	2.5E-06	3.6E-06
			KM TEQ DF	1.1E-08	2.6E-08	3.7E-08	Reproductive	8.3E-04	1.9E-03	2.8E-03
			PCB-77	8.3E-11	1.9E-10	2.8E-10	Reproductive	6.1E-06	1.4E-05	2.0E-05
			PCB-81	9.6E-12	2.2E-11	3.2E-11	Reproductive	7.1E-07	1.7E-06	2.4E-06
			PCB-105	4.0E-11	9.3E-11	1.3E-10	Reproductive	3.0E-06	6.9E-06	9.9E-06
			PCB-114	2.7E-12	6.4E-12	9.1E-12	Reproductive	2.0E-07	4.7E-07	6.8E-07
			PCB-118	1.2E-10	2.7E-10	3.9E-10	Reproductive	8.6E-06	2.0E-05	2.9E-05
			PCB-123	3.4E-12	7.9E-12	1.1E-11	Reproductive	2.5E-07	5.9E-07	8.4E-07
			PCB-126	2.6E-09	6.1E-09	8.8E-09	Reproductive	1.9E-04	4.5E-04	6.5E-04
			PCB-156/157	1.0E-11	2.4E-11	3.5E-11	Reproductive	7.7E-07	1.8E-06	2.6E-06
			PCB-167	3.7E-12	8.7E-12	1.2E-11	Reproductive	2.8E-07	6.5E-07	9.2E-07
			PCB-169	8.1E-10	1.9E-09	2.7E-09	Reproductive	6.0E-05	1.4E-04	2.0E-04
			PCB-189	7.8E-13	1.8E-12	2.6E-12	Reproductive	5.8E-08	1.4E-07	1.9E-07
			KM TEQ PCB	3.3E-09	7.7E-09	1.1E-08	Reproductive	2.4E-04	5.7E-04	8.1E-04
			Non-DL PCBs							
			Total Non-DL PCBs	4.7E-10	5.2E-09	5.6E-09	Whole Body	1.8E-04	2.0E-03	2.2E-03
			PAHs							
			Benz(a)anthracene	1.5E-10	1.5E-09	1.7E-09	--	--	--	--
			Benzo(a)pyrene	1.5E-09	1.5E-08	1.6E-08	Developmental	3.8E-05	3.8E-04	4.2E-04
			Benzo(b)fluoranthene	1.3E-10	1.3E-09	1.5E-09	--	--	--	--
			Benzo(k)fluoranthene	8.5E-12	8.6E-11	9.5E-11	--	--	--	--
			Chrysene	1.4E-12	1.4E-11	1.6E-11	--	--	--	--
			Dibenz(a,h)anthracene	3.0E-10	3.0E-09	3.3E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.4E-11	5.5E-10	6.0E-10	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	7.9E-06	--	7.9E-06
			TPH (C9-C40)	--	--	--	Respiratory	5.7E-04	--	5.7E-04
			Inorganics							
			Aluminum	--	--	--	Neurological	6.8E-05	--	6.8E-05
			Antimony	--	--	--	Whole Body	3.3E-05	--	3.3E-05
			Arsenic, inorganic	2.0E-08	7.7E-08	9.7E-08	Skin, Blood	3.4E-04	1.3E-03	1.7E-03
			Cadmium	--	--	--	Urinary	1.7E-05	5.3E-05	7.1E-05

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	4.0E-07	--	4.0E-07
			Cobalt	--	--	--	Thyroid	2.6E-04	--	2.6E-04
			Copper	--	--	--	GI Tract	9.3E-04	--	9.3E-04
			Chromium (VI)	5.0E-10	--	5.0E-10	No Effect	2.6E-06	--	2.6E-06
			Iron	--	--	--	GI Tract	3.5E-04	--	3.5E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	8.2E-05	--	8.2E-05
			Mercury	--	--	--	Immune	3.7E-05	--	3.7E-05
			Nickel	--	--	--	Body Weight, Organ Weights	1.9E-05	--	1.9E-05
			Thallium	--	--	--	Skin, Hair	1.4E-04	--	1.4E-04
			Vanadium	--	--	--	Hair	5.6E-05	--	5.6E-05
			Zinc	--	--	--	Blood	2.3E-05	--	2.3E-05
			Total DLCs (excluding KM TEQs)			5.1E-08				3.7E-03
			Total DLCs (based on KM TEQs)			4.8E-08				3.6E-03
			Total PCDD/Fs (excluding KM TEQ)			3.8E-08				2.8E-03
			Total PCDD/Fs (based on KM TEQ)			3.7E-08				2.8E-03
			Total DL-PCBs (excluding KM TEQ)			1.2E-08				9.2E-04
			Total DL-PCBs (based on KM TEQ)			1.1E-08				8.1E-04
			Total Non-DL PCBs			5.6E-09				2.2E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-08				3.1E-03
			Total PCBs (DL & NDL; based on KM TEQ)			1.7E-08				3.0E-03
			Total PAHs			2.3E-08				4.2E-04
			Total Organics			0.0E+00				5.8E-04
			Total Inorganics			9.7E-08				3.7E-03
	Wader - Sediment Total (excluding KM TEQs)					1.8E-07				1.1E-02
	Wader - Sediment Total (based on KM TEQs)					1.7E-07				1.1E-02
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.2E-09	1.9E-08	2.7E-08	Reproductive	6.1E-04	1.4E-03	2.0E-03
			1,2,3,7,8-PeCDD	4.3E-10	1.0E-09	1.4E-09	Reproductive	3.2E-05	7.5E-05	1.1E-04
			1,2,3,4,7,8-HxCDD	3.9E-11	9.0E-11	1.3E-10	Reproductive	2.9E-06	6.7E-06	9.6E-06
			1,2,3,6,7,8-HxCDD	1.6E-10	3.7E-10	5.2E-10	Reproductive	1.2E-05	2.7E-05	3.9E-05
			1,2,3,7,8,9-HxCDD	9.2E-11	2.2E-10	3.1E-10	Reproductive	6.8E-06	1.6E-05	2.3E-05
			1,2,3,4,6,7,8-HpCDD	2.8E-10	6.4E-10	9.2E-10	Reproductive	2.0E-05	4.8E-05	6.8E-05
			OCDD	8.4E-11	2.0E-10	2.8E-10	Reproductive	6.2E-06	1.5E-05	2.1E-05
			2,3,7,8-TCDF	1.5E-10	3.5E-10	4.9E-10	Reproductive	1.1E-05	2.6E-05	3.7E-05
			1,2,3,7,8-PeCDF	3.0E-11	7.1E-11	1.0E-10	Reproductive	2.3E-06	5.3E-06	7.5E-06
			2,3,4,7,8-PeCDF	5.1E-10	1.2E-09	1.7E-09	Reproductive	3.8E-05	8.8E-05	1.3E-04
			1,2,3,4,7,8-HxCDF	7.8E-10	1.8E-09	2.6E-09	Reproductive	5.7E-05	1.3E-04	1.9E-04
			1,2,3,6,7,8-HxCDF	2.0E-10	4.7E-10	6.7E-10	Reproductive	1.5E-05	3.5E-05	5.0E-05
			1,2,3,7,8,9-HxCDF	1.5E-11	3.5E-11	5.0E-11	Reproductive	1.1E-06	2.6E-06	3.7E-06
			2,3,4,6,7,8-HxCDF	1.1E-10	2.6E-10	3.7E-10	Reproductive	8.3E-06	1.9E-05	2.8E-05
			1,2,3,4,6,7,8-HpCDF	3.4E-10	8.0E-10	1.1E-09	Reproductive	2.5E-05	5.9E-05	8.5E-05
			1,2,3,4,7,8,9-HpCDF	1.2E-11	2.7E-11	3.9E-11	Reproductive	8.6E-07	2.0E-06	2.9E-06
			OCDF	1.4E-11	3.4E-11	4.8E-11	Reproductive	1.1E-06	2.5E-06	3.6E-06
			KM TEQ DF	1.1E-08	2.6E-08	3.7E-08	Reproductive	8.3E-04	1.9E-03	2.8E-03
			PCB-77	8.3E-11	1.9E-10	2.8E-10	Reproductive	6.1E-06	1.4E-05	2.0E-05
			PCB-81	9.6E-12	2.2E-11	3.2E-11	Reproductive	7.1E-07	1.7E-06	2.4E-06

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-105	4.0E-11	9.3E-11	1.3E-10	Reproductive	3.0E-06	6.9E-06	9.9E-06
			PCB-114	2.7E-12	6.4E-12	9.1E-12	Reproductive	2.0E-07	4.7E-07	6.8E-07
			PCB-118	1.2E-10	2.7E-10	3.9E-10	Reproductive	8.6E-06	2.0E-05	2.9E-05
			PCB-123	3.4E-12	7.9E-12	1.1E-11	Reproductive	2.5E-07	5.9E-07	8.4E-07
			PCB-126	2.6E-09	6.1E-09	8.8E-09	Reproductive	1.9E-04	4.5E-04	6.5E-04
			PCB-156/157	1.0E-11	2.4E-11	3.5E-11	Reproductive	7.7E-07	1.8E-06	2.6E-06
			PCB-167	3.7E-12	8.7E-12	1.2E-11	Reproductive	2.8E-07	6.5E-07	9.2E-07
			PCB-169	8.1E-10	1.9E-09	2.7E-09	Reproductive	6.0E-05	1.4E-04	2.0E-04
			PCB-189	7.8E-13	1.8E-12	2.6E-12	Reproductive	5.8E-08	1.4E-07	1.9E-07
			KM TEQ PCB	3.3E-09	7.7E-09	1.1E-08	Reproductive	2.4E-04	5.7E-04	8.1E-04
			Non-DL PCBs							
			Total Non-DL PCBs	4.7E-10	5.2E-09	5.6E-09	Whole Body	1.8E-04	2.0E-03	2.2E-03
			PAHs							
			Benz(a)anthracene	1.5E-10	1.5E-09	1.7E-09	--	--	--	--
			Benzo(a)pyrene	1.5E-09	1.5E-08	1.6E-08	Developmental	3.8E-05	3.8E-04	4.2E-04
			Benzo(b)fluoranthene	1.3E-10	1.3E-09	1.5E-09	--	--	--	--
			Benzo(k)fluoranthene	8.5E-12	8.6E-11	9.5E-11	--	--	--	--
			Chrysene	1.4E-12	1.4E-11	1.6E-11	--	--	--	--
			Dibenz(a,h)anthracene	3.0E-10	3.0E-09	3.3E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.4E-11	5.5E-10	6.0E-10	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	7.9E-06	--	7.9E-06
			TPH (C9-C40)	--	--	--	Respiratory	5.7E-04	--	5.7E-04
			Inorganics							
			Aluminum	--	--	--	Neurological	6.8E-05	--	6.8E-05
			Antimony	--	--	--	Whole Body	3.3E-05	--	3.3E-05
			Arsenic, inorganic	2.0E-08	7.7E-08	9.7E-08	Skin, Blood	3.4E-04	1.3E-03	1.7E-03
			Cadmium	--	--	--	Urinary	1.7E-05	5.3E-05	7.1E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	4.0E-07	--	4.0E-07
			Cobalt	--	--	--	Thyroid	2.6E-04	--	2.6E-04
			Copper	--	--	--	GI Tract	9.3E-04	--	9.3E-04
			Chromium (VI)	5.0E-10	--	5.0E-10	No Effect	2.6E-06	--	2.6E-06
			Iron	--	--	--	GI Tract	3.5E-04	--	3.5E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	8.2E-05	--	8.2E-05
			Mercury	--	--	--	Immune	3.7E-05	--	3.7E-05
			Nickel	--	--	--	Body Weight, Organ Weights	1.9E-05	--	1.9E-05
			Thallium	--	--	--	Skin, Hair	1.4E-04	--	1.4E-04
			Vanadium	--	--	--	Hair	5.6E-05	--	5.6E-05
			Zinc	--	--	--	Blood	2.3E-05	--	2.3E-05
Total DLCs (excluding KM TEQs)						5.1E-08				3.7E-03
Total DLCs (based on KM TEQs)						4.8E-08				3.6E-03
Total PCDD/Fs (excluding KM TEQ)						3.8E-08				2.8E-03
Total PCDD/Fs (based on KM TEQ)						3.7E-08				2.8E-03
Total DL-PCBs (excluding KM TEQ)						1.2E-08				9.2E-04
Total DL-PCBs (based on KM TEQ)						1.1E-08				8.1E-04
Total Non-DL PCBs						5.6E-09				2.2E-03
Total PCBs (DL & NDL; excluding KM TEQ)						1.8E-08				3.1E-03

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			1.7E-08				3.0E-03
			Total PAHs			2.3E-08				4.2E-04
			Total Organics			0.0E+00				5.8E-04
			Total Inorganics			9.7E-08				3.7E-03
	Swimmer - Sediment Total (excluding KM TEQs)					1.8E-07				1.1E-02
	Swimmer - Sediment Total (based on KM TEQs)					1.7E-07				1.1E-02
Sediment	Sediment	Boater Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.0E-09	4.9E-09	9.9E-09	Reproductive	3.7E-04	3.6E-04	7.4E-04
			1,2,3,7,8-PeCDD	2.7E-10	2.6E-10	5.2E-10	Reproductive	2.0E-05	1.9E-05	3.9E-05
			1,2,3,4,7,8-HxCDD	2.4E-11	2.3E-11	4.7E-11	Reproductive	1.8E-06	1.7E-06	3.5E-06
			1,2,3,6,7,8-HxCDD	9.6E-11	9.3E-11	1.9E-10	Reproductive	7.1E-06	6.9E-06	1.4E-05
			1,2,3,7,8,9-HxCDD	5.7E-11	5.5E-11	1.1E-10	Reproductive	4.2E-06	4.1E-06	8.3E-06
			1,2,3,4,6,7,8-HpCDD	1.7E-10	1.6E-10	3.3E-10	Reproductive	1.3E-05	1.2E-05	2.5E-05
			OCDD	5.2E-11	5.0E-11	1.0E-10	Reproductive	3.8E-06	3.7E-06	7.5E-06
			2,3,7,8-TCDF	9.1E-11	8.8E-11	1.8E-10	Reproductive	6.7E-06	6.5E-06	1.3E-05
			1,2,3,7,8-PeCDF	1.9E-11	1.8E-11	3.7E-11	Reproductive	1.4E-06	1.3E-06	2.7E-06
			2,3,4,7,8-PeCDF	3.1E-10	3.0E-10	6.2E-10	Reproductive	2.3E-05	2.2E-05	4.6E-05
			1,2,3,4,7,8-HxCDF	4.8E-10	4.6E-10	9.4E-10	Reproductive	3.5E-05	3.4E-05	7.0E-05
			1,2,3,6,7,8-HxCDF	1.2E-10	1.2E-10	2.4E-10	Reproductive	9.2E-06	8.9E-06	1.8E-05
			1,2,3,7,8,9-HxCDF	9.3E-12	9.0E-12	1.8E-11	Reproductive	6.9E-07	6.7E-07	1.4E-06
			2,3,4,6,7,8-HxCDF	6.9E-11	6.7E-11	1.4E-10	Reproductive	5.1E-06	5.0E-06	1.0E-05
			1,2,3,4,6,7,8-HpCDF	2.1E-10	2.0E-10	4.2E-10	Reproductive	1.6E-05	1.5E-05	3.1E-05
			1,2,3,4,7,8,9-HpCDF	7.2E-12	7.0E-12	1.4E-11	Reproductive	5.3E-07	5.2E-07	1.0E-06
			OCDF	8.9E-12	8.6E-12	1.7E-11	Reproductive	6.6E-07	6.4E-07	1.3E-06
			KM TEQ DF	6.9E-09	6.7E-09	1.4E-08	Reproductive	5.1E-04	4.9E-04	1.0E-03
			PCB-77	5.1E-11	4.9E-11	1.0E-10	Reproductive	3.8E-06	3.7E-06	7.4E-06
			PCB-81	5.9E-12	5.7E-12	1.2E-11	Reproductive	4.4E-07	4.2E-07	8.6E-07
			PCB-105	2.5E-11	2.4E-11	4.8E-11	Reproductive	1.8E-06	1.8E-06	3.6E-06
			PCB-114	1.7E-12	1.6E-12	3.3E-12	Reproductive	1.2E-07	1.2E-07	2.5E-07
			PCB-118	7.2E-11	7.0E-11	1.4E-10	Reproductive	5.3E-06	5.1E-06	1.0E-05
			PCB-123	2.1E-12	2.0E-12	4.1E-12	Reproductive	1.5E-07	1.5E-07	3.0E-07
			PCB-126	1.6E-09	1.6E-09	3.2E-09	Reproductive	1.2E-04	1.2E-04	2.4E-04
			PCB-156/157	6.4E-12	6.2E-12	1.3E-11	Reproductive	4.8E-07	4.6E-07	9.4E-07
			PCB-167	2.3E-12	2.2E-12	4.5E-12	Reproductive	1.7E-07	1.6E-07	3.4E-07
			PCB-169	5.0E-10	4.8E-10	9.8E-10	Reproductive	3.7E-05	3.6E-05	7.3E-05
			PCB-189	4.8E-13	4.7E-13	9.5E-13	Reproductive	3.6E-08	3.5E-08	7.0E-08
			KM TEQ PCB	2.0E-09	2.0E-09	4.0E-09	Reproductive	1.5E-04	1.4E-04	2.9E-04
			Non-DL PCBs							
			Total Non-DL PCBs	2.9E-10	1.3E-09	1.6E-09	Whole Body	1.1E-04	5.1E-04	6.2E-04
			PAHs							
			Benz(a)anthracene	9.2E-11	3.9E-10	4.8E-10	--	--	--	--
			Benzo(a)pyrene	9.0E-10	3.8E-09	4.7E-09	Developmental	2.3E-05	9.8E-05	1.2E-04
			Benzo(b)fluoranthene	8.1E-11	3.4E-10	4.2E-10	--	--	--	--
			Benzo(k)fluoranthene	5.2E-12	2.2E-11	2.7E-11	--	--	--	--
			Chrysene	8.8E-13	3.7E-12	4.6E-12	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-10	7.8E-10	9.6E-10	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-11	1.4E-10	1.7E-10	--	--	--	--
			Pesticides & Organics							

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PHC as gasoline	--	--	--	Blood, Immune	4.8E-06	--	4.8E-06
			TPH (C9-C40)	--	--	--	Respiratory	3.5E-04	--	3.5E-04
			Inorganics							
			Aluminum	--	--	--	Neurological	4.2E-05	--	4.2E-05
			Antimony	--	--	--	Whole Body	2.0E-05	--	2.0E-05
			Arsenic, inorganic	1.2E-08	2.0E-08	3.2E-08	Skin, Blood	2.1E-04	3.4E-04	5.5E-04
			Cadmium	--	--	--	Urinary	1.1E-05	1.4E-05	2.4E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	2.5E-07	--	2.5E-07
			Cobalt	--	--	--	Thyroid	1.6E-04	--	1.6E-04
			Copper	--	--	--	GI Tract	5.7E-04	--	5.7E-04
			Chromium (VI)	3.1E-10	--	3.1E-10	No Effect	1.6E-06	--	1.6E-06
			Iron	--	--	--	GI Tract	2.1E-04	--	2.1E-04
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	5.1E-05	--	5.1E-05
			Mercury	--	--	--	Immune	2.3E-05	--	2.3E-05
			Nickel	--	--	--	Body Weight, Organ Weights	1.2E-05	--	1.2E-05
			Thallium	--	--	--	Skin, Hair	8.4E-05	--	8.4E-05
			Vanadium	--	--	--	Hair	3.4E-05	--	3.4E-05
			Zinc	--	--	--	Blood	1.4E-05	--	1.4E-05
			Total DLCs (excluding KM TEQs)			1.8E-08				1.4E-03
			Total DLCs (based on KM TEQs)			1.8E-08				1.3E-03
			Total PCDD/Fs (excluding KM TEQ)			1.4E-08				1.0E-03
			Total PCDD/Fs (based on KM TEQ)			1.4E-08				1.0E-03
			Total DL-PCBs (excluding KM TEQ)			4.5E-09				3.3E-04
			Total DL-PCBs (based on KM TEQ)			4.0E-09				2.9E-04
			Total Non-DL PCBs			1.6E-09				6.2E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			6.1E-09				9.6E-04
			Total PCBs (DL & NDL; based on KM TEQ)			5.6E-09				9.2E-04
			Total PAHs			6.7E-09				1.2E-04
			Total Organics			0.0E+00				3.6E-04
			Total Inorganics			3.2E-08				1.8E-03
	Boater - Sediment Total (excluding KM TEQs)					5.9E-08				4.3E-03
	Boater - Sediment Total (based on KM TEQs)					5.8E-08				4.2E-03
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.9E-11	--	2.9E-11	Reproductive	2.1E-06	--	2.1E-06
			1,2,3,7,8-PeCDD	1.0E-11	--	1.0E-11	Reproductive	7.4E-07	--	7.4E-07
			1,2,3,4,7,8-HxCDD	7.2E-12	--	7.2E-12	Reproductive	5.4E-07	--	5.4E-07
			1,2,3,6,7,8-HxCDD	1.2E-12	--	1.2E-12	Reproductive	8.6E-08	--	8.6E-08
			1,2,3,7,8,9-HxCDD	2.0E-12	--	2.0E-12	Reproductive	1.5E-07	--	1.5E-07
			1,2,3,4,6,7,8-HpCDD	1.5E-12	--	1.5E-12	Reproductive	1.1E-07	--	1.1E-07
			OCDD	4.6E-13	--	4.6E-13	Reproductive	3.4E-08	--	3.4E-08
			2,3,7,8-TCDF	1.1E-12	--	1.1E-12	Reproductive	8.3E-08	--	8.3E-08
			1,2,3,7,8-PeCDF	2.7E-13	--	2.7E-13	Reproductive	2.0E-08	--	2.0E-08
			2,3,4,7,8-PeCDF	4.7E-12	--	4.7E-12	Reproductive	3.5E-07	--	3.5E-07
			1,2,3,4,7,8-HxCDF	4.3E-12	--	4.3E-12	Reproductive	3.2E-07	--	3.2E-07
			1,2,3,6,7,8-HxCDF	1.0E-12	--	1.0E-12	Reproductive	7.7E-08	--	7.7E-08
			1,2,3,7,8,9-HxCDF	6.2E-12	--	6.2E-12	Reproductive	4.6E-07	--	4.6E-07

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	6.6E-13	--	6.6E-13	Reproductive	4.9E-08	--	4.9E-08
			1,2,3,4,6,7,8-HpCDF	1.8E-12	--	1.8E-12	Reproductive	1.4E-07	--	1.4E-07
			1,2,3,4,7,8,9-HpCDF	1.2E-13	--	1.2E-13	Reproductive	8.5E-09	--	8.5E-09
			OCDF	1.0E-13	--	1.0E-13	Reproductive	7.6E-09	--	7.6E-09
			KM TEQ DF	5.8E-11	--	5.8E-11	Reproductive	4.3E-06	--	4.3E-06
			PCB-77	4.9E-14	--	4.9E-14	Reproductive	3.6E-09	--	3.6E-09
			PCB-81	4.8E-15	--	4.8E-15	Reproductive	3.6E-10	--	3.6E-10
			PCB-105	5.2E-14	--	5.2E-14	Reproductive	3.8E-09	--	3.8E-09
			PCB-114	2.7E-15	--	2.7E-15	Reproductive	2.0E-10	--	2.0E-10
			PCB-118	1.2E-13	--	1.2E-13	Reproductive	8.6E-09	--	8.6E-09
			PCB-123	2.2E-15	--	2.2E-15	Reproductive	1.7E-10	--	1.7E-10
			PCB-126	1.6E-12	--	1.6E-12	Reproductive	1.2E-07	--	1.2E-07
			PCB-156/157	1.4E-14	--	1.4E-14	Reproductive	1.0E-09	--	1.0E-09
			PCB-167	4.6E-15	--	4.6E-15	Reproductive	3.4E-10	--	3.4E-10
			PCB-169	2.9E-13	--	2.9E-13	Reproductive	2.1E-08	--	2.1E-08
			PCB-189	6.1E-16	--	6.1E-16	Reproductive	4.5E-11	--	4.5E-11
			KM TEQ PCB	2.6E-12	--	2.6E-12	Reproductive	1.9E-07	--	1.9E-07
			PAHs							
			Benz(a)anthracene	1.9E-13	--	1.9E-13	--	--	--	--
			Benzo(a)pyrene	2.4E-12	--	2.4E-12	Developmental	6.2E-08	--	6.2E-08
			Benzo(b)fluoranthene	3.2E-13	--	3.2E-13	--	--	--	--
			Benzo(k)fluoranthene	1.4E-14	--	1.4E-14	--	--	--	--
			Chrysene	3.2E-15	--	3.2E-15	--	--	--	--
			Dibenz(a,h)anthracene	6.1E-13	--	6.1E-13	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.4E-13	--	1.4E-13	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.2E-09	1.7E-07	1.8E-07
			Pesticides & Organics							
			Chloroform	5.8E-13	6.4E-12	7.0E-12	Liver	1.5E-08	1.6E-07	1.8E-07
			Trichloroethylene	9.5E-13	1.9E-11	2.0E-11	Thymus, Blood, Immune, Developmental	3.2E-07	6.5E-06	6.8E-06
			Inorganics							
			Antimony	--	--	--	Whole Body	2.1E-06	8.4E-06	1.1E-05
			Arsenic, inorganic	3.0E-10	1.8E-10	4.8E-10	Skin, Blood	5.2E-06	3.1E-06	8.3E-06
			Chromium [as Cr(III)]	--	--	--	No Effect	1.1E-09	4.8E-08	4.9E-08
			Chromium (VI)	1.8E-11	8.3E-10	8.4E-10	No Effect	9.1E-08	4.3E-06	4.4E-06
			Iron	--	--	--	GI Tract	9.3E-07	5.5E-07	1.5E-06
			Manganese	--	--	--	Neurological	3.5E-06	5.2E-05	5.6E-05
			Mercury	--	--	--	Immune	1.1E-07	9.1E-07	1.0E-06
			Thallium	--	--	--	Skin, Hair	1.5E-06	8.9E-07	2.4E-06
			Titanium	--	--	--	--	--	--	--
Total DLCs (excluding KM TEQs)						7.4E-11				5.5E-06
Total DLCs (based on KM TEQs)						6.0E-11				4.5E-06
Total PCDD/Fs (excluding KM TEQ)						7.2E-11				5.3E-06
Total PCDD/Fs (based on KM TEQ)						5.8E-11				4.3E-06
Total DL-PCBs (excluding KM TEQ)						2.1E-12				1.6E-07
Total DL-PCBs (based on KM TEQ)						2.6E-12				1.9E-07
Total Non-DL PCBs						0.0E+00				0.0E+00
Total PCBs (DL & NDL; excluding KM TEQ)						2.1E-12				1.6E-07
Total PCBs (DL & NDL; based on KM TEQ)						2.6E-12				1.9E-07

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PAHs			3.7E-12				2.4E-07
			Total Organics			2.7E-11				7.0E-06
			Total Inorganics			1.3E-09				8.4E-05
	Wader - Surface Water Total (excluding KM TEQs)					1.4E-09				9.6E-05
	Wader - Surface Water Total (based on KM TEQs)					1.4E-09				9.5E-05
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						1.8E-07				1.1E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)						1.8E-07				1.1E-02
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.9E-10	--	2.9E-10	Reproductive	2.1E-05	--	2.1E-05
			1,2,3,7,8-PeCDD	9.9E-11	--	9.9E-11	Reproductive	7.3E-06	--	7.3E-06
			1,2,3,4,7,8-HxCDD	7.2E-11	--	7.2E-11	Reproductive	5.3E-06	--	5.3E-06
			1,2,3,6,7,8-HxCDD	1.2E-11	--	1.2E-11	Reproductive	8.5E-07	--	8.5E-07
			1,2,3,7,8,9-HxCDD	2.0E-11	--	2.0E-11	Reproductive	1.5E-06	--	1.5E-06
			1,2,3,4,6,7,8-HpCDD	1.5E-11	--	1.5E-11	Reproductive	1.1E-06	--	1.1E-06
			OCDD	4.6E-12	--	4.6E-12	Reproductive	3.4E-07	--	3.4E-07
			2,3,7,8-TCDF	1.1E-11	--	1.1E-11	Reproductive	8.3E-07	--	8.3E-07
			1,2,3,7,8-PeCDF	2.7E-12	--	2.7E-12	Reproductive	2.0E-07	--	2.0E-07
			2,3,4,7,8-PeCDF	4.6E-11	--	4.6E-11	Reproductive	3.4E-06	--	3.4E-06
			1,2,3,4,7,8-HxCDF	4.3E-11	--	4.3E-11	Reproductive	3.2E-06	--	3.2E-06
			1,2,3,6,7,8-HxCDF	1.0E-11	--	1.0E-11	Reproductive	7.7E-07	--	7.7E-07
			1,2,3,7,8,9-HxCDF	6.2E-11	--	6.2E-11	Reproductive	4.6E-06	--	4.6E-06
			2,3,4,6,7,8-HxCDF	6.6E-12	--	6.6E-12	Reproductive	4.9E-07	--	4.9E-07
			1,2,3,4,6,7,8-HpCDF	1.8E-11	--	1.8E-11	Reproductive	1.3E-06	--	1.3E-06
			1,2,3,4,7,8,9-HpCDF	1.1E-12	--	1.1E-12	Reproductive	8.5E-08	--	8.5E-08
			OCDF	1.0E-12	--	1.0E-12	Reproductive	7.6E-08	--	7.6E-08
			KM TEQ DF	5.7E-10	--	5.7E-10	Reproductive	4.2E-05	--	4.2E-05
			PCB-77	4.8E-13	--	4.8E-13	Reproductive	3.6E-08	--	3.6E-08
			PCB-81	4.8E-14	--	4.8E-14	Reproductive	3.6E-09	--	3.6E-09
			PCB-105	5.2E-13	--	5.2E-13	Reproductive	3.8E-08	--	3.8E-08
			PCB-114	2.7E-14	--	2.7E-14	Reproductive	2.0E-09	--	2.0E-09
			PCB-118	1.2E-12	--	1.2E-12	Reproductive	8.5E-08	--	8.5E-08
			PCB-123	2.2E-14	--	2.2E-14	Reproductive	1.7E-09	--	1.7E-09
			PCB-126	1.6E-11	--	1.6E-11	Reproductive	1.2E-06	--	1.2E-06
			PCB-156/157	1.4E-13	--	1.4E-13	Reproductive	1.0E-08	--	1.0E-08
			PCB-167	4.6E-14	--	4.6E-14	Reproductive	3.4E-09	--	3.4E-09
			PCB-169	2.8E-12	--	2.8E-12	Reproductive	2.1E-07	--	2.1E-07
			PCB-189	6.0E-15	--	6.0E-15	Reproductive	4.5E-10	--	4.5E-10
			KM TEQ PCB	2.6E-11	--	2.6E-11	Reproductive	1.9E-06	--	1.9E-06
			PAHs							
			Benz(a)anthracene	1.8E-12	--	1.8E-12	--	--	--	--
			Benzo(a)pyrene	2.4E-11	--	2.4E-11	Developmental	6.1E-07	--	6.1E-07
			Benzo(b)fluoranthene	3.2E-12	--	3.2E-12	--	--	--	--
			Benzo(k)fluoranthene	1.4E-13	--	1.4E-13	--	--	--	--
			Chrysene	3.1E-14	--	3.1E-14	--	--	--	--
			Dibenz(a,h)anthracene	6.1E-12	--	6.1E-12	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.4E-12	--	1.4E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.2E-08	1.3E-06	1.4E-06
			Pesticides & Organics							

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chloroform	5.8E-12	5.4E-11	5.9E-11	Liver	1.5E-07	1.3E-06	1.5E-06
			Trichloroethylene	9.4E-12	1.5E-10	1.6E-10	Thymus, Blood, Immune, Developmental	3.2E-06	5.2E-05	5.5E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	2.1E-05	1.4E-04	1.6E-04
			Arsenic, inorganic	3.0E-09	3.0E-09	6.0E-09	Skin, Blood	5.2E-05	5.1E-05	1.0E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.0E-08	8.0E-07	8.1E-07
			Chromium (VI)	1.7E-10	1.4E-08	1.4E-08	No Effect	9.0E-07	7.2E-05	7.3E-05
			Iron	--	--	--	GI Tract	9.2E-06	9.2E-06	1.8E-05
			Manganese	--	--	--	Neurological	3.5E-05	8.7E-04	9.1E-04
			Mercury	--	--	--	Immune	1.1E-06	1.5E-05	1.6E-05
			Thallium	--	--	--	Skin, Hair	1.5E-05	1.5E-05	3.0E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			7.3E-10				5.4E-05
			Total DLCs (based on KM TEQs)			6.0E-10				4.4E-05
			Total PCDD/Fs (excluding KM TEQ)			7.1E-10				5.3E-05
			Total PCDD/Fs (based on KM TEQ)			5.7E-10				4.2E-05
			Total DL-PCBs (excluding KM TEQ)			2.1E-11				1.6E-06
			Total DL-PCBs (based on KM TEQ)			2.6E-11				1.9E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.1E-11				1.6E-06
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-11				1.9E-06
			Total PAHs			3.6E-11				2.0E-06
			Total Organics			2.2E-10				5.7E-05
			Total Inorganics			2.0E-08				1.3E-03
	Swimmer - Surface Water Total (excluding KM TEQs)					2.1E-08				1.4E-03
	Swimmer - Surface Water Total (based on KM TEQs)					2.1E-08				1.4E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						2.0E-07				1.2E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						2.0E-07				1.2E-02
Surface Water	Surface Water	Boater Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.5E-09	--	1.5E-09	Reproductive	1.1E-04	--	1.1E-04
			1,2,3,7,8-PeCDD	5.1E-10	--	5.1E-10	Reproductive	3.8E-05	--	3.8E-05
			1,2,3,4,7,8-HxCDD	3.7E-10	--	3.7E-10	Reproductive	2.8E-05	--	2.8E-05
			1,2,3,6,7,8-HxCDD	6.0E-11	--	6.0E-11	Reproductive	4.4E-06	--	4.4E-06
			1,2,3,7,8,9-HxCDD	1.0E-10	--	1.0E-10	Reproductive	7.8E-06	--	7.8E-06
			1,2,3,4,6,7,8-HpCDD	7.5E-11	--	7.5E-11	Reproductive	5.6E-06	--	5.6E-06
			OCDD	2.4E-11	--	2.4E-11	Reproductive	1.7E-06	--	1.7E-06
			2,3,7,8-TCDF	5.8E-11	--	5.8E-11	Reproductive	4.3E-06	--	4.3E-06
			1,2,3,7,8-PeCDF	1.4E-11	--	1.4E-11	Reproductive	1.0E-06	--	1.0E-06
			2,3,4,7,8-PeCDF	2.4E-10	--	2.4E-10	Reproductive	1.8E-05	--	1.8E-05
			1,2,3,4,7,8-HxCDF	2.2E-10	--	2.2E-10	Reproductive	1.6E-05	--	1.6E-05
			1,2,3,6,7,8-HxCDF	5.4E-11	--	5.4E-11	Reproductive	4.0E-06	--	4.0E-06
			1,2,3,7,8,9-HxCDF	3.2E-10	--	3.2E-10	Reproductive	2.4E-05	--	2.4E-05
			2,3,4,6,7,8-HxCDF	3.4E-11	--	3.4E-11	Reproductive	2.5E-06	--	2.5E-06
			1,2,3,4,6,7,8-HpCDF	9.4E-11	--	9.4E-11	Reproductive	6.9E-06	--	6.9E-06
			1,2,3,4,7,8,9-HpCDF	5.9E-12	--	5.9E-12	Reproductive	4.4E-07	--	4.4E-07
			OCDF	5.3E-12	--	5.3E-12	Reproductive	3.9E-07	--	3.9E-07

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	2.9E-09	--	2.9E-09	Reproductive	2.2E-04	--	2.2E-04
			PCB-77	2.5E-12	--	2.5E-12	Reproductive	1.8E-07	--	1.8E-07
			PCB-81	2.5E-13	--	2.5E-13	Reproductive	1.8E-08	--	1.8E-08
			PCB-105	2.7E-12	--	2.7E-12	Reproductive	2.0E-07	--	2.0E-07
			PCB-114	1.4E-13	--	1.4E-13	Reproductive	1.0E-08	--	1.0E-08
			PCB-118	5.9E-12	--	5.9E-12	Reproductive	4.4E-07	--	4.4E-07
			PCB-123	1.2E-13	--	1.2E-13	Reproductive	8.5E-09	--	8.5E-09
			PCB-126	8.2E-11	--	8.2E-11	Reproductive	6.0E-06	--	6.0E-06
			PCB-156/157	7.0E-13	--	7.0E-13	Reproductive	5.2E-08	--	5.2E-08
			PCB-167	2.4E-13	--	2.4E-13	Reproductive	1.8E-08	--	1.8E-08
			PCB-169	1.5E-11	--	1.5E-11	Reproductive	1.1E-06	--	1.1E-06
			PCB-189	3.1E-14	--	3.1E-14	Reproductive	2.3E-09	--	2.3E-09
			KM TEQ PCB	1.3E-10	--	1.3E-10	Reproductive	9.8E-06	--	9.8E-06
			PAHs							
			Benz(a)anthracene	9.5E-12	--	9.5E-12	--	--	--	--
			Benzo(a)pyrene	1.2E-10	--	1.2E-10	Developmental	3.2E-06	--	3.2E-06
			Benzo(b)fluoranthene	1.7E-11	--	1.7E-11	--	--	--	--
			Benzo(k)fluoranthene	7.4E-13	--	7.4E-13	--	--	--	--
			Chrysene	1.6E-13	--	1.6E-13	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-11	--	3.1E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	7.0E-12	--	7.0E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	1.1E-07	2.2E-06	2.3E-06
			Pesticides & Organics							
			Chloroform	3.0E-11	8.2E-11	1.1E-10	Liver	7.5E-07	2.1E-06	2.8E-06
			Trichloroethylene	4.9E-11	2.4E-10	2.9E-10	Thymus, Blood, Immune, Developmental	1.6E-05	8.2E-05	9.8E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	1.1E-04	1.8E-04	2.9E-04
			Arsenic, inorganic	1.5E-08	3.8E-09	1.9E-08	Skin, Blood	2.7E-04	6.5E-05	3.3E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	5.4E-08	1.0E-06	1.1E-06
			Chromium (VI)	9.0E-10	1.8E-08	1.8E-08	No Effect	4.7E-06	9.1E-05	9.6E-05
			Iron	--	--	--	GI Tract	4.8E-05	1.2E-05	5.9E-05
			Manganese	--	--	--	Neurological	1.8E-04	1.1E-03	1.3E-03
			Mercury	--	--	--	Immune	5.5E-06	1.9E-05	2.5E-05
			Thallium	--	--	--	Skin, Hair	7.8E-05	1.9E-05	9.7E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			3.8E-09				2.8E-04
			Total DLCs (based on KM TEQs)			3.1E-09				2.3E-04
			Total PCDD/Fs (excluding KM TEQ)			3.7E-09				2.7E-04
			Total PCDD/Fs (based on KM TEQ)			2.9E-09				2.2E-04
			Total DL-PCBs (excluding KM TEQ)			1.1E-10				8.1E-06
			Total DL-PCBs (based on KM TEQ)			1.3E-10				9.8E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-10				8.1E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-10				9.8E-06
			Total PAHs			1.9E-10				5.4E-06
			Total Organics			4.0E-10				1.0E-04
			Total Inorganics			3.8E-08				2.2E-03

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Boater - Surface Water Total (excluding KM TEQs)					4.2E-08				2.6E-03
	Boater - Surface Water Total (based on KM TEQs)					4.1E-08				2.5E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)						1.0E-07				6.8E-03
Boater Sediment Total + Surface Water Total (based on KM TEQs)						9.9E-08				6.7E-03

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Wader Sediment Total + Surface Water Total			Wader Sediment Total + Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.7E-03		Blood HI =		1.7E-03
				Body Weight HI =		1.9E-05		Body Weight HI =		1.9E-05
				Developmental HI =		4.3E-04		Developmental HI =		4.3E-04
				GI Tract HI =		1.3E-03		GI Tract HI =		1.3E-03
				Hair HI =		1.9E-04		Hair HI =		1.9E-04
				Immune HI =		5.3E-05		Immune HI =		5.3E-05
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.8E-07		Liver HI =		1.8E-07
				Neurological HI =		2.1E-04		Neurological HI =		2.1E-04
				No Effect HI =		7.4E-06		No Effect HI =		7.4E-06
				Organ Weights HI =		1.9E-05		Organ Weights HI =		1.9E-05
				Reproductive HI =		3.8E-03		Reproductive HI =		3.6E-03
				Skin HI =		1.8E-03		Skin HI =		1.8E-03
				Thymus HI =		6.8E-06		Thymus HI =		6.8E-06
				Thyroid HI =		2.6E-04		Thyroid HI =		2.6E-04
				Urinary HI =		7.1E-05		Urinary HI =		7.1E-05
				Whole Body HI =		2.2E-03		Whole Body HI =		2.2E-03
				Swimmer Sediment Total + Surface Water Total			Swimmer Sediment Total + Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-03		Blood HI =		1.9E-03
				Body Weight HI =		2.0E-05		Body Weight HI =		2.0E-05
				Developmental HI =		4.8E-04		Developmental HI =		4.8E-04
				GI Tract HI =		1.3E-03		GI Tract HI =		1.3E-03
				Hair HI =		2.2E-04		Hair HI =		2.2E-04
				Immune HI =		1.2E-04		Immune HI =		1.2E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.5E-06		Liver HI =		1.5E-06
				Neurological HI =		1.1E-03		Neurological HI =		1.1E-03
				No Effect HI =		7.6E-05		No Effect HI =		7.6E-05
				Organ Weights HI =		1.9E-05		Organ Weights HI =		1.9E-05
				Reproductive HI =		3.8E-03		Reproductive HI =		3.6E-03
				Skin HI =		1.9E-03		Skin HI =		1.9E-03
				Thymus HI =		5.5E-05		Thymus HI =		5.5E-05
				Thyroid HI =		2.6E-04		Thyroid HI =		2.6E-04
				Urinary HI =		7.1E-05		Urinary HI =		7.1E-05
				Whole Body HI =		2.4E-03		Whole Body HI =		2.4E-03

TABLE 9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Boater Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Boater Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.0E-03		Blood HI =		1.0E-03
				Body Weight HI =		1.4E-05		Body Weight HI =		1.4E-05
				Developmental HI =		2.2E-04		Developmental HI =		2.2E-04
				GI Tract HI =		8.4E-04		GI Tract HI =		8.4E-04
				Hair HI =		2.1E-04		Hair HI =		2.1E-04
				Immune HI =		1.5E-04		Immune HI =		1.5E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		2.8E-06		Liver HI =		2.8E-06
				Neurological HI =		1.4E-03		Neurological HI =		1.4E-03
				No Effect HI =		9.9E-05		No Effect HI =		9.9E-05
				Organ Weights HI =		1.2E-05		Organ Weights HI =		1.2E-05
				Reproductive HI =		1.6E-03		Reproductive HI =		1.5E-03
				Skin HI =		1.1E-03		Skin HI =		1.1E-03
				Thymus HI =		9.8E-05		Thymus HI =		9.8E-05
				Thyroid HI =		1.6E-04		Thyroid HI =		1.6E-04
				Urinary HI =		2.4E-05		Urinary HI =		2.4E-05
				Whole Body HI =		9.3E-04		Whole Body HI =		9.3E-04

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.5E-08	2.7E-08	5.2E-08	Reproductive	2.8E-03	3.0E-03	5.8E-03
			1,2,3,7,8-PeCDD	1.3E-09	1.4E-09	2.7E-09	Reproductive	1.5E-04	1.6E-04	3.0E-04
			1,2,3,4,7,8-HxCDD	1.2E-10	1.3E-10	2.5E-10	Reproductive	1.3E-05	1.4E-05	2.7E-05
			1,2,3,6,7,8-HxCDD	4.8E-10	5.1E-10	9.9E-10	Reproductive	5.3E-05	5.7E-05	1.1E-04
			1,2,3,7,8,9-HxCDD	2.8E-10	3.0E-10	5.9E-10	Reproductive	3.2E-05	3.4E-05	6.5E-05
			1,2,3,4,6,7,8-HpCDD	8.5E-10	9.0E-10	1.7E-09	Reproductive	9.4E-05	1.0E-04	1.9E-04
			OCDD	2.6E-10	2.8E-10	5.3E-10	Reproductive	2.9E-05	3.1E-05	5.9E-05
			2,3,7,8-TCDF	4.5E-10	4.8E-10	9.4E-10	Reproductive	5.0E-05	5.4E-05	1.0E-04
			1,2,3,7,8-PeCDF	9.4E-11	1.0E-10	1.9E-10	Reproductive	1.0E-05	1.1E-05	2.1E-05
			2,3,4,7,8-PeCDF	1.6E-09	1.7E-09	3.2E-09	Reproductive	1.7E-04	1.8E-04	3.6E-04
			1,2,3,4,7,8-HxCDF	2.4E-09	2.5E-09	4.9E-09	Reproductive	2.7E-04	2.8E-04	5.5E-04
			1,2,3,6,7,8-HxCDF	6.2E-10	6.6E-10	1.3E-09	Reproductive	6.9E-05	7.3E-05	1.4E-04
			1,2,3,7,8,9-HxCDF	4.6E-11	4.9E-11	9.6E-11	Reproductive	5.2E-06	5.5E-06	1.1E-05
			2,3,4,6,7,8-HxCDF	3.5E-10	3.7E-10	7.1E-10	Reproductive	3.8E-05	4.1E-05	7.9E-05
			1,2,3,4,6,7,8-HpCDF	1.1E-09	1.1E-09	2.2E-09	Reproductive	1.2E-04	1.3E-04	2.4E-04
			1,2,3,4,7,8,9-HpCDF	3.6E-11	3.8E-11	7.4E-11	Reproductive	4.0E-06	4.2E-06	8.2E-06
			OCDF	4.4E-11	4.7E-11	9.1E-11	Reproductive	4.9E-06	5.2E-06	1.0E-05
			KM TEQ DF	3.4E-08	3.7E-08	7.1E-08	Reproductive	3.8E-03	4.1E-03	7.9E-03
			PCB-77	2.5E-10	2.7E-10	5.3E-10	Reproductive	2.8E-05	3.0E-05	5.8E-05
			PCB-81	2.9E-11	3.1E-11	6.1E-11	Reproductive	3.3E-06	3.5E-06	6.8E-06
			PCB-105	1.2E-10	1.3E-10	2.5E-10	Reproductive	1.4E-05	1.5E-05	2.8E-05
			PCB-114	8.4E-12	9.0E-12	1.7E-11	Reproductive	9.4E-07	1.0E-06	1.9E-06
			PCB-118	3.6E-10	3.8E-10	7.4E-10	Reproductive	4.0E-05	4.2E-05	8.2E-05
			PCB-123	1.0E-11	1.1E-11	2.1E-11	Reproductive	1.2E-06	1.2E-06	2.4E-06
			PCB-126	8.1E-09	8.6E-09	1.7E-08	Reproductive	9.0E-04	9.6E-04	1.9E-03
			PCB-156/157	3.2E-11	3.4E-11	6.6E-11	Reproductive	3.6E-06	3.8E-06	7.4E-06
			PCB-167	1.1E-11	1.2E-11	2.4E-11	Reproductive	1.3E-06	1.4E-06	2.6E-06
			PCB-169	2.5E-09	2.7E-09	5.2E-09	Reproductive	2.8E-04	3.0E-04	5.7E-04
			PCB-189	2.4E-12	2.6E-12	5.0E-12	Reproductive	2.7E-07	2.8E-07	5.5E-07
			KM TEQ PCB	1.0E-08	1.1E-08	2.1E-08	Reproductive	1.1E-03	1.2E-03	2.3E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-09	7.2E-09	8.7E-09	Whole Body	8.5E-04	4.2E-03	5.1E-03
			PAHs							
			Benz(a)anthracene	9.2E-10	4.2E-09	5.2E-09	--	--	--	--
			Benzo(a)pyrene	9.0E-09	4.1E-08	5.0E-08	Developmental	1.7E-04	8.1E-04	9.8E-04
			Benzo(b)fluoranthene	8.1E-10	3.7E-09	4.5E-09	--	--	--	--
			Benzo(k)fluoranthene	5.2E-11	2.4E-10	2.9E-10	--	--	--	--
			Chrysene	8.8E-12	4.1E-11	4.9E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-09	8.5E-09	1.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-10	1.5E-09	1.9E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.6E-05	--	3.6E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.6E-03	--	2.6E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	3.1E-04	--	3.1E-04
			Antimony	--	--	--	Whole Body	1.5E-04	--	1.5E-04
			Arsenic, inorganic	6.1E-08	1.1E-07	1.7E-07	Skin, Blood	1.6E-03	2.8E-03	4.4E-03
			Cadmium	--	--	--	Urinary	7.9E-05	1.1E-04	1.9E-04

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	1.8E-06	--	1.8E-06
			Cobalt	--	--	--	Thyroid	1.2E-03	--	1.2E-03
			Copper	--	--	--	GI Tract	4.3E-03	--	4.3E-03
			Chromium (VI)	3.1E-09	--	3.1E-09	No Effect	1.2E-05	--	1.2E-05
			Iron	--	--	--	GI Tract	1.6E-03	--	1.6E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.8E-04	--	3.8E-04
			Mercury	--	--	--	Immune	1.7E-04	--	1.7E-04
			Nickel	--	--	--	Body Weight, Organ Weights	8.6E-05	--	8.6E-05
			Thallium	--	--	--	Skin, Hair	6.3E-04	--	6.3E-04
			Vanadium	--	--	--	Hair	2.6E-04	--	2.6E-04
			Zinc	--	--	--	Blood	1.1E-04	--	1.1E-04
			Total DLCs (excluding KM TEQs)			9.6E-08				1.1E-02
			Total DLCs (based on KM TEQs)			9.2E-08				1.0E-02
			Total PCDD/Fs (excluding KM TEQ)			7.3E-08				8.1E-03
			Total PCDD/Fs (based on KM TEQ)			7.1E-08				7.9E-03
			Total DL-PCBs (excluding KM TEQ)			2.4E-08				2.6E-03
			Total DL-PCBs (based on KM TEQ)			2.1E-08				2.3E-03
			Total DL-PCBs (excluding KM TEQ)			2.4E-08				2.6E-03
			Total DL-PCBs (based on KM TEQ)			2.1E-08				2.3E-03
			Total Non-DL PCBs			8.7E-09				5.1E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			3.2E-08				7.7E-03
			Total PCBs (DL & NDL; based on KM TEQ)			2.9E-08				7.4E-03
			Total PAHs			7.3E-08				9.8E-04
			Total Organics			0.0E+00				2.7E-03
			Total Inorganics			1.7E-07				1.4E-02
	Wader - Sediment Total (excluding KM TEQs)					3.5E-07				3.3E-02
	Wader - Sediment Total (based on KM TEQs)					3.5E-07				3.3E-02
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.5E-08	2.7E-08	5.2E-08	Reproductive	2.8E-03	3.0E-03	5.8E-03
			1,2,3,7,8-PeCDD	1.3E-09	1.4E-09	2.7E-09	Reproductive	1.5E-04	1.6E-04	3.0E-04
			1,2,3,4,7,8-HxCDD	1.2E-10	1.3E-10	2.5E-10	Reproductive	1.3E-05	1.4E-05	2.7E-05
			1,2,3,6,7,8-HxCDD	4.8E-10	5.1E-10	9.9E-10	Reproductive	5.3E-05	5.7E-05	1.1E-04
			1,2,3,7,8,9-HxCDD	2.8E-10	3.0E-10	5.9E-10	Reproductive	3.2E-05	3.4E-05	6.5E-05
			1,2,3,4,6,7,8-HpCDD	8.5E-10	9.0E-10	1.7E-09	Reproductive	9.4E-05	1.0E-04	1.9E-04
			OCDD	2.6E-10	2.8E-10	5.3E-10	Reproductive	2.9E-05	3.1E-05	5.9E-05
			2,3,7,8-TCDF	4.5E-10	4.8E-10	9.4E-10	Reproductive	5.0E-05	5.4E-05	1.0E-04
			1,2,3,7,8-PeCDF	9.4E-11	1.0E-10	1.9E-10	Reproductive	1.0E-05	1.1E-05	2.1E-05
			2,3,4,7,8-PeCDF	1.6E-09	1.7E-09	3.2E-09	Reproductive	1.7E-04	1.8E-04	3.6E-04
			1,2,3,4,7,8-HxCDF	2.4E-09	2.5E-09	4.9E-09	Reproductive	2.7E-04	2.8E-04	5.5E-04
			1,2,3,6,7,8-HxCDF	6.2E-10	6.6E-10	1.3E-09	Reproductive	6.9E-05	7.3E-05	1.4E-04
			1,2,3,7,8,9-HxCDF	4.6E-11	4.9E-11	9.6E-11	Reproductive	5.2E-06	5.5E-06	1.1E-05
			2,3,4,6,7,8-HxCDF	3.5E-10	3.7E-10	7.1E-10	Reproductive	3.8E-05	4.1E-05	7.9E-05
			1,2,3,4,6,7,8-HpCDF	1.1E-09	1.1E-09	2.2E-09	Reproductive	1.2E-04	1.3E-04	2.4E-04
			1,2,3,4,7,8,9-HpCDF	3.6E-11	3.8E-11	7.4E-11	Reproductive	4.0E-06	4.2E-06	8.2E-06
			OCDF	4.4E-11	4.7E-11	9.1E-11	Reproductive	4.9E-06	5.2E-06	1.0E-05
			KM TEQ DF	3.4E-08	3.7E-08	7.1E-08	Reproductive	3.8E-03	4.1E-03	7.9E-03
			PCB-77	2.5E-10	2.7E-10	5.3E-10	Reproductive	2.8E-05	3.0E-05	5.8E-05
			PCB-81	2.9E-11	3.1E-11	6.1E-11	Reproductive	3.3E-06	3.5E-06	6.8E-06

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.2E-10	1.3E-10	2.5E-10	Reproductive	1.4E-05	1.5E-05	2.8E-05
			PCB-114	8.4E-12	9.0E-12	1.7E-11	Reproductive	9.4E-07	1.0E-06	1.9E-06
			PCB-118	3.6E-10	3.8E-10	7.4E-10	Reproductive	4.0E-05	4.2E-05	8.2E-05
			PCB-123	1.0E-11	1.1E-11	2.1E-11	Reproductive	1.2E-06	1.2E-06	2.4E-06
			PCB-126	8.1E-09	8.6E-09	1.7E-08	Reproductive	9.0E-04	9.6E-04	1.9E-03
			PCB-156/157	3.2E-11	3.4E-11	6.6E-11	Reproductive	3.6E-06	3.8E-06	7.4E-06
			PCB-167	1.1E-11	1.2E-11	2.4E-11	Reproductive	1.3E-06	1.4E-06	2.6E-06
			PCB-169	2.5E-09	2.7E-09	5.2E-09	Reproductive	2.8E-04	3.0E-04	5.7E-04
			PCB-189	2.4E-12	2.6E-12	5.0E-12	Reproductive	2.7E-07	2.8E-07	5.5E-07
			KM TEQ PCB	1.0E-08	1.1E-08	2.1E-08	Reproductive	1.1E-03	1.2E-03	2.3E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-09	7.2E-09	8.7E-09	Whole Body	8.5E-04	4.2E-03	5.1E-03
			PAHs							
			Benz(a)anthracene	9.2E-10	4.2E-09	5.2E-09	--	--	--	--
			Benzo(a)pyrene	9.0E-09	4.1E-08	5.0E-08	Developmental	1.7E-04	8.1E-04	9.8E-04
			Benzo(b)fluoranthene	8.1E-10	3.7E-09	4.5E-09	--	--	--	--
			Benzo(k)fluoranthene	5.2E-11	2.4E-10	2.9E-10	--	--	--	--
			Chrysene	8.8E-12	4.1E-11	4.9E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-09	8.5E-09	1.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-10	1.5E-09	1.9E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	3.6E-05	--	3.6E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.6E-03	--	2.6E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	3.1E-04	--	3.1E-04
			Antimony	--	--	--	Whole Body	1.5E-04	--	1.5E-04
			Arsenic, inorganic	6.1E-08	1.1E-07	1.7E-07	Skin, Blood	1.6E-03	2.8E-03	4.4E-03
			Cadmium	--	--	--	Urinary	7.9E-05	1.1E-04	1.9E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.8E-06	--	1.8E-06
			Cobalt	--	--	--	Thyroid	1.2E-03	--	1.2E-03
			Copper	--	--	--	GI Tract	4.3E-03	--	4.3E-03
			Chromium (VI)	3.1E-09	--	3.1E-09	No Effect	1.2E-05	--	1.2E-05
			Iron	--	--	--	GI Tract	1.6E-03	--	1.6E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.8E-04	--	3.8E-04
			Mercury	--	--	--	Immune	1.7E-04	--	1.7E-04
			Nickel	--	--	--	Body Weight, Organ Weights	8.6E-05	--	8.6E-05
			Thallium	--	--	--	Skin, Hair	6.3E-04	--	6.3E-04
			Vanadium	--	--	--	Hair	2.6E-04	--	2.6E-04
			Zinc	--	--	--	Blood	1.1E-04	--	1.1E-04
			Total DLCs (excluding KM TEQs)			9.6E-08				1.1E-02
			Total DLCs (based on KM TEQs)			9.2E-08				1.0E-02
			Total PCDD/Fs (excluding KM TEQ)			7.3E-08				8.1E-03
			Total PCDD/Fs (based on KM TEQ)			7.1E-08				7.9E-03
			Total DL-PCBs (excluding KM TEQ)			2.4E-08				2.6E-03
			Total DL-PCBs (based on KM TEQ)			2.1E-08				2.3E-03
			Total Non-DL PCBs			8.7E-09				5.1E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			3.2E-08				7.7E-03

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			2.9E-08				7.4E-03
			Total PAHs			7.3E-08				9.8E-04
			Total Organics			0.0E+00				2.7E-03
			Total Inorganics			1.7E-07				1.4E-02
	Swimmer - Sediment Total (excluding KM TEQs)					3.5E-07				3.3E-02
	Swimmer - Sediment Total (based on KM TEQs)					3.5E-07				3.3E-02
Sediment	Sediment	Boater Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.5E-08	2.7E-08	5.2E-08	Reproductive	2.8E-03	3.0E-03	5.8E-03
			1,2,3,7,8-PeCDD	1.3E-09	1.4E-09	2.7E-09	Reproductive	1.5E-04	1.6E-04	3.0E-04
			1,2,3,4,7,8-HxCDD	1.2E-10	1.3E-10	2.5E-10	Reproductive	1.3E-05	1.4E-05	2.7E-05
			1,2,3,6,7,8-HxCDD	4.8E-10	5.1E-10	9.9E-10	Reproductive	5.3E-05	5.7E-05	1.1E-04
			1,2,3,7,8,9-HxCDD	2.8E-10	3.0E-10	5.9E-10	Reproductive	3.2E-05	3.4E-05	6.5E-05
			1,2,3,4,6,7,8-HpCDD	8.5E-10	9.0E-10	1.7E-09	Reproductive	9.4E-05	1.0E-04	1.9E-04
			OCDD	2.6E-10	2.8E-10	5.3E-10	Reproductive	2.9E-05	3.1E-05	5.9E-05
			2,3,7,8-TCDF	4.5E-10	4.8E-10	9.4E-10	Reproductive	5.0E-05	5.4E-05	1.0E-04
			1,2,3,7,8-PeCDF	9.4E-11	1.0E-10	1.9E-10	Reproductive	1.0E-05	1.1E-05	2.1E-05
			2,3,4,7,8-PeCDF	1.6E-09	1.7E-09	3.2E-09	Reproductive	1.7E-04	1.8E-04	3.6E-04
			1,2,3,4,7,8-HxCDF	2.4E-09	2.5E-09	4.9E-09	Reproductive	2.7E-04	2.8E-04	5.5E-04
			1,2,3,6,7,8-HxCDF	6.2E-10	6.6E-10	1.3E-09	Reproductive	6.9E-05	7.3E-05	1.4E-04
			1,2,3,7,8,9-HxCDF	4.6E-11	4.9E-11	9.6E-11	Reproductive	5.2E-06	5.5E-06	1.1E-05
			2,3,4,6,7,8-HxCDF	3.5E-10	3.7E-10	7.1E-10	Reproductive	3.8E-05	4.1E-05	7.9E-05
			1,2,3,4,6,7,8-HpCDF	1.1E-09	1.1E-09	2.2E-09	Reproductive	1.2E-04	1.3E-04	2.4E-04
			1,2,3,4,7,8,9-HpCDF	3.6E-11	3.8E-11	7.4E-11	Reproductive	4.0E-06	4.2E-06	8.2E-06
			OCDF	4.4E-11	4.7E-11	9.1E-11	Reproductive	4.9E-06	5.2E-06	1.0E-05
			KM TEQ DF	3.4E-08	3.7E-08	7.1E-08	Reproductive	3.8E-03	4.1E-03	7.9E-03
			PCB-77	2.5E-10	2.7E-10	5.3E-10	Reproductive	2.8E-05	3.0E-05	5.8E-05
			PCB-81	2.9E-11	3.1E-11	6.1E-11	Reproductive	3.3E-06	3.5E-06	6.8E-06
			PCB-105	1.2E-10	1.3E-10	2.5E-10	Reproductive	1.4E-05	1.5E-05	2.8E-05
			PCB-114	8.4E-12	9.0E-12	1.7E-11	Reproductive	9.4E-07	1.0E-06	1.9E-06
			PCB-118	3.6E-10	3.8E-10	7.4E-10	Reproductive	4.0E-05	4.2E-05	8.2E-05
			PCB-123	1.0E-11	1.1E-11	2.1E-11	Reproductive	1.2E-06	1.2E-06	2.4E-06
			PCB-126	8.1E-09	8.6E-09	1.7E-08	Reproductive	9.0E-04	9.6E-04	1.9E-03
			PCB-156/157	3.2E-11	3.4E-11	6.6E-11	Reproductive	3.6E-06	3.8E-06	7.4E-06
			PCB-167	1.1E-11	1.2E-11	2.4E-11	Reproductive	1.3E-06	1.4E-06	2.6E-06
			PCB-169	2.5E-09	2.7E-09	5.2E-09	Reproductive	2.8E-04	3.0E-04	5.7E-04
			PCB-189	2.4E-12	2.6E-12	5.0E-12	Reproductive	2.7E-07	2.8E-07	5.5E-07
			KM TEQ PCB	1.0E-08	1.1E-08	2.1E-08	Reproductive	1.1E-03	1.2E-03	2.3E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-09	7.2E-09	8.7E-09	Whole Body	8.5E-04	4.2E-03	5.1E-03
			PAHs							
			Benz(a)anthracene	9.2E-10	4.2E-09	5.2E-09	--	--	--	--
			Benzo(a)pyrene	9.0E-09	4.1E-08	5.0E-08	Developmental	1.7E-04	8.1E-04	9.8E-04
			Benzo(b)fluoranthene	8.1E-10	3.7E-09	4.5E-09	--	--	--	--
			Benzo(k)fluoranthene	5.2E-11	2.4E-10	2.9E-10	--	--	--	--
			Chrysene	8.8E-12	4.1E-11	4.9E-11	--	--	--	--
			Dibenz(a,h)anthracene	1.8E-09	8.5E-09	1.0E-08	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.3E-10	1.5E-09	1.9E-09	--	--	--	--
			Pesticides & Organics							

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PHC as gasoline	--	--	--	Blood, Immune	3.6E-05	--	3.6E-05
			TPH (C9-C40)	--	--	--	Respiratory	2.6E-03	--	2.6E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	3.1E-04	--	3.1E-04
			Antimony	--	--	--	Whole Body	1.5E-04	--	1.5E-04
			Arsenic, inorganic	6.1E-08	1.1E-07	1.7E-07	Skin, Blood	1.6E-03	2.8E-03	4.4E-03
			Cadmium	--	--	--	Urinary	7.9E-05	1.1E-04	1.9E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.8E-06	--	1.8E-06
			Cobalt	--	--	--	Thyroid	1.2E-03	--	1.2E-03
			Copper	--	--	--	GI Tract	4.3E-03	--	4.3E-03
			Chromium (VI)	3.1E-09	--	3.1E-09	No Effect	1.2E-05	--	1.2E-05
			Iron	--	--	--	GI Tract	1.6E-03	--	1.6E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	3.8E-04	--	3.8E-04
			Mercury	--	--	--	Immune	1.7E-04	--	1.7E-04
			Nickel	--	--	--	Body Weight, Organ Weights	8.6E-05	--	8.6E-05
			Thallium	--	--	--	Skin, Hair	6.3E-04	--	6.3E-04
			Vanadium	--	--	--	Hair	2.6E-04	--	2.6E-04
			Zinc	--	--	--	Blood	1.1E-04	--	1.1E-04
			Total DLCs (excluding KM TEQs)			9.6E-08				1.1E-02
			Total DLCs (based on KM TEQs)			9.2E-08				1.0E-02
			Total PCDD/Fs (excluding KM TEQ)			7.3E-08				8.1E-03
			Total PCDD/Fs (based on KM TEQ)			7.1E-08				7.9E-03
			Total DL-PCBs (excluding KM TEQ)			2.4E-08				2.6E-03
			Total DL-PCBs (based on KM TEQ)			2.1E-08				2.3E-03
			Total Non-DL PCBs			8.7E-09				5.1E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			3.2E-08				7.7E-03
			Total PCBs (DL & NDL; based on KM TEQ)			2.9E-08				7.4E-03
			Total PAHs			7.3E-08				9.8E-04
			Total Organics			0.0E+00				2.7E-03
			Total Inorganics			1.7E-07				1.4E-02
	Boater - Sediment Total (excluding KM TEQs)					3.5E-07				3.3E-02
	Boater - Sediment Total (based on KM TEQs)					3.5E-07				3.3E-02
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-10	--	2.0E-10	Reproductive	2.2E-05	--	2.2E-05
			1,2,3,7,8-PeCDD	7.0E-11	--	7.0E-11	Reproductive	7.8E-06	--	7.8E-06
			1,2,3,4,7,8-HxCDD	5.1E-11	--	5.1E-11	Reproductive	5.6E-06	--	5.6E-06
			1,2,3,6,7,8-HxCDD	8.1E-12	--	8.1E-12	Reproductive	9.0E-07	--	9.0E-07
			1,2,3,7,8,9-HxCDD	1.4E-11	--	1.4E-11	Reproductive	1.6E-06	--	1.6E-06
			1,2,3,4,6,7,8-HpCDD	1.0E-11	--	1.0E-11	Reproductive	1.1E-06	--	1.1E-06
			OCDD	3.2E-12	--	3.2E-12	Reproductive	3.6E-07	--	3.6E-07
			2,3,7,8-TCDF	7.9E-12	--	7.9E-12	Reproductive	8.7E-07	--	8.7E-07
			1,2,3,7,8-PeCDF	1.9E-12	--	1.9E-12	Reproductive	2.1E-07	--	2.1E-07
			2,3,4,7,8-PeCDF	3.3E-11	--	3.3E-11	Reproductive	3.6E-06	--	3.6E-06
			1,2,3,4,7,8-HxCDF	3.0E-11	--	3.0E-11	Reproductive	3.4E-06	--	3.4E-06
			1,2,3,6,7,8-HxCDF	7.3E-12	--	7.3E-12	Reproductive	8.1E-07	--	8.1E-07
			1,2,3,7,8,9-HxCDF	4.4E-11	--	4.4E-11	Reproductive	4.8E-06	--	4.8E-06

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	4.6E-12	--	4.6E-12	Reproductive	5.2E-07	--	5.2E-07
			1,2,3,4,6,7,8-HpCDF	1.3E-11	--	1.3E-11	Reproductive	1.4E-06	--	1.4E-06
			1,2,3,4,7,8,9-HpCDF	8.1E-13	--	8.1E-13	Reproductive	9.0E-08	--	9.0E-08
			OCDF	7.2E-13	--	7.2E-13	Reproductive	8.0E-08	--	8.0E-08
			KM TEQ DF	4.0E-10	--	4.0E-10	Reproductive	4.5E-05	--	4.5E-05
			PCB-77	3.4E-13	--	3.4E-13	Reproductive	3.8E-08	--	3.8E-08
			PCB-81	3.4E-14	--	3.4E-14	Reproductive	3.8E-09	--	3.8E-09
			PCB-105	3.6E-13	--	3.6E-13	Reproductive	4.0E-08	--	4.0E-08
			PCB-114	1.9E-14	--	1.9E-14	Reproductive	2.1E-09	--	2.1E-09
			PCB-118	8.1E-13	--	8.1E-13	Reproductive	9.0E-08	--	9.0E-08
			PCB-123	1.6E-14	--	1.6E-14	Reproductive	1.7E-09	--	1.7E-09
			PCB-126	1.1E-11	--	1.1E-11	Reproductive	1.2E-06	--	1.2E-06
			PCB-156/157	9.6E-14	--	9.6E-14	Reproductive	1.1E-08	--	1.1E-08
			PCB-167	3.2E-14	--	3.2E-14	Reproductive	3.6E-09	--	3.6E-09
			PCB-169	2.0E-12	--	2.0E-12	Reproductive	2.2E-07	--	2.2E-07
			PCB-189	4.2E-15	--	4.2E-15	Reproductive	4.7E-10	--	4.7E-10
			KM TEQ PCB	1.8E-11	--	1.8E-11	Reproductive	2.0E-06	--	2.0E-06
			PAHs							
			Benz(a)anthracene	2.6E-12	--	2.6E-12	--	--	--	--
			Benzo(a)pyrene	3.3E-11	--	3.3E-11	Developmental	6.5E-07	--	6.5E-07
			Benzo(b)fluoranthene	4.5E-12	--	4.5E-12	--	--	--	--
			Benzo(k)fluoranthene	2.0E-13	--	2.0E-13	--	--	--	--
			Chrysene	4.4E-14	--	4.4E-14	--	--	--	--
			Dibenz(a,h)anthracene	8.6E-12	--	8.6E-12	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.9E-12	--	1.9E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.3E-08	5.5E-07	5.7E-07
			Pesticides & Organics							
			Chloroform	4.1E-12	1.4E-11	1.8E-11	Liver	1.5E-07	5.1E-07	6.6E-07
			Trichloroethylene	1.3E-11	8.1E-11	9.4E-11	Thymus, Blood, Immune, Developmental	3.4E-06	2.0E-05	2.4E-05
			Inorganics							
			Antimony	--	--	--	Whole Body	2.2E-05	2.7E-05	4.9E-05
			Arsenic, inorganic	2.1E-09	3.7E-10	2.5E-09	Skin, Blood	5.5E-05	9.7E-06	6.4E-05
			Chromium [as Cr(III)]	--	--	--	No Effect	1.1E-08	1.5E-07	1.6E-07
			Chromium (VI)	2.5E-10	3.5E-09	3.7E-09	No Effect	9.5E-07	1.4E-05	1.4E-05
			Iron	--	--	--	GI Tract	9.8E-06	1.7E-06	1.2E-05
			Manganese	--	--	--	Neurological	3.7E-05	1.6E-04	2.0E-04
			Mercury	--	--	--	Immune	1.1E-06	2.9E-06	4.0E-06
			Thallium	--	--	--	Skin, Hair	1.6E-05	2.8E-06	1.9E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			5.2E-10				5.7E-05
			Total DLCs (based on KM TEQs)			4.2E-10				4.7E-05
			Total PCDD/Fs (excluding KM TEQ)			5.0E-10				5.6E-05
			Total PCDD/Fs (based on KM TEQ)			4.0E-10				4.5E-05
			Total DL-PCBs (excluding KM TEQ)			1.5E-11				1.6E-06
			Total DL-PCBs (based on KM TEQ)			1.8E-11				2.0E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.5E-11				1.6E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-11				2.0E-06

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PAHs			5.1E-11				1.2E-06
			Total Organics			1.1E-10				2.5E-05
			Total Inorganics			6.2E-09				3.6E-04
	Wader - Surface Water Total (excluding KM TEQs)					6.9E-09				4.5E-04
	Wader - Surface Water Total (based on KM TEQs)					6.8E-09				4.4E-04
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						3.6E-07				3.4E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)						3.5E-07				3.3E-02
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.1E-09	--	2.1E-09	Reproductive	2.3E-04	--	2.3E-04
			1,2,3,7,8-PeCDD	7.3E-10	--	7.3E-10	Reproductive	8.1E-05	--	8.1E-05
			1,2,3,4,7,8-HxCDD	5.3E-10	--	5.3E-10	Reproductive	5.9E-05	--	5.9E-05
			1,2,3,6,7,8-HxCDD	8.4E-11	--	8.4E-11	Reproductive	9.4E-06	--	9.4E-06
			1,2,3,7,8,9-HxCDD	1.5E-10	--	1.5E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,4,6,7,8-HpCDD	1.1E-10	--	1.1E-10	Reproductive	1.2E-05	--	1.2E-05
			OCDD	3.3E-11	--	3.3E-11	Reproductive	3.7E-06	--	3.7E-06
			2,3,7,8-TCDF	8.2E-11	--	8.2E-11	Reproductive	9.1E-06	--	9.1E-06
			1,2,3,7,8-PeCDF	2.0E-11	--	2.0E-11	Reproductive	2.2E-06	--	2.2E-06
			2,3,4,7,8-PeCDF	3.4E-10	--	3.4E-10	Reproductive	3.8E-05	--	3.8E-05
			1,2,3,4,7,8-HxCDF	3.1E-10	--	3.1E-10	Reproductive	3.5E-05	--	3.5E-05
			1,2,3,6,7,8-HxCDF	7.6E-11	--	7.6E-11	Reproductive	8.5E-06	--	8.5E-06
			1,2,3,7,8,9-HxCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			2,3,4,6,7,8-HxCDF	4.8E-11	--	4.8E-11	Reproductive	5.4E-06	--	5.4E-06
			1,2,3,4,6,7,8-HpCDF	1.3E-10	--	1.3E-10	Reproductive	1.5E-05	--	1.5E-05
			1,2,3,4,7,8,9-HpCDF	8.4E-12	--	8.4E-12	Reproductive	9.3E-07	--	9.3E-07
			OCDF	7.5E-12	--	7.5E-12	Reproductive	8.3E-07	--	8.3E-07
			KM TEQ DF	4.2E-09	--	4.2E-09	Reproductive	4.6E-04	--	4.6E-04
			PCB-77	3.5E-12	--	3.5E-12	Reproductive	3.9E-07	--	3.9E-07
			PCB-81	3.5E-13	--	3.5E-13	Reproductive	3.9E-08	--	3.9E-08
			PCB-105	3.8E-12	--	3.8E-12	Reproductive	4.2E-07	--	4.2E-07
			PCB-114	2.0E-13	--	2.0E-13	Reproductive	2.2E-08	--	2.2E-08
			PCB-118	8.4E-12	--	8.4E-12	Reproductive	9.4E-07	--	9.4E-07
			PCB-123	1.6E-13	--	1.6E-13	Reproductive	1.8E-08	--	1.8E-08
			PCB-126	1.2E-10	--	1.2E-10	Reproductive	1.3E-05	--	1.3E-05
			PCB-156/157	1.0E-12	--	1.0E-12	Reproductive	1.1E-07	--	1.1E-07
			PCB-167	3.4E-13	--	3.4E-13	Reproductive	3.7E-08	--	3.7E-08
			PCB-169	2.1E-11	--	2.1E-11	Reproductive	2.3E-06	--	2.3E-06
			PCB-189	4.4E-14	--	4.4E-14	Reproductive	4.9E-09	--	4.9E-09
			KM TEQ PCB	1.9E-10	--	1.9E-10	Reproductive	2.1E-05	--	2.1E-05
			PAHs							
			Benz(a)anthracene	2.7E-11	--	2.7E-11	--	--	--	--
			Benzo(a)pyrene	3.5E-10	--	3.5E-10	Developmental	6.8E-06	--	6.8E-06
			Benzo(b)fluoranthene	4.7E-11	--	4.7E-11	--	--	--	--
			Benzo(k)fluoranthene	2.1E-12	--	2.1E-12	--	--	--	--
			Chrysene	4.6E-13	--	4.6E-13	--	--	--	--
			Dibenz(a,h)anthracene	8.9E-11	--	8.9E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.0E-11	--	2.0E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.4E-07	4.4E-06	4.6E-06
			Pesticides & Organics							

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chloroform	4.2E-11	1.2E-10	1.6E-10	Liver	1.6E-06	4.4E-06	6.0E-06
			Trichloroethylene	1.4E-10	6.7E-10	8.1E-10	Thymus, Blood, Immune, Developmental	3.5E-05	1.7E-04	2.1E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	2.3E-04	4.6E-04	6.9E-04
			Arsenic, inorganic	2.2E-08	6.5E-09	2.8E-08	Skin, Blood	5.7E-04	1.7E-04	7.4E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.2E-07	2.6E-06	2.7E-06
			Chromium (VI)	2.5E-09	6.0E-08	6.3E-08	No Effect	9.9E-06	2.4E-04	2.4E-04
			Iron	--	--	--	GI Tract	1.0E-04	3.0E-05	1.3E-04
			Manganese	--	--	--	Neurological	3.8E-04	2.9E-03	3.2E-03
			Mercury	--	--	--	Immune	1.2E-05	5.0E-05	6.1E-05
			Thallium	--	--	--	Skin, Hair	1.7E-04	4.9E-05	2.1E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			5.4E-09				6.0E-04
			Total DLCs (based on KM TEQs)			4.4E-09				4.9E-04
			Total PCDD/Fs (excluding KM TEQ)			5.2E-09				5.8E-04
			Total PCDD/Fs (based on KM TEQ)			4.2E-09				4.6E-04
			Total DL-PCBs (excluding KM TEQ)			1.5E-10				1.7E-05
			Total DL-PCBs (based on KM TEQ)			1.9E-10				2.1E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.5E-10				1.7E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.9E-10				2.1E-05
			Total PAHs			5.3E-10				1.1E-05
			Total Organics			9.7E-10				2.1E-04
			Total Inorganics			9.1E-08				5.3E-03
	Swimmer - Surface Water Total (excluding KM TEQs)					9.8E-08				6.1E-03
	Swimmer - Surface Water Total (based on KM TEQs)					9.7E-08				6.0E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						4.5E-07				3.9E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						4.4E-07				3.9E-02
Surface Water	Surface Water	Boater Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.2E-09	--	2.2E-09	Reproductive	2.4E-04	--	2.4E-04
			1,2,3,7,8-PeCDD	7.5E-10	--	7.5E-10	Reproductive	8.4E-05	--	8.4E-05
			1,2,3,4,7,8-HxCDD	5.5E-10	--	5.5E-10	Reproductive	6.1E-05	--	6.1E-05
			1,2,3,6,7,8-HxCDD	8.7E-11	--	8.7E-11	Reproductive	9.7E-06	--	9.7E-06
			1,2,3,7,8,9-HxCDD	1.5E-10	--	1.5E-10	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,4,6,7,8-HpCDD	1.1E-10	--	1.1E-10	Reproductive	1.2E-05	--	1.2E-05
			OCDD	3.5E-11	--	3.5E-11	Reproductive	3.8E-06	--	3.8E-06
			2,3,7,8-TCDF	8.5E-11	--	8.5E-11	Reproductive	9.4E-06	--	9.4E-06
			1,2,3,7,8-PeCDF	2.0E-11	--	2.0E-11	Reproductive	2.3E-06	--	2.3E-06
			2,3,4,7,8-PeCDF	3.5E-10	--	3.5E-10	Reproductive	3.9E-05	--	3.9E-05
			1,2,3,4,7,8-HxCDF	3.3E-10	--	3.3E-10	Reproductive	3.6E-05	--	3.6E-05
			1,2,3,6,7,8-HxCDF	7.9E-11	--	7.9E-11	Reproductive	8.8E-06	--	8.8E-06
			1,2,3,7,8,9-HxCDF	4.7E-10	--	4.7E-10	Reproductive	5.2E-05	--	5.2E-05
			2,3,4,6,7,8-HxCDF	5.0E-11	--	5.0E-11	Reproductive	5.6E-06	--	5.6E-06
			1,2,3,4,6,7,8-HpCDF	1.4E-10	--	1.4E-10	Reproductive	1.5E-05	--	1.5E-05
			1,2,3,4,7,8,9-HpCDF	8.7E-12	--	8.7E-12	Reproductive	9.6E-07	--	9.6E-07
			OCDF	7.8E-12	--	7.8E-12	Reproductive	8.6E-07	--	8.6E-07

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	4.3E-09	--	4.3E-09	Reproductive	4.8E-04	--	4.8E-04
			PCB-77	3.7E-12	--	3.7E-12	Reproductive	4.1E-07	--	4.1E-07
			PCB-81	3.6E-13	--	3.6E-13	Reproductive	4.1E-08	--	4.1E-08
			PCB-105	3.9E-12	--	3.9E-12	Reproductive	4.3E-07	--	4.3E-07
			PCB-114	2.0E-13	--	2.0E-13	Reproductive	2.3E-08	--	2.3E-08
			PCB-118	8.7E-12	--	8.7E-12	Reproductive	9.7E-07	--	9.7E-07
			PCB-123	1.7E-13	--	1.7E-13	Reproductive	1.9E-08	--	1.9E-08
			PCB-126	1.2E-10	--	1.2E-10	Reproductive	1.3E-05	--	1.3E-05
			PCB-156/157	1.0E-12	--	1.0E-12	Reproductive	1.1E-07	--	1.1E-07
			PCB-167	3.5E-13	--	3.5E-13	Reproductive	3.9E-08	--	3.9E-08
			PCB-169	2.1E-11	--	2.1E-11	Reproductive	2.4E-06	--	2.4E-06
			PCB-189	4.6E-14	--	4.6E-14	Reproductive	5.1E-09	--	5.1E-09
			KM TEQ PCB	1.9E-10	--	1.9E-10	Reproductive	2.2E-05	--	2.2E-05
			PAHs							
			Benz(a)anthracene	2.8E-11	--	2.8E-11	--	--	--	--
			Benzo(a)pyrene	3.6E-10	--	3.6E-10	Developmental	7.0E-06	--	7.0E-06
			Benzo(b)fluoranthene	4.9E-11	--	4.9E-11	--	--	--	--
			Benzo(k)fluoranthene	2.2E-12	--	2.2E-12	--	--	--	--
			Chrysene	4.8E-13	--	4.8E-13	--	--	--	--
			Dibenz(a,h)anthracene	9.2E-11	--	9.2E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.1E-11	--	2.1E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.5E-07	3.5E-06	3.7E-06
			Pesticides & Organics							
			Chloroform	4.4E-11	8.8E-11	1.3E-10	Liver	1.7E-06	3.3E-06	5.0E-06
			Trichloroethylene	1.4E-10	5.2E-10	6.6E-10	Thymus, Blood, Immune, Developmental	3.6E-05	1.3E-04	1.7E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	2.4E-04	2.9E-04	5.3E-04
			Arsenic, inorganic	2.3E-08	4.0E-09	2.7E-08	Skin, Blood	5.9E-04	1.0E-04	6.9E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.2E-07	1.6E-06	1.7E-06
			Chromium (VI)	2.6E-09	3.7E-08	4.0E-08	No Effect	1.0E-05	1.5E-04	1.6E-04
			Iron	--	--	--	GI Tract	1.1E-04	1.9E-05	1.2E-04
			Manganese	--	--	--	Neurological	4.0E-04	1.8E-03	2.2E-03
			Mercury	--	--	--	Immune	1.2E-05	3.1E-05	4.3E-05
			Thallium	--	--	--	Skin, Hair	1.7E-04	3.0E-05	2.0E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			5.6E-09				6.2E-04
			Total DLCs (based on KM TEQs)			4.5E-09				5.0E-04
			Total PCDD/Fs (excluding KM TEQ)			5.4E-09				6.0E-04
			Total PCDD/Fs (based on KM TEQ)			4.3E-09				4.8E-04
			Total DL-PCBs (excluding KM TEQ)			1.6E-10				1.8E-05
			Total DL-PCBs (based on KM TEQ)			1.9E-10				2.2E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-10				1.8E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.9E-10				2.2E-05
			Total PAHs			5.5E-10				1.1E-05
			Total Organics			7.9E-10				1.7E-04
			Total Inorganics			6.7E-08				3.9E-03

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Boater - Surface Water Total (excluding KM TEQs)					7.4E-08				4.7E-03
	Boater - Surface Water Total (based on KM TEQs)					7.3E-08				4.6E-03
Boater Sediment Total + Surface Water Total (excluding KM TEQs)						4.2E-07				3.8E-02
Boater Sediment Total + Surface Water Total (based on KM TEQs)						4.2E-07				3.7E-02

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Wader Sediment Total + Surface Water Total			Wader Sediment Total + Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
								Blood HI =		4.6E-03
								Body Weight HI =		8.7E-05
								Developmental HI =		1.0E-03
								GI Tract HI =		5.9E-03
								Hair HI =		9.0E-04
								Immune HI =		2.3E-04
								Kidney HI =		--
								Liver HI =		6.6E-07
								Neurological HI =		8.9E-04
								No Effect HI =		2.8E-05
								Organ Weights HI =		8.6E-05
								Reproductive HI =		1.0E-02
								Skin HI =		5.1E-03
								Thymus HI =		2.4E-05
								Thyroid HI =		1.2E-03
								Urinary HI =		1.9E-04
								Whole Body HI =		5.3E-03
				Swimmer Sediment Total + Surface Water Total			Swimmer Sediment Total + Surface Water Total			
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
								Blood HI =		5.5E-03
								Body Weight HI =		9.1E-05
								Developmental HI =		1.2E-03
								GI Tract HI =		6.0E-03
								Hair HI =		1.1E-03
								Immune HI =		4.7E-04
								Kidney HI =		--
								Liver HI =		6.0E-06
								Neurological HI =		3.9E-03
								No Effect HI =		2.6E-04
								Organ Weights HI =		8.6E-05
								Reproductive HI =		1.1E-02
								Skin HI =		6.0E-03
								Thymus HI =		2.1E-04
								Thyroid HI =		1.2E-03
								Urinary HI =		1.9E-04
								Whole Body HI =		5.9E-03

TABLE 9.6.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Boater Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Boater Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		5.4E-03		Blood HI =		5.4E-03
				Body Weight HI =		9.0E-05		Body Weight HI =		9.0E-05
				Developmental HI =		1.2E-03		Developmental HI =		1.2E-03
				GI Tract HI =		6.0E-03		GI Tract HI =		6.0E-03
				Hair HI =		1.1E-03		Hair HI =		1.1E-03
				Immune HI =		4.2E-04		Immune HI =		4.2E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		5.0E-06		Liver HI =		5.0E-06
				Neurological HI =		2.9E-03		Neurological HI =		2.9E-03
				No Effect HI =		1.7E-04		No Effect HI =		1.7E-04
				Organ Weights HI =		8.6E-05		Organ Weights HI =		8.6E-05
				Reproductive HI =		1.1E-02		Reproductive HI =		1.1E-02
				Skin HI =		5.9E-03		Skin HI =		5.9E-03
				Thymus HI =		1.7E-04		Thymus HI =		1.7E-04
				Thyroid HI =		1.2E-03		Thyroid HI =		1.2E-03
				Urinary HI =		1.9E-04		Urinary HI =		1.9E-04
				Whole Body HI =		5.7E-03		Whole Body HI =		5.7E-03

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.6E-08	7.0E-09	3.3E-08	Reproductive	5.7E-03	1.6E-03	7.3E-03
			1,2,3,7,8-PeCDD	1.4E-09	3.7E-10	1.7E-09	Reproductive	3.0E-04	8.2E-05	3.8E-04
			1,2,3,4,7,8-HxCDD	1.2E-10	3.3E-11	1.5E-10	Reproductive	2.7E-05	7.4E-06	3.4E-05
			1,2,3,6,7,8-HxCDD	4.9E-10	1.3E-10	6.2E-10	Reproductive	1.1E-04	3.0E-05	1.4E-04
			1,2,3,7,8,9-HxCDD	2.9E-10	7.9E-11	3.7E-10	Reproductive	6.4E-05	1.8E-05	8.2E-05
			1,2,3,4,6,7,8-HpCDD	8.6E-10	2.4E-10	1.1E-09	Reproductive	1.9E-04	5.2E-05	2.4E-04
			OCDD	2.6E-10	7.2E-11	3.4E-10	Reproductive	5.9E-05	1.6E-05	7.5E-05
			2,3,7,8-TCDF	4.6E-10	1.3E-10	5.9E-10	Reproductive	1.0E-04	2.8E-05	1.3E-04
			1,2,3,7,8-PeCDF	9.5E-11	2.6E-11	1.2E-10	Reproductive	2.1E-05	5.8E-06	2.7E-05
			2,3,4,7,8-PeCDF	1.6E-09	4.3E-10	2.0E-09	Reproductive	3.5E-04	9.6E-05	4.5E-04
			1,2,3,4,7,8-HxCDF	2.4E-09	6.6E-10	3.1E-09	Reproductive	5.4E-04	1.5E-04	6.9E-04
			1,2,3,6,7,8-HxCDF	6.3E-10	1.7E-10	8.1E-10	Reproductive	1.4E-04	3.8E-05	1.8E-04
			1,2,3,7,8,9-HxCDF	4.7E-11	1.3E-11	6.0E-11	Reproductive	1.1E-05	2.9E-06	1.3E-05
			2,3,4,6,7,8-HxCDF	3.5E-10	9.6E-11	4.5E-10	Reproductive	7.8E-05	2.1E-05	1.0E-04
			1,2,3,4,6,7,8-HpCDF	1.1E-09	2.9E-10	1.4E-09	Reproductive	2.4E-04	6.5E-05	3.0E-04
			1,2,3,4,7,8,9-HpCDF	3.7E-11	1.0E-11	4.7E-11	Reproductive	8.1E-06	2.2E-06	1.0E-05
			OCDF	4.5E-11	1.2E-11	5.7E-11	Reproductive	1.0E-05	2.7E-06	1.3E-05
			KM TEQ DF	3.5E-08	9.6E-09	4.5E-08	Reproductive	7.8E-03	2.1E-03	9.9E-03
			PCB-77	2.6E-10	7.1E-11	3.3E-10	Reproductive	5.8E-05	1.6E-05	7.4E-05
			PCB-81	3.0E-11	8.2E-12	3.8E-11	Reproductive	6.7E-06	1.8E-06	8.5E-06
			PCB-105	1.3E-10	3.4E-11	1.6E-10	Reproductive	2.8E-05	7.6E-06	3.5E-05
			PCB-114	8.6E-12	2.3E-12	1.1E-11	Reproductive	1.9E-06	5.2E-07	2.4E-06
			PCB-118	3.7E-10	1.0E-10	4.7E-10	Reproductive	8.1E-05	2.2E-05	1.0E-04
			PCB-123	1.1E-11	2.9E-12	1.3E-11	Reproductive	2.4E-06	6.4E-07	3.0E-06
			PCB-126	8.2E-09	2.2E-09	1.0E-08	Reproductive	1.8E-03	5.0E-04	2.3E-03
			PCB-156/157	3.3E-11	8.9E-12	4.2E-11	Reproductive	7.3E-06	2.0E-06	9.3E-06
			PCB-167	1.2E-11	3.2E-12	1.5E-11	Reproductive	2.6E-06	7.1E-07	3.3E-06
			PCB-169	2.5E-09	6.9E-10	3.2E-09	Reproductive	5.7E-04	1.5E-04	7.2E-04
			PCB-189	2.5E-12	6.7E-13	3.1E-12	Reproductive	5.5E-07	1.5E-07	6.9E-07
			KM TEQ PCB	1.0E-08	2.8E-09	1.3E-08	Reproductive	2.3E-03	6.2E-04	2.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-09	1.9E-09	3.4E-09	Whole Body	1.7E-03	2.2E-03	3.9E-03
			PAHs							
			Benz(a)anthracene	1.4E-09	1.7E-09	3.1E-09	--	--	--	--
			Benzo(a)pyrene	1.4E-08	1.6E-08	3.0E-08	Developmental	3.6E-04	4.2E-04	7.8E-04
			Benzo(b)fluoranthene	1.2E-09	1.5E-09	2.7E-09	--	--	--	--
			Benzo(k)fluoranthene	8.0E-11	9.5E-11	1.7E-10	--	--	--	--
			Chrysene	1.3E-11	1.6E-11	2.9E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.8E-09	3.3E-09	6.2E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.1E-10	6.0E-10	1.1E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	7.4E-05	--	7.4E-05
			TPH (C9-C40)	--	--	--	Respiratory	5.4E-03	--	5.4E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	6.4E-04	--	6.4E-04
			Antimony	--	--	--	Whole Body	3.1E-04	--	3.1E-04
			Arsenic, inorganic	6.2E-08	2.8E-08	9.0E-08	Skin, Blood	3.2E-03	1.5E-03	4.7E-03
			Cadmium	--	--	--	Urinary	1.6E-04	5.9E-05	2.2E-04

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--	No Effect	3.8E-06	--	3.8E-06
			Cobalt	--	--	--	Thyroid	2.5E-03	--	2.5E-03
			Copper	--	--	--	GI Tract	8.8E-03	--	8.8E-03
			Chromium (VI)	4.7E-09	--	4.7E-09	No Effect	2.4E-05	--	2.4E-05
			Iron	--	--	--	GI Tract	3.3E-03	--	3.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	7.7E-04	--	7.7E-04
			Mercury	--	--	--	Immune	3.5E-04	--	3.5E-04
			Nickel	--	--	--	Body Weight, Organ Weights	1.8E-04	--	1.8E-04
			Thallium	--	--	--	Skin, Hair	1.3E-03	--	1.3E-03
			Vanadium	--	--	--	Hair	5.2E-04	--	5.2E-04
			Zinc	--	--	--	Blood	2.2E-04	--	2.2E-04
			Total DLCs (excluding KM TEQs)			6.0E-08				1.3E-02
			Total DLCs (based on KM TEQs)			5.8E-08				1.3E-02
			Total PCDD/Fs (excluding KM TEQ)			4.6E-08				1.0E-02
			Total PCDD/Fs (based on KM TEQ)			4.5E-08				9.9E-03
			Total DL-PCBs (excluding KM TEQ)			1.5E-08				3.3E-03
			Total DL-PCBs (based on KM TEQ)			1.3E-08				2.9E-03
			Total DL-PCBs (excluding KM TEQ)			1.5E-08				3.3E-03
			Total DL-PCBs (based on KM TEQ)			1.3E-08				2.9E-03
			Total Non-DL PCBs			3.4E-09				3.9E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-08				7.2E-03
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-08				6.8E-03
			Total PAHs			4.3E-08				7.8E-04
			Total Organics			0.0E+00				5.5E-03
			Total Inorganics			9.5E-08				2.4E-02
	Wader - Sediment Total (excluding KM TEQs)					2.0E-07				4.7E-02
	Wader - Sediment Total (based on KM TEQs)					2.0E-07				4.7E-02
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.6E-08	7.0E-09	3.3E-08	Reproductive	5.7E-03	1.6E-03	7.3E-03
			1,2,3,7,8-PeCDD	1.4E-09	3.7E-10	1.7E-09	Reproductive	3.0E-04	8.2E-05	3.8E-04
			1,2,3,4,7,8-HxCDD	1.2E-10	3.3E-11	1.5E-10	Reproductive	2.7E-05	7.4E-06	3.4E-05
			1,2,3,6,7,8-HxCDD	4.9E-10	1.3E-10	6.2E-10	Reproductive	1.1E-04	3.0E-05	1.4E-04
			1,2,3,7,8,9-HxCDD	2.9E-10	7.9E-11	3.7E-10	Reproductive	6.4E-05	1.8E-05	8.2E-05
			1,2,3,4,6,7,8-HpCDD	8.6E-10	2.4E-10	1.1E-09	Reproductive	1.9E-04	5.2E-05	2.4E-04
			OCDD	2.6E-10	7.2E-11	3.4E-10	Reproductive	5.9E-05	1.6E-05	7.5E-05
			2,3,7,8-TCDF	4.6E-10	1.3E-10	5.9E-10	Reproductive	1.0E-04	2.8E-05	1.3E-04
			1,2,3,7,8-PeCDF	9.5E-11	2.6E-11	1.2E-10	Reproductive	2.1E-05	5.8E-06	2.7E-05
			2,3,4,7,8-PeCDF	1.6E-09	4.3E-10	2.0E-09	Reproductive	3.5E-04	9.6E-05	4.5E-04
			1,2,3,4,7,8-HxCDF	2.4E-09	6.6E-10	3.1E-09	Reproductive	5.4E-04	1.5E-04	6.9E-04
			1,2,3,6,7,8-HxCDF	6.3E-10	1.7E-10	8.1E-10	Reproductive	1.4E-04	3.8E-05	1.8E-04
			1,2,3,7,8,9-HxCDF	4.7E-11	1.3E-11	6.0E-11	Reproductive	1.1E-05	2.9E-06	1.3E-05
			2,3,4,6,7,8-HxCDF	3.5E-10	9.6E-11	4.5E-10	Reproductive	7.8E-05	2.1E-05	1.0E-04
			1,2,3,4,6,7,8-HpCDF	1.1E-09	2.9E-10	1.4E-09	Reproductive	2.4E-04	6.5E-05	3.0E-04
			1,2,3,4,7,8,9-HpCDF	3.7E-11	1.0E-11	4.7E-11	Reproductive	8.1E-06	2.2E-06	1.0E-05
			OCDF	4.5E-11	1.2E-11	5.7E-11	Reproductive	1.0E-05	2.7E-06	1.3E-05
			KM TEQ DF	3.5E-08	9.6E-09	4.5E-08	Reproductive	7.8E-03	2.1E-03	9.9E-03
			PCB-77	2.6E-10	7.1E-11	3.3E-10	Reproductive	5.8E-05	1.6E-05	7.4E-05
			PCB-81	3.0E-11	8.2E-12	3.8E-11	Reproductive	6.7E-06	1.8E-06	8.5E-06

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.3E-10	3.4E-11	1.6E-10	Reproductive	2.8E-05	7.6E-06	3.5E-05
			PCB-114	8.6E-12	2.3E-12	1.1E-11	Reproductive	1.9E-06	5.2E-07	2.4E-06
			PCB-118	3.7E-10	1.0E-10	4.7E-10	Reproductive	8.1E-05	2.2E-05	1.0E-04
			PCB-123	1.1E-11	2.9E-12	1.3E-11	Reproductive	2.4E-06	6.4E-07	3.0E-06
			PCB-126	8.2E-09	2.2E-09	1.0E-08	Reproductive	1.8E-03	5.0E-04	2.3E-03
			PCB-156/157	3.3E-11	8.9E-12	4.2E-11	Reproductive	7.3E-06	2.0E-06	9.3E-06
			PCB-167	1.2E-11	3.2E-12	1.5E-11	Reproductive	2.6E-06	7.1E-07	3.3E-06
			PCB-169	2.5E-09	6.9E-10	3.2E-09	Reproductive	5.7E-04	1.5E-04	7.2E-04
			PCB-189	2.5E-12	6.7E-13	3.1E-12	Reproductive	5.5E-07	1.5E-07	6.9E-07
			KM TEQ PCB	1.0E-08	2.8E-09	1.3E-08	Reproductive	2.3E-03	6.2E-04	2.9E-03
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-09	1.9E-09	3.4E-09	Whole Body	1.7E-03	2.2E-03	3.9E-03
			PAHs							
			Benz(a)anthracene	1.4E-09	1.7E-09	3.1E-09	--	--	--	--
			Benzo(a)pyrene	1.4E-08	1.6E-08	3.0E-08	Developmental	3.6E-04	4.2E-04	7.8E-04
			Benzo(b)fluoranthene	1.2E-09	1.5E-09	2.7E-09	--	--	--	--
			Benzo(k)fluoranthene	8.0E-11	9.5E-11	1.7E-10	--	--	--	--
			Chrysene	1.3E-11	1.6E-11	2.9E-11	--	--	--	--
			Dibenz(a,h)anthracene	2.8E-09	3.3E-09	6.2E-09	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	5.1E-10	6.0E-10	1.1E-09	--	--	--	--
			Pesticides & Organics							
			PHC as gasoline	--	--	--	Blood, Immune	7.4E-05	--	7.4E-05
			TPH (C9-C40)	--	--	--	Respiratory	5.4E-03	--	5.4E-03
			Inorganics							
			Aluminum	--	--	--	Neurological	6.4E-04	--	6.4E-04
			Antimony	--	--	--	Whole Body	3.1E-04	--	3.1E-04
			Arsenic, inorganic	6.2E-08	2.8E-08	9.0E-08	Skin, Blood	3.2E-03	1.5E-03	4.7E-03
			Cadmium	--	--	--	Urinary	1.6E-04	5.9E-05	2.2E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	3.8E-06	--	3.8E-06
			Cobalt	--	--	--	Thyroid	2.5E-03	--	2.5E-03
			Copper	--	--	--	GI Tract	8.8E-03	--	8.8E-03
			Chromium (VI)	4.7E-09	--	4.7E-09	No Effect	2.4E-05	--	2.4E-05
			Iron	--	--	--	GI Tract	3.3E-03	--	3.3E-03
			Lead	--	--	--	--	--	--	--
			Manganese	--	--	--	Neurological	7.7E-04	--	7.7E-04
			Mercury	--	--	--	Immune	3.5E-04	--	3.5E-04
			Nickel	--	--	--	Body Weight, Organ Weights	1.8E-04	--	1.8E-04
			Thallium	--	--	--	Skin, Hair	1.3E-03	--	1.3E-03
			Vanadium	--	--	--	Hair	5.2E-04	--	5.2E-04
			Zinc	--	--	--	Blood	2.2E-04	--	2.2E-04
			Total DLCs (excluding KM TEQs)			6.0E-08				1.3E-02
			Total DLCs (based on KM TEQs)			5.8E-08				1.3E-02
			Total PCDD/Fs (excluding KM TEQ)			4.6E-08				1.0E-02
			Total PCDD/Fs (based on KM TEQ)			4.5E-08				9.9E-03
			Total DL-PCBs (excluding KM TEQ)			1.5E-08				3.3E-03
			Total DL-PCBs (based on KM TEQ)			1.3E-08				2.9E-03
			Total Non-DL PCBs			3.4E-09				3.9E-03
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-08				7.2E-03

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-08				6.8E-03
			Total PAHs			4.3E-08				7.8E-04
			Total Organics			0.0E+00				5.5E-03
			Total Inorganics			9.5E-08				2.4E-02
	Swimmer - Sediment Total (excluding KM TEQs)					2.0E-07				4.7E-02
	Swimmer - Sediment Total (based on KM TEQs)					2.0E-07				4.7E-02
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-10	1.0E-10	2.1E-10	Reproductive	2.3E-05	2.3E-05	4.6E-05
			1,2,3,7,8-PeCDD	3.6E-11	3.6E-11	7.1E-11	Reproductive	7.9E-06	7.9E-06	1.6E-05
			1,2,3,4,7,8-HxCDD	2.6E-11	2.6E-11	5.2E-11	Reproductive	5.7E-06	5.7E-06	1.1E-05
			1,2,3,6,7,8-HxCDD	4.1E-12	4.1E-12	8.3E-12	Reproductive	9.2E-07	9.2E-07	1.8E-06
			1,2,3,7,8,9-HxCDD	7.3E-12	7.3E-12	1.5E-11	Reproductive	1.6E-06	1.6E-06	3.2E-06
			1,2,3,4,6,7,8-HpCDD	5.2E-12	5.2E-12	1.0E-11	Reproductive	1.2E-06	1.2E-06	2.3E-06
			OCDD	1.6E-12	1.6E-12	3.3E-12	Reproductive	3.6E-07	3.6E-07	7.3E-07
			2,3,7,8-TCDF	4.0E-12	4.0E-12	8.0E-12	Reproductive	8.9E-07	8.9E-07	1.8E-06
			1,2,3,7,8-PeCDF	9.6E-13	9.6E-13	1.9E-12	Reproductive	2.1E-07	2.1E-07	4.3E-07
			2,3,4,7,8-PeCDF	1.7E-11	1.7E-11	3.3E-11	Reproductive	3.7E-06	3.7E-06	7.4E-06
			1,2,3,4,7,8-HxCDF	1.5E-11	1.5E-11	3.1E-11	Reproductive	3.4E-06	3.4E-06	6.9E-06
			1,2,3,6,7,8-HxCDF	3.7E-12	3.7E-12	7.5E-12	Reproductive	8.3E-07	8.3E-07	1.7E-06
			1,2,3,7,8,9-HxCDF	2.2E-11	2.2E-11	4.4E-11	Reproductive	4.9E-06	4.9E-06	9.9E-06
			2,3,4,6,7,8-HxCDF	2.4E-12	2.4E-12	4.7E-12	Reproductive	5.3E-07	5.3E-07	1.1E-06
			1,2,3,4,6,7,8-HpCDF	6.5E-12	6.5E-12	1.3E-11	Reproductive	1.4E-06	1.4E-06	2.9E-06
			1,2,3,4,7,8,9-HpCDF	4.1E-13	4.1E-13	8.2E-13	Reproductive	9.1E-08	9.1E-08	1.8E-07
			OCDF	3.7E-13	3.7E-13	7.3E-13	Reproductive	8.2E-08	8.2E-08	1.6E-07
			KM TEQ DF	2.1E-10	2.1E-10	4.1E-10	Reproductive	4.6E-05	4.6E-05	9.1E-05
			PCB-77	1.7E-13	1.7E-13	3.5E-13	Reproductive	3.8E-08	3.8E-08	7.7E-08
			PCB-81	1.7E-14	1.7E-14	3.5E-14	Reproductive	3.8E-09	3.8E-09	7.7E-09
			PCB-105	1.9E-13	1.9E-13	3.7E-13	Reproductive	4.1E-08	4.1E-08	8.2E-08
			PCB-114	9.6E-15	9.6E-15	1.9E-14	Reproductive	2.1E-09	2.1E-09	4.3E-09
			PCB-118	4.1E-13	4.1E-13	8.3E-13	Reproductive	9.2E-08	9.2E-08	1.8E-07
			PCB-123	8.0E-15	8.0E-15	1.6E-14	Reproductive	1.8E-09	1.8E-09	3.6E-09
			PCB-126	5.7E-12	5.7E-12	1.1E-11	Reproductive	1.3E-06	1.3E-06	2.5E-06
			PCB-156/157	4.9E-14	4.9E-14	9.8E-14	Reproductive	1.1E-08	1.1E-08	2.2E-08
			PCB-167	1.7E-14	1.7E-14	3.3E-14	Reproductive	3.7E-09	3.7E-09	7.3E-09
			PCB-169	1.0E-12	1.0E-12	2.0E-12	Reproductive	2.3E-07	2.3E-07	4.5E-07
			PCB-189	2.2E-15	2.2E-15	4.3E-15	Reproductive	4.8E-10	4.8E-10	9.6E-10
			KM TEQ PCB	9.2E-12	9.2E-12	1.8E-11	Reproductive	2.0E-06	2.0E-06	4.1E-06
			PAHs							
			Benz(a)anthracene	2.0E-12	2.0E-12	4.0E-12	--	--	--	--
			Benzo(a)pyrene	2.6E-11	2.6E-11	5.1E-11	Developmental	6.6E-07	6.6E-07	1.3E-06
			Benzo(b)fluoranthene	3.5E-12	3.5E-12	6.9E-12	--	--	--	--
			Benzo(k)fluoranthene	1.6E-13	1.6E-13	3.1E-13	--	--	--	--
			Chrysene	3.4E-14	3.4E-14	6.8E-14	--	--	--	--
			Dibenz(a,h)anthracene	6.6E-12	6.6E-12	1.3E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.5E-12	1.5E-12	2.9E-12	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.3E-08	2.3E-08	4.6E-08
			Pesticides & Organics							
			Chloroform	2.1E-12	2.1E-12	4.2E-12	Liver	1.6E-07	1.6E-07	3.1E-07

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Trichloroethylene	1.0E-11	1.0E-11	2.0E-11	Thymus, Blood, Immune, Developmental	3.4E-06	3.4E-06	6.9E-06
			Inorganics							
			Antimony	--	--	--	Whole Body	2.3E-05	2.3E-05	4.6E-05
			Arsenic, inorganic	1.1E-09	1.1E-09	2.1E-09	Skin, Blood	5.6E-05	5.6E-05	1.1E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.1E-08	1.1E-08	2.3E-08
			Chromium (VI)	1.9E-10	7.5E-09	7.7E-09	No Effect	9.7E-07	9.7E-07	1.9E-06
			Iron	--	--	--	GI Tract	1.0E-05	1.0E-05	2.0E-05
			Manganese	--	--	--	Neurological	3.8E-05	3.8E-05	7.5E-05
			Mercury	--	--	--	Immune	1.2E-06	1.2E-06	2.3E-06
			Thallium	--	--	--	Skin, Hair	1.6E-05	1.5E-06	1.8E-05
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			5.3E-10				1.2E-04
			Total DLCs (based on KM TEQs)			4.3E-10				9.5E-05
			Total PCDD/Fs (excluding KM TEQ)			5.1E-10				1.1E-04
			Total PCDD/Fs (based on KM TEQ)			4.1E-10				9.1E-05
			Total DL-PCBs (excluding KM TEQ)			1.5E-11				3.4E-06
			Total DL-PCBs (based on KM TEQ)			1.8E-11				4.1E-06
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.5E-11				3.4E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-11				4.1E-06
			Total PAHs			7.8E-11				1.4E-06
			Total Organics			2.4E-11				7.2E-06
			Total Inorganics			9.8E-09				2.7E-04
	Wader - Surface Water Total (excluding KM TEQs)					1.0E-08				4.0E-04
	Wader - Surface Water Total (based on KM TEQs)					1.0E-08				3.8E-04
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						2.1E-07				4.8E-02
Wader Sediment Total + Surface Water Total (based on KM TEQs)						2.1E-07				4.7E-02
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.1E-09	--	1.1E-09	Reproductive	2.4E-04	--	2.4E-04
			1,2,3,7,8-PeCDD	3.7E-10	--	3.7E-10	Reproductive	8.2E-05	--	8.2E-05
			1,2,3,4,7,8-HxCDD	2.7E-10	--	2.7E-10	Reproductive	6.0E-05	--	6.0E-05
			1,2,3,6,7,8-HxCDD	4.3E-11	--	4.3E-11	Reproductive	9.6E-06	--	9.6E-06
			1,2,3,7,8,9-HxCDD	7.6E-11	--	7.6E-11	Reproductive	1.7E-05	--	1.7E-05
			1,2,3,4,6,7,8-HpCDD	5.4E-11	--	5.4E-11	Reproductive	1.2E-05	--	1.2E-05
			OCDD	1.7E-11	--	1.7E-11	Reproductive	3.8E-06	--	3.8E-06
			2,3,7,8-TCDF	4.2E-11	--	4.2E-11	Reproductive	9.3E-06	--	9.3E-06
			1,2,3,7,8-PeCDF	1.0E-11	--	1.0E-11	Reproductive	2.2E-06	--	2.2E-06
			2,3,4,7,8-PeCDF	1.7E-10	--	1.7E-10	Reproductive	3.8E-05	--	3.8E-05
			1,2,3,4,7,8-HxCDF	1.6E-10	--	1.6E-10	Reproductive	3.6E-05	--	3.6E-05
			1,2,3,6,7,8-HxCDF	3.9E-11	--	3.9E-11	Reproductive	8.6E-06	--	8.6E-06
			1,2,3,7,8,9-HxCDF	2.3E-10	--	2.3E-10	Reproductive	5.1E-05	--	5.1E-05
			2,3,4,6,7,8-HxCDF	2.5E-11	--	2.5E-11	Reproductive	5.5E-06	--	5.5E-06
			1,2,3,4,6,7,8-HpCDF	6.8E-11	--	6.8E-11	Reproductive	1.5E-05	--	1.5E-05
			1,2,3,4,7,8,9-HpCDF	4.3E-12	--	4.3E-12	Reproductive	9.5E-07	--	9.5E-07
			OCDF	3.8E-12	--	3.8E-12	Reproductive	8.5E-07	--	8.5E-07
			KM TEQ DF	2.1E-09	--	2.1E-09	Reproductive	4.7E-04	--	4.7E-04

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-77	1.8E-12	--	1.8E-12	Reproductive	4.0E-07	--	4.0E-07
			PCB-81	1.8E-13	--	1.8E-13	Reproductive	4.0E-08	--	4.0E-08
			PCB-105	1.9E-12	--	1.9E-12	Reproductive	4.3E-07	--	4.3E-07
			PCB-114	1.0E-13	--	1.0E-13	Reproductive	2.2E-08	--	2.2E-08
			PCB-118	4.3E-12	--	4.3E-12	Reproductive	9.6E-07	--	9.6E-07
			PCB-123	8.3E-14	--	8.3E-14	Reproductive	1.9E-08	--	1.9E-08
			PCB-126	5.9E-11	--	5.9E-11	Reproductive	1.3E-05	--	1.3E-05
			PCB-156/157	5.1E-13	--	5.1E-13	Reproductive	1.1E-07	--	1.1E-07
			PCB-167	1.7E-13	--	1.7E-13	Reproductive	3.8E-08	--	3.8E-08
			PCB-169	1.1E-11	--	1.1E-11	Reproductive	2.4E-06	--	2.4E-06
			PCB-189	2.3E-14	--	2.3E-14	Reproductive	5.0E-09	--	5.0E-09
			KM TEQ PCB	9.5E-11	--	9.5E-11	Reproductive	2.1E-05	--	2.1E-05
			PAHs							
			Benz(a)anthracene	2.1E-11	--	2.1E-11	--	--	--	--
			Benzo(a)pyrene	2.7E-10	--	2.7E-10	Developmental	6.9E-06	--	6.9E-06
			Benzo(b)fluoranthene	3.6E-11	--	3.6E-11	--	--	--	--
			Benzo(k)fluoranthene	1.6E-12	--	1.6E-12	--	--	--	--
			Chrysene	3.5E-13	--	3.5E-13	--	--	--	--
			Dibenz(a,h)anthracene	6.8E-11	--	6.8E-11	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.5E-11	--	1.5E-11	--	--	--	--
			Naphthalene	--	--	--	Body Weight	2.4E-07	2.3E-06	2.5E-06
			Pesticides & Organics							
			Chloroform	2.2E-11	3.0E-11	5.2E-11	Liver	1.6E-06	2.3E-06	3.9E-06
			Trichloroethylene	1.1E-10	2.6E-10	3.7E-10	Thymus, Blood, Immune, Developmental	3.6E-05	8.8E-05	1.2E-04
			Inorganics							
			Antimony	--	--	--	Whole Body	2.4E-04	2.4E-04	4.8E-04
			Arsenic, inorganic	1.1E-08	1.7E-09	1.3E-08	Skin, Blood	5.8E-04	8.7E-05	6.7E-04
			Chromium [as Cr(III)]	--	--	--	No Effect	1.2E-07	1.4E-06	1.5E-06
			Chromium (VI)	1.9E-09	2.3E-08	2.5E-08	No Effect	1.0E-05	1.2E-04	1.3E-04
			Iron	--	--	--	GI Tract	1.0E-04	1.6E-05	1.2E-04
			Manganese	--	--	--	Neurological	3.9E-04	1.5E-03	1.9E-03
			Mercury	--	--	--	Immune	1.2E-05	2.6E-05	3.8E-05
			Thallium	--	--	--	Skin, Hair	1.7E-04	2.5E-05	1.9E-04
			Titanium	--	--	--	--	--	--	--
			Total DLCs (excluding KM TEQs)			2.7E-09				6.1E-04
			Total DLCs (based on KM TEQs)			2.2E-09				5.0E-04
			Total PCDD/Fs (excluding KM TEQ)			2.7E-09				5.9E-04
			Total PCDD/Fs (based on KM TEQ)			2.1E-09				4.7E-04
			Total DL-PCBs (excluding KM TEQ)			7.9E-11				1.7E-05
			Total DL-PCBs (based on KM TEQ)			9.5E-11				2.1E-05
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.9E-11				1.7E-05
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-11				2.1E-05
			Total PAHs			4.1E-10				9.4E-06
			Total Organics			4.2E-10				1.3E-04
			Total Inorganics			3.8E-08				3.5E-03
Swimmer - Surface Water Total (excluding KM TEQs)						4.2E-08				4.2E-03

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Swimmer - Surface Water Total (based on KM TEQs)					4.1E-08				4.1E-03
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						2.4E-07				5.2E-02
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						2.4E-07				5.1E-02

TABLE 9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Wader Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Wader Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		5.1E-03		Blood HI =		5.1E-03
				Body Weight HI =		1.8E-04		Body Weight HI =		1.8E-04
				Developmental HI =		7.9E-04		Developmental HI =		7.9E-04
				GI Tract HI =		1.2E-02		GI Tract HI =		1.2E-02
				Hair HI =		1.8E-03		Hair HI =		1.8E-03
				Immune HI =		4.3E-04		Immune HI =		4.3E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		3.1E-07		Liver HI =		3.1E-07
				Neurological HI =		1.5E-03		Neurological HI =		1.5E-03
				No Effect HI =		3.0E-05		No Effect HI =		3.0E-05
				Organ Weights HI =		1.8E-04		Organ Weights HI =		1.8E-04
				Reproductive HI =		1.4E-02		Reproductive HI =		1.3E-02
				Skin HI =		6.1E-03		Skin HI =		6.1E-03
				Thymus HI =		6.9E-06		Thymus HI =		6.9E-06
				Thyroid HI =		2.5E-03		Thyroid HI =		2.5E-03
				Urinary HI =		2.2E-04		Urinary HI =		2.2E-04
				Whole Body HI =		4.3E-03		Whole Body HI =		4.3E-03
				Swimmer Sediment Total + Surface Water Total (excluding KM TEQs) Target Organ-Specific HI			Swimmer Sediment Total + Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		5.8E-03		Blood HI =		5.8E-03
				Body Weight HI =		1.8E-04		Body Weight HI =		1.8E-04
				Developmental HI =		9.1E-04		Developmental HI =		9.1E-04
				GI Tract HI =		1.2E-02		GI Tract HI =		1.2E-02
				Hair HI =		2.0E-03		Hair HI =		2.0E-03
				Immune HI =		5.8E-04		Immune HI =		5.8E-04
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		3.9E-06		Liver HI =		3.9E-06
				Neurological HI =		3.3E-03		Neurological HI =		3.3E-03
				No Effect HI =		1.6E-04		No Effect HI =		1.6E-04
				Organ Weights HI =		1.8E-04		Organ Weights HI =		1.8E-04
				Reproductive HI =		1.4E-02		Reproductive HI =		1.3E-02
				Skin HI =		6.8E-03		Skin HI =		6.8E-03
				Thymus HI =		1.2E-04		Thymus HI =		1.2E-04
				Thyroid HI =		2.5E-03		Thyroid HI =		2.5E-03
				Urinary HI =		2.2E-04		Urinary HI =		2.2E-04
				Whole Body HI =		4.7E-03		Whole Body HI =		4.7E-03

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	3.4E-08	2.6E-08	6.0E-08
			1,2,3,7,8-PeCDD	1.8E-09	1.4E-09	3.2E-09
			1,2,3,4,7,8-HxCDD	1.6E-10	1.2E-10	2.8E-10
			1,2,3,6,7,8-HxCDD	6.5E-10	5.0E-10	1.1E-09
			1,2,3,7,8,9-HxCDD	3.8E-10	2.9E-10	6.8E-10
			1,2,3,4,6,7,8-HpCDD	1.1E-09	8.8E-10	2.0E-09
			OCDD	3.5E-10	2.7E-10	6.2E-10
			2,3,7,8-TCDF	6.1E-10	4.7E-10	1.1E-09
			1,2,3,7,8-PeCDF	1.3E-10	9.7E-11	2.2E-10
			2,3,4,7,8-PeCDF	2.1E-09	1.6E-09	3.7E-09
			1,2,3,4,7,8-HxCDF	3.2E-09	2.5E-09	5.7E-09
			1,2,3,6,7,8-HxCDF	8.4E-10	6.4E-10	1.5E-09
			1,2,3,7,8,9-HxCDF	6.2E-11	4.8E-11	1.1E-10
			2,3,4,6,7,8-HxCDF	4.6E-10	3.6E-10	8.2E-10
			1,2,3,4,6,7,8-HpCDF	1.4E-09	1.1E-09	2.5E-09
			1,2,3,4,7,8,9-HpCDF	4.8E-11	3.7E-11	8.6E-11
			OCDF	6.0E-11	4.6E-11	1.1E-10
			KM TEQ DF	4.6E-08	3.6E-08	8.2E-08
			PCB-77	3.4E-10	2.6E-10	6.1E-10
			PCB-81	4.0E-11	3.1E-11	7.0E-11
			PCB-105	1.7E-10	1.3E-10	2.9E-10
			PCB-114	1.1E-11	8.7E-12	2.0E-11
			PCB-118	4.8E-10	3.7E-10	8.5E-10
			PCB-123	1.4E-11	1.1E-11	2.5E-11
			PCB-126	1.1E-08	8.4E-09	1.9E-08
			PCB-156/157	4.3E-11	3.3E-11	7.6E-11
			PCB-167	1.5E-11	1.2E-11	2.7E-11
			PCB-169	3.4E-09	2.6E-09	5.9E-09
			PCB-189	3.2E-12	2.5E-12	5.7E-12
			KM TEQ PCB	1.4E-08	1.0E-08	2.4E-08
			Non-DL PCBs			
			Total Non-DL PCBs	2.0E-09	7.0E-09	9.0E-09
			PAHs			
			Benz(a)anthracene	6.2E-10	2.1E-09	2.7E-09
			Benzo(a)pyrene	6.0E-09	2.0E-08	2.6E-08
			Benzo(b)fluoranthene	5.4E-10	1.8E-09	2.4E-09
			Benzo(k)fluoranthene	3.5E-11	1.2E-10	1.5E-10
			Chrysene	5.9E-12	2.0E-11	2.6E-11
			Dibenz(a,h)anthracene	1.2E-09	4.2E-09	5.4E-09
			Indeno(1,2,3-c,d)-pyrene	2.2E-10	7.5E-10	9.7E-10
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	8.2E-08	1.1E-07	1.9E-07
			Cadmium	--	--	--

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	2.1E-09	--	2.1E-09
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.1E-07
			Total DLCs (based on KM TEQs)			1.1E-07
			Total PCDD/Fs (excluding KM TEQ)			8.4E-08
			Total PCDD/Fs (based on KM TEQ)			8.2E-08
			Total DL-PCBs (excluding KM TEQ)			2.7E-08
			Total DL-PCBs (based on KM TEQ)			2.4E-08
			Total Non-DL PCBs			9.0E-09
			Total PCBs (DL & NDL; excluding KM TEQ)			3.6E-08
			Total PCBs (DL & NDL; based on KM TEQ)			3.3E-08
			Total PAHs			3.8E-08
			Total Organics			0.0E+00
			Total Inorganics			1.9E-07
	Wader - Sediment Total (excluding KM TEQs)					3.5E-07
	Wader - Sediment Total (based on KM TEQs)					3.4E-07
Sediment	Sediment	Swimmer Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	3.4E-08	2.6E-08	6.0E-08
			1,2,3,7,8-PeCDD	1.8E-09	1.4E-09	3.2E-09
			1,2,3,4,7,8-HxCDD	1.6E-10	1.2E-10	2.8E-10
			1,2,3,6,7,8-HxCDD	6.5E-10	5.0E-10	1.1E-09
			1,2,3,7,8,9-HxCDD	3.8E-10	2.9E-10	6.8E-10
			1,2,3,4,6,7,8-HpCDD	1.1E-09	8.8E-10	2.0E-09
			OCDD	3.5E-10	2.7E-10	6.2E-10
			2,3,7,8-TCDF	6.1E-10	4.7E-10	1.1E-09
			1,2,3,7,8-PeCDF	1.3E-10	9.7E-11	2.2E-10
			2,3,4,7,8-PeCDF	2.1E-09	1.6E-09	3.7E-09
			1,2,3,4,7,8-HxCDF	3.2E-09	2.5E-09	5.7E-09
			1,2,3,6,7,8-HxCDF	8.4E-10	6.4E-10	1.5E-09
			1,2,3,7,8,9-HxCDF	6.2E-11	4.8E-11	1.1E-10
			2,3,4,6,7,8-HxCDF	4.6E-10	3.6E-10	8.2E-10
			1,2,3,4,6,7,8-HpCDF	1.4E-09	1.1E-09	2.5E-09
			1,2,3,4,7,8,9-HpCDF	4.8E-11	3.7E-11	8.6E-11
			OCDF	6.0E-11	4.6E-11	1.1E-10
			KM TEQ DF	4.6E-08	3.6E-08	8.2E-08
			PCB-77	3.4E-10	2.6E-10	6.1E-10
			PCB-81	4.0E-11	3.1E-11	7.0E-11

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.7E-10	1.3E-10	2.9E-10
			PCB-114	1.1E-11	8.7E-12	2.0E-11
			PCB-118	4.8E-10	3.7E-10	8.5E-10
			PCB-123	1.4E-11	1.1E-11	2.5E-11
			PCB-126	1.1E-08	8.4E-09	1.9E-08
			PCB-156/157	4.3E-11	3.3E-11	7.6E-11
			PCB-167	1.5E-11	1.2E-11	2.7E-11
			PCB-169	3.4E-09	2.6E-09	5.9E-09
			PCB-189	3.2E-12	2.5E-12	5.7E-12
			KM TEQ PCB	1.4E-08	1.0E-08	2.4E-08
			Non-DL PCBs			
			Total Non-DL PCBs	2.0E-09	7.0E-09	9.0E-09
			PAHs			
			Benz(a)anthracene	6.2E-10	2.1E-09	2.7E-09
			Benzo(a)pyrene	6.0E-09	2.0E-08	2.6E-08
			Benzo(b)fluoranthene	5.4E-10	1.8E-09	2.4E-09
			Benzo(k)fluoranthene	3.5E-11	1.2E-10	1.5E-10
			Chrysene	5.9E-12	2.0E-11	2.6E-11
			Dibenz(a,h)anthracene	1.2E-09	4.2E-09	5.4E-09
			Indeno(1,2,3-c,d)-pyrene	2.2E-10	7.5E-10	9.7E-10
			Pesticides & Organics			
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	8.2E-08	1.1E-07	1.9E-07
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	2.1E-09	--	2.1E-09
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
Total DLCs (excluding KM TEQs)						1.1E-07
Total DLCs (based on KM TEQs)						1.1E-07
Total PCDD/Fs (excluding KM TEQ)						8.4E-08
Total PCDD/Fs (based on KM TEQ)						8.2E-08
Total DL-PCBs (excluding KM TEQ)						2.7E-08
Total DL-PCBs (based on KM TEQ)						2.4E-08
Total Non-DL PCBs						9.0E-09
Total PCBs (DL & NDL; excluding KM TEQ)						3.6E-08

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			3.3E-08
			Total PAHs			3.8E-08
			Total Organics			0.0E+00
			Total Inorganics			1.9E-07
	Swimmer - Sediment Total (excluding KM TEQs)					3.5E-07
	Swimmer - Sediment Total (based on KM TEQs)					3.4E-07
Sediment	Sediment	Boater Sediment	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.0E-09	4.9E-09	9.9E-09
			1,2,3,7,8-PeCDD	2.7E-10	2.6E-10	5.2E-10
			1,2,3,4,7,8-HxCDD	2.4E-11	2.3E-11	4.7E-11
			1,2,3,6,7,8-HxCDD	9.6E-11	9.3E-11	1.9E-10
			1,2,3,7,8,9-HxCDD	5.7E-11	5.5E-11	1.1E-10
			1,2,3,4,6,7,8-HpCDD	1.7E-10	1.6E-10	3.3E-10
			OCDD	5.2E-11	5.0E-11	1.0E-10
			2,3,7,8-TCDF	9.1E-11	8.8E-11	1.8E-10
			1,2,3,7,8-PeCDF	1.9E-11	1.8E-11	3.7E-11
			2,3,4,7,8-PeCDF	3.1E-10	3.0E-10	6.2E-10
			1,2,3,4,7,8-HxCDF	4.8E-10	4.6E-10	9.4E-10
			1,2,3,6,7,8-HxCDF	1.2E-10	1.2E-10	2.4E-10
			1,2,3,7,8,9-HxCDF	9.3E-12	9.0E-12	1.8E-11
			2,3,4,6,7,8-HxCDF	6.9E-11	6.7E-11	1.4E-10
			1,2,3,4,6,7,8-HpCDF	2.1E-10	2.0E-10	4.2E-10
			1,2,3,4,7,8,9-HpCDF	7.2E-12	7.0E-12	1.4E-11
			OCDF	8.9E-12	8.6E-12	1.7E-11
			KM TEQ DF	6.9E-09	6.7E-09	1.4E-08
			PCB-77	5.1E-11	4.9E-11	1.0E-10
			PCB-81	5.9E-12	5.7E-12	1.2E-11
			PCB-105	2.5E-11	2.4E-11	4.8E-11
			PCB-114	1.7E-12	1.6E-12	3.3E-12
			PCB-118	7.2E-11	7.0E-11	1.4E-10
			PCB-123	2.1E-12	2.0E-12	4.1E-12
			PCB-126	1.6E-09	1.6E-09	3.2E-09
			PCB-156/157	6.4E-12	6.2E-12	1.3E-11
			PCB-167	2.3E-12	2.2E-12	4.5E-12
			PCB-169	5.0E-10	4.8E-10	9.8E-10
			PCB-189	4.8E-13	4.7E-13	9.5E-13
			KM TEQ PCB	2.0E-09	2.0E-09	4.0E-09
			Non-DL PCBs			
			Total Non-DL PCBs	2.9E-10	1.3E-09	1.6E-09
			PAHs			
			Benz(a)anthracene	9.2E-11	3.9E-10	4.8E-10
			Benzo(a)pyrene	9.0E-10	3.8E-09	4.7E-09
			Benzo(b)fluoranthene	8.1E-11	3.4E-10	4.2E-10
			Benzo(k)fluoranthene	5.2E-12	2.2E-11	2.7E-11
			Chrysene	8.8E-13	3.7E-12	4.6E-12
			Dibenz(a,h)anthracene	1.8E-10	7.8E-10	9.6E-10
			Indeno(1,2,3-c,d)-pyrene	3.3E-11	1.4E-10	1.7E-10
			Pesticides & Organics			

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PHC as gasoline	--	--	--
			TPH (C9-C40)	--	--	--
			Inorganics			
			Aluminum	--	--	--
			Antimony	--	--	--
			Arsenic, inorganic	1.2E-08	2.0E-08	3.2E-08
			Cadmium	--	--	--
			Chromium [as Cr(III)]	--	--	--
			Cobalt	--	--	--
			Copper	--	--	--
			Chromium (VI)	3.1E-10	--	3.1E-10
			Iron	--	--	--
			Lead	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Nickel	--	--	--
			Thallium	--	--	--
			Vanadium	--	--	--
			Zinc	--	--	--
			Total DLCs (excluding KM TEQs)			1.8E-08
			Total DLCs (based on KM TEQs)			1.8E-08
			Total PCDD/Fs (excluding KM TEQ)			1.4E-08
			Total PCDD/Fs (based on KM TEQ)			1.4E-08
			Total DL-PCBs (excluding KM TEQ)			4.5E-09
			Total DL-PCBs (based on KM TEQ)			4.0E-09
			Total Non-DL PCBs			1.6E-09
			Total PCBs (DL & NDL; excluding KM TEQ)			6.1E-09
			Total PCBs (DL & NDL; based on KM TEQ)			5.6E-09
			Total PAHs			6.7E-09
			Total Organics			0.0E+00
			Total Inorganics			3.2E-08
	Boater - Sediment Total (excluding KM TEQs)					5.9E-08
	Boater - Sediment Total (based on KM TEQs)					5.8E-08
Surface Water	Surface Water	Wader Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.3E-10	--	1.3E-10
			1,2,3,7,8-PeCDD	4.6E-11	--	4.6E-11
			1,2,3,4,7,8-HxCDD	3.3E-11	--	3.3E-11
			1,2,3,6,7,8-HxCDD	5.3E-12	--	5.3E-12
			1,2,3,7,8,9-HxCDD	9.3E-12	--	9.3E-12
			1,2,3,4,6,7,8-HpCDD	6.7E-12	--	6.7E-12
			OCDD	2.1E-12	--	2.1E-12
			2,3,7,8-TCDF	5.1E-12	--	5.1E-12
			1,2,3,7,8-PeCDF	1.2E-12	--	1.2E-12
			2,3,4,7,8-PeCDF	2.1E-11	--	2.1E-11
			1,2,3,4,7,8-HxCDF	2.0E-11	--	2.0E-11
			1,2,3,6,7,8-HxCDF	4.8E-12	--	4.8E-12
			1,2,3,7,8,9-HxCDF	2.8E-11	--	2.8E-11

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	3.0E-12	--	3.0E-12
			1,2,3,4,6,7,8-HpCDF	8.3E-12	--	8.3E-12
			1,2,3,4,7,8,9-HpCDF	5.3E-13	--	5.3E-13
			OCDF	4.7E-13	--	4.7E-13
			KM TEQ DF	2.6E-10	--	2.6E-10
			PCB-77	2.2E-13	--	2.2E-13
			PCB-81	2.2E-14	--	2.2E-14
			PCB-105	2.4E-13	--	2.4E-13
			PCB-114	1.2E-14	--	1.2E-14
			PCB-118	5.3E-13	--	5.3E-13
			PCB-123	1.0E-14	--	1.0E-14
			PCB-126	7.3E-12	--	7.3E-12
			PCB-156/157	6.3E-14	--	6.3E-14
			PCB-167	2.1E-14	--	2.1E-14
			PCB-169	1.3E-12	--	1.3E-12
			PCB-189	2.8E-15	--	2.8E-15
			KM TEQ PCB	1.2E-11	--	1.2E-11
			PAHs			
			Benz(a)anthracene	8.5E-13	--	8.5E-13
			Benzo(a)pyrene	1.1E-11	--	1.1E-11
			Benzo(b)fluoranthene	1.5E-12	--	1.5E-12
			Benzo(k)fluoranthene	6.6E-14	--	6.6E-14
			Chrysene	1.4E-14	--	1.4E-14
			Dibenz(a,h)anthracene	2.8E-12	--	2.8E-12
			Indeno(1,2,3-c,d)-pyrene	6.2E-13	--	6.2E-13
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	2.7E-12	8.5E-12	1.1E-11
			Trichloroethylene	4.3E-12	2.3E-11	2.7E-11
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	1.4E-09	1.3E-09	2.6E-09
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	8.0E-11	3.3E-09	3.4E-09
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			3.4E-10
			Total DLCs (based on KM TEQs)			2.7E-10
			Total PCDD/Fs (excluding KM TEQ)			3.3E-10
			Total PCDD/Fs (based on KM TEQ)			2.6E-10
			Total DL-PCBs (excluding KM TEQ)			9.7E-12
			Total DL-PCBs (based on KM TEQ)			1.2E-11
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			9.7E-12
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-11

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PAHs			1.7E-11
			Total Organics			3.8E-11
			Total Inorganics			6.0E-09
	Wader - Surface Water Total (excluding KM TEQs)					6.4E-09
	Wader - Surface Water Total (based on KM TEQs)					6.4E-09
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						3.5E-07
Wader Sediment Total + Surface Water Total (based on KM TEQs)						3.5E-07
Surface Water	Surface Water	Swimmer Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.4E-09	--	1.4E-09
			1,2,3,7,8-PeCDD	4.7E-10	--	4.7E-10
			1,2,3,4,7,8-HxCDD	3.4E-10	--	3.4E-10
			1,2,3,6,7,8-HxCDD	5.5E-11	--	5.5E-11
			1,2,3,7,8,9-HxCDD	9.6E-11	--	9.6E-11
			1,2,3,4,6,7,8-HpCDD	6.9E-11	--	6.9E-11
			OCDD	2.2E-11	--	2.2E-11
			2,3,7,8-TCDF	5.3E-11	--	5.3E-11
			1,2,3,7,8-PeCDF	1.3E-11	--	1.3E-11
			2,3,4,7,8-PeCDF	2.2E-10	--	2.2E-10
			1,2,3,4,7,8-HxCDF	2.0E-10	--	2.0E-10
			1,2,3,6,7,8-HxCDF	4.9E-11	--	4.9E-11
			1,2,3,7,8,9-HxCDF	2.9E-10	--	2.9E-10
			2,3,4,6,7,8-HxCDF	3.1E-11	--	3.1E-11
			1,2,3,4,6,7,8-HpCDF	8.6E-11	--	8.6E-11
			1,2,3,4,7,8,9-HpCDF	5.4E-12	--	5.4E-12
			OCDF	4.8E-12	--	4.8E-12
			KM TEQ DF	2.7E-09	--	2.7E-09
			PCB-77	2.3E-12	--	2.3E-12
			PCB-81	2.3E-13	--	2.3E-13
			PCB-105	2.4E-12	--	2.4E-12
			PCB-114	1.3E-13	--	1.3E-13
			PCB-118	5.5E-12	--	5.5E-12
			PCB-123	1.1E-13	--	1.1E-13
			PCB-126	7.5E-11	--	7.5E-11
			PCB-156/157	6.5E-13	--	6.5E-13
			PCB-167	2.2E-13	--	2.2E-13
			PCB-169	1.3E-11	--	1.3E-11
			PCB-189	2.9E-14	--	2.9E-14
			KM TEQ PCB	1.2E-10	--	1.2E-10
			PAHs			
			Benz(a)anthracene	8.7E-12	--	8.7E-12
			Benzo(a)pyrene	1.1E-10	--	1.1E-10
			Benzo(b)fluoranthene	1.5E-11	--	1.5E-11
			Benzo(k)fluoranthene	6.8E-13	--	6.8E-13
			Chrysene	1.5E-13	--	1.5E-13
			Dibenz(a,h)anthracene	2.9E-11	--	2.9E-11
			Indeno(1,2,3-c,d)-pyrene	6.4E-12	--	6.4E-12
			Naphthalene	--	--	--
			Pesticides & Organics			

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Chloroform	2.7E-11	8.4E-11	1.1E-10
			Trichloroethylene	4.5E-11	2.4E-10	2.9E-10
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	1.4E-08	4.6E-09	1.9E-08
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	8.2E-10	2.2E-08	2.2E-08
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			3.5E-09
			Total DLCs (based on KM TEQs)			2.8E-09
			Total PCDD/Fs (excluding KM TEQ)			3.4E-09
			Total PCDD/Fs (based on KM TEQ)			2.7E-09
			Total DL-PCBs (excluding KM TEQ)			1.0E-10
			Total DL-PCBs (based on KM TEQ)			1.2E-10
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.0E-10
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-10
			Total PAHs			1.7E-10
			Total Organics			4.0E-10
			Total Inorganics			4.1E-08
	Swimmer - Surface Water Total (excluding KM TEQs)					4.5E-08
	Swimmer - Surface Water Total (based on KM TEQs)					4.5E-08
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						3.9E-07
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						3.9E-07
Surface Water	Surface Water	Boater Surface Water	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-09	--	1.5E-09
			1,2,3,7,8-PeCDD	5.1E-10	--	5.1E-10
			1,2,3,4,7,8-HxCDD	3.7E-10	--	3.7E-10
			1,2,3,6,7,8-HxCDD	6.0E-11	--	6.0E-11
			1,2,3,7,8,9-HxCDD	1.0E-10	--	1.0E-10
			1,2,3,4,6,7,8-HpCDD	7.5E-11	--	7.5E-11
			OCDD	2.4E-11	--	2.4E-11
			2,3,7,8-TCDF	5.8E-11	--	5.8E-11
			1,2,3,7,8-PeCDF	1.4E-11	--	1.4E-11
			2,3,4,7,8-PeCDF	2.4E-10	--	2.4E-10
			1,2,3,4,7,8-HxCDF	2.2E-10	--	2.2E-10
			1,2,3,6,7,8-HxCDF	5.4E-11	--	5.4E-11
			1,2,3,7,8,9-HxCDF	3.2E-10	--	3.2E-10
			2,3,4,6,7,8-HxCDF	3.4E-11	--	3.4E-11
			1,2,3,4,6,7,8-HpCDF	9.4E-11	--	9.4E-11
			1,2,3,4,7,8,9-HpCDF	5.9E-12	--	5.9E-12
			OCDF	5.3E-12	--	5.3E-12

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	2.9E-09	--	2.9E-09
			PCB-77	2.5E-12	--	2.5E-12
			PCB-81	2.5E-13	--	2.5E-13
			PCB-105	2.7E-12	--	2.7E-12
			PCB-114	1.4E-13	--	1.4E-13
			PCB-118	5.9E-12	--	5.9E-12
			PCB-123	1.2E-13	--	1.2E-13
			PCB-126	8.2E-11	--	8.2E-11
			PCB-156/157	7.0E-13	--	7.0E-13
			PCB-167	2.4E-13	--	2.4E-13
			PCB-169	1.5E-11	--	1.5E-11
			PCB-189	3.1E-14	--	3.1E-14
			KM TEQ PCB	1.3E-10	--	1.3E-10
			PAHs			
			Benz(a)anthracene	9.5E-12	--	9.5E-12
			Benzo(a)pyrene	1.2E-10	--	1.2E-10
			Benzo(b)fluoranthene	1.7E-11	--	1.7E-11
			Benzo(k)fluoranthene	7.4E-13	--	7.4E-13
			Chrysene	1.6E-13	--	1.6E-13
			Dibenz(a,h)anthracene	3.1E-11	--	3.1E-11
			Indeno(1,2,3-c,d)-pyrene	7.0E-12	--	7.0E-12
			Naphthalene	--	--	--
			Pesticides & Organics			
			Chloroform	3.0E-11	8.2E-11	1.1E-10
			Trichloroethylene	4.9E-11	2.4E-10	2.9E-10
			Inorganics			
			Antimony	--	--	--
			Arsenic, inorganic	1.5E-08	3.8E-09	1.9E-08
			Chromium [as Cr(III)]	--	--	--
			Chromium (VI)	9.0E-10	1.8E-08	1.8E-08
			Iron	--	--	--
			Manganese	--	--	--
			Mercury	--	--	--
			Thallium	--	--	--
			Titanium	--	--	--
			Total DLCs (excluding KM TEQs)			3.8E-09
			Total DLCs (based on KM TEQs)			3.1E-09
			Total PCDD/Fs (excluding KM TEQ)			3.7E-09
			Total PCDD/Fs (based on KM TEQ)			2.9E-09
			Total DL-PCBs (excluding KM TEQ)			1.1E-10
			Total DL-PCBs (based on KM TEQ)			1.3E-10
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-10
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-10
			Total PAHs			1.9E-10
			Total Organics			4.0E-10
			Total Inorganics			3.8E-08

TABLE 9.B.CTE
SUMMARY OF RECEPTOR RISKS FOR COPCs - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
	Boater - Surface Water Total (excluding KM TEQs)					4.2E-08
	Boater - Surface Water Total (based on KM TEQs)					4.1E-08
Boater Sediment Total + Surface Water Total (excluding KM TEQs)						1.0E-07
Boater Sediment Total + Surface Water Total (based on KM TEQs)						9.9E-08

Note: Sediment and surface water boater risks are for adult only, since the child is not expected to participate in boating activities on the Bay.

Appendix H

APPENDIX H
COPC PERCENT CONTRIBUTION TABLES

Table H-1 RME	Angler Mixed Fish Diet COPC Percent Contribution Cancer – RME Scenario
Table H-2 RME	Angler Mixed Fish Diet COPC Percent Contribution Non-cancer – RME Scenario
Table H-3 RME	Angler Crab Muscle Hepatopancreas COPC Percent Contribution Cancer – RME Scenario
Table H-4 RME	Angler Crab Muscle Hepatopancreas COPC Percent Contribution Non-cancer – RME Scenario
Table H-1 CTE	Angler Mixed Fish Diet COPC Percent Contribution Cancer – CTE Scenario
Table H-2 CTE	Angler Mixed Fish Diet COPC Percent Contribution Non-cancer – CTE Scenario
Table H-3 CTE	Angler Crab Muscle Hepatopancreas COPC Percent Contribution Cancer – CTE Scenario
Table H-4 CTE	Angler Crab Muscle Hepatopancreas COPC Percent Contribution Non-cancer – CTE Scenario

TABLE H-1 RME

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk	
COPC	EPC (a) (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Dioxin-like Compounds													
2,3,7,8-TCDD	8.24E-06	7.2E-05	28.2%	--	9.4E-05	28.4%	--	1.5E-04	28.6%	--	2.2E-04	28.4%	--
1,2,3,7,8-PeCDD	4.42E-07	3.9E-06	1.5%	--	5.0E-06	1.5%	--	8.2E-06	1.5%	--	1.2E-05	1.5%	--
1,2,3,4,7,8-HxCDD	2.04E-07	1.8E-07	0.1%	--	2.3E-07	0.1%	--	3.8E-07	0.1%	--	5.6E-07	0.1%	--
1,2,3,6,7,8-HxCDD	6.32E-07	5.5E-07	0.2%	--	7.2E-07	0.2%	--	1.2E-06	0.2%	--	1.7E-06	0.2%	--
1,2,3,7,8,9-HxCDD	1.50E-07	1.3E-07	0.1%	--	1.7E-07	0.1%	--	2.8E-07	0.1%	--	4.1E-07	0.1%	--
1,2,3,4,6,7,8-HpCDD	7.10E-07	6.2E-08	0.02%	--	8.1E-08	0.02%	--	1.3E-07	0.02%	--	1.9E-07	0.02%	--
OCDD	4.15E-06	1.1E-08	0.004%	--	1.4E-08	0.004%	--	2.3E-08	0.004%	--	3.4E-08	0.004%	--
2,3,7,8-TCDF	1.68E-06	1.5E-06	0.6%	--	1.9E-06	0.6%	--	3.1E-06	0.6%	--	4.6E-06	0.6%	--
1,2,3,7,8-PeCDF	1.53E-06	4.0E-07	0.2%	--	5.2E-07	0.2%	--	8.5E-07	0.2%	--	1.2E-06	0.2%	--
2,3,4,7,8-PeCDF	2.43E-06	6.4E-06	2.5%	--	8.3E-06	2.5%	--	1.4E-05	2.5%	--	2.0E-05	2.5%	--
1,2,3,4,7,8-HxCDF	1.09E-06	9.5E-07	0.4%	--	1.2E-06	0.4%	--	2.0E-06	0.4%	--	3.0E-06	0.4%	--
1,2,3,6,7,8-HxCDF	9.84E-07	8.6E-07	0.3%	--	1.1E-06	0.3%	--	1.8E-06	0.3%	--	2.7E-06	0.3%	--
1,2,3,7,8,9-HxCDF	1.13E-07	9.9E-08	0.04%	--	1.3E-07	0.04%	--	2.1E-07	0.04%	--	3.1E-07	0.04%	--
2,3,4,6,7,8-HxCDF	1.68E-07	1.5E-07	0.1%	--	1.9E-07	0.1%	--	3.1E-07	0.1%	--	4.6E-07	0.1%	--
1,2,3,4,6,7,8-HpCDF	2.32E-06	2.0E-07	0.1%	--	2.6E-07	0.1%	--	4.3E-07	0.1%	--	6.3E-07	0.1%	--
1,2,3,4,7,8,9-HpCDF	1.08E-07	9.4E-09	0.004%	--	1.2E-08	0.004%	--	2.0E-08	0.004%	--	2.9E-08	0.004%	--
OCDF	2.27E-07	5.9E-10	0.0002%	--	7.8E-10	0.0002%	--	1.3E-09	0.0002%	--	1.9E-09	0.0002%	--
KM TEQ DF	9.82E-06	8.6E-05	--	32.7%	1.1E-04	--	32.9%	1.8E-04	--	33.1%	2.7E-04	--	33.0%
PCB-77	4.87E-04	4.2E-07	0.2%	--	5.6E-07	0.2%	--	9.0E-07	0.2%	--	1.3E-06	0.2%	--
PCB-81	1.90E-05	5.0E-08	0.02%	--	6.5E-08	0.02%	--	1.1E-07	0.02%	--	1.6E-07	0.02%	--
PCB-105	7.61E-03	2.0E-06	0.8%	--	2.6E-06	0.8%	--	4.2E-06	0.8%	--	6.2E-06	0.8%	--
PCB-114	5.83E-04	1.5E-07	0.1%	--	2.0E-07	0.1%	--	3.2E-07	0.1%	--	4.8E-07	0.1%	--
PCB-118	3.07E-02	8.0E-06	3.1%	--	1.0E-05	3.2%	--	1.7E-05	3.2%	--	2.5E-05	3.2%	--
PCB-123	5.57E-04	1.5E-07	0.1%	--	1.9E-07	0.1%	--	3.1E-07	0.1%	--	4.6E-07	0.1%	--
PCB-126	9.01E-05	7.9E-05	30.8%	--	1.0E-04	31.0%	--	1.7E-04	31.2%	--	2.5E-04	31.1%	--
PCB-156/157	2.81E-03	7.3E-07	0.3%	--	9.6E-07	0.3%	--	1.6E-06	0.3%	--	2.3E-06	0.3%	--
PCB-167	1.23E-03	3.2E-07	0.1%	--	4.2E-07	0.1%	--	6.8E-07	0.1%	--	1.0E-06	0.1%	--
PCB-169	3.80E-06	9.9E-07	0.4%	--	1.3E-06	0.4%	--	2.1E-06	0.4%	--	3.1E-06	0.4%	--
PCB-189	2.25E-04	5.9E-08	0.02%	--	7.7E-08	0.02%	--	1.3E-07	0.02%	--	1.8E-07	0.02%	--
KM TEQ PCB	1.15E-05	1.0E-04	--	38.1%	1.3E-04	--	38.4%	2.1E-04	--	38.7%	3.1E-04	--	38.5%
Non-DL PCBs													
Total Non-DL PCBs	4.08E-01	4.7E-05	18.6%	18.1%	6.2E-05	18.7%	18.2%	1.0E-04	18.9%	18.4%	1.5E-04	18.8%	18.3%
PAHs													
Benz(a)anthracene	8.38E-03	2.0E-07	0.1%	0.1%	1.6E-07	0.05%	0.05%	1.0E-07	0.02%	0.02%	3.1E-07	0.04%	0.04%
Benzo(a)pyrene	8.38E-03	2.0E-06	0.8%	0.8%	1.6E-06	0.5%	0.5%	1.0E-06	0.2%	0.2%	3.1E-06	0.4%	0.4%

TABLE H-1 RME

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk	
COPC	EPC (a) (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Benzo(b)fluoranthene	8.38E-03	2.0E-07	0.1%	0.1%	1.6E-07	0.05%	0.05%	1.0E-07	0.02%	0.02%	3.1E-07	0.04%	0.04%
Chrysene	8.38E-03	2.0E-09	0.001%	0.001%	1.6E-09	0.0005%	0.0005%	1.0E-09	0.0002%	0.0002%	3.1E-09	0.0004%	0.0004%
Dibenz(a,h)anthracene	8.38E-03	2.0E-06	0.8%	0.8%	1.6E-06	0.5%	0.5%	1.0E-06	0.2%	0.2%	3.1E-06	0.4%	0.4%
Indeno(1,2,3-c,d)-pyrene	8.38E-03	2.0E-07	0.1%	0.1%	1.6E-07	0.05%	0.05%	1.0E-07	0.02%	0.02%	3.1E-07	0.04%	0.04%
Pesticides & Organics													
2,4'-DDD	1.82E-02	2.5E-07	0.1%	0.1%	3.3E-07	0.1%	0.1%	5.4E-07	0.1%	0.1%	7.9E-07	0.1%	0.1%
2,4'-DDE	5.79E-03	1.1E-07	0.04%	0.04%	1.5E-07	0.05%	0.04%	2.4E-07	0.05%	0.04%	3.6E-07	0.05%	0.04%
2,4'-DDT	3.47E-03	6.9E-08	0.03%	0.03%	9.0E-08	0.03%	0.03%	1.5E-07	0.03%	0.03%	2.1E-07	0.03%	0.03%
4,4'-DDD	8.95E-02	1.2E-06	0.5%	0.5%	1.6E-06	0.5%	0.5%	2.7E-06	0.5%	0.5%	3.9E-06	0.5%	0.5%
4,4'-DDE	1.25E-01	2.5E-06	1.0%	0.9%	3.2E-06	1.0%	0.9%	5.2E-06	1.0%	1.0%	7.7E-06	1.0%	0.9%
4,4'-DDT	1.42E-02	2.8E-07	0.1%	0.1%	3.7E-07	0.1%	0.1%	6.0E-07	0.1%	0.1%	8.8E-07	0.1%	0.1%
Benzaldehyde	1.30E+00	3.0E-07	0.1%	0.1%	4.0E-07	0.1%	0.1%	6.4E-07	0.1%	0.1%	9.4E-07	0.1%	0.1%
Chlordane, alpha (cis)	1.62E-02	3.3E-07	0.1%	0.1%	4.3E-07	0.1%	0.1%	7.0E-07	0.1%	0.1%	1.0E-06	0.1%	0.1%
Chlordane, gamma (trans)	3.59E-03	7.3E-08	0.03%	0.03%	9.6E-08	0.03%	0.03%	1.6E-07	0.03%	0.03%	2.3E-07	0.03%	0.03%
Dieldrin	7.67E-03	7.1E-06	2.8%	2.7%	9.3E-06	2.8%	2.7%	1.5E-05	2.8%	2.8%	2.2E-05	2.8%	2.7%
Heptachlor epoxide, cis-	1.85E-03	9.8E-07	0.4%	0.4%	1.3E-06	0.4%	0.4%	2.1E-06	0.4%	0.4%	3.1E-06	0.4%	0.4%
Heptachlor epoxide, trans-	8.97E-05	4.7E-08	0.02%	0.02%	6.2E-08	0.02%	0.02%	1.0E-07	0.02%	0.02%	1.5E-07	0.02%	0.02%
Hexachlorobenzene	1.48E-03	1.4E-07	0.1%	0.1%	1.8E-07	0.1%	0.1%	2.9E-07	0.1%	0.1%	4.3E-07	0.1%	0.1%
Mirex	2.54E-04	2.7E-07	0.1%	0.1%	3.5E-07	0.1%	0.1%	5.6E-07	0.1%	0.1%	8.3E-07	0.1%	0.1%
Nonachlor, cis-	6.42E-03	1.3E-07	0.05%	0.05%	1.7E-07	0.1%	0.1%	2.8E-07	0.1%	0.1%	4.1E-07	0.1%	0.1%
Nonachlor, trans-	1.55E-02	3.2E-07	0.1%	0.1%	4.1E-07	0.1%	0.1%	6.7E-07	0.1%	0.1%	9.9E-07	0.1%	0.1%
Oxychlordane	4.58E-03	9.3E-08	0.04%	0.04%	1.2E-07	0.04%	0.04%	2.0E-07	0.04%	0.04%	2.9E-07	0.04%	0.04%
Pyridine	1.30E+00	–	–	–	–	–	–	–	–	–	–	–	–
Inorganics													
Aluminum	6.43E+00	–	–	–	–	–	–	–	–	–	–	–	–
Arsenic, organic	1.04E+00	–	–	–	–	–	–	–	–	–	–	–	–
Arsenic, inorganic	1.16E-01	1.0E-05	4.0%	3.8%	1.3E-05	4.0%	3.9%	2.1E-05	4.0%	3.9%	3.1E-05	4.0%	3.9%
Cadmium	4.59E-02	–	–	–	–	–	–	–	–	–	–	–	–
Chromium [as Cr(III)]	6.47E-01	–	–	–	–	–	–	–	–	–	–	–	–
Cobalt	2.25E-01	–	–	–	–	–	–	–	–	–	–	–	–
Copper	4.81E-01	–	–	–	–	–	–	–	–	–	–	–	–
Iron	7.08E+00	–	–	–	–	–	–	–	–	–	–	–	–
Lead	3.54E-02	–	–	–	–	–	–	–	–	–	–	–	–
Manganese	2.87E-01	–	–	–	–	–	–	–	–	–	–	–	–
Mercury	3.02E-01	–	–	–	–	–	–	–	–	–	–	–	–
Methyl Mercury	3.62E-01	–	–	–	–	–	–	–	–	–	–	–	–

TABLE H-1 RME

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk	
COPC	EPC (a) (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Selenium	5.45E-01	--	--	--	--	--	--	--	--	--	--	--	--
Silver	2.00E-02	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	2.80E-02	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	1.47E+01	--	--	--	--	--	--	--	--	--	--	--	--
Total Cumulative Risk													
Total without KM TEQ (c)		2.6E-04	100.0%		3.3E-04	100.0%		5.3E-04	100.0%		7.9E-04	100.0%	
Total with KM TEQ (d)		2.6E-04		100.0%	3.4E-04		100.0%	5.5E-04		100.0%	8.1E-04		100.0%

Notes:

COPC - Chemical of Potential Concern.

EPC - Exposure Point Concentration.

NA - Not applicable - not a potential carcinogen.

PCB - Polycarbonated biphenyls

CTE - Central Tendency Estimate

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

Non-DL - Non dioxin-like

RME - Reasonable Maximum Exposure.

DLC - Dioxin-like congener.

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

PAH - Polycyclic Aromatic Hydrocarbons.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) For calculation of potential cancer risk, adult and young child risks are summed (yielding a total exposure duration of 12 yrs for CTE).

(c) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(d) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-2 RME

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION NON-CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Dioxin-like Compounds										
2,3,7,8-TCDD	8.24E-06	8.0E+00	18.7%	--	5.2E+00	18.7%	--	5.1E+00	18.7%	--
1,2,3,7,8-PeCDD	4.42E-07	4.3E-01	1.0%	--	2.8E-01	1.0%	--	2.7E-01	1.0%	--
1,2,3,4,7,8-HxCDD	2.04E-07	2.0E-02	0.05%	--	1.3E-02	0.05%	--	1.3E-02	0.05%	--
1,2,3,6,7,8-HxCDD	6.32E-07	6.1E-02	0.1%	--	4.0E-02	0.1%	--	3.9E-02	0.1%	--
1,2,3,7,8,9-HxCDD	1.50E-07	1.5E-02	0.03%	--	9.5E-03	0.03%	--	9.2E-03	0.03%	--
1,2,3,4,6,7,8-HpCDD	7.10E-07	6.9E-03	0.02%	--	4.5E-03	0.02%	--	4.4E-03	0.02%	--
OCDD	4.15E-06	1.2E-03	0.003%	--	7.9E-04	0.003%	--	7.7E-04	0.003%	--
2,3,7,8-TCDF	1.68E-06	1.6E-01	0.4%	--	1.1E-01	0.4%	--	1.0E-01	0.4%	--
1,2,3,7,8-PeCDF	1.53E-06	4.4E-02	0.1%	--	2.9E-02	0.1%	--	2.8E-02	0.1%	--
2,3,4,7,8-PeCDF	2.43E-06	7.1E-01	1.7%	--	4.6E-01	1.7%	--	4.5E-01	1.7%	--
1,2,3,4,7,8-HxCDF	1.09E-06	1.1E-01	0.2%	--	6.9E-02	0.2%	--	6.8E-02	0.2%	--
1,2,3,6,7,8-HxCDF	9.84E-07	9.5E-02	0.2%	--	6.2E-02	0.2%	--	6.1E-02	0.2%	--
1,2,3,7,8,9-HxCDF	1.13E-07	1.1E-02	0.03%	--	7.2E-03	0.03%	--	7.0E-03	0.03%	--
2,3,4,6,7,8-HxCDF	1.68E-07	1.6E-02	0.04%	--	1.1E-02	0.04%	--	1.0E-02	0.0%	--
1,2,3,4,6,7,8-HpCDF	2.32E-06	2.3E-02	0.1%	--	1.5E-02	0.1%	--	1.4E-02	0.1%	--
1,2,3,4,7,8,9-HpCDF	1.08E-07	1.0E-03	0.002%	--	6.9E-04	0.002%	--	6.7E-04	0.002%	--
OCDF	2.27E-07	6.6E-05	0.0002%	--	4.3E-05	0.0002%	--	4.2E-05	0.0002%	--
KM TEQ DF	9.82E-06	9.5E+00	--	21.8%	6.2E+00	--	21.8%	6.1E+00	--	21.8%
PCB-77	4.87E-04	4.7E-02	0.1%	--	3.1E-02	0.1%	--	3.0E-02	0.1%	--
PCB-81	1.90E-05	5.5E-03	0.01%	--	3.6E-03	0.01%	--	3.5E-03	0.01%	--
PCB-105	7.61E-03	2.2E-01	0.5%	--	1.4E-01	0.5%	--	1.4E-01	0.5%	--
PCB-114	5.83E-04	1.7E-02	0.04%	--	1.1E-02	0.04%	--	1.1E-02	0.0%	--
PCB-118	3.07E-02	8.9E-01	2.1%	--	5.8E-01	2.1%	--	5.7E-01	2.1%	--
PCB-123	5.57E-04	1.6E-02	0.04%	--	1.1E-02	0.04%	--	1.0E-02	0.04%	--
PCB-126	9.01E-05	8.7E+00	20.4%	--	5.7E+00	20.4%	--	5.6E+00	20.4%	--
PCB-156/157	2.81E-03	8.2E-02	0.2%	--	5.3E-02	0.2%	--	5.2E-02	0.2%	--
PCB-167	1.23E-03	3.6E-02	0.1%	--	2.3E-02	0.1%	--	2.3E-02	0.1%	--
PCB-169	3.80E-06	1.1E-01	0.3%	--	7.2E-02	0.3%	--	7.0E-02	0.3%	--
PCB-189	2.25E-04	6.6E-03	0.02%	--	4.3E-03	0.02%	--	4.2E-03	0.02%	--

TABLE H-2 RME

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION NON-CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
KM TEQ PCB	1.15E-05	1.1E+01	--	25.5%	7.3E+00	--	25.5%	7.1E+00	--	25.5%
Non-DL PCBs										
Total Non-DL PCBs	4.08E-01	1.4E+01	32.4%	31.8%	9.1E+00	32.4%	31.8%	8.8E+00	32.4%	31.8%
PAHs										
Benz(a)anthracene	8.38E-03	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	8.38E-03	1.9E-02	0.04%	0.04%	1.2E-02	0.04%	0.04%	1.2E-02	0.04%	0.04%
Benzo(b)fluoranthene	8.38E-03	--	--	--	--	--	--	--	--	--
Chrysene	8.38E-03	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	8.38E-03	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)-pyrene	8.38E-03	--	--	--	--	--	--	--	--	--
Pesticides & Organics										
2,4'-DDD	1.82E-02	4.1E-01	1.0%	0.9%	2.7E-01	1.0%	0.9%	2.6E-01	1.0%	0.9%
2,4'-DDE	5.79E-03	1.3E-02	0.03%	0.03%	8.6E-03	0.03%	0.03%	8.4E-03	0.03%	0.03%
2,4'-DDT	3.47E-03	4.7E-03	0.01%	0.01%	3.1E-03	0.01%	0.01%	3.0E-03	0.01%	0.01%
4,4'-DDD	8.95E-02	2.0E+00	4.7%	4.6%	1.3E+00	4.7%	4.6%	1.3E+00	4.7%	4.6%
4,4'-DDE	1.25E-01	2.8E-01	0.7%	0.6%	1.8E-01	0.7%	0.6%	1.8E-01	0.7%	0.6%
4,4'-DDT	1.42E-02	1.9E-02	0.05%	0.04%	1.3E-02	0.05%	0.04%	1.2E-02	0.05%	0.04%
Benzaldehyde	1.30E+00	8.8E-03	0.02%	0.02%	5.8E-03	0.02%	0.02%	5.6E-03	0.02%	0.02%
Chlordane, alpha (cis)	1.62E-02	2.2E-02	0.1%	0.1%	1.4E-02	0.1%	0.1%	1.4E-02	0.1%	0.1%
Chlordane, gamma (trans)	3.59E-03	4.9E-03	0.01%	0.01%	3.2E-03	0.01%	0.01%	3.1E-03	0.01%	0.01%
Dieldrin	7.67E-03	1.0E-01	0.2%	0.2%	6.8E-02	0.2%	0.2%	6.6E-02	0.2%	0.2%
Heptachlor epoxide, cis-	1.85E-03	9.7E-02	0.2%	0.2%	6.3E-02	0.2%	0.2%	6.2E-02	0.2%	0.2%
Heptachlor epoxide, trans-	8.97E-05	4.7E-03	0.01%	0.01%	3.1E-03	0.01%	0.01%	3.0E-03	0.01%	0.01%
Hexachlorobenzene	1.48E-03	1.3E-03	0.003%	0.003%	8.2E-04	0.003%	0.003%	8.0E-04	0.003%	0.003%
Mirex	2.54E-04	8.6E-04	0.002%	0.002%	5.6E-04	0.002%	0.002%	5.5E-04	0.002%	0.002%
Nonachlor, cis-	6.42E-03	4.4E-02	0.1%	0.1%	2.8E-02	0.1%	0.10%	2.8E-02	0.1%	0.10%
Nonachlor, trans-	1.55E-02	6.8E-01	1.6%	1.6%	4.4E-01	1.6%	1.6%	4.3E-01	1.6%	1.6%
Oxychlordane	4.58E-03	3.5E-02	0.08%	0.08%	2.3E-02	0.08%	0.08%	2.2E-02	0.08%	0.08%
Pyridine	1.30E+00	8.8E-01	2.06%	2.0%	5.8E-01	2.06%	2.0%	5.6E-01	2.1%	2.0%

TABLE H-2 RME

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION NON-CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Inorganics										
Aluminum	6.43E+00	4.4E-03	0.01%	0.01%	2.9E-03	0.01%	0.01%	2.8E-03	0.01%	0.01%
Arsenic, organic	1.04E+00	3.5E-02	0.08%	0.08%	2.3E-02	0.08%	0.08%	2.2E-02	0.08%	0.1%
Arsenic, inorganic	1.16E-01	2.6E-01	0.6%	0.6%	1.7E-01	0.6%	0.6%	1.7E-01	0.6%	0.6%
Cadmium	4.59E-02	3.1E-02	0.07%	0.07%	2.0E-02	0.07%	0.07%	2.0E-02	0.07%	0.1%
Chromium [as Cr(III)]	6.47E-01	2.9E-04	0.001%	0.001%	1.9E-04	0.001%	0.001%	1.9E-04	0.001%	0.001%
Cobalt	2.25E-01	5.1E-01	1.2%	1.2%	3.3E-01	1.2%	1.2%	3.2E-01	1.2%	1.2%
Copper	4.81E-01	3.3E-01	0.76%	0.75%	2.1E-01	0.76%	0.75%	2.1E-01	0.76%	0.75%
Iron	7.08E+00	6.858553501E-03	0.02%	0.02%	4.5E-03	0.02%	0.02%	4.4E-03	0.02%	0.02%
Lead	3.54E-02	--	--	--	--	--	--	--	--	--
Manganese	2.87E-01	1.4E-03	0.003%	0.003%	9.1E-04	0.003%	0.003%	8.9E-04	0.003%	0.003%
Mercury	3.02E-01	6.8E-01	1.6%	1.6%	4.5E-01	1.6%	1.6%	4.4E-01	1.6%	1.6%
Methyl Mercury	3.62E-01	2.5E+00	5.7%	5.6%	1.6E+00	5.7%	5.6%	1.6E+00	5.7%	5.6%
Selenium	5.45E-01	7.4E-02	0.2%	0.2%	4.8E-02	0.2%	0.2%	4.7E-02	0.2%	0.2%
Silver	2.00E-02	2.7E-03	0.01%	0.01%	1.8E-03	0.01%	0.01%	1.7E-03	0.01%	0.01%
Vanadium	2.80E-02	3.8E-03	0.01%	0.01%	2.5E-03	0.01%	0.01%	2.4E-03	0.01%	0.01%
Zinc	1.47E+01	3.3E-02	0.08%	0.08%	2.2E-02	0.08%	0.08%	2.1E-02	0.08%	0.08%
Total Cumulative Risk										
Total without KM TEQ (b)		4.2778852E+01	100.0%		2.8E+01	100.0%		2.7E+01	100.0%	
Total with KM TEQ (c)		4.4E+01		100.0%	2.8E+01		100.0%	2.8E+01		100.0%

Notes:

COPC - Chemical of Potential Concern.

CTE - Central Tendency Estimate

DLC - Dioxin-like congener.

EPC - Exposure Point Concentration.

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

NA - Not applicable - not a potential carcinogen.

Non-DL - Non dioxin-like

PAH - Polycyclic Aromatic Hydrocarbons.

PCB - Polycarbonated biphenyls

RME - Reasonable Maximum Exposure.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(c) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-3 RME

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk	
COPC	EPC (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Dioxin-like Compounds													
2,3,7,8-TCDD	2.6E-05	1.4E-04	51.5%	--	1.8E-04	51.6%	--	2.9E-04	51.7%	--	4.3E-04	51.6%	--
1,2,3,7,8-PeCDD	6.9E-07	3.6E-06	1.4%	--	4.8E-06	1.4%	--	7.7E-06	1.4%	--	1.1E-05	1.4%	--
1,2,3,4,7,8-HxCDD	2.0E-07	1.1E-07	0.04%	--	1.4E-07	0.04%	--	2.2E-07	0.04%	--	3.3E-07	0.04%	--
1,2,3,6,7,8-HxCDD	5.9E-07	3.1E-07	0.1%	--	4.1E-07	0.1%	--	6.6E-07	0.1%	--	9.7E-07	0.1%	--
1,2,3,7,8,9-HxCDD	2.1E-07	1.1E-07	0.04%	--	1.4E-07	0.04%	--	2.4E-07	0.04%	--	3.5E-07	0.04%	--
1,2,3,4,6,7,8-HpCDD	6.8E-07	3.6E-08	0.01%	--	4.7E-08	0.01%	--	7.6E-08	0.01%	--	1.1E-07	0.01%	--
OCDD	2.0E-06	3.2E-09	0.001%	--	4.1E-09	0.001%	--	6.7E-09	0.001%	--	9.9E-09	0.001%	--
2,3,7,8-TCDF	9.7E-06	5.1E-06	1.9%	--	6.7E-06	1.9%	--	1.1E-05	1.9%	--	1.6E-05	1.9%	--
1,2,3,7,8-PeCDF	2.1E-06	3.3E-07	0.1%	--	4.3E-07	0.1%	--	7.0E-07	0.1%	--	1.0E-06	0.1%	--
2,3,4,7,8-PeCDF	4.9E-06	7.7E-06	2.9%	--	1.0E-05	2.9%	--	1.6E-05	2.9%	--	2.4E-05	2.9%	--
1,2,3,4,7,8-HxCDF	4.7E-06	2.5E-06	0.9%	--	3.2E-06	0.9%	--	5.3E-06	0.9%	--	7.7E-06	0.9%	--
1,2,3,6,7,8-HxCDF	1.4E-06	7.4E-07	0.3%	--	9.6E-07	0.3%	--	1.6E-06	0.3%	--	2.3E-06	0.3%	--
1,2,3,7,8,9-HxCDF	8.6E-08	4.5E-08	0.02%	--	5.9E-08	0.02%	--	9.6E-08	0.02%	--	1.4E-07	0.02%	--
2,3,4,6,7,8-HxCDF	3.7E-07	1.9E-07	0.1%	--	2.5E-07	0.1%	--	4.1E-07	0.1%	--	6.1E-07	0.1%	--
1,2,3,4,6,7,8-HpCDF	4.7E-06	2.5E-07	0.1%	--	3.2E-07	0.1%	--	5.2E-07	0.1%	--	7.7E-07	0.1%	--
1,2,3,4,7,8,9-HpCDF	6.7E-08	3.5E-09	0.001%	--	4.6E-09	0.001%	--	7.4E-09	0.001%	--	1.1E-08	0.001%	--
OCDF	2.4E-07	3.9E-10	0.0001%	--	5.0E-10	0.0001%	--	8.2E-10	0.0001%	--	1.2E-09	0.0001%	--
KM TEQ DF	3.0E-05	1.6E-04	--	59.9%	2.1E-04	--	60.0%	3.4E-04	--	60.1%	5.0E-04	--	60.0%
PCB-77	2.0E-03	1.0E-06	0.4%	--	1.3E-06	0.4%	--	2.2E-06	0.4%	--	3.2E-06	0.4%	--
PCB-81	8.5E-05	1.3E-07	0.05%	--	1.8E-07	0.05%	--	2.9E-07	0.05%	--	4.2E-07	0.05%	--
PCB-105	1.0E-02	1.6E-06	0.6%	--	2.1E-06	0.6%	--	3.5E-06	0.6%	--	5.1E-06	0.6%	--
PCB-114	8.8E-04	1.4E-07	0.1%	--	1.8E-07	0.1%	--	3.0E-07	0.1%	--	4.3E-07	0.1%	--
PCB-118	4.7E-02	7.4E-06	2.7%	--	9.6E-06	2.7%	--	1.6E-05	2.7%	--	2.3E-05	2.7%	--
PCB-123	8.2E-04	1.3E-07	0.05%	--	1.7E-07	0.05%	--	2.7E-07	0.05%	--	4.0E-07	0.05%	--
PCB-126	9.7E-05	5.1E-05	18.9%	--	6.7E-05	18.9%	--	1.1E-04	19.0%	--	1.6E-04	18.9%	--
PCB-156/157	3.7E-03	5.9E-07	0.2%	--	7.7E-07	0.2%	--	1.3E-06	0.2%	--	1.8E-06	0.2%	--
PCB-167	1.6E-03	2.5E-07	0.1%	--	3.2E-07	0.1%	--	5.2E-07	0.1%	--	7.7E-07	0.1%	--
PCB-169	1.1E-05	1.7E-06	0.6%	--	2.3E-06	0.6%	--	3.7E-06	0.6%	--	5.4E-06	0.6%	--
PCB-189	2.7E-04	4.2E-08	0.02%	--	5.5E-08	0.02%	--	9.0E-08	0.02%	--	1.3E-07	0.02%	--
KM TEQ PCB	1.2E-05	6.1E-05	--	22.9%	8.0E-05	--	23.0%	1.3E-04	--	23.0%	1.9E-04	--	23.0%
Non-DL PCBs													
Total Non-DL PCBs	3.2E-01	2.2E-05	8.4%	8.5%	2.9E-05	8.4%	8.5%	4.8E-05	8.4%	8.5%	7.0E-05	8.4%	8.5%
PAHs													
Benz(a)anthracene	2.8E-03	4.1E-08	0.02%	0.02%	3.2E-08	0.01%	0.01%	2.1E-08	0.00%	0.00%	6.2E-08	0.01%	0.01%
Benzo(a)pyrene	2.7E-03	3.9E-07	0.1%	0.1%	3.1E-07	0.1%	0.1%	2.0E-07	0.0%	0.0%	5.9E-07	0.1%	0.1%

TABLE H-3 RME

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk	
COPC	EPC (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Benzo(b)fluoranthene	2.6E-03	3.8E-08	0.01%	0.01%	3.0E-08	0.01%	0.01%	2.0E-08	0.00%	0.00%	5.8E-08	0.01%	0.01%
Chrysene	3.7E-03	5.4E-10	0.0002%	0.0002%	4.2E-10	0.0001%	0.0001%	2.7E-10	0.0000%	0.0000%	8.1E-10	0.0001%	0.0001%
Dibenz(a,h)anthracene	2.7E-03	3.9E-07	0.1%	0.1%	3.0E-07	0.1%	0.1%	2.0E-07	0.0%	0.0%	5.9E-07	0.1%	0.1%
Indeno(1,2,3-c,d)-pyrene	2.1E-02	3.1E-07	0.1%	0.1%	2.5E-07	0.1%	0.1%	1.6E-07	0.0%	0.0%	4.7E-07	0.1%	0.1%
Pesticides & Organics													
2,4'-DDD	2.2E-04	1.8E-09	0.001%	0.001%	2.4E-09	0.001%	0.001%	3.9E-09	0.001%	0.001%	5.8E-09	0.001%	0.001%
2,4'-DDE	4.5E-04	5.3E-09	0.002%	0.002%	7.0E-09	0.002%	0.002%	1.1E-08	0.002%	0.002%	1.7E-08	0.002%	0.002%
2,4'-DDT	2.0E-04	2.4E-09	0.001%	0.001%	3.1E-09	0.001%	0.001%	5.0E-09	0.001%	0.001%	7.4E-09	0.001%	0.001%
4,4'-DDD	3.5E-02	2.9E-07	0.1%	0.1%	3.8E-07	0.1%	0.1%	6.3E-07	0.1%	0.1%	9.2E-07	0.1%	0.1%
4,4'-DDE	9.4E-02	1.1E-06	0.4%	0.4%	1.5E-06	0.4%	0.4%	2.4E-06	0.4%	0.4%	3.5E-06	0.4%	0.4%
4,4'-DDT	1.1E-03	1.3E-08	0.005%	0.005%	1.7E-08	0.005%	0.005%	2.7E-08	0.005%	0.005%	4.0E-08	0.005%	0.005%
Benzaldehyde	1.2E+00	1.7E-07	0.1%	0.1%	2.2E-07	0.1%	0.1%	3.6E-07	0.1%	0.1%	5.2E-07	0.1%	0.1%
Chlordane, alpha (cis)	2.0E-03	2.5E-08	0.01%	0.01%	3.3E-08	0.01%	0.01%	5.3E-08	0.01%	0.01%	7.8E-08	0.01%	0.01%
Chlordane, gamma (trans)	2.5E-04	3.1E-09	0.001%	0.001%	4.1E-09	0.001%	0.001%	6.6E-09	0.001%	0.001%	9.7E-09	0.001%	0.001%
Dieldrin	6.1E-03	3.4E-06	1.3%	1.3%	4.5E-06	1.3%	1.3%	7.3E-06	1.3%	1.3%	1.1E-05	1.3%	1.3%
Heptachlor epoxide, cis-	3.6E-03	1.1E-06	0.4%	0.4%	1.5E-06	0.4%	0.4%	2.4E-06	0.4%	0.4%	3.6E-06	0.4%	0.4%
Heptachlor epoxide, trans-	1.2E-03	3.7E-07	0.14%	0.14%	4.8E-07	0.14%	0.14%	7.8E-07	0.14%	0.14%	1.1E-06	0.14%	0.14%
Hexachlorobenzene	1.1E-03	6.2E-08	0.02%	0.02%	8.1E-08	0.02%	0.02%	1.3E-07	0.02%	0.02%	1.9E-07	0.02%	0.02%
Mirex	2.0E-04	1.3E-07	0.05%	0.05%	1.7E-07	0.05%	0.05%	2.7E-07	0.05%	0.05%	4.0E-07	0.05%	0.05%
Nonachlor, cis-	5.3E-03	6.5E-08	0.02%	0.02%	8.5E-08	0.02%	0.02%	1.4E-07	0.02%	0.02%	2.0E-07	0.02%	0.02%
Nonachlor, trans-	1.0E-02	1.3E-07	0.05%	0.05%	1.7E-07	0.05%	0.05%	2.7E-07	0.05%	0.05%	4.0E-07	0.05%	0.05%
Oxychlordane	1.6E-02	1.9E-07	0.07%	0.07%	2.5E-07	0.07%	0.07%	4.1E-07	0.07%	0.07%	6.0E-07	0.07%	0.07%
Pyridine	5.1E-01	--	--	--	--	--	--	--	--	--	--	--	--
Inorganics													
Aluminum	9.2E+00	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, organic	2.5E+00	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, inorganic	2.8E-01	1.5E-05	5.5%	5.6%	1.9E-05	5.5%	5.6%	3.1E-05	5.5%	5.6%	4.6E-05	5.5%	5.6%
Cadmium	4.0E-01	--	--	--	--	--	--	--	--	--	--	--	--
Chromium [as Cr(III)]	1.7E-01	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	8.9E-02	--	--	--	--	--	--	--	--	--	--	--	--
Copper	2.9E+01	--	--	--	--	--	--	--	--	--	--	--	--
Iron	3.9E+01	--	--	--	--	--	--	--	--	--	--	--	--
Lead	2.8E-01	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	9.9E+00	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	1.5E-01	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Mercury	1.7E-01	--	--	--	--	--	--	--	--	--	--	--	--

TABLE H-3 RME

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk		RME	Contribution to Cumulative Risk	
COPC	EPC (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Selenium	1.1E+00	--	--	--	--	--	--	--	--	--	--	--	--
Silver	7.8E-01	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	7.3E-02	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	4.7E+01	--	--	--	--	--	--	--	--	--	--	--	--
Total Cumulative Risk													
Total without KM TEQ (c)		2.7E-04	100.0%		3.5E-04	100.0%		5.7E-04	100.0%		8.4E-04	100.0%	
Total with KM TEQ (d)		2.7E-04		100.0%	3.5E-04		100.0%	5.6E-04		100.0%	8.3E-04		100.0%

Notes:

COPC - Chemical of Potential Concern.

EPC - Exposure Point Concentration.

NA - Not applicable - not a potential carcinogen.

PCB - Polycarbonated biphenyls

CTE - Central Tendency Estimate

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

Non-DL - Non dioxin-like

RME - Reasonable Maximum Exposure.

DLC - Dioxin-like congener.

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

PAH - Polycyclic Aromatic Hydrocarbons.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) For calculation of potential cancer risk, adult and young child risks are summed (yielding a total exposure duration of 12 yrs for CTE).

(c) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(d) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-4 RME

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION NON-CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Dioxin-like Compounds										
2,3,7,8-TCDD	2.6E-05	1.5E+01	33.2%	--	1.0E+01	33.2%	--	9.82E+00	33.2%	--
1,2,3,7,8-PeCDD	6.9E-07	4.0E-01	0.9%	--	2.6E-01	0.9%	--	2.58E-01	0.9%	--
1,2,3,4,7,8-HxCDD	2.0E-07	1.2E-02	0.03%	--	7.7E-03	0.03%	--	7.48E-03	0.03%	--
1,2,3,6,7,8-HxCDD	5.9E-07	3.5E-02	0.1%	--	2.3E-02	0.1%	--	2.21E-02	0.1%	--
1,2,3,7,8,9-HxCDD	2.1E-07	1.2E-02	0.03%	--	8.0E-03	0.03%	--	7.84E-03	0.03%	--
1,2,3,4,6,7,8-HpCDD	6.8E-07	4.0E-03	0.01%	--	2.6E-03	0.01%	--	2.54E-03	0.01%	--
OCDD	2.0E-06	3.5E-04	0.001%	--	2.3E-04	0.001%	--	2.25E-04	0.001%	--
2,3,7,8-TCDF	9.7E-06	5.7E-01	1.2%	--	3.7E-01	1.2%	--	3.61E-01	1.2%	--
1,2,3,7,8-PeCDF	2.1E-06	3.7E-02	0.1%	--	2.4E-02	0.1%	--	2.35E-02	0.1%	--
2,3,4,7,8-PeCDF	4.9E-06	8.6E-01	1.8%	--	5.6E-01	1.8%	--	5.45E-01	1.8%	--
1,2,3,4,7,8-HxCDF	4.7E-06	2.7E-01	0.6%	--	1.8E-01	0.6%	--	1.75E-01	0.6%	--
1,2,3,6,7,8-HxCDF	1.4E-06	8.2E-02	0.2%	--	5.4E-02	0.2%	--	5.22E-02	0.2%	--
1,2,3,7,8,9-HxCDF	8.6E-08	5.0E-03	0.01%	--	3.3E-03	0.01%	--	3.21E-03	0.01%	--
2,3,4,6,7,8-HxCDF	3.7E-07	2.2E-02	0.0%	--	1.4E-02	0.0%	--	1.38E-02	0.0%	--
1,2,3,4,6,7,8-HpCDF	4.7E-06	2.7E-02	0.1%	--	1.8E-02	0.1%	--	1.75E-02	0.1%	--
1,2,3,4,7,8,9-HpCDF	6.7E-08	3.9E-04	0.001%	--	2.5E-04	0.001%	--	2.48E-04	0.001%	--
OCDF	2.4E-07	4.3E-05	0.0001%	--	2.8E-05	0.0001%	--	2.73E-05	0.0001%	--
KM TEQ DF	3.0E-05	1.8E+01	--	38.4%	1.2E+01	--	38.4%	1.13E+01	--	38.4%
PCB-77	2.0E-03	1.1E-01	0.2%	--	7.5E-02	0.2%	--	7.28E-02	0.2%	--
PCB-81	8.5E-05	1.5E-02	0.03%	--	9.8E-03	0.03%	--	9.54E-03	0.03%	--
PCB-105	1.0E-02	1.8E-01	0.4%	--	1.2E-01	0.4%	--	1.16E-01	0.4%	--
PCB-114	8.8E-04	1.5E-02	0.03%	--	1.0E-02	0.03%	--	9.86E-03	0.03%	--
PCB-118	4.7E-02	8.2E-01	1.8%	--	5.4E-01	1.8%	--	5.22E-01	1.8%	--
PCB-123	8.2E-04	1.4E-02	0.03%	--	9.4E-03	0.03%	--	9.16E-03	0.03%	--
PCB-126	9.7E-05	5.7E+00	12.2%	--	3.7E+00	12.2%	--	3.60E+00	12.2%	--
PCB-156/157	3.7E-03	6.6E-02	0.1%	--	4.3E-02	0.1%	--	4.18E-02	0.1%	--
PCB-167	1.6E-03	2.7E-02	0.1%	--	1.8E-02	0.1%	--	1.74E-02	0.1%	--
PCB-169	1.1E-05	1.9E-01	0.4%	--	1.3E-01	0.4%	--	1.22E-01	0.4%	--
PCB-189	2.7E-04	4.7E-03	0.01%	--	3.1E-03	0.01%	--	3.00E-03	0.01%	--

TABLE H-4 RME

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION NON-CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
KM TEQ PCB	1.2E-05	6.8E+00	--	14.7%	4.4E+00	--	14.7%	4.31E+00	--	14.7%
Non-DL PCBs										
Total Non-DL PCBs	3.2E-01	6.6E+00	14.1%	14.2%	4.3E+00	14.1%	14.2%	4.18E+00	14.1%	14.2%
PAHs										
Benz(a)anthracene	2.8E-03	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	2.7E-03	3.7E-03	0.01%	0.01%	2.4E-03	0.01%	0.01%	2.34E-03	0.01%	0.01%
Benzo(b)fluoranthene	2.6E-03	--	--	--	--	--	--	--	--	--
Chrysene	3.7E-03	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	2.7E-03	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)-pyrene	2.1E-02	--	--	--	--	--	--	--	--	--
Pesticides & Organics										
2,4'-DDD	2.2E-04	3.0E-03	0.006%	0.006%	1.9E-03	0.006%	0.006%	1.90E-03	0.006%	0.006%
2,4'-DDE	4.5E-04	6.1E-04	0.001%	0.001%	4.0E-04	0.001%	0.001%	3.89E-04	0.001%	0.001%
2,4'-DDT	2.0E-04	1.6E-04	0.0003%	0.0004%	1.1E-04	0.0003%	0.0004%	1.03E-04	0.0003%	0.0004%
4,4'-DDD	3.5E-02	4.8E-01	1.0%	1.0%	3.1E-01	1.0%	1.0%	3.04E-01	1.0%	1.0%
4,4'-DDE	9.4E-02	1.3E-01	0.3%	0.3%	8.4E-02	0.3%	0.3%	8.19E-02	0.3%	0.3%
4,4'-DDT	1.1E-03	8.9E-04	0.002%	0.002%	5.8E-04	0.002%	0.002%	5.64E-04	0.002%	0.002%
Benzaldehyde	1.2E+00	4.9E-03	0.01%	0.01%	3.2E-03	0.01%	0.01%	3.11E-03	0.01%	0.01%
Chlordane, alpha (cis)	2.0E-03	1.7E-03	0.004%	0.004%	1.1E-03	0.004%	0.004%	1.06E-03	0.004%	0.004%
Chlordane, gamma (trans)	2.5E-04	2.1E-04	0.000%	0.000%	1.4E-04	0.000%	0.000%	1.32E-04	0.000%	0.000%
Dieldrin	6.1E-03	5.0E-02	0.1%	0.1%	3.3E-02	0.1%	0.1%	3.20E-02	0.1%	0.1%
Heptachlor epoxide, cis-	3.6E-03	1.1E-01	0.2%	0.2%	7.4E-02	0.2%	0.2%	7.19E-02	0.2%	0.2%
Heptachlor epoxide, trans-	1.2E-03	3.6E-02	0.08%	0.08%	2.4E-02	0.08%	0.08%	2.31E-02	0.08%	0.08%
Hexachlorobenzene	1.1E-03	5.6E-04	0.001%	0.001%	3.7E-04	0.001%	0.001%	3.59E-04	0.001%	0.001%
Mirex	2.0E-04	4.1E-04	0.001%	0.001%	2.7E-04	0.001%	0.001%	2.63E-04	0.001%	0.001%
Nonachlor, cis-	5.3E-03	2.2E-02	0.05%	0.05%	1.4E-02	0.05%	0.05%	1.38E-02	0.05%	0.05%
Nonachlor, trans-	1.0E-02	2.7E-01	0.59%	0.60%	1.8E-01	0.59%	0.60%	1.75E-01	0.59%	0.60%
Oxychlordane	1.6E-02	7.2E-02	0.15%	0.16%	4.7E-02	0.15%	0.16%	4.58E-02	0.15%	0.16%
Pyridine	5.1E-01	2.1E-01	0.45%	0.4%	1.4E-01	0.45%	0.4%	1.32E-01	0.45%	0.4%

TABLE H-4 RME

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION NON-CANCER - RME SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index		RME	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Inorganics										
Aluminum	9.2E+00	3.8E-03	0.01%	0.01%	2.5E-03	0.01%	0.01%	2.40E-03	0.01%	0.01%
Arsenic, organic	2.5E+00	5.2E-02	0.1%	0.1%	3.4E-02	0.1%	0.1%	3.30E-02	0.1%	0.1%
Arsenic, inorganic	2.8E-01	3.8E-01	0.8%	0.8%	2.5E-01	0.8%	0.8%	2.45E-01	0.8%	0.8%
Cadmium	4.0E-01	1.6E-01	0.4%	0.4%	1.1E-01	0.4%	0.4%	1.04E-01	0.4%	0.4%
Chromium [as Cr(III)]	1.7E-01	4.5E-05	0.0001%	0.0001%	3.0E-05	0.0001%	0.0001%	2.89E-05	0.0001%	0.0001%
Cobalt	8.9E-02	1.2E-01	0.3%	0.3%	7.9E-02	0.3%	0.3%	7.75E-02	0.3%	0.3%
Copper	2.9E+01	1.2E+01	25.3%	25.5%	7.7E+00	25.3%	25.5%	7.48E+00	25.3%	25.5%
Iron	3.9E+01	2.3E-02	0.0%	0.0%	1.5E-02	0.0%	0.0%	1.45E-02	0.0%	0.0%
Lead	2.8E-01	--	--	--	--	--	--	--	--	--
Manganese	9.9E+00	2.9E-02	0.1%	0.1%	1.9E-02	0.1%	0.1%	1.85E-02	0.1%	0.1%
Mercury	1.5E-01	2.1E-01	0.4%	0.5%	1.4E-01	0.4%	0.5%	1.32E-01	0.4%	0.5%
Methyl Mercury	1.7E-01	7.0E-01	1.5%	1.5%	4.6E-01	1.5%	1.5%	4.49E-01	1.5%	1.5%
Selenium	1.1E+00	9.3E-02	0.2%	0.2%	6.1E-02	0.2%	0.2%	5.93E-02	0.2%	0.2%
Silver	7.8E-01	6.4E-02	0.1%	0.1%	4.2E-02	0.1%	0.1%	4.08E-02	0.1%	0.1%
Vanadium	7.3E-02	6.0E-03	0.01%	0.01%	3.9E-03	0.01%	0.01%	3.83E-03	0.01%	0.01%
Zinc	4.7E+01	6.4E-02	0.1%	0.1%	4.2E-02	0.1%	0.1%	4.06E-02	0.1%	0.1%
Total Cumulative Risk										
Total without KM TEQ (b)		4.6E+01	100.0%		3.0E+01	100.0%		3.0E+01	100.0%	
Total with KM TEQ (c)		4.6E+01		100.0%	3.0E+01		100.0%	2.9E+01		100.0%

Notes:

COPC - Chemical of Potential Concern.

EPC - Exposure Point Concentration.

NA - Not applicable - not a potential carcinogen.

PCB - Polycarbonated biphenyls

CTE - Central Tendency Estimate

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

Non-DL - Non dioxin-like

RME - Reasonable Maximum Exposure.

DLC - Dioxin-like congener.

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

PAH - Polycyclic Aromatic Hydrocarbons.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(c) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-1 CTE

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk	
COPC	EPC (a) (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Dioxin-like Compounds													
2,3,7,8-TCDD	8.24E-06	2.6E-06	28.8%	--	3.4E-06	29.0%	--	5.0E-06	29.2%	--	7.6E-06	29.1%	--
1,2,3,7,8-PeCDD	4.42E-07	1.4E-07	1.5%	--	1.8E-07	1.6%	--	2.7E-07	1.6%	--	4.1E-07	1.6%	--
1,2,3,4,7,8-HxCDD	2.04E-07	6.5E-09	0.07%	--	8.5E-09	0.07%	--	1.2E-08	0.07%	--	1.9E-08	0.07%	--
1,2,3,6,7,8-HxCDD	6.32E-07	2.0E-08	0.2%	--	2.6E-08	0.2%	--	3.8E-08	0.2%	--	5.8E-08	0.2%	--
1,2,3,7,8,9-HxCDD	1.50E-07	4.8E-09	0.05%	--	6.2E-09	0.05%	--	9.1E-09	0.05%	--	1.4E-08	0.05%	--
1,2,3,4,6,7,8-HpCDD	7.10E-07	2.3E-09	0.02%	--	2.9E-09	0.02%	--	4.3E-09	0.03%	--	6.6E-09	0.03%	--
OCDD	4.15E-06	4.0E-10	0.004%	--	5.2E-10	0.004%	--	7.6E-10	0.004%	--	1.2E-09	0.004%	--
2,3,7,8-TCDF	1.68E-06	5.4E-08	0.6%	--	7.0E-08	0.6%	--	1.0E-07	0.6%	--	1.6E-07	0.6%	--
1,2,3,7,8-PeCDF	1.53E-06	1.5E-08	0.2%	--	1.9E-08	0.2%	--	2.8E-08	0.2%	--	4.2E-08	0.2%	--
2,3,4,7,8-PeCDF	2.43E-06	2.3E-07	2.6%	--	3.0E-07	2.6%	--	4.4E-07	2.6%	--	6.8E-07	2.6%	--
1,2,3,4,7,8-HxCDF	1.09E-06	3.5E-08	0.4%	--	4.5E-08	0.4%	--	6.7E-08	0.4%	--	1.0E-07	0.4%	--
1,2,3,6,7,8-HxCDF	9.84E-07	3.1E-08	0.3%	--	4.1E-08	0.3%	--	6.0E-08	0.3%	--	9.1E-08	0.3%	--
1,2,3,7,8,9-HxCDF	1.13E-07	3.6E-09	0.04%	--	4.7E-09	0.04%	--	6.9E-09	0.04%	--	1.1E-08	0.04%	--
2,3,4,6,7,8-HxCDF	1.68E-07	5.3E-09	0.1%	--	7.0E-09	0.1%	--	1.0E-08	0.1%	--	1.6E-08	0.1%	--
1,2,3,4,6,7,8-HpCDF	2.32E-06	7.4E-09	0.1%	--	9.7E-09	0.1%	--	1.4E-08	0.1%	--	2.1E-08	0.1%	--
1,2,3,4,7,8,9-HpCDF	1.08E-07	3.4E-10	0.004%	--	4.5E-10	0.004%	--	6.6E-10	0.004%	--	1.0E-09	0.004%	--
OCDF	2.27E-07	2.2E-11	0.0002%	--	2.8E-11	0.0002%	--	4.1E-11	0.0002%	--	6.3E-11	0.0002%	--
KM TEQ DF	9.82E-06	3.1E-06	--	33.3%	4.1E-06	--	33.5%	6.0E-06	--	33.7%	9.1E-06	--	33.6%
PCB-77	4.87E-04	1.7E-08	0.2%	--	2.2E-08	0.2%	--	3.3E-08	0.2%	--	5.0E-08	0.2%	--
PCB-81	1.90E-05	2.0E-09	0.02%	--	2.6E-09	0.02%	--	3.8E-09	0.02%	--	5.8E-09	0.02%	--
PCB-105	7.61E-03	8.0E-08	0.9%	--	1.0E-07	0.9%	--	1.5E-07	0.9%	--	2.3E-07	0.9%	--
PCB-114	5.83E-04	6.1E-09	0.1%	--	8.0E-09	0.1%	--	1.2E-08	0.1%	--	1.8E-08	0.1%	--
PCB-118	3.07E-02	3.2E-07	3.5%	--	4.2E-07	3.6%	--	6.1E-07	3.6%	--	9.4E-07	3.6%	--
PCB-123	5.57E-04	5.8E-09	0.06%	--	7.6E-09	0.06%	--	1.1E-08	0.07%	--	1.7E-08	0.06%	--
PCB-126	9.01E-05	3.1E-06	34.6%	--	4.1E-06	34.9%	--	6.0E-06	35.1%	--	9.2E-06	35.0%	--
PCB-156/157	2.81E-03	2.9E-08	0.3%	--	3.8E-08	0.3%	--	5.6E-08	0.3%	--	8.6E-08	0.3%	--
PCB-167	1.23E-03	1.3E-08	0.1%	--	1.7E-08	0.1%	--	2.5E-08	0.1%	--	3.7E-08	0.1%	--
PCB-169	3.80E-06	4.0E-08	0.4%	--	5.2E-08	0.4%	--	7.6E-08	0.4%	--	1.2E-07	0.4%	--
PCB-189	2.25E-04	2.4E-09	0.03%	--	3.1E-09	0.03%	--	4.5E-09	0.03%	--	6.9E-09	0.03%	--
KM TEQ PCB	1.15E-05	4.0E-06	--	42.7%	5.2E-06	--	43.0%	7.7E-06	--	43.3%	1.2E-05	--	43.1%
Non-DL PCBs													
Total Non-DL PCBs	4.08E-01	9.5E-07	10.5%	10.1%	1.2E-06	10.5%	10.2%	1.8E-06	10.6%	10.3%	2.8E-06	10.6%	10.2%
PAHs													
Benz(a)anthracene	8.38E-03	8.1E-09	0.09%	0.09%	7.1E-09	0.06%	0.06%	5.2E-09	0.03%	0.03%	1.3E-08	0.05%	0.05%
Benzo(a)pyrene	8.38E-03	8.1E-08	0.9%	0.9%	7.1E-08	0.6%	0.6%	5.2E-08	0.3%	0.3%	1.3E-07	0.5%	0.5%

TABLE H-1 CTE

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk	
COPC	EPC (a) (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Benzo(b)fluoranthene	8.38E-03	8.1E-09	0.09%	0.09%	7.1E-09	0.06%	0.06%	5.2E-09	0.03%	0.03%	1.3E-08	0.05%	0.05%
Chrysene	8.38E-03	8.1E-11	0.0009%	0.0009%	7.1E-11	0.0006%	0.0006%	5.2E-11	0.0003%	0.0003%	1.3E-10	0.0005%	0.0005%
Dibenz(a,h)anthracene	8.38E-03	8.1E-08	0.9%	0.9%	7.1E-08	0.6%	0.6%	5.2E-08	0.3%	0.3%	1.3E-07	0.5%	0.5%
Indeno(1,2,3-c,d)-pyrene	8.38E-03	8.1E-09	0.1%	0.1%	7.1E-09	0.1%	0.1%	5.2E-09	0.03%	0.03%	1.3E-08	0.05%	0.05%
Pesticides & Organics													
2,4'-DDD	1.82E-02	9.7E-09	0.1%	0.1%	1.3E-08	0.1%	0.1%	1.9E-08	0.1%	0.1%	2.8E-08	0.1%	0.1%
2,4'-DDE	5.79E-03	4.3E-09	0.05%	0.05%	5.7E-09	0.05%	0.05%	8.3E-09	0.05%	0.05%	1.3E-08	0.05%	0.05%
2,4'-DDT	3.47E-03	2.9E-09	0.03%	0.03%	3.8E-09	0.03%	0.03%	5.6E-09	0.03%	0.03%	8.6E-09	0.03%	0.03%
4,4'-DDD	8.95E-02	4.8E-08	0.5%	0.5%	6.3E-08	0.5%	0.5%	9.2E-08	0.5%	0.5%	1.4E-07	0.5%	0.5%
4,4'-DDE	1.25E-01	9.3E-08	1.0%	1.0%	1.2E-07	1.0%	1.0%	1.8E-07	1.0%	1.0%	2.7E-07	1.0%	1.0%
4,4'-DDT	1.42E-02	1.2E-08	0.1%	0.1%	1.6E-08	0.1%	0.1%	2.3E-08	0.1%	0.1%	3.5E-08	0.1%	0.1%
Benzaldehyde	1.30E+00	1.7E-08	0.19%	0.18%	2.2E-08	0.19%	0.18%	3.2E-08	0.19%	0.18%	4.9E-08	0.19%	0.18%
Chlordane, alpha (cis)	1.62E-02	1.2E-08	0.13%	0.12%	1.5E-08	0.13%	0.12%	2.2E-08	0.13%	0.12%	3.4E-08	0.13%	0.12%
Chlordane, gamma (trans)	3.59E-03	2.8E-09	0.03%	0.03%	3.6E-09	0.03%	0.03%	5.3E-09	0.03%	0.03%	8.1E-09	0.03%	0.03%
Dieldrin	7.67E-03	2.8E-07	3.1%	3.0%	3.6E-07	3.1%	3.0%	5.3E-07	3.1%	3.0%	8.1E-07	3.1%	3.0%
Heptachlor epoxide, cis-	1.85E-03	3.4E-08	0.4%	0.4%	4.5E-08	0.4%	0.4%	6.6E-08	0.4%	0.4%	1.0E-07	0.4%	0.4%
Heptachlor epoxide, trans-	8.97E-05	1.7E-09	0.02%	0.02%	2.2E-09	0.02%	0.02%	3.2E-09	0.02%	0.02%	4.8E-09	0.02%	0.02%
Hexachlorobenzene	1.48E-03	5.1E-09	0.06%	0.05%	6.7E-09	0.06%	0.06%	9.8E-09	0.06%	0.06%	1.5E-08	0.06%	0.06%
Mirex	2.54E-04	6.4E-09	0.1%	0.1%	8.3E-09	0.1%	0.1%	1.2E-08	0.1%	0.1%	1.8E-08	0.1%	0.1%
Nonachlor, cis-	6.42E-03	4.8E-09	0.05%	0.05%	6.3E-09	0.05%	0.05%	9.2E-09	0.05%	0.05%	1.4E-08	0.05%	0.05%
Nonachlor, trans-	1.55E-02	1.3E-08	0.1%	0.1%	1.7E-08	0.1%	0.1%	2.4E-08	0.1%	0.1%	3.7E-08	0.1%	0.1%
Oxychlordane	4.58E-03	3.4E-09	0.04%	0.04%	4.5E-09	0.04%	0.04%	6.6E-09	0.04%	0.04%	1.0E-08	0.04%	0.04%
Pyridine	1.30E+00	–	–	–	–	–	–	–	–	–	–	–	–
Inorganics													
Aluminum	6.43E+00	–	–	–	–	–	–	–	–	–	–	–	–
Arsenic, organic	1.04E+00	–	–	–	–	–	–	–	–	–	–	–	–
Arsenic, inorganic	1.16E-01	5.6E-07	6.2%	6.0%	7.3E-07	6.2%	6.0%	1.1E-06	6.3%	6.1%	1.6E-06	6.2%	6.0%
Cadmium	4.59E-02	–	–	–	–	–	–	–	–	–	–	–	–
Chromium [as Cr(III)]	6.47E-01	–	–	–	–	–	–	–	–	–	–	–	–
Cobalt	2.25E-01	–	–	–	–	–	–	–	–	–	–	–	–
Copper	4.81E-01	–	–	–	–	–	–	–	–	–	–	–	–
Iron	7.08E+00	–	–	–	–	–	–	–	–	–	–	–	–
Lead	3.54E-02	–	–	–	–	–	–	–	–	–	–	–	–
Manganese	2.87E-01	–	–	–	–	–	–	–	–	–	–	–	–
Mercury	3.02E-01	–	–	–	–	–	–	–	–	–	–	–	–
Methyl Mercury	3.62E-01	–	–	–	–	–	–	–	–	–	–	–	–

TABLE H-1 CTE

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk	
COPC	EPC (a) (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Selenium	5.45E-01	--	--	--	--	--	--	--	--	--	--	--	--
Silver	2.00E-02	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	2.80E-02	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	1.47E+01	--	--	--	--	--	--	--	--	--	--	--	--
Total Cumulative Risk													
Total without KM TEQ (c)		9.1E-06	100.0%		1.2E-05	100.0%		1.7E-05	100.0%		2.6E-05	100.0%	
Total with KM TEQ (d)		9.4E-06		100.0%	1.2E-05		100.0%	1.8E-05		100.0%	2.7E-05		100.0%

Notes:

COPC - Chemical of Potential Concern.

CTE - Central Tendency Estimate

DLC - Dioxin-like congener.

EPC - Exposure Point Concentration.

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

NA - Not applicable - not a potential carcinogen.

Non-DL - Non dioxin-like

PAH - Polycyclic Aromatic Hydrocarbons.

PCB - Polycarbonated biphenyls

RME - Reasonable Maximum Exposure.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) For calculation of potential cancer risk, adult and young child risks are summed (yielding a total exposure duration of 12 yrs for CTE).

(c) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(d) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-2 CTE

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION NON-CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Dioxin-like Compounds										
2,3,7,8-TCDD	8.24E-06	5.8E-01	16.6%	–	3.8E-01	16.6%	–	3.7E-01	16.6%	–
1,2,3,7,8-PeCDD	4.42E-07	3.1E-02	0.9%	–	2.0E-02	0.9%	–	2.0E-02	0.9%	–
1,2,3,4,7,8-HxCDD	2.04E-07	1.4E-03	0.04%	–	9.4E-04	0.04%	–	9.2E-04	0.04%	–
1,2,3,6,7,8-HxCDD	6.32E-07	4.5E-03	0.1%	–	2.9E-03	0.1%	–	2.8E-03	0.1%	–
1,2,3,7,8,9-HxCDD	1.50E-07	1.1E-03	0.03%	–	6.9E-04	0.03%	–	6.7E-04	0.03%	–
1,2,3,4,6,7,8-HpCDD	7.10E-07	5.0E-04	0.01%	–	3.3E-04	0.01%	–	3.2E-04	0.01%	–
OCDD	4.15E-06	8.8E-05	0.003%	–	5.8E-05	0.003%	–	5.6E-05	0.003%	–
2,3,7,8-TCDF	1.68E-06	1.2E-02	0.3%	–	7.8E-03	0.3%	–	7.6E-03	0.3%	–
1,2,3,7,8-PeCDF	1.53E-06	3.2E-03	0.1%	–	2.1E-03	0.1%	–	2.1E-03	0.1%	–
2,3,4,7,8-PeCDF	2.43E-06	5.2E-02	1.5%	–	3.4E-02	1.5%	–	3.3E-02	1.5%	–
1,2,3,4,7,8-HxCDF	1.09E-06	7.7E-03	0.2%	–	5.1E-03	0.2%	–	4.9E-03	0.2%	–
1,2,3,6,7,8-HxCDF	9.84E-07	7.0E-03	0.2%	–	4.5E-03	0.2%	–	4.4E-03	0.2%	–
1,2,3,7,8,9-HxCDF	1.13E-07	8.0E-04	0.02%	–	5.2E-04	0.02%	–	5.1E-04	0.02%	–
2,3,4,6,7,8-HxCDF	1.68E-07	1.2E-03	0.03%	–	7.8E-04	0.03%	–	7.6E-04	0.03%	–
1,2,3,4,6,7,8-HpCDF	2.32E-06	1.6E-03	0.05%	–	1.1E-03	0.05%	–	1.0E-03	0.05%	–
1,2,3,4,7,8,9-HpCDF	1.08E-07	7.6E-05	0.002%	–	5.0E-05	0.002%	–	4.9E-05	0.002%	–
OCDF	2.27E-07	4.8E-06	0.0001%	–	3.2E-06	0.0001%	–	3.1E-06	0.0001%	–
KM TEQ DF	9.82E-06	6.9E-01	--	19.4%	4.5E-01	–	19.4%	4.4E-01	–	19.4%
PCB-77	4.87E-04	3.8E-03	0.1%	–	2.5E-03	0.1%	–	2.4E-03	0.1%	–
PCB-81	1.90E-05	4.4E-04	0.01%	–	2.9E-04	0.01%	–	2.8E-04	0.01%	–
PCB-105	7.61E-03	1.8E-02	0.5%	–	1.2E-02	0.5%	–	1.1E-02	0.5%	–
PCB-114	5.83E-04	1.4E-03	0.04%	–	8.9E-04	0.04%	–	8.7E-04	0.04%	–
PCB-118	3.07E-02	7.1E-02	2.0%	–	4.7E-02	2.0%	–	4.6E-02	2.0%	–
PCB-123	5.57E-04	1.3E-03	0.04%	–	8.5E-04	0.04%	–	8.3E-04	0.04%	–
PCB-126	9.01E-05	7.0E-01	19.9%	–	4.6E-01	19.9%	–	4.5E-01	19.9%	–
PCB-156/157	2.81E-03	6.5E-03	0.2%	–	4.3E-03	0.2%	–	4.2E-03	0.2%	–
PCB-167	1.23E-03	2.9E-03	0.1%	–	1.9E-03	0.1%	–	1.8E-03	0.1%	–
PCB-169	3.80E-06	8.8E-03	0.3%	–	5.8E-03	0.3%	–	5.6E-03	0.3%	–
PCB-189	2.25E-04	5.2E-04	0.01%	–	3.4E-04	0.01%	–	3.3E-04	0.01%	–

TABLE H-2 CTE

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION NON-CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
KM TEQ PCB	1.15E-05	8.9E-01	--	24.9%	5.8E-01	--	24.9%	5.7E-01	--	24.9%
Non-DL PCBs										
Total Non-DL PCBs	4.08E-01	1.1E+00	31.6%	31.0%	7.3E-01	31.6%	31.0%	7.1E-01	31.6%	31.0%
PAHs										
Benz(a)anthracene	8.38E-03	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	8.38E-03	2.1E-03	0.1%	0.1%	1.4E-03	0.1%	0.1%	1.3E-03	0.1%	0.1%
Benzo(b)fluoranthene	8.38E-03	--	--	--	--	--	--	--	--	--
Chrysene	8.38E-03	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	8.38E-03	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)-pyrene	8.38E-03	--	--	--	--	--	--	--	--	--
Pesticides & Organics										
2,4'-DDD	1.82E-02	3.2E-02	0.9%	0.9%	2.1E-02	0.9%	0.9%	2.0E-02	0.9%	0.9%
2,4'-DDE	5.79E-03	9.9E-04	0.03%	0.03%	6.5E-04	0.03%	0.03%	6.3E-04	0.03%	0.03%
2,4'-DDT	3.47E-03	4.0E-04	0.01%	0.01%	2.6E-04	0.01%	0.01%	2.6E-04	0.01%	0.01%
4,4'-DDD	8.95E-02	1.6E-01	4.4%	4.3%	1.0E-01	4.4%	4.3%	9.9E-02	4.4%	4.3%
4,4'-DDE	1.25E-01	2.1E-02	0.6%	0.6%	1.4E-02	0.6%	0.6%	1.4E-02	0.6%	0.6%
4,4'-DDT	1.42E-02	1.6E-03	0.05%	0.05%	1.1E-03	0.05%	0.05%	1.1E-03	0.05%	0.05%
Benzaldehyde	1.30E+00	9.8E-04	0.03%	0.03%	6.4E-04	0.03%	0.03%	6.3E-04	0.03%	0.03%
Chlordane, alpha (cis)	1.62E-02	1.5E-03	0.04%	0.04%	1.0E-03	0.04%	0.04%	9.8E-04	0.04%	0.04%
Chlordane, gamma (trans)	3.59E-03	3.7E-04	0.01%	0.01%	2.4E-04	0.01%	0.01%	2.4E-04	0.01%	0.01%
Dieldrin	7.67E-03	8.1E-03	0.2%	0.2%	5.3E-03	0.2%	0.2%	5.2E-03	0.2%	0.2%
Heptachlor epoxide, cis-	1.85E-03	6.8E-03	0.2%	0.2%	4.4E-03	0.2%	0.2%	4.3E-03	0.2%	0.2%
Heptachlor epoxide, trans-	8.97E-05	3.3E-04	0.01%	0.01%	2.1E-04	0.01%	0.01%	2.1E-04	0.01%	0.01%
Hexachlorobenzene	1.48E-03	9.4E-05	0.003%	0.003%	6.1E-05	0.003%	0.003%	6.0E-05	0.003%	0.003%
Mirex	2.54E-04	4.1E-05	0.001%	0.001%	2.7E-05	0.001%	0.001%	2.6E-05	0.001%	0.001%
Nonachlor, cis-	6.42E-03	3.2E-03	0.09%	0.09%	2.1E-03	0.09%	0.09%	2.0E-03	0.09%	0.09%
Nonachlor, trans-	1.55E-02	5.4E-02	1.6%	1.5%	3.6E-02	1.6%	1.5%	3.5E-02	1.6%	1.5%
Oxychlordane	4.58E-03	2.6E-03	0.07%	0.07%	1.7E-03	0.07%	0.07%	1.6E-03	0.07%	0.07%
Pyridine	1.30E+00	9.8E-02	2.79%	2.7%	6.4E-02	2.79%	2.7%	6.3E-02	2.79%	2.7%

TABLE H-2 CTE

ANGLER MIXED FISH DIET COPC PERCENT CONTRIBUTION NON-CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index	
COPC	EPC (a) (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Inorganics										
Aluminum	6.43E+00	4.9E-04	0.01%	0.01%	3.2E-04	0.01%	0.01%	3.1E-04	0.01%	0.01%
Arsenic, organic	1.04E+00	3.9E-03	0.1%	0.1%	2.6E-03	0.1%	0.1%	2.5E-03	0.1%	0.1%
Arsenic, inorganic	1.16E-01	2.9E-02	0.8%	0.8%	1.9E-02	0.8%	0.8%	1.9E-02	0.8%	0.8%
Cadmium	4.59E-02	3.5E-03	0.1%	0.1%	2.3E-03	0.1%	0.1%	2.2E-03	0.1%	0.1%
Chromium [as Cr(III)]	6.47E-01	3.3E-05	0.0009%	0.0009%	2.1E-05	0.0009%	0.0009%	2.1E-05	0.0009%	0.0009%
Cobalt	2.25E-01	5.7E-02	1.6%	1.6%	3.7E-02	1.6%	1.6%	3.6E-02	1.6%	1.6%
Copper	4.81E-01	3.6E-02	1.03%	1.02%	2.4E-02	1.03%	1.02%	2.3E-02	1.03%	1.02%
Iron	7.08E+00	7.6E-04	0.02%	0.02%	5.0E-04	0.02%	0.02%	4.9E-04	0.02%	0.02%
Lead	3.54E-02	--	--	--	--	--	--	--	--	--
Manganese	2.87E-01	1.5E-04	0.004%	0.004%	1.0E-04	0.004%	0.004%	9.9E-05	0.004%	0.004%
Mercury	3.02E-01	7.6E-02	2.2%	2.1%	5.0E-02	2.2%	2.1%	4.9E-02	2.2%	2.1%
Methyl Mercury	3.62E-01	2.7E-01	7.8%	7.6%	1.8E-01	7.8%	7.6%	1.7E-01	7.8%	7.6%
Selenium	5.45E-01	8.2E-03	0.2%	0.2%	5.4E-03	0.2%	0.2%	5.2E-03	0.2%	0.2%
Silver	2.00E-02	3.0E-04	0.01%	0.01%	2.0E-04	0.01%	0.01%	1.9E-04	0.01%	0.01%
Vanadium	2.80E-02	4.2E-04	0.01%	0.01%	2.8E-04	0.01%	0.01%	2.7E-04	0.01%	0.01%
Zinc	1.47E+01	3.7E-03	0.1%	0.1%	2.4E-03	0.1%	0.1%	2.4E-03	0.1%	0.1%
Total Cumulative Risk										
Total without KM TEQ (b)		3.5E+00	100.0%		2.3E+00	100.0%		2.2E+00	100.0%	
Total with KM TEQ (c)		3.6E+00		100.0%	2.3E+00		100.0%	2.3E+00		100.0%

Notes:

COPC - Chemical of Potential Concern.

CTE - Central Tendency Estimate

DLC - Dioxin-like congener.

EPC - Exposure Point Concentration.

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

NA - Not applicable - not a potential carcinogen.

Non-DL - Non dioxin-like

PAH - Polycyclic Aromatic Hydrocarbons.

PCB - Polycarbonated biphenyls

RME - Reasonable Maximum Exposure.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(c) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-3 CTE

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk	
COPC	EPC (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Dioxin-like Compounds													
2,3,7,8-TCDD	2.6E-05	9.9E-06	53.8%	--	1.3E-05	53.9%	--	1.9E-05	53.9%	--	2.9E-05	53.9%	--
1,2,3,7,8-PeCDD	6.9E-07	2.6E-07	1.4%	--	3.4E-07	1.4%	--	5.0E-07	1.4%	--	7.6E-07	1.4%	--
1,2,3,4,7,8-HxCDD	2.0E-07	7.6E-09	0.04%	--	9.9E-09	0.04%	--	1.4E-08	0.04%	--	2.2E-08	0.04%	--
1,2,3,6,7,8-HxCDD	5.9E-07	2.2E-08	0.1%	--	2.9E-08	0.1%	--	4.3E-08	0.1%	--	6.5E-08	0.1%	--
1,2,3,7,8,9-HxCDD	2.1E-07	7.9E-09	0.04%	--	1.0E-08	0.04%	--	1.5E-08	0.04%	--	2.3E-08	0.04%	--
1,2,3,4,6,7,8-HpCDD	6.8E-07	2.6E-09	0.01%	--	3.4E-09	0.01%	--	4.9E-09	0.01%	--	7.5E-09	0.01%	--
OCDD	2.0E-06	2.3E-10	0.001%	--	3.0E-10	0.001%	--	4.4E-10	0.001%	--	6.6E-10	0.001%	--
2,3,7,8-TCDF	9.7E-06	3.7E-07	2.0%	--	4.8E-07	2.0%	--	7.0E-07	2.0%	--	1.1E-06	2.0%	--
1,2,3,7,8-PeCDF	2.1E-06	2.4E-08	0.1%	--	3.1E-08	0.1%	--	4.6E-08	0.1%	--	6.9E-08	0.1%	--
2,3,4,7,8-PeCDF	4.9E-06	5.5E-07	3.0%	--	7.2E-07	3.0%	--	1.1E-06	3.0%	--	1.6E-06	3.0%	--
1,2,3,4,7,8-HxCDF	4.7E-06	1.8E-07	1.0%	--	2.3E-07	1.0%	--	3.4E-07	1.0%	--	5.2E-07	1.0%	--
1,2,3,6,7,8-HxCDF	1.4E-06	5.3E-08	0.3%	--	6.9E-08	0.3%	--	1.0E-07	0.3%	--	1.5E-07	0.3%	--
1,2,3,7,8,9-HxCDF	8.6E-08	3.2E-09	0.02%	--	4.2E-09	0.02%	--	6.2E-09	0.02%	--	9.5E-09	0.02%	--
2,3,4,6,7,8-HxCDF	3.7E-07	1.4E-08	0.1%	--	1.8E-08	0.1%	--	2.7E-08	0.1%	--	4.1E-08	0.1%	--
1,2,3,4,6,7,8-HpCDF	4.7E-06	1.8E-08	0.1%	--	2.3E-08	0.1%	--	3.4E-08	0.1%	--	5.2E-08	0.1%	--
1,2,3,4,7,8,9-HpCDF	6.7E-08	2.5E-10	0.001%	--	3.3E-10	0.001%	--	4.8E-10	0.001%	--	7.3E-10	0.001%	--
OCDF	2.4E-07	2.8E-11	0.0001%	--	3.6E-11	0.0001%	--	5.3E-11	0.0002%	--	8.1E-11	0.0001%	--
KM TEQ DF	3.0E-05	1.1E-05	--	62.6%	1.5E-05	--	62.7%	2.2E-05	--	62.7%	3.3E-05	--	62.7%
PCB-77	2.0E-03	7.4E-08	0.4%	--	9.6E-08	0.4%	--	1.4E-07	0.4%	--	2.1E-07	0.4%	--
PCB-81	8.5E-05	9.7E-09	0.05%	--	1.3E-08	0.05%	--	1.8E-08	0.05%	--	2.8E-08	0.05%	--
PCB-105	1.0E-02	1.2E-07	0.6%	--	1.5E-07	0.6%	--	2.3E-07	0.6%	--	3.4E-07	0.6%	--
PCB-114	8.8E-04	1.0E-08	0.05%	--	1.3E-08	0.05%	--	1.9E-08	0.05%	--	2.9E-08	0.05%	--
PCB-118	4.7E-02	5.3E-07	2.9%	--	6.9E-07	2.9%	--	1.0E-06	2.9%	--	1.5E-06	2.9%	--
PCB-123	8.2E-04	9.3E-09	0.05%	--	1.2E-08	0.05%	--	1.8E-08	0.05%	--	2.7E-08	0.05%	--
PCB-126	9.7E-05	3.7E-06	19.8%	--	4.8E-06	19.8%	--	7.0E-06	19.8%	--	1.1E-05	19.8%	--
PCB-156/157	3.7E-03	4.2E-08	0.2%	--	5.5E-08	0.2%	--	8.1E-08	0.2%	--	1.2E-07	0.2%	--
PCB-167	1.6E-03	1.8E-08	0.1%	--	2.3E-08	0.1%	--	3.4E-08	0.1%	--	5.1E-08	0.1%	--
PCB-169	1.1E-05	1.2E-07	0.7%	--	1.6E-07	0.7%	--	2.4E-07	0.7%	--	3.6E-07	0.7%	--
PCB-189	2.7E-04	3.0E-09	0.02%	--	4.0E-09	0.02%	--	5.8E-09	0.02%	--	8.8E-09	0.02%	--
KM TEQ PCB	1.2E-05	4.4E-06	--	24.0%	5.7E-06	--	24.0%	8.4E-06	--	24.0%	1.3E-05	--	24.0%
Non-DL PCBs													
Total Non-DL PCBs	3.2E-01	8.1E-07	4.4%	4.4%	1.1E-06	4.4%	4.4%	1.5E-06	4.4%	4.4%	2.3E-06	4.4%	4.4%
PAHs													
Benz(a)anthracene	2.8E-03	2.1E-09	0.01%	0.01%	1.9E-09	0.01%	0.01%	1.4E-09	0.00%	0.00%	3.5E-09	0.01%	0.01%
Benzo(a)pyrene	2.7E-03	2.0E-08	0.1%	0.1%	1.8E-08	0.1%	0.1%	1.3E-08	0.0%	0.0%	3.3E-08	0.1%	0.1%

TABLE H-3 CTE

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk	
COPC	EPC (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Benzo(b)fluoranthene	2.6E-03	2.0E-09	0.01%	0.01%	1.7E-09	0.01%	0.01%	1.3E-09	0.00%	0.00%	3.2E-09	0.01%	0.01%
Chrysene	3.7E-03	2.8E-11	0.0001%	0.0002%	2.4E-11	0.0001%	0.0001%	1.8E-11	0.0001%	0.0001%	4.5E-11	0.0001%	0.0001%
Dibenz(a,h)anthracene	2.7E-03	2.0E-08	0.1%	0.1%	1.7E-08	0.07%	0.07%	1.3E-08	0.04%	0.04%	3.3E-08	0.06%	0.06%
Indeno(1,2,3-c,d)-pyrene	2.1E-02	1.6E-08	0.09%	0.09%	1.4E-08	0.06%	0.06%	1.0E-08	0.03%	0.03%	2.7E-08	0.05%	0.05%
Pesticides & Organics													
2,4'-DDD	2.2E-04	1.3E-10	0.001%	0.001%	1.7E-10	0.001%	0.001%	2.5E-10	0.001%	0.001%	3.8E-10	0.001%	0.001%
2,4'-DDE	4.5E-04	3.8E-10	0.002%	0.002%	5.0E-10	0.002%	0.002%	7.3E-10	0.002%	0.002%	1.1E-09	0.002%	0.002%
2,4'-DDT	2.0E-04	1.7E-10	0.001%	0.001%	2.2E-10	0.001%	0.001%	3.2E-10	0.001%	0.001%	4.9E-10	0.001%	0.001%
4,4'-DDD	3.5E-02	2.1E-08	0.1%	0.1%	2.8E-08	0.1%	0.1%	4.0E-08	0.1%	0.1%	6.2E-08	0.1%	0.1%
4,4'-DDE	9.4E-02	8.1E-08	0.4%	0.4%	1.1E-07	0.4%	0.4%	1.5E-07	0.4%	0.4%	2.3E-07	0.4%	0.4%
4,4'-DDT	1.1E-03	9.3E-10	0.01%	0.01%	1.2E-09	0.01%	0.01%	1.8E-09	0.01%	0.01%	2.7E-09	0.01%	0.01%
Benzaldehyde	1.2E+00	1.2E-08	0.07%	0.07%	1.6E-08	0.07%	0.07%	2.3E-08	0.07%	0.07%	3.5E-08	0.07%	0.07%
Chlordane, alpha (cis)	2.0E-03	1.8E-09	0.01%	0.01%	2.3E-09	0.01%	0.01%	3.4E-09	0.01%	0.01%	5.2E-09	0.01%	0.01%
Chlordane, gamma (trans)	2.5E-04	2.2E-10	0.001%	0.001%	2.9E-10	0.001%	0.001%	4.3E-10	0.001%	0.001%	6.5E-10	0.001%	0.001%
Dieldrin	6.1E-03	2.5E-07	1.3%	1.4%	3.2E-07	1.3%	1.4%	4.7E-07	1.3%	1.4%	7.2E-07	1.3%	1.4%
Heptachlor epoxide, cis-	3.6E-03	8.2E-08	0.4%	0.5%	1.1E-07	0.4%	0.5%	1.6E-07	0.4%	0.5%	2.4E-07	0.4%	0.5%
Heptachlor epoxide, trans-	1.2E-03	2.6E-08	0.14%	0.14%	3.5E-08	0.14%	0.14%	5.0E-08	0.14%	0.15%	7.7E-08	0.14%	0.15%
Hexachlorobenzene	1.1E-03	4.4E-09	0.024%	0.024%	5.8E-09	0.024%	0.024%	8.5E-09	0.024%	0.024%	1.3E-08	0.024%	0.024%
Mirex	2.0E-04	9.1E-09	0.049%	0.050%	1.2E-08	0.049%	0.050%	1.7E-08	0.050%	0.050%	2.7E-08	0.049%	0.050%
Nonachlor, cis-	5.3E-03	4.7E-09	0.03%	0.03%	6.1E-09	0.03%	0.03%	8.9E-09	0.03%	0.03%	1.4E-08	0.03%	0.03%
Nonachlor, trans-	1.0E-02	9.2E-09	0.05%	0.05%	1.2E-08	0.05%	0.05%	1.8E-08	0.05%	0.05%	2.7E-08	0.05%	0.05%
Oxychlordane	1.6E-02	1.4E-08	0.07%	0.08%	1.8E-08	0.07%	0.08%	2.6E-08	0.07%	0.08%	4.0E-08	0.07%	0.08%
Pyridine	5.1E-01	--	--	--	--	--	--	--	--	--	--	--	--
Inorganics													
Aluminum	9.2E+00	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, organic	2.5E+00	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, inorganic	2.8E-01	1.1E-06	5.7%	5.8%	1.4E-06	5.8%	5.8%	2.0E-06	5.8%	5.8%	3.1E-06	5.8%	5.8%
Cadmium	4.0E-01	--	--	--	--	--	--	--	--	--	--	--	--
Chromium [as Cr(III)]	1.7E-01	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	8.9E-02	--	--	--	--	--	--	--	--	--	--	--	--
Copper	2.9E+01	--	--	--	--	--	--	--	--	--	--	--	--
Iron	3.9E+01	--	--	--	--	--	--	--	--	--	--	--	--
Lead	2.8E-01	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	9.9E+00	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	1.5E-01	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Mercury	1.7E-01	--	--	--	--	--	--	--	--	--	--	--	--

TABLE H-3 CTE

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)			Combined Adult/Child Angler/Sportsman (b)		
		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk		CTE	Contribution to Cumulative Risk	
COPC	EPC (mg/kg)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)	Potential Cancer Risk	Based on Total without KM TEQ (c)	Based on Total with KM TEQ (d)
Selenium	1.1E+00	--	--	--	--	--	--	--	--	--	--	--	--
Silver	7.8E-01	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	7.3E-02	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	4.7E+01	--	--	--	--	--	--	--	--	--	--	--	--
Total Cumulative Risk													
Total without KM TEQ (c)		1.8E-05	100.0%		2.4E-05	100.0%		3.5E-05	100.0%		5.4E-05	100.0%	
Total with KM TEQ (d)		1.8E-05		100.0%	2.4E-05		100.0%	3.5E-05		100.0%	5.3E-05		100.0%

Notes:

COPC - Chemical of Potential Concern.

CTE - Central Tendency Estimate

DLC - Dioxin-like congener.

EPC - Exposure Point Concentration.

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

NA - Not applicable - not a potential carcinogen.

Non-DL - Non dioxin-like

PAH - Polycyclic Aromatic Hydrocarbons.

PCB - Polycarbonated biphenyls

RME - Reasonable Maximum Exposure.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) For calculation of potential cancer risk, adult and young child risks are summed (yielding a total exposure duration of 12 yrs for CTE).

(c) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(d) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

TABLE H-4 CTE

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION NON-CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index	
COPC	EPC (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Dioxin-like Compounds										
2,3,7,8-TCDD	2.6E-05	2.2E+00	33.2%	–	1.4E+00	33.2%	–	1.4E+00	33.2%	–
1,2,3,7,8-PeCDD	6.9E-07	5.8E-02	0.9%	–	3.8E-02	0.9%	–	3.7E-02	0.9%	–
1,2,3,4,7,8-HxCDD	2.0E-07	1.7E-03	0.03%	–	1.1E-03	0.03%	–	1.1E-03	0.03%	–
1,2,3,6,7,8-HxCDD	5.9E-07	5.0E-03	0.1%	–	3.2E-03	0.1%	–	3.2E-03	0.1%	–
1,2,3,7,8,9-HxCDD	2.1E-07	1.8E-03	0.03%	–	1.2E-03	0.03%	–	1.1E-03	0.03%	–
1,2,3,4,6,7,8-HpCDD	6.8E-07	5.7E-04	0.01%	–	3.7E-04	0.01%	–	3.6E-04	0.01%	–
OCDD	2.0E-06	5.1E-05	0.001%	–	3.3E-05	0.001%	–	3.2E-05	0.001%	–
2,3,7,8-TCDF	9.7E-06	8.1E-02	1.2%	–	5.3E-02	1.2%	–	5.2E-02	1.2%	–
1,2,3,7,8-PeCDF	2.1E-06	5.3E-03	0.1%	–	3.5E-03	0.1%	–	3.4E-03	0.1%	–
2,3,4,7,8-PeCDF	4.9E-06	1.2E-01	1.8%	–	8.0E-02	1.8%	–	7.8E-02	1.8%	–
1,2,3,4,7,8-HxCDF	4.7E-06	3.9E-02	0.6%	–	2.6E-02	0.6%	–	2.5E-02	0.6%	–
1,2,3,6,7,8-HxCDF	1.4E-06	1.2E-02	0.2%	–	7.7E-03	0.2%	–	7.5E-03	0.2%	–
1,2,3,7,8,9-HxCDF	8.6E-08	7.2E-04	0.01%	–	4.7E-04	0.01%	–	4.6E-04	0.01%	–
2,3,4,6,7,8-HxCDF	3.7E-07	3.1E-03	0.0%	–	2.0E-03	0.0%	–	2.0E-03	0.0%	–
1,2,3,4,6,7,8-HpCDF	4.7E-06	3.9E-03	0.1%	–	2.6E-03	0.1%	–	2.5E-03	0.1%	–
1,2,3,4,7,8,9-HpCDF	6.7E-08	5.6E-05	0.001%	–	3.7E-05	0.001%	–	3.6E-05	0.001%	–
OCDF	2.4E-07	6.1E-06	0.0001%	–	4.0E-06	0.0001%	–	3.9E-06	0.0001%	–
KM TEQ DF	3.0E-05	2.5E+00	--	38.4%	1.7E+00	–	38.4%	1.6E+00	–	38.4%
PCB-77	2.0E-03	1.6E-02	0.2%	–	1.1E-02	0.2%	–	1.0E-02	0.2%	–
PCB-81	8.5E-05	2.1E-03	0.03%	–	1.4E-03	0.03%	–	1.4E-03	0.03%	–
PCB-105	1.0E-02	2.6E-02	0.4%	–	1.7E-02	0.4%	–	1.7E-02	0.4%	–
PCB-114	8.8E-04	2.2E-03	0.03%	–	1.5E-03	0.03%	–	1.4E-03	0.03%	–
PCB-118	4.7E-02	1.2E-01	1.8%	–	7.7E-02	1.8%	–	7.5E-02	1.8%	–
PCB-123	8.2E-04	2.1E-03	0.03%	–	1.3E-03	0.03%	–	1.3E-03	0.03%	–
PCB-126	9.7E-05	8.1E-01	12.2%	–	5.3E-01	12.2%	–	5.2E-01	12.2%	–
PCB-156/157	3.7E-03	9.4E-03	0.1%	–	6.1E-03	0.1%	–	6.0E-03	0.1%	–
PCB-167	1.6E-03	3.9E-03	0.1%	–	2.6E-03	0.1%	–	2.5E-03	0.1%	–
PCB-169	1.1E-05	2.7E-02	0.4%	–	1.8E-02	0.4%	–	1.8E-02	0.4%	–
PCB-189	2.7E-04	6.8E-04	0.01%	–	4.4E-04	0.01%	–	4.3E-04	0.01%	–

TABLE H-4 CTE

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION NON-CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index	
COPC	EPC (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
KM TEQ PCB	1.2E-05	9.7E-01	--	14.7%	6.4E-01	--	14.7%	6.2E-01	--	14.7%
Non-DL PCBs										
Total Non-DL PCBs	3.2E-01	9.4E-01	14.1%	14.2%	6.2E-01	14.1%	14.2%	6.0E-01	14.1%	14.2%
PAHs										
Benz(a)anthracene	2.8E-03	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	2.7E-03	5.3E-04	0.01%	0.01%	3.4E-04	0.01%	0.01%	3.4E-04	0.01%	0.01%
Benzo(b)fluoranthene	2.6E-03	--	--	--	--	--	--	--	--	--
Chrysene	3.7E-03	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	2.7E-03	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)-pyrene	2.1E-02	--	--	--	--	--	--	--	--	--
Pesticides & Organics										
2,4'-DDD	2.2E-04	4.3E-04	0.006%	0.006%	2.8E-04	0.006%	0.006%	2.7E-04	0.006%	0.006%
2,4'-DDE	4.5E-04	8.8E-05	0.001%	0.001%	5.7E-05	0.001%	0.001%	5.6E-05	0.001%	0.001%
2,4'-DDT	2.0E-04	2.3E-05	0.0003%	0.0004%	1.5E-05	0.0003%	0.0004%	1.5E-05	0.0003%	0.0004%
4,4'-DDD	3.5E-02	6.8E-02	1.0%	1.0%	4.5E-02	1.0%	1.0%	4.4E-02	1.0%	1.0%
4,4'-DDE	9.4E-02	1.8E-02	0.3%	0.3%	1.2E-02	0.3%	0.3%	1.2E-02	0.3%	0.3%
4,4'-DDT	1.1E-03	1.3E-04	0.002%	0.002%	8.3E-05	0.002%	0.002%	8.1E-05	0.002%	0.002%
Benzaldehyde	1.2E+00	7.0E-04	0.01%	0.01%	4.6E-04	0.01%	0.01%	4.5E-04	0.01%	0.01%
Chlordane, alpha (cis)	2.0E-03	2.4E-04	0.004%	0.004%	1.6E-04	0.004%	0.004%	1.5E-04	0.004%	0.004%
Chlordane, gamma (trans)	2.5E-04	3.0E-05	0.000%	0.000%	2.0E-05	0.000%	0.000%	1.9E-05	0.000%	0.000%
Dieldrin	6.1E-03	7.2E-03	0.1%	0.1%	4.7E-03	0.1%	0.1%	4.6E-03	0.1%	0.1%
Heptachlor epoxide, cis-	3.6E-03	1.6E-02	0.2%	0.2%	1.1E-02	0.2%	0.2%	1.0E-02	0.2%	0.2%
Heptachlor epoxide, trans-	1.2E-03	5.2E-03	0.1%	0.1%	3.4E-03	0.1%	0.1%	3.3E-03	0.1%	0.1%
Hexachlorobenzene	1.1E-03	8.1E-05	0.001%	0.001%	5.3E-05	0.001%	0.001%	5.2E-05	0.001%	0.001%
Mirex	2.0E-04	5.9E-05	0.001%	0.001%	3.9E-05	0.001%	0.001%	3.8E-05	0.001%	0.001%
Nonachlor, cis-	5.3E-03	3.1E-03	0.05%	0.05%	2.0E-03	0.05%	0.05%	2.0E-03	0.05%	0.05%
Nonachlor, trans-	1.0E-02	3.9E-02	0.6%	0.6%	2.6E-02	0.6%	0.6%	2.5E-02	0.6%	0.6%
Oxychlordane	1.6E-02	1.0E-02	0.2%	0.2%	6.7E-03	0.2%	0.2%	6.6E-03	0.2%	0.2%
Pyridine	5.1E-01	3.0E-02	0.4%	0.4%	1.9E-02	0.4%	0.4%	1.9E-02	0.4%	0.4%

TABLE H-4 CTE

ANGLER CRAB MUSCLE AND HEPATOPANCREAS DIET COPC PERCENT CONTRIBUTION NON-CANCER - CTE SCENARIO

BASELINE HUMAN HEALTH RISK ASSESSMENT

NEWARK BAY STUDY AREA

		Angler/Sportsman (Child 1 to < 7 yrs)			Angler/Sportsman (Adolescent 7 to < 19 yrs)			Angler/Sportsman (Adult)		
		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index		CTE	Contribution to Total Hazard Index	
COPC	EPC (mg/kg)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)	Noncancer Hazard	Based on Total without KM TEQ (b)	Based on Total with KM TEQ (c)
Inorganics										
Aluminum	9.2E+00	5.4E-04	0.01%	0.01%	3.5E-04	0.01%	0.01%	3.4E-04	0.01%	0.01%
Arsenic, organic	2.5E+00	7.4E-03	0.1%	0.1%	4.9E-03	0.1%	0.1%	4.7E-03	0.1%	0.1%
Arsenic, inorganic	2.8E-01	5.5E-02	0.8%	0.8%	3.6E-02	0.8%	0.8%	3.5E-02	0.8%	0.8%
Cadmium	4.0E-01	2.3E-02	0.4%	0.4%	1.5E-02	0.4%	0.4%	1.5E-02	0.4%	0.4%
Chromium [as Cr(III)]	1.7E-01	6.5E-06	0.0001%	0.0001%	4.3E-06	0.0001%	0.0001%	4.2E-06	0.0001%	0.0001%
Cobalt	8.9E-02	1.7E-02	0.3%	0.3%	1.1E-02	0.3%	0.3%	1.1E-02	0.3%	0.3%
Copper	2.9E+01	1.7E+00	25.3%	25.5%	1.1E+00	25.3%	25.5%	1.1E+00	25.3%	25.5%
Iron	3.9E+01	3.3E-03	0.05%	0.05%	2.1E-03	0.05%	0.05%	2.1E-03	0.05%	0.05%
Lead	2.8E-01	--	--	--	--	--	--	--	--	--
Manganese	9.9E+00	4.2E-03	0.06%	0.06%	2.7E-03	0.06%	0.06%	2.7E-03	0.06%	0.06%
Mercury	1.5E-01	3.0E-02	0.4%	0.5%	1.9E-02	0.4%	0.5%	1.9E-02	0.4%	0.5%
Methyl Mercury	1.7E-01	1.0E-01	1.5%	1.5%	6.6E-02	1.5%	1.5%	6.5E-02	1.5%	1.5%
Selenium	1.1E+00	1.3E-02	0.2%	0.2%	8.7E-03	0.2%	0.2%	8.5E-03	0.2%	0.2%
Silver	7.8E-01	9.2E-03	0.1%	0.1%	6.0E-03	0.1%	0.1%	5.9E-03	0.1%	0.1%
Vanadium	7.3E-02	8.6E-04	0.01%	0.01%	5.6E-04	0.01%	0.01%	5.5E-04	0.01%	0.01%
Zinc	4.7E+01	9.1E-03	0.1%	0.1%	6.0E-03	0.1%	0.1%	5.8E-03	0.1%	0.1%
Total Cumulative Risk										
Total without KM TEQ (b)		6.7E+00	100.0%		4.4E+00	100.0%		4.2E+00	100.0%	
Total with KM TEQ (c)		6.6E+00		100.0%	4.3E+00		100.0%	4.2E+00		100.0%

Notes:

COPC - Chemical of Potential Concern.

CTE - Central Tendency Estimate

DLC - Dioxin-like congener.

EPC - Exposure Point Concentration.

KM TEQ DF - Kaplan-Meier Toxicity Equivalence for dioxin/furans

KM TEQ PCB - Kaplan-Meier Toxicity Equivalence for PCBs

NA - Not applicable - not a potential carcinogen.

Non-DL - Non dioxin-like

PAH - Polycyclic Aromatic Hydrocarbons.

PCB - Polycarbonated biphenyls

RME - Reasonable Maximum Exposure.

TEQ - Toxicity Equivalence.

(a) RME Mixed fish diet EPC calculated based on equal fractions (20%) of American eel, bluefish, striped bass, summer flounder, white perch.

(b) Total cumulative risk and percent contribution based on all COPCs excluding KM TEQ DF and KM TEQ PCB.

(c) Total cumulative risk and percent contribution based on all COPCs and based on KM TEQ DF and KM TEQ PCB.

Appendix I

APPENDIX I
RAGS PART D TABLE 10 SERIES – RISK SUMMARY

RAGS D Table 10.1 RME	Risk and Hazard Summary – Adult Angler/Sportsman – RME Scenario
RAGS D Table 10.2 RME	Risk and Hazard Summary – Adolescent Angler/Sportsman – RME Scenario
RAGS D Table 10.3 RME	Risk and Hazard Summary – Child Angler/Sportsman – RME Scenario
RAGS D Table 10.A RME	Risk Summary – Combined Adult and Child Angler/Sportsman – RME Scenario
RAGS D Table 10.4 RME	Risk and Hazard Summary – Adult Worker – RME Scenario
RAGS D Table 10.5 RME	Risk and Hazard Summary – Adult Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 10.6 RME	Risk and Hazard Summary – Adolescent Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 10.7 RME	Risk and Hazard Summary – Child Wader and Swimmer – RME Scenario
RAGS D Table 10.B RME	Risk Summary – Combined Adult and Child Wader, Swimmer, and Boater – RME Scenario
RAGS D Table 10.1 CTE	Risk and Hazard Summary – Adult Angler/Sportsman – CTE Scenario
RAGS D Table 10.2 CTE	Risk and Hazard Summary – Adolescent Angler/Sportsman – CTE Scenario
RAGS D Table 10.3 CTE	Risk and Hazard Summary – Child Angler/Sportsman – CTE Scenario
RAGS D Table 10.A CTE	Risk Summary – Combined Adult and Child Angler/Sportsman – CTE Scenario
RAGS D Table 10.4 CTE	Risk and Hazard Summary – Adult Worker – CTE Scenario
RAGS D Table 10.5 CTE	Risk and Hazard Summary – Adult Wader, Swimmer, and Boater – CTE Scenario
RAGS D Table 10.6 CTE	Risk and Hazard Summary – Adolescent Wader, Swimmer, and Boater – CTE Scenario
RAGS D Table 10.7 CTE	Risk and Hazard Summary – Child Wader and Swimmer – CTE Scenario
RAGS D Table 10.B CTE	Risk Summary – Combined Adult and Child Wader, Swimmer, and Boater – CTE Scenario

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.5E-04	--	1.5E-04	Reproductive	5.1E+00	--	5.1E+00
			1,2,3,7,8-PeCDD	8.2E-06	--	8.2E-06	Reproductive	2.7E-01	--	2.7E-01
			1,2,3,4,7,8-HxCDD	3.8E-07	--	3.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	1.2E-06	--	1.2E-06	Reproductive	3.9E-02	--	3.9E-02
			1,2,3,7,8,9-HxCDD	2.8E-07	--	2.8E-07	Reproductive	9.2E-03	--	9.2E-03
			1,2,3,4,6,7,8-HpCDD	1.3E-07	--	1.3E-07	Reproductive	4.4E-03	--	4.4E-03
			OCDD	2.3E-08	--	2.3E-08	Reproductive	7.7E-04	--	7.7E-04
			2,3,7,8-TCDF	3.1E-06	--	3.1E-06	Reproductive	1.0E-01	--	1.0E-01
			1,2,3,7,8-PeCDF	8.5E-07	--	8.5E-07	Reproductive	2.8E-02	--	2.8E-02
			2,3,4,7,8-PeCDF	1.4E-05	--	1.4E-05	Reproductive	4.5E-01	--	4.5E-01
			1,2,3,4,7,8-HxCDF	2.0E-06	--	2.0E-06	Reproductive	6.8E-02	--	6.8E-02
			1,2,3,6,7,8-HxCDF	1.8E-06	--	1.8E-06	Reproductive	6.1E-02	--	6.1E-02
			1,2,3,7,8,9-HxCDF	2.1E-07	--	2.1E-07	Reproductive	7.0E-03	--	7.0E-03
			2,3,4,6,7,8-HxCDF	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,6,7,8-HpCDF	4.3E-07	--	4.3E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8,9-HpCDF	2.0E-08	--	2.0E-08	Reproductive	6.7E-04	--	6.7E-04
			OCDF	1.3E-09	--	1.3E-09	Reproductive	4.2E-05	--	4.2E-05
			KM TEQ DF	1.8E-04	--	1.8E-04	Reproductive	6.1E+00	--	6.1E+00
			PCB-77	9.0E-07	--	9.0E-07	Reproductive	3.0E-02	--	3.0E-02
			PCB-81	1.1E-07	--	1.1E-07	Reproductive	3.5E-03	--	3.5E-03
			PCB-105	4.2E-06	--	4.2E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	3.2E-07	--	3.2E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-118	1.7E-05	--	1.7E-05	Reproductive	5.7E-01	--	5.7E-01
			PCB-123	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-126	1.7E-04	--	1.7E-04	Reproductive	5.6E+00	--	5.6E+00
			PCB-156/157	1.6E-06	--	1.6E-06	Reproductive	5.2E-02	--	5.2E-02
			PCB-167	6.8E-07	--	6.8E-07	Reproductive	2.3E-02	--	2.3E-02
			PCB-169	2.1E-06	--	2.1E-06	Reproductive	7.0E-02	--	7.0E-02
			PCB-189	1.3E-07	--	1.3E-07	Reproductive	4.2E-03	--	4.2E-03
			KM TEQ PCB	2.1E-04	--	2.1E-04	Reproductive	7.1E+00	--	7.1E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.0E-04	--	1.0E-04	Whole Body	8.8E+00	--	8.8E+00
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	2.7E-06	--	2.7E-06	Liver	1.3E+00	--	1.3E+00
			4,4'-DDE	5.2E-06	--	5.2E-06	Liver	1.8E-01	--	1.8E-01

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Dieldrin	1.5E-05	--	1.5E-05	Liver	6.6E-02	--	6.6E-02
			Heptachlor epoxide, cis-	2.1E-06	--	2.1E-06	Liver	6.2E-02	--	6.2E-02
			Inorganics							
			Arsenic, inorganic	2.1E-05	--	2.1E-05	Skin, Blood	1.7E-01	--	1.7E-01
			Methyl Mercury	--	--	--	Neurological	1.6E+00	--	1.6E+00
			Total DLCs (excluding KM TEQs)			3.8E-04				1.3E+01
			Total DLCs (based on KM TEQs)			3.9E-04				1.3E+01
			Total PCDD/Fs (excluding KM TEQ)			1.9E-04				6.2E+00
			Total PCDD/Fs (based on KM TEQ)			1.8E-04				6.1E+00
			Total DL-PCBs (excluding KM TEQ)			1.9E-04				6.5E+00
			Total DL-PCBs (based on KM TEQ)			2.1E-04				7.1E+00
			Total Non-DL PCBs			1.0E-04				8.8E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.0E-04				1.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.1E-04				1.6E+01
			Total PAHs			2.4E-06				1.2E-02
			Total Organics			2.5E-05				1.6E+00
			Total Inorganics			2.1E-05				1.7E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					5.3E-04				2.5E+01
	Mixed Fish/All Species Total (based on KM TEQs)					5.4E-04				2.5E+01
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.6E-04	--	1.6E-04	Reproductive	5.4E+00	--	5.4E+00
			1,2,3,7,8-PeCDD	1.3E-05	--	1.3E-05	Reproductive	4.3E-01	--	4.3E-01
			1,2,3,4,7,8-HxCDD	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDD	3.5E-06	--	3.5E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDD	6.4E-07	--	6.4E-07	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,6,7,8-HpCDD	2.4E-07	--	2.4E-07	Reproductive	8.0E-03	--	8.0E-03
			OCDD	1.8E-08	--	1.8E-08	Reproductive	5.9E-04	--	5.9E-04
			2,3,7,8-TCDF	1.9E-07	--	1.9E-07	Reproductive	6.5E-03	--	6.5E-03
			1,2,3,7,8-PeCDF	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			2,3,4,7,8-PeCDF	2.1E-05	--	2.1E-05	Reproductive	7.1E-01	--	7.1E-01
			1,2,3,4,7,8-HxCDF	5.0E-06	--	5.0E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,6,7,8-HxCDF	3.7E-06	--	3.7E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDF	2.1E-07	--	2.1E-07	Reproductive	7.0E-03	--	7.0E-03
			2,3,4,6,7,8-HxCDF	6.7E-07	--	6.7E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,4,6,7,8-HpCDF	8.8E-07	--	8.8E-07	Reproductive	2.9E-02	--	2.9E-02
			1,2,3,4,7,8,9-HpCDF	3.0E-08	--	3.0E-08	Reproductive	1.0E-03	--	1.0E-03
			OCDF	2.0E-09	--	2.0E-09	Reproductive	6.7E-05	--	6.7E-05
			KM TEQ DF	2.1E-04	--	2.1E-04	Reproductive	6.9E+00	--	6.9E+00
			PCB-77	1.4E-07	--	1.4E-07	Reproductive	4.6E-03	--	4.6E-03
			PCB-81	6.5E-08	--	6.5E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-105	1.2E-05	--	1.2E-05	Reproductive	3.8E-01	--	3.8E-01
			PCB-114	7.3E-07	--	7.3E-07	Reproductive	2.4E-02	--	2.4E-02
			PCB-118	4.0E-05	--	4.0E-05	Reproductive	1.3E+00	--	1.3E+00

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			PCB-126	2.2E-04	--	2.2E-04	Reproductive	7.4E+00	--	7.4E+00
			PCB-156/157	3.4E-06	--	3.4E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-167	1.5E-06	--	1.5E-06	Reproductive	5.0E-02	--	5.0E-02
			PCB-169	2.4E-06	--	2.4E-06	Reproductive	8.1E-02	--	8.1E-02
			PCB-189	2.7E-07	--	2.7E-07	Reproductive	8.9E-03	--	8.9E-03
			KM TEQ PCB	4.0E-04	--	4.0E-04	Reproductive	1.3E+01	--	1.3E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-04	--	1.5E-04	Whole Body	1.3E+01	--	1.3E+01
			PAHs							
			Benz(a)anthracene	1.6E-07	--	1.6E-07	--	--	--	--
			Benzo(a)pyrene	1.6E-06	--	1.6E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	1.6E-07	--	1.6E-07	--	--	--	--
			Chrysene	1.6E-09	--	1.6E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.6E-06	--	1.6E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	--	1.6E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	3.9E-06	--	3.9E-06	Liver	1.9E+00	--	1.9E+00
			4,4'-DDE	1.2E-05	--	1.2E-05	Liver	4.0E-01	--	4.0E-01
			Dieldrin	2.8E-05	--	2.8E-05	Liver	1.2E-01	--	1.2E-01
			Heptachlor epoxide, cis-	4.2E-06	--	4.2E-06	Liver	1.2E-01	--	1.2E-01
			Nonachlor, trans-	1.1E-06	--	1.1E-06	Liver	7.3E-01	--	7.3E-01
			Inorganics							
			Arsenic, inorganic	2.2E-05	--	2.2E-05	Skin, Blood	1.7E-01	--	1.7E-01
			Methyl Mercury	--	--	--	Neurological	2.0E+00	--	2.0E+00
			Total DLCs (excluding KM TEQs)			5.0E-04				1.7E+01
			Total DLCs (based on KM TEQs)			6.1E-04				2.0E+01
			Total PCDD/Fs (excluding KM TEQ)			2.1E-04				7.1E+00
			Total PCDD/Fs (based on KM TEQ)			2.1E-04				6.9E+00
			Total DL-PCBs (excluding KM TEQ)			2.8E-04				9.4E+00
			Total DL-PCBs (based on KM TEQ)			4.0E-04				1.3E+01
			Total Non-DL PCBs			1.5E-04				1.3E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.3E-04				2.2E+01
			Total PCBs (DL & NDL; based on KM TEQ)			5.5E-04				2.6E+01
			Total PAHs			3.7E-06				1.9E-02
			Total Organics			4.9E-05				3.3E+00
			Total Inorganics			2.2E-05				2.2E+00
	American Eel Total (excluding KM TEQs)					7.2E-04				3.5E+01
	American Eel Total (based on KM TEQs)					8.3E-04				3.9E+01
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.8E-05	--	2.8E-05	Reproductive	9.2E-01	--	9.2E-01
			1,2,3,7,8-PeCDD	5.5E-06	--	5.5E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,4,7,8-HxCDD	1.3E-07	--	1.3E-07	Reproductive	4.5E-03	--	4.5E-03

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDD	3.7E-07	--	3.7E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,7,8,9-HxCDD	1.3E-07	--	1.3E-07	Reproductive	4.3E-03	--	4.3E-03
			1,2,3,4,6,7,8-HpCDD	2.6E-08	--	2.6E-08	Reproductive	8.7E-04	--	8.7E-04
			OCDD	1.4E-09	--	1.4E-09	Reproductive	4.8E-05	--	4.8E-05
			2,3,7,8-TCDF	7.1E-07	--	7.1E-07	Reproductive	2.4E-02	--	2.4E-02
			1,2,3,7,8-PeCDF	3.7E-07	--	3.7E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,7,8-PeCDF	4.2E-06	--	4.2E-06	Reproductive	1.4E-01	--	1.4E-01
			1,2,3,4,7,8-HxCDF	1.7E-07	--	1.7E-07	Reproductive	5.8E-03	--	5.8E-03
			1,2,3,6,7,8-HxCDF	4.2E-07	--	4.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,7,8,9-HxCDF	1.6E-07	--	1.6E-07	Reproductive	5.3E-03	--	5.3E-03
			2,3,4,6,7,8-HxCDF	1.0E-07	--	1.0E-07	Reproductive	3.5E-03	--	3.5E-03
			1,2,3,4,6,7,8-HpCDF	1.2E-07	--	1.2E-07	Reproductive	4.1E-03	--	4.1E-03
			1,2,3,4,7,8,9-HpCDF	1.4E-08	--	1.4E-08	Reproductive	4.7E-04	--	4.7E-04
			OCDF	9.5E-10	--	9.5E-10	Reproductive	3.2E-05	--	3.2E-05
			KM TEQ DF	3.7E-05	--	3.7E-05	Reproductive	1.2E+00	--	1.2E+00
			PCB-77	1.8E-07	--	1.8E-07	Reproductive	6.0E-03	--	6.0E-03
			PCB-81	2.0E-08	--	2.0E-08	Reproductive	6.6E-04	--	6.6E-04
			PCB-105	7.0E-07	--	7.0E-07	Reproductive	2.3E-02	--	2.3E-02
			PCB-114	4.2E-08	--	4.2E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	2.9E-06	--	2.9E-06	Reproductive	9.7E-02	--	9.7E-02
			PCB-123	4.1E-08	--	4.1E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-126	7.1E-05	--	7.1E-05	Reproductive	2.4E+00	--	2.4E+00
			PCB-156/157	3.2E-07	--	3.2E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-167	1.6E-07	--	1.6E-07	Reproductive	5.4E-03	--	5.4E-03
			PCB-169	9.9E-07	--	9.9E-07	Reproductive	3.3E-02	--	3.3E-02
			PCB-189	3.1E-08	--	3.1E-08	Reproductive	1.0E-03	--	1.0E-03
			KM TEQ PCB	7.5E-05	--	7.5E-05	Reproductive	2.5E+00	--	2.5E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.9E-05	--	2.9E-05	Whole Body	2.6E+00	--	2.6E+00
			Pesticides & Organics							
			4,4'-DDE	1.3E-06	--	1.3E-06	Liver	4.4E-02	--	4.4E-02
			Dieldrin	8.9E-06	--	8.9E-06	Liver	3.9E-02	--	3.9E-02
			Heptachlor epoxide, cis-	1.4E-06	--	1.4E-06	Liver	4.0E-02	--	4.0E-02
			Inorganics							
			Arsenic, inorganic	1.3E-05	--	1.3E-05	Skin, Blood	1.0E-01	--	1.0E-01
			Methyl Mercury	--	--	--	Neurological	1.7E+00	--	1.7E+00
			Total DLCs (excluding KM TEQs)			1.2E-04				3.9E+00
			Total DLCs (based on KM TEQs)			1.1E-04				3.7E+00
			Total PCDD/Fs (excluding KM TEQ)			4.0E-05				1.3E+00
			Total PCDD/Fs (based on KM TEQ)			3.7E-05				1.2E+00
			Total DL-PCBs (excluding KM TEQ)			7.7E-05				2.6E+00
			Total DL-PCBs (based on KM TEQ)			7.5E-05				2.5E+00
			Total Non-DL PCBs			2.9E-05				2.6E+00

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-04				5.1E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.0E-04				5.1E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			1.2E-05				1.2E-01
			Total Inorganics			1.3E-05				1.8E+00
	Bluefish Total (excluding KM TEQs)					1.7E-04				8.4E+00
	Bluefish Total (based on KM TEQs)					1.7E-04				8.2E+00
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-04	--	1.7E-04	Reproductive	5.8E+00	--	5.8E+00
			1,2,3,7,8-PeCDD	1.0E-05	--	1.0E-05	Reproductive	3.4E-01	--	3.4E-01
			1,2,3,4,7,8-HxCDD	3.8E-07	--	3.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	3.9E-07	--	3.9E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	1.6E-07	--	1.6E-07	Reproductive	5.3E-03	--	5.3E-03
			1,2,3,4,6,7,8-HpCDD	2.7E-07	--	2.7E-07	Reproductive	8.9E-03	--	8.9E-03
			OCDD	8.9E-08	--	8.9E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,7,8-TCDF	7.0E-06	--	7.0E-06	Reproductive	2.3E-01	--	2.3E-01
			1,2,3,7,8-PeCDF	1.2E-06	--	1.2E-06	Reproductive	4.1E-02	--	4.1E-02
			2,3,4,7,8-PeCDF	1.8E-05	--	1.8E-05	Reproductive	6.0E-01	--	6.0E-01
			1,2,3,4,7,8-HxCDF	7.7E-07	--	7.7E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDF	2.3E-06	--	2.3E-06	Reproductive	7.5E-02	--	7.5E-02
			1,2,3,7,8,9-HxCDF	2.2E-07	--	2.2E-07	Reproductive	7.5E-03	--	7.5E-03
			2,3,4,6,7,8-HxCDF	1.8E-07	--	1.8E-07	Reproductive	6.1E-03	--	6.1E-03
			1,2,3,4,6,7,8-HpCDF	6.1E-07	--	6.1E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8,9-HpCDF	2.0E-08	--	2.0E-08	Reproductive	6.7E-04	--	6.7E-04
			OCDF	1.1E-09	--	1.1E-09	Reproductive	3.5E-05	--	3.5E-05
			KM TEQ DF	2.2E-04	--	2.2E-04	Reproductive	7.2E+00	--	7.2E+00
			PCB-77	2.1E-06	--	2.1E-06	Reproductive	7.0E-02	--	7.0E-02
			PCB-81	1.6E-07	--	1.6E-07	Reproductive	5.2E-03	--	5.2E-03
			PCB-105	3.3E-06	--	3.3E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-114	4.0E-07	--	4.0E-07	Reproductive	1.3E-02	--	1.3E-02
			PCB-118	2.1E-05	--	2.1E-05	Reproductive	6.9E-01	--	6.9E-01
			PCB-123	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-126	3.5E-04	--	3.5E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-156/157	1.8E-06	--	1.8E-06	Reproductive	6.1E-02	--	6.1E-02
			PCB-167	8.1E-07	--	8.1E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-169	1.9E-06	--	1.9E-06	Reproductive	6.2E-02	--	6.2E-02
			PCB-189	1.6E-07	--	1.6E-07	Reproductive	5.3E-03	--	5.3E-03
			KM TEQ PCB	3.6E-04	--	3.6E-04	Reproductive	1.2E+01	--	1.2E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-04	--	1.8E-04	Whole Body	1.5E+01	--	1.5E+01
			Pesticides & Organics							
			4,4'-DDD	4.0E-06	--	4.0E-06	Liver	2.0E+00	--	2.0E+00
			4,4'-DDE	6.5E-06	--	6.5E-06	Liver	2.2E-01	--	2.2E-01

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Chlordane, alpha (cis)	1.5E-06	--	1.5E-06	Liver	3.1E-02	--	3.1E-02
			Dieldrin	2.1E-05	--	2.1E-05	Liver	9.3E-02	--	9.3E-02
			Heptachlor epoxide, cis-	2.1E-06	--	2.1E-06	Liver	6.1E-02	--	6.1E-02
			Nonachlor, trans-	1.1E-06	--	1.1E-06	Liver	7.4E-01	--	7.4E-01
			Inorganics							
			Arsenic, inorganic	2.4E-05	--	2.4E-05	Skin, Blood	1.8E-01	--	1.8E-01
			Methyl Mercury	--	--	--	Neurological	1.5E+00	--	1.5E+00
			Total DLCs (excluding KM TEQs)			6.0E-04				2.0E+01
			Total DLCs (based on KM TEQs)			5.8E-04				1.9E+01
			Total PCDD/Fs (excluding KM TEQ)			2.2E-04				7.2E+00
			Total PCDD/Fs (based on KM TEQ)			2.2E-04				7.2E+00
			Total DL-PCBs (excluding KM TEQ)			3.8E-04				1.3E+01
			Total DL-PCBs (based on KM TEQ)			3.6E-04				1.2E+01
			Total Non-DL PCBs			1.8E-04				1.5E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			5.6E-04				2.8E+01
			Total PCBs (DL & NDL; based on KM TEQ)			5.4E-04				2.7E+01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			3.7E-05				3.1E+00
			Total Inorganics			2.4E-05				1.6E+00
	Striped Bass Total (excluding KM TEQs)					8.3E-04				4.0E+01
	Striped Bass Total (based on KM TEQs)					8.1E-04				3.9E+01
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-04	--	1.0E-04	Reproductive	3.4E+00	--	3.4E+00
			1,2,3,7,8-PeCDD	4.5E-06	--	4.5E-06	Reproductive	1.5E-01	--	1.5E-01
			1,2,3,4,7,8-HxCDD	1.5E-07	--	1.5E-07	Reproductive	5.0E-03	--	5.0E-03
			1,2,3,6,7,8-HxCDD	4.7E-07	--	4.7E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,7,8,9-HxCDD	2.0E-07	--	2.0E-07	Reproductive	6.6E-03	--	6.6E-03
			1,2,3,4,6,7,8-HpCDD	5.7E-08	--	5.7E-08	Reproductive	1.9E-03	--	1.9E-03
			OCDD	2.5E-09	--	2.5E-09	Reproductive	8.3E-05	--	8.3E-05
			2,3,7,8-TCDF	5.0E-07	--	5.0E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	1.9E-07	--	1.9E-07	Reproductive	6.5E-03	--	6.5E-03
			2,3,4,7,8-PeCDF	5.0E-06	--	5.0E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06	Reproductive	4.0E-02	--	4.0E-02
			1,2,3,6,7,8-HxCDF	4.9E-07	--	4.9E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,7,8,9-HxCDF	2.6E-07	--	2.6E-07	Reproductive	8.8E-03	--	8.8E-03
			2,3,4,6,7,8-HxCDF	2.0E-07	--	2.0E-07	Reproductive	6.7E-03	--	6.7E-03
			1,2,3,4,6,7,8-HpCDF	9.2E-08	--	9.2E-08	Reproductive	3.1E-03	--	3.1E-03
			1,2,3,4,7,8,9-HpCDF	2.0E-08	--	2.0E-08	Reproductive	6.6E-04	--	6.6E-04
			OCDF	1.1E-09	--	1.1E-09	Reproductive	3.7E-05	--	3.7E-05
			KM TEQ DF	1.1E-04	--	1.1E-04	Reproductive	3.7E+00	--	3.7E+00
			PCB-77	2.6E-07	--	2.6E-07	Reproductive	8.8E-03	--	8.8E-03
			PCB-81	8.2E-08	--	8.2E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-105	1.5E-06	--	1.5E-06	Reproductive	5.1E-02	--	5.1E-02

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-114	1.3E-07	--	1.3E-07	Reproductive	4.4E-03	--	4.4E-03
			PCB-118	6.5E-06	--	6.5E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-123	9.9E-08	--	9.9E-08	Reproductive	3.3E-03	--	3.3E-03
			PCB-126	8.1E-05	--	8.1E-05	Reproductive	2.7E+00	--	2.7E+00
			PCB-156/157	6.4E-07	--	6.4E-07	Reproductive	2.1E-02	--	2.1E-02
			PCB-167	2.9E-07	--	2.9E-07	Reproductive	9.8E-03	--	9.8E-03
			PCB-169	1.1E-06	--	1.1E-06	Reproductive	3.8E-02	--	3.8E-02
			PCB-189	4.4E-08	--	4.4E-08	Reproductive	1.5E-03	--	1.5E-03
			KM TEQ PCB	8.9E-05	--	8.9E-05	Reproductive	3.0E+00	--	3.0E+00
			Non-DL PCBs							
			Total Non-DL PCBs	3.7E-05	--	3.7E-05	Whole Body	3.2E+00	--	3.2E+00
			Pesticides & Organics							
			4,4'-DDE	1.7E-06	--	1.7E-06	Liver	5.8E-02	--	5.8E-02
			Dieldrin	2.8E-06	--	2.8E-06	Liver	1.2E-02	--	1.2E-02
			Inorganics							
			Arsenic, inorganic	3.4E-05	--	3.4E-05	Skin, Blood	2.6E-01	--	2.6E-01
			Cobalt	--	--	--	Thyroid	1.2E+00	--	1.2E+00
			Total DLCs (excluding KM TEQs)			2.1E-04				6.9E+00
			Total DLCs (based on KM TEQs)			2.0E-04				6.7E+00
			Total PCDD/Fs (excluding KM TEQ)			1.1E-04				3.8E+00
			Total PCDD/Fs (based on KM TEQ)			1.1E-04				3.7E+00
			Total DL-PCBs (excluding KM TEQ)			9.1E-05				3.0E+00
			Total DL-PCBs (based on KM TEQ)			8.9E-05				3.0E+00
			Total Non-DL PCBs			3.7E-05				3.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-04				6.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.3E-04				6.2E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			4.5E-06				7.1E-02
			Total Inorganics			3.4E-05				1.5E+00
	Summer Flounder Total (excluding KM TEQs)					2.8E-04				1.2E+01
	Summer Flounder Total (based on KM TEQs)					2.8E-04				1.1E+01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.0E-04	--	3.0E-04	Reproductive	9.9E+00	--	9.9E+00
			1,2,3,7,8-PeCDD	7.8E-06	--	7.8E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDD	4.5E-07	--	4.5E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,6,7,8-HxCDD	1.1E-06	--	1.1E-06	Reproductive	3.7E-02	--	3.7E-02
			1,2,3,7,8,9-HxCDD	2.6E-07	--	2.6E-07	Reproductive	8.6E-03	--	8.6E-03
			1,2,3,4,6,7,8-HpCDD	6.9E-08	--	6.9E-08	Reproductive	2.3E-03	--	2.3E-03
			OCDD	4.7E-09	--	4.7E-09	Reproductive	1.6E-04	--	1.6E-04
			2,3,7,8-TCDF	7.2E-06	--	7.2E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,7,8-PeCDF	1.7E-06	--	1.7E-06	Reproductive	5.6E-02	--	5.6E-02
			2,3,4,7,8-PeCDF	1.9E-05	--	1.9E-05	Reproductive	6.3E-01	--	6.3E-01
			1,2,3,4,7,8-HxCDF	3.0E-06	--	3.0E-06	Reproductive	1.0E-01	--	1.0E-01

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDF	2.2E-06	--	2.2E-06	Reproductive	7.3E-02	--	7.3E-02
			1,2,3,7,8,9-HxCDF	1.9E-07	--	1.9E-07	Reproductive	6.5E-03	--	6.5E-03
			2,3,4,6,7,8-HxCDF	4.0E-07	--	4.0E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,6,7,8-HpCDF	4.4E-07	--	4.4E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,7,8,9-HpCDF	1.6E-08	--	1.6E-08	Reproductive	5.4E-04	--	5.4E-04
			OCDF	1.2E-09	--	1.2E-09	Reproductive	4.0E-05	--	4.0E-05
			KM TEQ DF	3.4E-04	--	3.4E-04	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	1.8E-06	--	1.8E-06	Reproductive	6.0E-02	--	6.0E-02
			PCB-81	2.0E-07	--	2.0E-07	Reproductive	6.8E-03	--	6.8E-03
			PCB-105	4.1E-06	--	4.1E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-118	1.6E-05	--	1.6E-05	Reproductive	5.2E-01	--	5.2E-01
			PCB-123	3.1E-07	--	3.1E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-126	1.1E-04	--	1.1E-04	Reproductive	3.7E+00	--	3.7E+00
			PCB-156/157	1.6E-06	--	1.6E-06	Reproductive	5.3E-02	--	5.3E-02
			PCB-167	6.5E-07	--	6.5E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-169	4.1E-06	--	4.1E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-189	1.2E-07	--	1.2E-07	Reproductive	4.2E-03	--	4.2E-03
			KM TEQ PCB	1.4E-04	--	1.4E-04	Reproductive	4.6E+00	--	4.6E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.2E-04	--	1.2E-04	Whole Body	1.0E+01	--	1.0E+01
			PAHs							
			Benz(a)anthracene	1.6E-07	--	1.6E-07	--	--	--	--
			Benzo(a)pyrene	1.6E-06	--	1.6E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	1.6E-07	--	1.6E-07	--	--	--	--
			Chrysene	1.6E-09	--	1.6E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.6E-06	--	1.6E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	--	1.6E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	1.5E-06	--	1.5E-06	Liver	7.4E-01	--	7.4E-01
			4,4'-DDD	4.6E-06	--	4.6E-06	Liver	2.2E+00	--	2.2E+00
			4,4'-DDE	5.0E-06	--	5.0E-06	Liver	1.7E-01	--	1.7E-01
			4,4'-DDT	1.2E-06	--	1.2E-06	Liver	2.4E-02	--	2.4E-02
			Chlordane, alpha (cis)	1.0E-06	--	1.0E-06	Liver	2.1E-02	--	2.1E-02
			Dieldrin	1.4E-05	--	1.4E-05	Liver	6.3E-02	--	6.3E-02
			Heptachlor epoxide, cis-	2.4E-06	--	2.4E-06	Liver	7.0E-02	--	7.0E-02
			Inorganics							
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	1.1E-01	--	1.1E-01
			Methyl Mercury	--	--	--	Neurological	1.8E+00	--	1.8E+00
			Total DLCs (excluding KM TEQs)			4.8E-04				1.6E+01
			Total DLCs (based on KM TEQs)			4.7E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			3.4E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			3.4E-04				1.1E+01

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total DL-PCBs (excluding KM TEQ)			1.4E-04				4.7E+00
			Total DL-PCBs (based on KM TEQ)			1.4E-04				4.6E+00
			Total Non-DL PCBs			1.2E-04				1.0E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-04				1.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-04				1.5E+01
			Total PAHs			3.7E-06				1.9E-02
			Total Organics			3.0E-05				3.3E+00
			Total Inorganics			1.4E-05				1.9E+00
	White Perch Total (excluding KM TEQs)					6.5E-04				3.2E+01
	White Perch Total (based on KM TEQs)					6.4E-04				3.1E+01
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.9E-04	--	2.9E-04	Reproductive	9.8E+00	--	9.8E+00
			1,2,3,7,8-PeCDD	7.7E-06	--	7.7E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDD	2.2E-07	--	2.2E-07	Reproductive	7.5E-03	--	7.5E-03
			1,2,3,6,7,8-HxCDD	6.6E-07	--	6.6E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,7,8,9-HxCDD	2.4E-07	--	2.4E-07	Reproductive	7.8E-03	--	7.8E-03
			1,2,3,4,6,7,8-HpCDD	7.6E-08	--	7.6E-08	Reproductive	2.5E-03	--	2.5E-03
			OCDD	6.7E-09	--	6.7E-09	Reproductive	2.2E-04	--	2.2E-04
			2,3,7,8-TCDF	1.1E-05	--	1.1E-05	Reproductive	3.6E-01	--	3.6E-01
			1,2,3,7,8-PeCDF	7.0E-07	--	7.0E-07	Reproductive	2.3E-02	--	2.3E-02
			2,3,4,7,8-PeCDF	1.6E-05	--	1.6E-05	Reproductive	5.5E-01	--	5.5E-01
			1,2,3,4,7,8-HxCDF	5.3E-06	--	5.3E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,6,7,8-HxCDF	1.6E-06	--	1.6E-06	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,7,8,9-HxCDF	9.6E-08	--	9.6E-08	Reproductive	3.2E-03	--	3.2E-03
			2,3,4,6,7,8-HxCDF	4.1E-07	--	4.1E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDF	5.2E-07	--	5.2E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,4,7,8,9-HpCDF	7.4E-09	--	7.4E-09	Reproductive	2.5E-04	--	2.5E-04
			OCDF	8.2E-10	--	8.2E-10	Reproductive	2.7E-05	--	2.7E-05
			KM TEQ DF	3.4E-04	--	3.4E-04	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	2.2E-06	--	2.2E-06	Reproductive	7.3E-02	--	7.3E-02
			PCB-81	2.9E-07	--	2.9E-07	Reproductive	9.5E-03	--	9.5E-03
			PCB-105	3.5E-06	--	3.5E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-114	3.0E-07	--	3.0E-07	Reproductive	9.9E-03	--	9.9E-03
			PCB-118	1.6E-05	--	1.6E-05	Reproductive	5.2E-01	--	5.2E-01
			PCB-123	2.7E-07	--	2.7E-07	Reproductive	9.2E-03	--	9.2E-03
			PCB-126	1.1E-04	--	1.1E-04	Reproductive	3.6E+00	--	3.6E+00
			PCB-156/157	1.3E-06	--	1.3E-06	Reproductive	4.2E-02	--	4.2E-02
			PCB-167	5.2E-07	--	5.2E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-169	3.7E-06	--	3.7E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-189	9.0E-08	--	9.0E-08	Reproductive	3.0E-03	--	3.0E-03
			KM TEQ PCB	1.3E-04	--	1.3E-04	Reproductive	4.3E+00	--	4.3E+00
			Non-DL PCBs							
			Total Non-DL PCBs	4.8E-05	--	4.8E-05	Whole Body	4.2E+00	--	4.2E+00

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Pesticides & Organics							
			4,4'-DDE	2.4E-06	--	2.4E-06	Liver	8.2E-02	--	8.2E-02
			Dieldrin	7.3E-06	--	7.3E-06	Liver	3.2E-02	--	3.2E-02
			Heptachlor epoxide, cis-	2.4E-06	--	2.4E-06	Liver	7.2E-02	--	7.2E-02
			Inorganics							
			Arsenic, inorganic	3.1E-05	--	3.1E-05	Skin, Blood	2.4E-01	--	2.4E-01
			Total DLCs (excluding KM TEQs)			4.7E-04				1.6E+01
			Total DLCs (based on KM TEQs)			4.7E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			3.4E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			3.4E-04				1.1E+01
			Total DL-PCBs (excluding KM TEQ)			1.4E-04				4.5E+00
			Total DL-PCBs (based on KM TEQ)			1.3E-04				4.3E+00
			Total Non-DL PCBs			4.8E-05				4.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-04				8.7E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-04				8.5E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			1.2E-05				1.9E-01
			Total Inorganics			3.1E-05				2.4E-01
	Crab (H+M) Total (excluding KM TEQs)					5.7E-04				2.0E+01
	Crab (H+M) Total (based on KM TEQs)					5.6E-04				2.0E+01
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.3E-05	--	4.3E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	2.8E-06	--	2.8E-06	Reproductive	9.3E-02	--	9.3E-02
			1,2,3,4,7,8-HxCDD	3.1E-08	--	3.1E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,6,7,8-HxCDD	7.8E-08	--	7.8E-08	Reproductive	2.6E-03	--	2.6E-03
			1,2,3,7,8,9-HxCDD	4.0E-08	--	4.0E-08	Reproductive	1.3E-03	--	1.3E-03
			1,2,3,4,6,7,8-HpCDD	1.5E-08	--	1.5E-08	Reproductive	5.0E-04	--	5.0E-04
			OCDD	1.6E-09	--	1.6E-09	Reproductive	5.2E-05	--	5.2E-05
			2,3,7,8-TCDF	1.3E-06	--	1.3E-06	Reproductive	4.3E-02	--	4.3E-02
			1,2,3,7,8-PeCDF	9.1E-08	--	9.1E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,4,7,8-PeCDF	1.6E-06	--	1.6E-06	Reproductive	5.4E-02	--	5.4E-02
			1,2,3,4,7,8-HxCDF	8.0E-07	--	8.0E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDF	2.0E-07	--	2.0E-07	Reproductive	6.7E-03	--	6.7E-03
			1,2,3,7,8,9-HxCDF	7.9E-08	--	7.9E-08	Reproductive	2.6E-03	--	2.6E-03
			2,3,4,6,7,8-HxCDF	5.2E-08	--	5.2E-08	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,4,6,7,8-HpCDF	4.4E-08	--	4.4E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	3.8E-09	--	3.8E-09	Reproductive	1.3E-04	--	1.3E-04
			OCDF	3.1E-10	--	3.1E-10	Reproductive	1.0E-05	--	1.0E-05
			KM TEQ DF	4.9E-05	--	4.9E-05	Reproductive	1.6E+00	--	1.6E+00
			PCB-77	2.2E-07	--	2.2E-07	Reproductive	7.4E-03	--	7.4E-03
			PCB-81	3.0E-08	--	3.0E-08	Reproductive	1.0E-03	--	1.0E-03
			PCB-105	3.6E-07	--	3.6E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-114	3.1E-08	--	3.1E-08	Reproductive	1.0E-03	--	1.0E-03

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-118	1.3E-06	--	1.3E-06	Reproductive	4.4E-02	--	4.4E-02
			PCB-123	2.6E-08	--	2.6E-08	Reproductive	8.8E-04	--	8.8E-04
			PCB-126	9.5E-06	--	9.5E-06	Reproductive	3.2E-01	--	3.2E-01
			PCB-156/157	1.1E-07	--	1.1E-07	Reproductive	3.6E-03	--	3.6E-03
			PCB-167	4.1E-08	--	4.1E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-169	3.8E-06	--	3.8E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	5.3E-09	--	5.3E-09	Reproductive	1.8E-04	--	1.8E-04
			KM TEQ PCB	1.1E-05	--	1.1E-05	Reproductive	3.8E-01	--	3.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	4.1E-06	--	4.1E-06	Whole Body	3.6E-01	--	3.6E-01
			Pesticides & Organics							
			Dieldrin	1.6E-06	--	1.6E-06	Liver	7.1E-03	--	7.1E-03
			Arsenic, inorganic	2.9E-05	--	2.9E-05	Skin, Blood	2.3E-01	--	2.3E-01
			Total DLCs (excluding KM TEQs)			6.6E-05				2.2E+00
			Total DLCs (based on KM TEQs)			6.1E-05				2.0E+00
			Total PCDD/Fs (excluding KM TEQ)			5.0E-05				1.7E+00
			Total PCDD/Fs (based on KM TEQ)			4.9E-05				1.6E+00
			Total DL-PCBs (excluding KM TEQ)			1.5E-05				5.2E-01
			Total DL-PCBs (based on KM TEQ)			1.1E-05				3.8E-01
			Total Non-DL PCBs			4.1E-06				3.6E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.0E-05				8.8E-01
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-05				7.4E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			1.6E-06				7.1E-03
			Total Inorganics			2.9E-05				2.3E-01
	Crab (Muscle) Total (excluding KM TEQs)					1.0E-04				2.8E+00
	Crab (Muscle) Total (based on KM TEQs)					9.6E-05				2.6E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-03	--	1.0E-03	Reproductive	3.4E+01	--	3.4E+01
			1,2,3,7,8-PeCDD	2.4E-05	--	2.4E-05	Reproductive	8.1E-01	--	8.1E-01
			1,2,3,4,7,8-HxCDD	7.8E-07	--	7.8E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDD	2.3E-06	--	2.3E-06	Reproductive	7.8E-02	--	7.8E-02
			1,2,3,7,8,9-HxCDD	8.0E-07	--	8.0E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,4,6,7,8-HpCDD	2.5E-07	--	2.5E-07	Reproductive	8.4E-03	--	8.4E-03
			OCDD	2.2E-08	--	2.2E-08	Reproductive	7.2E-04	--	7.2E-04
			2,3,7,8-TCDF	3.8E-05	--	3.8E-05	Reproductive	1.3E+00	--	1.3E+00
			1,2,3,7,8-PeCDF	2.5E-06	--	2.5E-06	Reproductive	8.3E-02	--	8.3E-02
			2,3,4,7,8-PeCDF	5.9E-05	--	5.9E-05	Reproductive	2.0E+00	--	2.0E+00
			1,2,3,4,7,8-HxCDF	1.9E-05	--	1.9E-05	Reproductive	6.2E-01	--	6.2E-01
			1,2,3,6,7,8-HxCDF	5.6E-06	--	5.6E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,7,8,9-HxCDF	1.5E-07	--	1.5E-07	Reproductive	5.1E-03	--	5.1E-03
			2,3,4,6,7,8-HxCDF	1.5E-06	--	1.5E-06	Reproductive	4.8E-02	--	4.8E-02
			1,2,3,4,6,7,8-HpCDF	1.9E-06	--	1.9E-06	Reproductive	6.3E-02	--	6.3E-02

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8,9-HpCDF	1.5E-08	--	1.5E-08	Reproductive	5.1E-04	--	5.1E-04
			OCDF	2.8E-09	--	2.8E-09	Reproductive	9.4E-05	--	9.4E-05
			KM TEQ DF	1.2E-03	--	1.2E-03	Reproductive	3.9E+01	--	3.9E+01
			PCB-77	7.7E-06	--	7.7E-06	Reproductive	2.6E-01	--	2.6E-01
			PCB-81	1.0E-06	--	1.0E-06	Reproductive	3.4E-02	--	3.4E-02
			PCB-105	1.2E-05	--	1.2E-05	Reproductive	4.2E-01	--	4.2E-01
			PCB-114	1.1E-06	--	1.1E-06	Reproductive	3.5E-02	--	3.5E-02
			PCB-118	5.7E-05	--	5.7E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-123	9.9E-07	--	9.9E-07	Reproductive	3.3E-02	--	3.3E-02
			PCB-126	3.9E-04	--	3.9E-04	Reproductive	1.3E+01	--	1.3E+01
			PCB-156/157	4.5E-06	--	4.5E-06	Reproductive	1.5E-01	--	1.5E-01
			PCB-167	1.9E-06	--	1.9E-06	Reproductive	6.4E-02	--	6.4E-02
			PCB-169	1.2E-05	--	1.2E-05	Reproductive	4.1E-01	--	4.1E-01
			PCB-189	3.3E-07	--	3.3E-07	Reproductive	1.1E-02	--	1.1E-02
			KM TEQ PCB	4.7E-04	--	4.7E-04	Reproductive	1.6E+01	--	1.6E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-04	--	1.7E-04	Whole Body	1.5E+01	--	1.5E+01
			Pesticides & Organics							
			4,4'-DDD	2.2E-06	--	2.2E-06	Liver	1.1E+00	--	1.1E+00
			4,4'-DDE	8.2E-06	--	8.2E-06	Liver	2.8E-01	--	2.8E-01
			Dieldrin	2.4E-05	--	2.4E-05	Liver	1.1E-01	--	1.1E-01
			Heptachlor epoxide, cis-	8.9E-06	--	8.9E-06	Liver	2.6E-01	--	2.6E-01
			Heptachlor epoxide, trans-	2.6E-06	--	2.6E-06	Liver	7.7E-02	--	7.7E-02
			Oxychlordane	1.4E-06	--	1.4E-06	Liver	1.6E-01	--	1.6E-01
			Inorganics							
			Arsenic, inorganic	3.9E-05	--	3.9E-05	Skin, Blood	3.0E-01	--	3.0E-01
			Total DLCs (excluding KM TEQs)			1.7E-03				5.6E+01
			Total DLCs (based on KM TEQs)			1.6E-03				5.5E+01
			Total PCDD/Fs (excluding KM TEQ)			1.2E-03				3.9E+01
			Total PCDD/Fs (based on KM TEQ)			1.2E-03				3.9E+01
			Total DL-PCBs (excluding KM TEQ)			4.9E-04				1.6E+01
			Total DL-PCBs (based on KM TEQ)			4.7E-04				1.6E+01
			Total Non-DL PCBs			1.7E-04				1.5E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			6.7E-04				3.2E+01
			Total PCBs (DL & NDL; based on KM TEQ)			6.4E-04				3.1E+01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			4.7E-05				1.9E+00
			Total Inorganics			3.9E-05				3.0E-01
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.9E-03				7.3E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.9E-03				7.2E+01
Sediment	Sediment	Angler - Fishing Sediment	**Inorganics**							
			Arsenic, inorganic	6.5E-07	1.3E-06	1.9E-06	Skin, Blood	5.1E-03	9.8E-03	1.5E-02
	Fishing - Sediment Total (excluding KM TEQs)					1.9E-06				1.5E-02

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
	Fishing - Sediment Total (based on KM TEQs)					1.9E-06				1.5E-02
Surface Water	Surface Water	Angler - Fishing Surface Water	--	--	--	--	--	--	--	--
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						5.3E-04				2.5E+01
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						5.5E-04				2.5E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						7.2E-04				3.5E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						8.3E-04				3.9E+01
Sediment	Sediment	Angler - Crabbing Sediment	**Inorganics** Arsenic, inorganic	4.1E-07	7.9E-07	1.2E-06	Skin, Blood	3.2E-03	6.2E-03	9.3E-03
	Crabbing - Sediment Total (excluding KM TEQs)					1.2E-06				9.3E-03
	Crabbing - Sediment Total (based on KM TEQs)					1.2E-06				9.3E-03
Surface Water	Surface Water	Angler - Crabbing Surface Water	--	--	--	--	--	--	--	--
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						5.7E-04				2.0E+01
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						5.6E-04				2.0E+01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						1.0E-04				2.8E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						9.7E-05				2.6E+00

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.8E-01		Blood HI =		1.8E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.2E-02		Developmental HI =		1.2E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.6E+00		Liver HI =		1.6E+00
				Neurological HI =		1.6E+00		Neurological HI =		1.6E+00
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.3E+01		Reproductive HI =		1.3E+01
				Skin HI =		1.8E-01		Skin HI =		1.8E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		8.8E+00		Whole Body HI =		8.8E+00
			American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-01		Blood HI =		1.9E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.9E-02		Developmental HI =		1.9E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		3.3E+00		Liver HI =		3.3E+00
				Neurological HI =		2.0E+00		Neurological HI =		2.0E+00
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.7E+01		Reproductive HI =		2.0E+01
				Skin HI =		1.9E-01		Skin HI =		1.9E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.3E+01		Whole Body HI =		1.3E+01

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total			
			(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.5E-01		Blood HI =		2.5E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.9E-01		Liver HI =		1.9E-01
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.6E+01		Reproductive HI =		1.6E+01
				Skin HI =		2.5E-01		Skin HI =		2.5E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		4.2E+00		Whole Body HI =		4.2E+00
			Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total				Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total			
			(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.4E-01		Blood HI =		2.4E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		7.1E-03		Liver HI =		7.1E-03
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.2E+00		Reproductive HI =		2.0E+00
				Skin HI =		2.4E-01		Skin HI =		2.4E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		3.6E-01		Whole Body HI =		3.6E-01

TABLE 10.1.RME
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.4E-05	--	9.4E-05	Reproductive	5.2E+00	--	5.2E+00
			1,2,3,7,8-PeCDD	5.0E-06	--	5.0E-06	Reproductive	2.8E-01	--	2.8E-01
			1,2,3,4,7,8-HxCDD	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	7.2E-07	--	7.2E-07	Reproductive	4.0E-02	--	4.0E-02
			1,2,3,7,8,9-HxCDD	1.7E-07	--	1.7E-07	Reproductive	9.5E-03	--	9.5E-03
			1,2,3,4,6,7,8-HpCDD	8.1E-08	--	8.1E-08	Reproductive	4.5E-03	--	4.5E-03
			OCDD	1.4E-08	--	1.4E-08	Reproductive	7.9E-04	--	7.9E-04
			2,3,7,8-TCDF	1.9E-06	--	1.9E-06	Reproductive	1.1E-01	--	1.1E-01
			1,2,3,7,8-PeCDF	5.2E-07	--	5.2E-07	Reproductive	2.9E-02	--	2.9E-02
			2,3,4,7,8-PeCDF	8.3E-06	--	8.3E-06	Reproductive	4.6E-01	--	4.6E-01
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06	Reproductive	6.9E-02	--	6.9E-02
			1,2,3,6,7,8-HxCDF	1.1E-06	--	1.1E-06	Reproductive	6.2E-02	--	6.2E-02
			1,2,3,7,8,9-HxCDF	1.3E-07	--	1.3E-07	Reproductive	7.2E-03	--	7.2E-03
			2,3,4,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,6,7,8-HpCDF	2.6E-07	--	2.6E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,7,8,9-HpCDF	1.2E-08	--	1.2E-08	Reproductive	6.9E-04	--	6.9E-04
			OCDF	7.8E-10	--	7.8E-10	Reproductive	4.3E-05	--	4.3E-05
			KM TEQ DF	1.1E-04	--	1.1E-04	Reproductive	6.2E+00	--	6.2E+00
			PCB-77	5.6E-07	--	5.6E-07	Reproductive	3.1E-02	--	3.1E-02
			PCB-81	6.5E-08	--	6.5E-08	Reproductive	3.6E-03	--	3.6E-03
			PCB-105	2.6E-06	--	2.6E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	2.0E-07	--	2.0E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-118	1.0E-05	--	1.0E-05	Reproductive	5.8E-01	--	5.8E-01
			PCB-123	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-126	1.0E-04	--	1.0E-04	Reproductive	5.7E+00	--	5.7E+00
			PCB-156/157	9.6E-07	--	9.6E-07	Reproductive	5.3E-02	--	5.3E-02
			PCB-167	4.2E-07	--	4.2E-07	Reproductive	2.3E-02	--	2.3E-02
			PCB-169	1.3E-06	--	1.3E-06	Reproductive	7.2E-02	--	7.2E-02
			PCB-189	7.7E-08	--	7.7E-08	Reproductive	4.3E-03	--	4.3E-03
			KM TEQ PCB	1.3E-04	--	1.3E-04	Reproductive	7.3E+00	--	7.3E+00
			Non-DL PCBs							
			Total Non-DL PCBs	6.2E-05	--	6.2E-05	Whole Body	9.1E+00	--	9.1E+00
			PAHs							
			Benz(a)anthracene	1.6E-07	--	1.6E-07	--	--	--	--
			Benzo(a)pyrene	1.6E-06	--	1.6E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.6E-07	--	1.6E-07	--	--	--	--
			Chrysene	1.6E-09	--	1.6E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.6E-06	--	1.6E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.6E-07	--	1.6E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	1.6E-06	--	1.6E-06	Liver	1.3E+00	--	1.3E+00
			4,4'-DDE	3.2E-06	--	3.2E-06	Liver	1.8E-01	--	1.8E-01
			Dieldrin	9.3E-06	--	9.3E-06	Liver	6.8E-02	--	6.8E-02
			Heptachlor epoxide, cis-	1.3E-06	--	1.3E-06	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Arsenic, inorganic	1.3E-05	--	1.3E-05	Skin, Blood	1.7E-01	--	1.7E-01
			Methyl Mercury	--	--	--	Neurological	1.6E+00	--	1.6E+00
			Total DLCs (excluding KM TEQs)			2.3E-04				1.3E+01
			Total DLCs (based on KM TEQs)			2.4E-04				1.3E+01
			Total PCDD/Fs (excluding KM TEQ)			1.1E-04				6.3E+00

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			1.1E-04				6.2E+00
			Total DL-PCBs (excluding KM TEQ)			1.2E-04				6.6E+00
			Total DL-PCBs (based on KM TEQ)			1.3E-04				7.3E+00
			Total Non-DL PCBs			6.2E-05				9.1E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.8E-04				1.6E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.9E-04				1.6E+01
			Total PAHs			3.7E-06				1.2E-02
			Total Organics			1.5E-05				1.6E+00
			Total Inorganics			1.3E-05				1.8E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					3.3E-04				2.5E+01
	Mixed Fish/All Species Total (based on KM TEQs)					3.4E-04				2.6E+01
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.0E-04	--	1.0E-04	Reproductive	5.6E+00	--	5.6E+00
			1,2,3,7,8-PeCDD	8.0E-06	--	8.0E-06	Reproductive	4.4E-01	--	4.4E-01
			1,2,3,4,7,8-HxCDD	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDD	2.2E-06	--	2.2E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDD	3.9E-07	--	3.9E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,4,6,7,8-HpCDD	1.5E-07	--	1.5E-07	Reproductive	8.2E-03	--	8.2E-03
			OCDD	1.1E-08	--	1.1E-08	Reproductive	6.0E-04	--	6.0E-04
			2,3,7,8-TCDF	1.2E-07	--	1.2E-07	Reproductive	6.6E-03	--	6.6E-03
			1,2,3,7,8-PeCDF	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			2,3,4,7,8-PeCDF	1.3E-05	--	1.3E-05	Reproductive	7.3E-01	--	7.3E-01
			1,2,3,4,7,8-HxCDF	3.1E-06	--	3.1E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,6,7,8-HxCDF	2.3E-06	--	2.3E-06	Reproductive	1.3E-01	--	1.3E-01
			1,2,3,7,8,9-HxCDF	1.3E-07	--	1.3E-07	Reproductive	7.2E-03	--	7.2E-03
			2,3,4,6,7,8-HxCDF	4.1E-07	--	4.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,4,6,7,8-HpCDF	5.4E-07	--	5.4E-07	Reproductive	3.0E-02	--	3.0E-02
			1,2,3,4,7,8,9-HpCDF	1.8E-08	--	1.8E-08	Reproductive	1.0E-03	--	1.0E-03
			OCDF	1.2E-09	--	1.2E-09	Reproductive	6.9E-05	--	6.9E-05
			KM TEQ DF	1.3E-04	--	1.3E-04	Reproductive	7.1E+00	--	7.1E+00
			PCB-77	8.5E-08	--	8.5E-08	Reproductive	4.7E-03	--	4.7E-03
			PCB-81	4.0E-08	--	4.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-105	7.1E-06	--	7.1E-06	Reproductive	3.9E-01	--	3.9E-01
			PCB-114	4.5E-07	--	4.5E-07	Reproductive	2.5E-02	--	2.5E-02
			PCB-118	2.4E-05	--	2.4E-05	Reproductive	1.4E+00	--	1.4E+00
			PCB-123	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-126	1.4E-04	--	1.4E-04	Reproductive	7.6E+00	--	7.6E+00
			PCB-156/157	2.1E-06	--	2.1E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-167	9.2E-07	--	9.2E-07	Reproductive	5.1E-02	--	5.1E-02
			PCB-169	1.5E-06	--	1.5E-06	Reproductive	8.3E-02	--	8.3E-02
			PCB-189	1.7E-07	--	1.7E-07	Reproductive	9.2E-03	--	9.2E-03
			KM TEQ PCB	2.5E-04	--	2.5E-04	Reproductive	1.4E+01	--	1.4E+01
			Non-DL PCBs							
			Total Non-DL PCBs	9.0E-05	--	9.0E-05	Whole Body	1.3E+01	--	1.3E+01
			PAHs							
			Benz(a)anthracene	2.5E-07	--	2.5E-07	--	--	--	--
			Benzo(a)pyrene	2.5E-06	--	2.5E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	2.5E-07	--	2.5E-07	--	--	--	--
			Chrysene	2.5E-09	--	2.5E-09	--	--	--	--
			Dibenz(a,h)anthracene	2.5E-06	--	2.5E-06	--	--	--	--

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Indeno(1,2,3-c,d)-pyrene	2.5E-07	--	2.5E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	2.4E-06	--	2.4E-06	Liver	1.9E+00	--	1.9E+00
			4,4'-DDE	7.2E-06	--	7.2E-06	Liver	4.1E-01	--	4.1E-01
			Dieldrin	1.7E-05	--	1.7E-05	Liver	1.3E-01	--	1.3E-01
			Heptachlor epoxide, cis-	2.6E-06	--	2.6E-06	Liver	1.3E-01	--	1.3E-01
			Inorganics							
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	1.8E-01	--	1.8E-01
			Methyl Mercury	--	--	--	Neurological	2.0E+00	--	2.0E+00
			Total DLCs (excluding KM TEQs)			3.0E-04				1.7E+01
			Total DLCs (based on KM TEQs)			3.7E-04				2.1E+01
			Total PCDD/Fs (excluding KM TEQ)			1.3E-04				7.3E+00
			Total PCDD/Fs (based on KM TEQ)			1.3E-04				7.1E+00
			Total DL-PCBs (excluding KM TEQ)			1.7E-04				9.6E+00
			Total DL-PCBs (based on KM TEQ)			2.5E-04				1.4E+01
			Total Non-DL PCBs			9.0E-05				1.3E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-04				2.3E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.4E-04				2.7E+01
			Total PAHs			5.7E-06				1.9E-02
			Total Organics			3.0E-05				2.6E+00
			Total Inorganics			1.4E-05				2.2E+00
	American Eel Total (excluding KM TEQs)					4.4E-04				3.5E+01
	American Eel Total (based on KM TEQs)					5.1E-04				3.9E+01
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-05	--	1.7E-05	Reproductive	9.4E-01	--	9.4E-01
			1,2,3,7,8-PeCDD	3.4E-06	--	3.4E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,4,7,8-HxCDD	8.3E-08	--	8.3E-08	Reproductive	4.6E-03	--	4.6E-03
			1,2,3,6,7,8-HxCDD	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	7.9E-08	--	7.9E-08	Reproductive	4.4E-03	--	4.4E-03
			1,2,3,4,6,7,8-HpCDD	1.6E-08	--	1.6E-08	Reproductive	9.0E-04	--	9.0E-04
			OCDD	8.8E-10	--	8.8E-10	Reproductive	4.9E-05	--	4.9E-05
			2,3,7,8-TCDF	4.4E-07	--	4.4E-07	Reproductive	2.4E-02	--	2.4E-02
			1,2,3,7,8-PeCDF	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			2,3,4,7,8-PeCDF	2.6E-06	--	2.6E-06	Reproductive	1.4E-01	--	1.4E-01
			1,2,3,4,7,8-HxCDF	1.1E-07	--	1.1E-07	Reproductive	6.0E-03	--	6.0E-03
			1,2,3,6,7,8-HxCDF	2.6E-07	--	2.6E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,7,8,9-HxCDF	9.7E-08	--	9.7E-08	Reproductive	5.4E-03	--	5.4E-03
			2,3,4,6,7,8-HxCDF	6.4E-08	--	6.4E-08	Reproductive	3.5E-03	--	3.5E-03
			1,2,3,4,6,7,8-HpCDF	7.5E-08	--	7.5E-08	Reproductive	4.2E-03	--	4.2E-03
			1,2,3,4,7,8,9-HpCDF	8.6E-09	--	8.6E-09	Reproductive	4.8E-04	--	4.8E-04
			OCDF	5.8E-10	--	5.8E-10	Reproductive	3.2E-05	--	3.2E-05
			KM TEQ DF	2.3E-05	--	2.3E-05	Reproductive	1.3E+00	--	1.3E+00
			PCB-77	1.1E-07	--	1.1E-07	Reproductive	6.2E-03	--	6.2E-03
			PCB-81	1.2E-08	--	1.2E-08	Reproductive	6.8E-04	--	6.8E-04
			PCB-105	4.3E-07	--	4.3E-07	Reproductive	2.4E-02	--	2.4E-02
			PCB-114	2.6E-08	--	2.6E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	1.8E-06	--	1.8E-06	Reproductive	1.0E-01	--	1.0E-01
			PCB-123	2.5E-08	--	2.5E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-126	4.4E-05	--	4.4E-05	Reproductive	2.4E+00	--	2.4E+00
			PCB-156/157	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-167	9.9E-08	--	9.9E-08	Reproductive	5.5E-03	--	5.5E-03
			PCB-169	6.1E-07	--	6.1E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-189	1.9E-08	--	1.9E-08	Reproductive	1.1E-03	--	1.1E-03
			KM TEQ PCB	4.6E-05	--	4.6E-05	Reproductive	2.6E+00	--	2.6E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-05	--	1.8E-05	Whole Body	2.6E+00	--	2.6E+00
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	7.8E-03	--	7.8E-03
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			Dieldrin	5.5E-06	--	5.5E-06	Liver	4.0E-02	--	4.0E-02
			Inorganics							
			Arsenic, inorganic	8.2E-06	--	8.2E-06	Skin, Blood	1.1E-01	--	1.1E-01
			Methyl Mercury	--	--	--	Neurological	1.7E+00	--	1.7E+00
			Total DLCs (excluding KM TEQs)			7.2E-05				4.0E+00
			Total DLCs (based on KM TEQs)			6.9E-05				3.8E+00
			Total PCDD/Fs (excluding KM TEQ)			2.5E-05				1.4E+00
			Total PCDD/Fs (based on KM TEQ)			2.3E-05				1.3E+00
			Total DL-PCBs (excluding KM TEQ)			4.7E-05				2.6E+00
			Total DL-PCBs (based on KM TEQ)			4.6E-05				2.6E+00
			Total Non-DL PCBs			1.8E-05				2.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.5E-05				5.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			6.4E-05				5.2E+00
			Total PAHs			2.3E-06				7.8E-03
			Total Organics			5.5E-06				4.0E-02
			Total Inorganics			8.2E-06				1.8E+00
	Bluefish Total (excluding KM TEQs)					1.1E-04				8.5E+00
	Bluefish Total (based on KM TEQs)					1.0E-04				8.3E+00
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.1E-04	--	1.1E-04	Reproductive	5.9E+00	--	5.9E+00
			1,2,3,7,8-PeCDD	6.2E-06	--	6.2E-06	Reproductive	3.5E-01	--	3.5E-01
			1,2,3,4,7,8-HxCDD	2.3E-07	--	2.3E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,6,7,8-HxCDD	2.4E-07	--	2.4E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,7,8,9-HxCDD	9.8E-08	--	9.8E-08	Reproductive	5.4E-03	--	5.4E-03
			1,2,3,4,6,7,8-HpCDD	1.6E-07	--	1.6E-07	Reproductive	9.1E-03	--	9.1E-03
			OCDD	5.5E-08	--	5.5E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,7,8-TCDF	4.3E-06	--	4.3E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,7,8-PeCDF	7.5E-07	--	7.5E-07	Reproductive	4.2E-02	--	4.2E-02
			2,3,4,7,8-PeCDF	1.1E-05	--	1.1E-05	Reproductive	6.2E-01	--	6.2E-01
			1,2,3,4,7,8-HxCDF	4.7E-07	--	4.7E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDF	1.4E-06	--	1.4E-06	Reproductive	7.7E-02	--	7.7E-02
			1,2,3,7,8,9-HxCDF	1.4E-07	--	1.4E-07	Reproductive	7.7E-03	--	7.7E-03
			2,3,4,6,7,8-HxCDF	1.1E-07	--	1.1E-07	Reproductive	6.2E-03	--	6.2E-03
			1,2,3,4,6,7,8-HpCDF	3.8E-07	--	3.8E-07	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,7,8,9-HpCDF	1.2E-08	--	1.2E-08	Reproductive	6.9E-04	--	6.9E-04
			OCDF	6.5E-10	--	6.5E-10	Reproductive	3.6E-05	--	3.6E-05

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ DF	1.3E-04	--	1.3E-04	Reproductive	7.4E+00	--	7.4E+00
			PCB-77	1.3E-06	--	1.3E-06	Reproductive	7.2E-02	--	7.2E-02
			PCB-81	9.7E-08	--	9.7E-08	Reproductive	5.4E-03	--	5.4E-03
			PCB-105	2.0E-06	--	2.0E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-114	2.5E-07	--	2.5E-07	Reproductive	1.4E-02	--	1.4E-02
			PCB-118	1.3E-05	--	1.3E-05	Reproductive	7.1E-01	--	7.1E-01
			PCB-123	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-126	2.2E-04	--	2.2E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-156/157	1.1E-06	--	1.1E-06	Reproductive	6.2E-02	--	6.2E-02
			PCB-167	5.0E-07	--	5.0E-07	Reproductive	2.8E-02	--	2.8E-02
			PCB-169	1.1E-06	--	1.1E-06	Reproductive	6.3E-02	--	6.3E-02
			PCB-189	9.7E-08	--	9.7E-08	Reproductive	5.4E-03	--	5.4E-03
			KM TEQ PCB	2.2E-04	--	2.2E-04	Reproductive	1.2E+01	--	1.2E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-04	--	1.1E-04	Whole Body	1.6E+01	--	1.6E+01
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	7.8E-03	--	7.8E-03
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	2.5E-06	--	2.5E-06	Liver	2.0E+00	--	2.0E+00
			4,4'-DDE	4.0E-06	--	4.0E-06	Liver	2.3E-01	--	2.3E-01
			Dieldrin	1.3E-05	--	1.3E-05	Liver	9.6E-02	--	9.6E-02
			Heptachlor epoxide, cis-	1.3E-06	--	1.3E-06	Liver	6.3E-02	--	6.3E-02
			Inorganics							
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	1.9E-01	--	1.9E-01
			Methyl Mercury	--	--	--	Neurological	1.5E+00	--	1.5E+00
			Total DLCs (excluding KM TEQs)			3.7E-04				2.0E+01
			Total DLCs (based on KM TEQs)			3.5E-04				2.0E+01
			Total PCDD/Fs (excluding KM TEQ)			1.3E-04				7.4E+00
			Total PCDD/Fs (based on KM TEQ)			1.3E-04				7.4E+00
			Total DL-PCBs (excluding KM TEQ)			2.3E-04				1.3E+01
			Total DL-PCBs (based on KM TEQ)			2.2E-04				1.2E+01
			Total Non-DL PCBs			1.1E-04				1.6E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			3.4E-04				2.9E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.3E-04				2.8E+01
			Total PAHs			2.3E-06				7.8E-03
			Total Organics			2.1E-05				2.4E+00
			Total Inorganics			1.4E-05				1.7E+00
	Striped Bass Total (excluding KM TEQs)					5.1E-04				4.0E+01
	Striped Bass Total (based on KM TEQs)					5.0E-04				4.0E+01
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.2E-05	--	6.2E-05	Reproductive	3.5E+00	--	3.5E+00
			1,2,3,7,8-PeCDD	2.8E-06	--	2.8E-06	Reproductive	1.5E-01	--	1.5E-01
			1,2,3,4,7,8-HxCDD	9.2E-08	--	9.2E-08	Reproductive	5.1E-03	--	5.1E-03
			1,2,3,6,7,8-HxCDD	2.9E-07	--	2.9E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,7,8,9-HxCDD	1.2E-07	--	1.2E-07	Reproductive	6.8E-03	--	6.8E-03

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	3.5E-08	--	3.5E-08	Reproductive	2.0E-03	--	2.0E-03
			OCDD	1.5E-09	--	1.5E-09	Reproductive	8.6E-05	--	8.6E-05
			2,3,7,8-TCDF	3.1E-07	--	3.1E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	1.2E-07	--	1.2E-07	Reproductive	6.6E-03	--	6.6E-03
			2,3,4,7,8-PeCDF	3.1E-06	--	3.1E-06	Reproductive	1.7E-01	--	1.7E-01
			1,2,3,4,7,8-HxCDF	7.4E-07	--	7.4E-07	Reproductive	4.1E-02	--	4.1E-02
			1,2,3,6,7,8-HxCDF	3.0E-07	--	3.0E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8,9-HxCDF	1.6E-07	--	1.6E-07	Reproductive	9.0E-03	--	9.0E-03
			2,3,4,6,7,8-HxCDF	1.2E-07	--	1.2E-07	Reproductive	6.9E-03	--	6.9E-03
			1,2,3,4,6,7,8-HpCDF	5.6E-08	--	5.6E-08	Reproductive	3.1E-03	--	3.1E-03
			1,2,3,4,7,8,9-HpCDF	1.2E-08	--	1.2E-08	Reproductive	6.8E-04	--	6.8E-04
			OCDF	6.8E-10	--	6.8E-10	Reproductive	3.8E-05	--	3.8E-05
			KM TEQ DF	6.9E-05	--	6.9E-05	Reproductive	3.8E+00	--	3.8E+00
			PCB-77	1.6E-07	--	1.6E-07	Reproductive	9.0E-03	--	9.0E-03
			PCB-81	5.1E-08	--	5.1E-08	Reproductive	2.8E-03	--	2.8E-03
			PCB-105	9.4E-07	--	9.4E-07	Reproductive	5.2E-02	--	5.2E-02
			PCB-114	8.0E-08	--	8.0E-08	Reproductive	4.5E-03	--	4.5E-03
			PCB-118	4.0E-06	--	4.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-123	6.1E-08	--	6.1E-08	Reproductive	3.4E-03	--	3.4E-03
			PCB-126	5.0E-05	--	5.0E-05	Reproductive	2.8E+00	--	2.8E+00
			PCB-156/157	3.9E-07	--	3.9E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-167	1.8E-07	--	1.8E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-169	6.9E-07	--	6.9E-07	Reproductive	3.9E-02	--	3.9E-02
			PCB-189	2.7E-08	--	2.7E-08	Reproductive	1.5E-03	--	1.5E-03
			KM TEQ PCB	5.5E-05	--	5.5E-05	Reproductive	3.0E+00	--	3.0E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.3E-05	--	2.3E-05	Whole Body	3.3E+00	--	3.3E+00
			PAHs							
			Benz(a)anthracene	1.0E-07	--	1.0E-07	--	--	--	--
			Benzo(a)pyrene	1.0E-06	--	1.0E-06	Developmental	7.8E-03	--	7.8E-03
			Benzo(b)fluoranthene	1.0E-07	--	1.0E-07	--	--	--	--
			Chrysene	1.0E-09	--	1.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.0E-06	--	1.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.0E-07	--	1.0E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDE	1.0E-06	--	1.0E-06	Liver	6.0E-02	--	6.0E-02
			Dieldrin	1.7E-06	--	1.7E-06	Liver	1.3E-02	--	1.3E-02
			Inorganics							
			Arsenic, inorganic	2.1E-05	--	2.1E-05	Skin, Blood	2.7E-01	--	2.7E-01
			Cobalt	--	--	--	Thyroid	1.3E+00	--	1.3E+00
			Total DLCs (excluding KM TEQs)			1.3E-04				7.0E+00
			Total DLCs (based on KM TEQs)			1.2E-04				6.9E+00
			Total PCDD/Fs (excluding KM TEQ)			7.0E-05				3.9E+00
			Total PCDD/Fs (based on KM TEQ)			6.9E-05				3.8E+00
			Total DL-PCBs (excluding KM TEQ)			5.6E-05				3.1E+00
			Total DL-PCBs (based on KM TEQ)			5.5E-05				3.0E+00
			Total Non-DL PCBs			2.3E-05				3.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			7.9E-05				6.4E+00
			Total PCBs (DL & NDL; based on KM TEQ)			7.7E-05				6.3E+00
			Total PAHs			2.3E-06				7.8E-03

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total Organics			2.8E-06				7.2E-02
			Total Inorganics			2.1E-05				1.5E+00
	Summer Flounder Total (excluding KM TEQs)					1.8E-04				1.2E+01
	Summer Flounder Total (based on KM TEQs)					1.7E-04				1.2E+01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.8E-04	--	1.8E-04	Reproductive	1.0E+01	--	1.0E+01
			1,2,3,7,8-PeCDD	4.8E-06	--	4.8E-06	Reproductive	2.7E-01	--	2.7E-01
			1,2,3,4,7,8-HxCDD	2.8E-07	--	2.8E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,6,7,8-HxCDD	6.9E-07	--	6.9E-07	Reproductive	3.8E-02	--	3.8E-02
			1,2,3,7,8,9-HxCDD	1.6E-07	--	1.6E-07	Reproductive	8.9E-03	--	8.9E-03
			1,2,3,4,6,7,8-HpCDD	4.2E-08	--	4.2E-08	Reproductive	2.3E-03	--	2.3E-03
			OCDD	2.9E-09	--	2.9E-09	Reproductive	1.6E-04	--	1.6E-04
			2,3,7,8-TCDF	4.4E-06	--	4.4E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,7,8-PeCDF	1.0E-06	--	1.0E-06	Reproductive	5.8E-02	--	5.8E-02
			2,3,4,7,8-PeCDF	1.2E-05	--	1.2E-05	Reproductive	6.5E-01	--	6.5E-01
			1,2,3,4,7,8-HxCDF	1.9E-06	--	1.9E-06	Reproductive	1.0E-01	--	1.0E-01
			1,2,3,6,7,8-HxCDF	1.4E-06	--	1.4E-06	Reproductive	7.5E-02	--	7.5E-02
			1,2,3,7,8,9-HxCDF	1.2E-07	--	1.2E-07	Reproductive	6.6E-03	--	6.6E-03
			2,3,4,6,7,8-HxCDF	2.4E-07	--	2.4E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDF	2.7E-07	--	2.7E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,7,8,9-HpCDF	1.0E-08	--	1.0E-08	Reproductive	5.6E-04	--	5.6E-04
			OCDF	7.5E-10	--	7.5E-10	Reproductive	4.1E-05	--	4.1E-05
			KM TEQ DF	2.1E-04	--	2.1E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-77	1.1E-06	--	1.1E-06	Reproductive	6.2E-02	--	6.2E-02
			PCB-81	1.3E-07	--	1.3E-07	Reproductive	7.0E-03	--	7.0E-03
			PCB-105	2.5E-06	--	2.5E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-114	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-118	9.6E-06	--	9.6E-06	Reproductive	5.3E-01	--	5.3E-01
			PCB-123	1.9E-07	--	1.9E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-126	6.9E-05	--	6.9E-05	Reproductive	3.8E+00	--	3.8E+00
			PCB-156/157	9.8E-07	--	9.8E-07	Reproductive	5.4E-02	--	5.4E-02
			PCB-167	4.0E-07	--	4.0E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-169	2.6E-06	--	2.6E-06	Reproductive	1.4E-01	--	1.4E-01
			PCB-189	7.7E-08	--	7.7E-08	Reproductive	4.3E-03	--	4.3E-03
			KM TEQ PCB	8.5E-05	--	8.5E-05	Reproductive	4.7E+00	--	4.7E+00
			Non-DL PCBs							
			Total Non-DL PCBs	7.2E-05	--	7.2E-05	Whole Body	1.0E+01	--	1.0E+01
			PAHs							
			Benz(a)anthracene	2.5E-07	--	2.5E-07	--	--	--	--
			Benzo(a)pyrene	2.5E-06	--	2.5E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	2.5E-07	--	2.5E-07	--	--	--	--
			Chrysene	2.5E-09	--	2.5E-09	--	--	--	--
			Dibenz(a,h)anthracene	2.5E-06	--	2.5E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.5E-07	--	2.5E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	2.8E-06	--	2.8E-06	Liver	2.3E+00	--	2.3E+00
			4,4'-DDE	3.1E-06	--	3.1E-06	Liver	1.8E-01	--	1.8E-01
			Dieldrin	8.9E-06	--	8.9E-06	Liver	6.5E-02	--	6.5E-02
			Heptachlor epoxide, cis-	1.5E-06	--	1.5E-06	Liver	7.2E-02	--	7.2E-02
			Inorganics							
			Arsenic, inorganic	8.7E-06	--	8.7E-06	Skin, Blood	1.1E-01	--	1.1E-01
			Methyl Mercury	--	--	--	Neurological	1.8E+00	--	1.8E+00

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			3.0E-04				1.7E+01
			Total DLCs (based on KM TEQs)			2.9E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			2.1E-04				1.2E+01
			Total PCDD/Fs (based on KM TEQ)			2.1E-04				1.2E+01
			Total DL-PCBs (excluding KM TEQ)			8.7E-05				4.8E+00
			Total DL-PCBs (based on KM TEQ)			8.5E-05				4.7E+00
			Total Non-DL PCBs			7.2E-05				1.0E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-04				1.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-04				1.5E+01
			Total PAHs			5.7E-06				1.9E-02
			Total Organics			1.6E-05				2.6E+00
			Total Inorganics			8.7E-06				1.9E+00
	White Perch Total (excluding KM TEQs)					4.0E-04				3.2E+01
	White Perch Total (based on KM TEQs)					3.9E-04				3.1E+01
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.8E-04	--	1.8E-04	Reproductive	1.0E+01	--	1.0E+01
			1,2,3,7,8-PeCDD	4.8E-06	--	4.8E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDD	1.4E-07	--	1.4E-07	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,6,7,8-HxCDD	4.1E-07	--	4.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,7,8,9-HxCDD	1.4E-07	--	1.4E-07	Reproductive	8.0E-03	--	8.0E-03
			1,2,3,4,6,7,8-HpCDD	4.7E-08	--	4.7E-08	Reproductive	2.6E-03	--	2.6E-03
			OCDD	4.1E-09	--	4.1E-09	Reproductive	2.3E-04	--	2.3E-04
			2,3,7,8-TCDF	6.7E-06	--	6.7E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDF	4.3E-07	--	4.3E-07	Reproductive	2.4E-02	--	2.4E-02
			2,3,4,7,8-PeCDF	1.0E-05	--	1.0E-05	Reproductive	5.6E-01	--	5.6E-01
			1,2,3,4,7,8-HxCDF	3.2E-06	--	3.2E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,6,7,8-HxCDF	9.6E-07	--	9.6E-07	Reproductive	5.4E-02	--	5.4E-02
			1,2,3,7,8,9-HxCDF	5.9E-08	--	5.9E-08	Reproductive	3.3E-03	--	3.3E-03
			2,3,4,6,7,8-HxCDF	2.5E-07	--	2.5E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDF	3.2E-07	--	3.2E-07	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,4,7,8,9-HpCDF	4.6E-09	--	4.6E-09	Reproductive	2.5E-04	--	2.5E-04
			OCDF	5.0E-10	--	5.0E-10	Reproductive	2.8E-05	--	2.8E-05
			KM TEQ DF	2.1E-04	--	2.1E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-77	1.3E-06	--	1.3E-06	Reproductive	7.5E-02	--	7.5E-02
			PCB-81	1.8E-07	--	1.8E-07	Reproductive	9.8E-03	--	9.8E-03
			PCB-105	2.1E-06	--	2.1E-06	Reproductive	1.2E-01	--	1.2E-01
			PCB-114	1.8E-07	--	1.8E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-118	9.6E-06	--	9.6E-06	Reproductive	5.4E-01	--	5.4E-01
			PCB-123	1.7E-07	--	1.7E-07	Reproductive	9.4E-03	--	9.4E-03
			PCB-126	6.7E-05	--	6.7E-05	Reproductive	3.7E+00	--	3.7E+00
			PCB-156/157	7.7E-07	--	7.7E-07	Reproductive	4.3E-02	--	4.3E-02
			PCB-167	3.2E-07	--	3.2E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-169	2.3E-06	--	2.3E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	5.5E-08	--	5.5E-08	Reproductive	3.1E-03	--	3.1E-03
			KM TEQ PCB	8.0E-05	--	8.0E-05	Reproductive	4.4E+00	--	4.4E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.9E-05	--	2.9E-05	Whole Body	4.3E+00	--	4.3E+00
			Pesticides & Organics							
			4,4'-DDE	1.5E-06	--	1.5E-06	Liver	8.4E-02	--	8.4E-02
			Dieldrin	4.5E-06	--	4.5E-06	Liver	3.3E-02	--	3.3E-02

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Heptachlor epoxide, cis-	1.5E-06	--	1.5E-06	Liver	7.4E-02	--	7.4E-02
			Inorganics							
			Arsenic, inorganic	1.9E-05	--	1.9E-05	Skin, Blood	2.5E-01	--	2.5E-01
			Total DLCs (excluding KM TEQs)			2.9E-04				1.6E+01
			Total DLCs (based on KM TEQs)			2.9E-04				1.6E+01
			Total PCDD/Fs (excluding KM TEQ)			2.1E-04				1.2E+01
			Total PCDD/Fs (based on KM TEQ)			2.1E-04				1.2E+01
			Total DL-PCBs (excluding KM TEQ)			8.4E-05				4.6E+00
			Total DL-PCBs (based on KM TEQ)			8.0E-05				4.4E+00
			Total Non-DL PCBs			2.9E-05				4.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-04				8.9E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-04				8.7E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			7.5E-06				1.9E-01
			Total Inorganics			1.9E-05				2.5E-01
	Crab (H+M) Total (excluding KM TEQs)					3.5E-04				2.1E+01
	Crab (H+M) Total (based on KM TEQs)					3.4E-04				2.1E+01
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.7E-05	--	2.7E-05	Reproductive	1.5E+00	--	1.5E+00
			1,2,3,7,8-PeCDD	1.7E-06	--	1.7E-06	Reproductive	9.6E-02	--	9.6E-02
			1,2,3,4,7,8-HxCDD	1.9E-08	--	1.9E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,6,7,8-HxCDD	4.8E-08	--	4.8E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,7,8,9-HxCDD	2.4E-08	--	2.4E-08	Reproductive	1.4E-03	--	1.4E-03
			1,2,3,4,6,7,8-HpCDD	9.2E-09	--	9.2E-09	Reproductive	5.1E-04	--	5.1E-04
			OCDD	9.5E-10	--	9.5E-10	Reproductive	5.3E-05	--	5.3E-05
			2,3,7,8-TCDF	8.0E-07	--	8.0E-07	Reproductive	4.4E-02	--	4.4E-02
			1,2,3,7,8-PeCDF	5.6E-08	--	5.6E-08	Reproductive	3.1E-03	--	3.1E-03
			2,3,4,7,8-PeCDF	1.0E-06	--	1.0E-06	Reproductive	5.5E-02	--	5.5E-02
			1,2,3,4,7,8-HxCDF	4.9E-07	--	4.9E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDF	1.2E-07	--	1.2E-07	Reproductive	6.9E-03	--	6.9E-03
			1,2,3,7,8,9-HxCDF	4.9E-08	--	4.9E-08	Reproductive	2.7E-03	--	2.7E-03
			2,3,4,6,7,8-HxCDF	3.2E-08	--	3.2E-08	Reproductive	1.8E-03	--	1.8E-03
			1,2,3,4,6,7,8-HpCDF	2.7E-08	--	2.7E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	2.3E-09	--	2.3E-09	Reproductive	1.3E-04	--	1.3E-04
			OCDF	1.9E-10	--	1.9E-10	Reproductive	1.1E-05	--	1.1E-05
			KM TEQ DF	3.0E-05	--	3.0E-05	Reproductive	1.7E+00	--	1.7E+00
			PCB-77	1.4E-07	--	1.4E-07	Reproductive	7.6E-03	--	7.6E-03
			PCB-81	1.9E-08	--	1.9E-08	Reproductive	1.0E-03	--	1.0E-03
			PCB-105	2.2E-07	--	2.2E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-114	1.9E-08	--	1.9E-08	Reproductive	1.1E-03	--	1.1E-03
			PCB-118	8.2E-07	--	8.2E-07	Reproductive	4.5E-02	--	4.5E-02
			PCB-123	1.6E-08	--	1.6E-08	Reproductive	9.0E-04	--	9.0E-04
			PCB-126	5.8E-06	--	5.8E-06	Reproductive	3.2E-01	--	3.2E-01
			PCB-156/157	6.6E-08	--	6.6E-08	Reproductive	3.7E-03	--	3.7E-03
			PCB-167	2.5E-08	--	2.5E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-169	2.4E-06	--	2.4E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	3.2E-09	--	3.2E-09	Reproductive	1.8E-04	--	1.8E-04
			KM TEQ PCB	7.0E-06	--	7.0E-06	Reproductive	3.9E-01	--	3.9E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.5E-06	--	2.5E-06	Whole Body	3.7E-01	--	3.7E-01

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PAHs							
			Benz(a)anthracene	1.5E-07	--	1.5E-07	--	--	--	--
			Benzo(a)pyrene	1.5E-06	--	1.5E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.5E-07	--	1.5E-07	--	--	--	--
			Chrysene	1.5E-09	--	1.5E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.5E-06	--	1.5E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.5E-07	--	1.5E-07	--	--	--	--
			Pesticides & Organics							
			Inorganics							
			Arsenic, inorganic	1.8E-05	--	1.8E-05	Skin, Blood	2.3E-01	--	2.3E-01
			Total DLCs (excluding KM TEQs)			4.1E-05				2.3E+00
			Total DLCs (based on KM TEQs)			3.7E-05				2.1E+00
			Total PCDD/Fs (excluding KM TEQ)			3.1E-05				1.7E+00
			Total PCDD/Fs (based on KM TEQ)			3.0E-05				1.7E+00
			Total DL-PCBs (excluding KM TEQ)			9.5E-06				5.3E-01
			Total DL-PCBs (based on KM TEQ)			7.0E-06				3.9E-01
			Total Non-DL PCBs			2.5E-06				3.7E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.2E-05				9.0E-01
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-06				7.6E-01
			Total PAHs			3.4E-06				1.2E-02
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.8E-05				2.3E-01
	Crab (Muscle) Total (excluding KM TEQs)					6.5E-05				2.9E+00
	Crab (Muscle) Total (based on KM TEQs)					6.1E-05				2.7E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.3E-04	--	6.3E-04	Reproductive	3.5E+01	--	3.5E+01
			1,2,3,7,8-PeCDD	1.5E-05	--	1.5E-05	Reproductive	8.3E-01	--	8.3E-01
			1,2,3,4,7,8-HxCDD	4.8E-07	--	4.8E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,6,7,8-HxCDD	1.4E-06	--	1.4E-06	Reproductive	8.0E-02	--	8.0E-02
			1,2,3,7,8,9-HxCDD	4.9E-07	--	4.9E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,4,6,7,8-HpCDD	1.6E-07	--	1.6E-07	Reproductive	8.7E-03	--	8.7E-03
			OCDD	1.3E-08	--	1.3E-08	Reproductive	7.4E-04	--	7.4E-04
			2,3,7,8-TCDF	2.4E-05	--	2.4E-05	Reproductive	1.3E+00	--	1.3E+00
			1,2,3,7,8-PeCDF	1.5E-06	--	1.5E-06	Reproductive	8.5E-02	--	8.5E-02
			2,3,4,7,8-PeCDF	3.6E-05	--	3.6E-05	Reproductive	2.0E+00	--	2.0E+00
			1,2,3,4,7,8-HxCDF	1.1E-05	--	1.1E-05	Reproductive	6.3E-01	--	6.3E-01
			1,2,3,6,7,8-HxCDF	3.5E-06	--	3.5E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,7,8,9-HxCDF	9.4E-08	--	9.4E-08	Reproductive	5.2E-03	--	5.2E-03
			2,3,4,6,7,8-HxCDF	8.9E-07	--	8.9E-07	Reproductive	5.0E-02	--	5.0E-02
			1,2,3,4,6,7,8-HpCDF	1.2E-06	--	1.2E-06	Reproductive	6.5E-02	--	6.5E-02
			1,2,3,4,7,8,9-HpCDF	9.5E-09	--	9.5E-09	Reproductive	5.3E-04	--	5.3E-04
			OCDF	1.7E-09	--	1.7E-09	Reproductive	9.6E-05	--	9.6E-05
			KM TEQ DF	7.2E-04	--	7.2E-04	Reproductive	4.0E+01	--	4.0E+01
			PCB-77	4.7E-06	--	4.7E-06	Reproductive	2.6E-01	--	2.6E-01
			PCB-81	6.3E-07	--	6.3E-07	Reproductive	3.5E-02	--	3.5E-02
			PCB-105	7.7E-06	--	7.7E-06	Reproductive	4.3E-01	--	4.3E-01
			PCB-114	6.5E-07	--	6.5E-07	Reproductive	3.6E-02	--	3.6E-02
			PCB-118	3.5E-05	--	3.5E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-123	6.1E-07	--	6.1E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-126	2.4E-04	--	2.4E-04	Reproductive	1.3E+01	--	1.3E+01

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-156/157	2.8E-06	--	2.8E-06	Reproductive	1.6E-01	--	1.6E-01
			PCB-167	1.2E-06	--	1.2E-06	Reproductive	6.5E-02	--	6.5E-02
			PCB-169	7.5E-06	--	7.5E-06	Reproductive	4.2E-01	--	4.2E-01
			PCB-189	2.1E-07	--	2.1E-07	Reproductive	1.1E-02	--	1.1E-02
			KM TEQ PCB	2.9E-04	--	2.9E-04	Reproductive	1.6E+01	--	1.6E+01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-04	--	1.1E-04	Whole Body	1.6E+01	--	1.6E+01
			Pesticides & Organics							
			4,4'-DDD	1.3E-06	--	1.3E-06	Liver	1.1E+00	--	1.1E+00
			4,4'-DDE	5.0E-06	--	5.0E-06	Liver	2.9E-01	--	2.9E-01
			Dieldrin	1.5E-05	--	1.5E-05	Liver	1.1E-01	--	1.1E-01
			Heptachlor epoxide, cis-	5.5E-06	--	5.5E-06	Liver	2.7E-01	--	2.7E-01
			Heptachlor epoxide, trans-	1.6E-06	--	1.6E-06	Liver	7.9E-02	--	7.9E-02
			Inorganics							
			Arsenic, inorganic	2.4E-05	--	2.4E-05	Skin, Blood	3.1E-01	--	3.1E-01
			Total DLCs (excluding KM TEQs)			1.0E-03				5.7E+01
			Total DLCs (based on KM TEQs)			1.0E-03				5.6E+01
			Total PCDD/Fs (excluding KM TEQ)			7.2E-04				4.0E+01
			Total PCDD/Fs (based on KM TEQ)			7.2E-04				4.0E+01
			Total DL-PCBs (excluding KM TEQ)			3.0E-04				1.7E+01
			Total DL-PCBs (based on KM TEQ)			2.9E-04				1.6E+01
			Total Non-DL PCBs			1.1E-04				1.6E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.1E-04				3.2E+01
			Total PCBs (DL & NDL; based on KM TEQ)			4.0E-04				3.2E+01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			2.8E-05				1.8E+00
			Total Inorganics			2.4E-05				3.1E-01
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.2E-03				7.5E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.2E-03				7.4E+01
Sediment	Sediment	Angler - Fishing Sediment	**Inorganics** Arsenic, inorganic	6.0E-07	5.3E-07	1.1E-06	Skin, Blood	7.8E-03	6.9E-03	1.5E-02
	Fishing - Sediment Total (excluding KM TEQs)					1.1E-06				1.5E-02
	Fishing - Sediment Total (based on KM TEQs)					1.1E-06				1.5E-02
Surface Water	Surface Water	Angler - Fishing Surface Water		--	--	--	--	--	--	--
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						3.3E-04				2.5E+01
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						3.4E-04				2.6E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						4.4E-04				3.5E+01
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						5.1E-04				3.9E+01
Sediment	Sediment	Angler - Crabbing Sediment	--	--	--	--	--	--	--	--
Surface Water	Surface Water	Angler - Crabbing Surface Water	--	--	--	--	--	--	--	--
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						3.5E-04				2.1E+01
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						3.4E-04				2.1E+01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						6.5E-05				2.9E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						6.1E-05				2.7E+00

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-01		Blood HI =		1.9E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.2E-02		Developmental HI =		1.2E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.6E+00		Liver HI =		1.6E+00
				Neurological HI =		1.6E+00		Neurological HI =		1.6E+00
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.3E+01		Reproductive HI =		1.3E+01
				Skin HI =		1.9E-01		Skin HI =		1.9E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		9.1E+00		Whole Body HI =		9.1E+00
			American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-01		Blood HI =		1.9E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.9E-02		Developmental HI =		1.9E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		2.6E+00		Liver HI =		2.6E+00
				Neurological HI =		2.0E+00		Neurological HI =		2.0E+00
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.7E+01		Reproductive HI =		2.1E+01
				Skin HI =		1.9E-01		Skin HI =		1.9E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.3E+01		Whole Body HI =		1.3E+01

TABLE 10.2.RME
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.5E-01		Blood HI =		2.5E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		1.9E-01		Liver HI =		1.9E-01
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.6E+01		Reproductive HI =		1.6E+01
				Skin HI =		2.5E-01		Skin HI =		2.5E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		4.3E+00		Whole Body HI =		4.3E+00
			Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		2.3E-01		Blood HI =		2.3E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.2E-02		Developmental HI =		1.2E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.3E+00		Reproductive HI =		2.1E+00
				Skin HI =		2.3E-01		Skin HI =		2.3E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		3.7E-01		Whole Body HI =		3.7E-01

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	7.2E-05	--	7.2E-05	Reproductive	8.0E+00	--	8.0E+00
			1,2,3,7,8-PeCDD	3.9E-06	--	3.9E-06	Reproductive	4.3E-01	--	4.3E-01
			1,2,3,4,7,8-HxCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,6,7,8-HxCDD	5.5E-07	--	5.5E-07	Reproductive	6.1E-02	--	6.1E-02
			1,2,3,7,8,9-HxCDD	1.3E-07	--	1.3E-07	Reproductive	1.5E-02	--	1.5E-02
			1,2,3,4,6,7,8-HpCDD	6.2E-08	--	6.2E-08	Reproductive	6.9E-03	--	6.9E-03
			OCDD	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			2,3,7,8-TCDF	1.5E-06	--	1.5E-06	Reproductive	1.6E-01	--	1.6E-01
			1,2,3,7,8-PeCDF	4.0E-07	--	4.0E-07	Reproductive	4.4E-02	--	4.4E-02
			2,3,4,7,8-PeCDF	6.4E-06	--	6.4E-06	Reproductive	7.1E-01	--	7.1E-01
			1,2,3,4,7,8-HxCDF	9.5E-07	--	9.5E-07	Reproductive	1.1E-01	--	1.1E-01
			1,2,3,6,7,8-HxCDF	8.6E-07	--	8.6E-07	Reproductive	9.5E-02	--	9.5E-02
			1,2,3,7,8,9-HxCDF	9.9E-08	--	9.9E-08	Reproductive	1.1E-02	--	1.1E-02
			2,3,4,6,7,8-HxCDF	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			1,2,3,4,6,7,8-HpCDF	2.0E-07	--	2.0E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,4,7,8,9-HpCDF	9.4E-09	--	9.4E-09	Reproductive	1.0E-03	--	1.0E-03
			OCDF	5.9E-10	--	5.9E-10	Reproductive	6.6E-05	--	6.6E-05
			KM TEQ DF	8.6E-05	--	8.6E-05	Reproductive	9.5E+00	--	9.5E+00
			PCB-77	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			PCB-81	5.0E-08	--	5.0E-08	Reproductive	5.5E-03	--	5.5E-03
			PCB-105	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-114	1.5E-07	--	1.5E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-118	8.0E-06	--	8.0E-06	Reproductive	8.9E-01	--	8.9E-01
			PCB-123	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-126	7.9E-05	--	7.9E-05	Reproductive	8.7E+00	--	8.7E+00
			PCB-156/157	7.3E-07	--	7.3E-07	Reproductive	8.2E-02	--	8.2E-02
			PCB-167	3.2E-07	--	3.2E-07	Reproductive	3.6E-02	--	3.6E-02
			PCB-169	9.9E-07	--	9.9E-07	Reproductive	1.1E-01	--	1.1E-01
			PCB-189	5.9E-08	--	5.9E-08	Reproductive	6.6E-03	--	6.6E-03
			KM TEQ PCB	1.0E-04	--	1.0E-04	Reproductive	1.1E+01	--	1.1E+01
			Non-DL PCBs							
			Total Non-DL PCBs	4.7E-05	--	4.7E-05	Whole Body	1.4E+01	--	1.4E+01
			PAHs							
			Benz(a)anthracene	2.0E-07	--	2.0E-07	--	--	--	--
			Benzo(a)pyrene	2.0E-06	--	2.0E-06	Developmental	1.9E-02	--	1.9E-02
			Benzo(b)fluoranthene	2.0E-07	--	2.0E-07	--	--	--	--
			Chrysene	2.0E-09	--	2.0E-09	--	--	--	--
			Dibenz(a,h)anthracene	2.0E-06	--	2.0E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	2.0E-07	--	2.0E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	1.2E-06	--	1.2E-06	Liver	2.0E+00	--	2.0E+00
			4,4'-DDE	2.5E-06	--	2.5E-06	Liver	2.8E-01	--	2.8E-01
			Dieldrin	7.1E-06	--	7.1E-06	Liver	1.0E-01	--	1.0E-01
			Inorganics							
			Arsenic, inorganic	1.0E-05	--	1.0E-05	Skin, Blood	2.6E-01	--	2.6E-01
			Methyl Mercury	--	--	--	Neurological	2.5E+00	--	2.5E+00
			Total DLCs (excluding KM TEQs)			1.8E-04				2.0E+01
			Total DLCs (based on KM TEQs)			1.9E-04				2.1E+01
			Total PCDD/Fs (excluding KM TEQ)			8.7E-05				9.7E+00
			Total PCDD/Fs (based on KM TEQ)			8.6E-05				9.5E+00

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total DL-PCBs (excluding KM TEQ)			9.1E-05				1.0E+01
			Total DL-PCBs (based on KM TEQ)			1.0E-04				1.1E+01
			Total Non-DL PCBs			4.7E-05				1.4E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.4E-04				2.4E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.5E-04				2.5E+01
			Total PAHs			4.7E-06				1.9E-02
			Total Organics			1.1E-05				2.4E+00
			Total Inorganics			1.0E-05				2.7E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					2.5E-04				3.9E+01
	Mixed Fish/All Species Total (based on KM TEQs)					2.6E-04				4.0E+01
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	7.7E-05	--	7.7E-05	Reproductive	8.5E+00	--	8.5E+00
			1,2,3,7,8-PeCDD	6.1E-06	--	6.1E-06	Reproductive	6.8E-01	--	6.8E-01
			1,2,3,4,7,8-HxCDD	3.6E-07	--	3.6E-07	Reproductive	4.1E-02	--	4.1E-02
			1,2,3,6,7,8-HxCDD	1.7E-06	--	1.7E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,7,8,9-HxCDD	3.0E-07	--	3.0E-07	Reproductive	3.4E-02	--	3.4E-02
			1,2,3,4,6,7,8-HpCDD	1.1E-07	--	1.1E-07	Reproductive	1.3E-02	--	1.3E-02
			OCDD	8.3E-09	--	8.3E-09	Reproductive	9.2E-04	--	9.2E-04
			2,3,7,8-TCDF	9.1E-08	--	9.1E-08	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,7,8-PeCDF	3.7E-07	--	3.7E-07	Reproductive	4.1E-02	--	4.1E-02
			2,3,4,7,8-PeCDF	1.0E-05	--	1.0E-05	Reproductive	1.1E+00	--	1.1E+00
			1,2,3,4,7,8-HxCDF	2.3E-06	--	2.3E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,6,7,8-HxCDF	1.8E-06	--	1.8E-06	Reproductive	2.0E-01	--	2.0E-01
			1,2,3,7,8,9-HxCDF	9.9E-08	--	9.9E-08	Reproductive	1.1E-02	--	1.1E-02
			2,3,4,6,7,8-HxCDF	3.2E-07	--	3.2E-07	Reproductive	3.5E-02	--	3.5E-02
			1,2,3,4,6,7,8-HpCDF	4.1E-07	--	4.1E-07	Reproductive	4.6E-02	--	4.6E-02
			1,2,3,4,7,8,9-HpCDF	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			OCDF	9.4E-10	--	9.4E-10	Reproductive	1.0E-04	--	1.0E-04
			KM TEQ DF	9.8E-05	--	9.8E-05	Reproductive	1.1E+01	--	1.1E+01
			PCB-77	6.5E-08	--	6.5E-08	Reproductive	7.3E-03	--	7.3E-03
			PCB-81	3.1E-08	--	3.1E-08	Reproductive	3.4E-03	--	3.4E-03
			PCB-105	5.4E-06	--	5.4E-06	Reproductive	6.0E-01	--	6.0E-01
			PCB-114	3.5E-07	--	3.5E-07	Reproductive	3.8E-02	--	3.8E-02
			PCB-118	1.9E-05	--	1.9E-05	Reproductive	2.1E+00	--	2.1E+00
			PCB-123	3.7E-07	--	3.7E-07	Reproductive	4.1E-02	--	4.1E-02
			PCB-126	1.0E-04	--	1.0E-04	Reproductive	1.2E+01	--	1.2E+01
			PCB-156/157	1.6E-06	--	1.6E-06	Reproductive	1.8E-01	--	1.8E-01
			PCB-167	7.1E-07	--	7.1E-07	Reproductive	7.9E-02	--	7.9E-02
			PCB-169	1.1E-06	--	1.1E-06	Reproductive	1.3E-01	--	1.3E-01
			PCB-189	1.3E-07	--	1.3E-07	Reproductive	1.4E-02	--	1.4E-02
			KM TEQ PCB	1.9E-04	--	1.9E-04	Reproductive	2.1E+01	--	2.1E+01
			Non-DL PCBs							
			Total Non-DL PCBs	6.9E-05	--	6.9E-05	Whole Body	2.0E+01	--	2.0E+01
			PAHs							
			Benz(a)anthracene	3.1E-07	--	3.1E-07	--	--	--	--
			Benzo(a)pyrene	3.1E-06	--	3.1E-06	Developmental	2.9E-02	--	2.9E-02
			Benzo(b)fluoranthene	3.1E-07	--	3.1E-07	--	--	--	--
			Chrysene	3.1E-09	--	3.1E-09	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-06	--	3.1E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07	--	--	--	--
			Pesticides & Organics							

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			4,4'-DDD	1.8E-06	--	1.8E-06	Liver	3.0E+00	--	3.0E+00
			4,4'-DDE	5.5E-06	--	5.5E-06	Liver	6.3E-01	--	6.3E-01
			Dieldrin	1.3E-05	--	1.3E-05	Liver	1.9E-01	--	1.9E-01
			Heptachlor epoxide, cis-	2.0E-06	--	2.0E-06	Liver	2.0E-01	--	2.0E-01
			Nonachlor, trans-	5.3E-07	--	5.3E-07	Liver	1.1E+00	--	1.1E+00
			Inorganics							
			Arsenic, inorganic	1.0E-05	--	1.0E-05	Skin, Blood	2.7E-01	--	2.7E-01
			Methyl Mercury	--	--	--	Neurological	3.1E+00	--	3.1E+00
			Total DLCs (excluding KM TEQs)			2.3E-04				2.6E+01
			Total DLCs (based on KM TEQs)			2.9E-04				3.2E+01
			Total PCDD/Fs (excluding KM TEQ)			1.0E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			9.8E-05				1.1E+01
			Total DL-PCBs (excluding KM TEQ)			1.3E-04				1.5E+01
			Total DL-PCBs (based on KM TEQ)			1.9E-04				2.1E+01
			Total Non-DL PCBs			6.9E-05				2.0E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.0E-04				3.5E+01
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-04				4.1E+01
			Total PAHs			7.2E-06				2.9E-02
			Total Organics			2.3E-05				5.1E+00
			Total Inorganics			1.0E-05				3.4E+00
	American Eel Total (excluding KM TEQs)					3.4E-04				5.4E+01
	American Eel Total (based on KM TEQs)					4.0E-04				6.0E+01
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.3E-05	--	1.3E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	2.6E-06	--	2.6E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,4,7,8-HxCDD	6.3E-08	--	6.3E-08	Reproductive	7.0E-03	--	7.0E-03
			1,2,3,6,7,8-HxCDD	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			1,2,3,7,8,9-HxCDD	6.0E-08	--	6.0E-08	Reproductive	6.7E-03	--	6.7E-03
			1,2,3,4,6,7,8-HpCDD	1.2E-08	--	1.2E-08	Reproductive	1.4E-03	--	1.4E-03
			OCDD	6.7E-10	--	6.7E-10	Reproductive	7.5E-05	--	7.5E-05
			2,3,7,8-TCDF	3.3E-07	--	3.3E-07	Reproductive	3.7E-02	--	3.7E-02
			1,2,3,7,8-PeCDF	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			2,3,4,7,8-PeCDF	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			1,2,3,4,7,8-HxCDF	8.2E-08	--	8.2E-08	Reproductive	9.1E-03	--	9.1E-03
			1,2,3,6,7,8-HxCDF	2.0E-07	--	2.0E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,7,8,9-HxCDF	7.4E-08	--	7.4E-08	Reproductive	8.3E-03	--	8.3E-03
			2,3,4,6,7,8-HxCDF	4.9E-08	--	4.9E-08	Reproductive	5.4E-03	--	5.4E-03
			1,2,3,4,6,7,8-HpCDF	5.7E-08	--	5.7E-08	Reproductive	6.4E-03	--	6.4E-03
			1,2,3,4,7,8,9-HpCDF	6.6E-09	--	6.6E-09	Reproductive	7.3E-04	--	7.3E-04
			OCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			KM TEQ DF	1.8E-05	--	1.8E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-77	8.5E-08	--	8.5E-08	Reproductive	9.5E-03	--	9.5E-03
			PCB-81	9.4E-09	--	9.4E-09	Reproductive	1.0E-03	--	1.0E-03
			PCB-105	3.3E-07	--	3.3E-07	Reproductive	3.6E-02	--	3.6E-02
			PCB-114	2.0E-08	--	2.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-118	1.4E-06	--	1.4E-06	Reproductive	1.5E-01	--	1.5E-01
			PCB-123	1.9E-08	--	1.9E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-126	3.3E-05	--	3.3E-05	Reproductive	3.7E+00	--	3.7E+00
			PCB-156/157	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-167	7.6E-08	--	7.6E-08	Reproductive	8.4E-03	--	8.4E-03

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-169	4.7E-07	--	4.7E-07	Reproductive	5.2E-02	--	5.2E-02
			PCB-189	1.5E-08	--	1.5E-08	Reproductive	1.6E-03	--	1.6E-03
			KM TEQ PCB	3.5E-05	--	3.5E-05	Reproductive	3.9E+00	--	3.9E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-05	--	1.4E-05	Whole Body	4.0E+00	--	4.0E+00
			PAHs							
			Benz(a)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Benzo(a)pyrene	1.3E-06	--	1.3E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.3E-07	--	1.3E-07	--	--	--	--
			Chrysene	1.3E-09	--	1.3E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-06	--	1.3E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-07	--	1.3E-07	--	--	--	--
			Pesticides & Organics							
			Dieldrin	4.2E-06	--	4.2E-06	Liver	6.1E-02	--	6.1E-02
			Inorganics							
			Arsenic, inorganic	6.3E-06	--	6.3E-06	Skin, Blood	1.6E-01	--	1.6E-01
			Methyl Mercury	--	--	--	Neurological	2.6E+00	--	2.6E+00
			Total DLCs (excluding KM TEQs)			5.5E-05				6.1E+00
			Total DLCs (based on KM TEQs)			5.3E-05				5.9E+00
			Total PCDD/Fs (excluding KM TEQ)			1.9E-05				2.1E+00
			Total PCDD/Fs (based on KM TEQ)			1.8E-05				1.9E+00
			Total DL-PCBs (excluding KM TEQ)			3.6E-05				4.0E+00
			Total DL-PCBs (based on KM TEQ)			3.5E-05				3.9E+00
			Total Non-DL PCBs			1.4E-05				4.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			5.0E-05				8.0E+00
			Total PCBs (DL & NDL; based on KM TEQ)			4.9E-05				7.9E+00
			Total PAHs			3.0E-06				1.2E-02
			Total Organics			4.2E-06				6.1E-02
			Total Inorganics			6.3E-06				2.8E+00
	Bluefish Total (excluding KM TEQs)					8.2E-05				1.3E+01
	Bluefish Total (based on KM TEQs)					8.0E-05				1.3E+01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	8.2E-05	--	8.2E-05	Reproductive	9.1E+00	--	9.1E+00
			1,2,3,7,8-PeCDD	4.8E-06	--	4.8E-06	Reproductive	5.3E-01	--	5.3E-01
			1,2,3,4,7,8-HxCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,6,7,8-HxCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,7,8,9-HxCDD	7.5E-08	--	7.5E-08	Reproductive	8.3E-03	--	8.3E-03
			1,2,3,4,6,7,8-HpCDD	1.3E-07	--	1.3E-07	Reproductive	1.4E-02	--	1.4E-02
			OCDD	4.2E-08	--	4.2E-08	Reproductive	4.7E-03	--	4.7E-03
			2,3,7,8-TCDF	3.3E-06	--	3.3E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDF	5.8E-07	--	5.8E-07	Reproductive	6.4E-02	--	6.4E-02
			2,3,4,7,8-PeCDF	8.5E-06	--	8.5E-06	Reproductive	9.5E-01	--	9.5E-01
			1,2,3,4,7,8-HxCDF	3.6E-07	--	3.6E-07	Reproductive	4.0E-02	--	4.0E-02
			1,2,3,6,7,8-HxCDF	1.1E-06	--	1.1E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,6,7,8-HxCDF	8.6E-08	--	8.6E-08	Reproductive	9.5E-03	--	9.5E-03
			1,2,3,4,6,7,8-HpCDF	2.9E-07	--	2.9E-07	Reproductive	3.2E-02	--	3.2E-02
			1,2,3,4,7,8,9-HpCDF	9.5E-09	--	9.5E-09	Reproductive	1.1E-03	--	1.1E-03
			OCDF	4.9E-10	--	4.9E-10	Reproductive	5.5E-05	--	5.5E-05
			KM TEQ DF	1.0E-04	--	1.0E-04	Reproductive	1.1E+01	--	1.1E+01

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-77	9.9E-07	--	9.9E-07	Reproductive	1.1E-01	--	1.1E-01
			PCB-81	7.4E-08	--	7.4E-08	Reproductive	8.2E-03	--	8.2E-03
			PCB-105	1.5E-06	--	1.5E-06	Reproductive	1.7E-01	--	1.7E-01
			PCB-114	1.9E-07	--	1.9E-07	Reproductive	2.1E-02	--	2.1E-02
			PCB-118	9.8E-06	--	9.8E-06	Reproductive	1.1E+00	--	1.1E+00
			PCB-123	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-126	1.6E-04	--	1.6E-04	Reproductive	1.8E+01	--	1.8E+01
			PCB-156/157	8.6E-07	--	8.6E-07	Reproductive	9.5E-02	--	9.5E-02
			PCB-167	3.8E-07	--	3.8E-07	Reproductive	4.2E-02	--	4.2E-02
			PCB-169	8.7E-07	--	8.7E-07	Reproductive	9.7E-02	--	9.7E-02
			PCB-189	7.4E-08	--	7.4E-08	Reproductive	8.3E-03	--	8.3E-03
			KM TEQ PCB	1.7E-04	--	1.7E-04	Reproductive	1.9E+01	--	1.9E+01
			Non-DL PCBs							
			Total Non-DL PCBs	8.3E-05	--	8.3E-05	Whole Body	2.4E+01	--	2.4E+01
			PAHs							
			Benz(a)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Benzo(a)pyrene	1.3E-06	--	1.3E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.3E-07	--	1.3E-07	--	--	--	--
			Chrysene	1.3E-09	--	1.3E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-06	--	1.3E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-07	--	1.3E-07	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	1.9E-06	--	1.9E-06	Liver	3.1E+00	--	3.1E+00
			4,4'-DDE	3.1E-06	--	3.1E-06	Liver	3.5E-01	--	3.5E-01
			Dieldrin	1.0E-05	--	1.0E-05	Liver	1.5E-01	--	1.5E-01
			Nonachlor, trans-	5.4E-07	--	5.4E-07	Liver	1.2E+00	--	1.2E+00
			Inorganics							
			Arsenic, inorganic	1.1E-05	--	1.1E-05	Skin, Blood	2.9E-01	--	2.9E-01
			Methyl Mercury	--	--	--	Neurological	2.3E+00	--	2.3E+00
			Total DLCs (excluding KM TEQs)			2.8E-04				3.1E+01
			Total DLCs (based on KM TEQs)			2.7E-04				3.0E+01
			Total PCDD/Fs (excluding KM TEQ)			1.0E-04				1.1E+01
			Total PCDD/Fs (based on KM TEQ)			1.0E-04				1.1E+01
			Total DL-PCBs (excluding KM TEQ)			1.8E-04				2.0E+01
			Total DL-PCBs (based on KM TEQ)			1.7E-04				1.9E+01
			Total Non-DL PCBs			8.3E-05				2.4E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-04				4.4E+01
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-04				4.3E+01
			Total PAHs			3.0E-06				1.2E-02
			Total Organics			1.6E-05				4.7E+00
			Total Inorganics			1.1E-05				2.6E+00
	Striped Bass Total (excluding KM TEQs)					3.9E-04				6.3E+01
	Striped Bass Total (based on KM TEQs)					3.8E-04				6.2E+01
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.8E-05	--	4.8E-05	Reproductive	5.3E+00	--	5.3E+00
			1,2,3,7,8-PeCDD	2.1E-06	--	2.1E-06	Reproductive	2.4E-01	--	2.4E-01
			1,2,3,4,7,8-HxCDD	7.1E-08	--	7.1E-08	Reproductive	7.8E-03	--	7.8E-03
			1,2,3,6,7,8-HxCDD	2.2E-07	--	2.2E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,7,8,9-HxCDD	9.4E-08	--	9.4E-08	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,6,7,8-HpCDD	2.7E-08	--	2.7E-08	Reproductive	3.0E-03	--	3.0E-03

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			OCDD	1.2E-09	--	1.2E-09	Reproductive	1.3E-04	--	1.3E-04
			2,3,7,8-TCDF	2.3E-07	--	2.3E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,7,8-PeCDF	9.1E-08	--	9.1E-08	Reproductive	1.0E-02	--	1.0E-02
			2,3,4,7,8-PeCDF	2.3E-06	--	2.3E-06	Reproductive	2.6E-01	--	2.6E-01
			1,2,3,4,7,8-HxCDF	5.7E-07	--	5.7E-07	Reproductive	6.3E-02	--	6.3E-02
			1,2,3,6,7,8-HxCDF	2.3E-07	--	2.3E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,7,8,9-HxCDF	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			2,3,4,6,7,8-HxCDF	9.5E-08	--	9.5E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,6,7,8-HpCDF	4.3E-08	--	4.3E-08	Reproductive	4.8E-03	--	4.8E-03
			1,2,3,4,7,8,9-HpCDF	9.4E-09	--	9.4E-09	Reproductive	1.0E-03	--	1.0E-03
			OCDF	5.2E-10	--	5.2E-10	Reproductive	5.8E-05	--	5.8E-05
			KM TEQ DF	5.3E-05	--	5.3E-05	Reproductive	5.9E+00	--	5.9E+00
			PCB-77	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			PCB-81	3.9E-08	--	3.9E-08	Reproductive	4.3E-03	--	4.3E-03
			PCB-105	7.2E-07	--	7.2E-07	Reproductive	8.0E-02	--	8.0E-02
			PCB-114	6.2E-08	--	6.2E-08	Reproductive	6.8E-03	--	6.8E-03
			PCB-118	3.1E-06	--	3.1E-06	Reproductive	3.4E-01	--	3.4E-01
			PCB-123	4.7E-08	--	4.7E-08	Reproductive	5.2E-03	--	5.2E-03
			PCB-126	3.8E-05	--	3.8E-05	Reproductive	4.2E+00	--	4.2E+00
			PCB-156/157	3.0E-07	--	3.0E-07	Reproductive	3.3E-02	--	3.3E-02
			PCB-167	1.4E-07	--	1.4E-07	Reproductive	1.5E-02	--	1.5E-02
			PCB-169	5.3E-07	--	5.3E-07	Reproductive	5.9E-02	--	5.9E-02
			PCB-189	2.1E-08	--	2.1E-08	Reproductive	2.3E-03	--	2.3E-03
			KM TEQ PCB	4.2E-05	--	4.2E-05	Reproductive	4.7E+00	--	4.7E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-05	--	1.7E-05	Whole Body	5.0E+00	--	5.0E+00
			PAHs							
			Benz(a)anthracene	1.3E-07	--	1.3E-07	--	--	--	--
			Benzo(a)pyrene	1.3E-06	--	1.3E-06	Developmental	1.2E-02	--	1.2E-02
			Benzo(b)fluoranthene	1.3E-07	--	1.3E-07	--	--	--	--
			Chrysene	1.3E-09	--	1.3E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.3E-06	--	1.3E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.3E-07	--	1.3E-07	--	--	--	--
			Pesticides & Organics							
			Dieldrin	1.3E-06	--	1.3E-06	Liver	1.9E-02	--	1.9E-02
			Inorganics							
			Arsenic, inorganic	1.6E-05	--	1.6E-05	Skin, Blood	4.1E-01	--	4.1E-01
			Cobalt	--	--	--	Thyroid	1.9E+00	--	1.9E+00
			Methyl Mercury	--	--	--	Neurological	1.4E+00	--	1.4E+00
			Total DLCs (excluding KM TEQs)			9.7E-05				1.1E+01
			Total DLCs (based on KM TEQs)			9.5E-05				1.1E+01
			Total PCDD/Fs (excluding KM TEQ)			5.4E-05				6.0E+00
			Total PCDD/Fs (based on KM TEQ)			5.3E-05				5.9E+00
			Total DL-PCBs (excluding KM TEQ)			4.3E-05				4.8E+00
			Total DL-PCBs (based on KM TEQ)			4.2E-05				4.7E+00
			Total Non-DL PCBs			1.7E-05				5.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-05				9.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			5.9E-05				9.7E+00
			Total PAHs			3.0E-06				1.2E-02
			Total Organics			1.3E-06				1.9E-02

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total Inorganics			1.6E-05				3.8E+00
	Summer Flounder Total (excluding KM TEQs)					1.3E-04				2.0E+01
	Summer Flounder Total (based on KM TEQs)					1.3E-04				1.9E+01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.4E-04	--	1.4E-04	Reproductive	1.6E+01	--	1.6E+01
			1,2,3,7,8-PeCDD	3.7E-06	--	3.7E-06	Reproductive	4.1E-01	--	4.1E-01
			1,2,3,4,7,8-HxCDD	2.1E-07	--	2.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,6,7,8-HxCDD	5.3E-07	--	5.3E-07	Reproductive	5.8E-02	--	5.8E-02
			1,2,3,7,8,9-HxCDD	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,6,7,8-HpCDD	3.2E-08	--	3.2E-08	Reproductive	3.6E-03	--	3.6E-03
			OCDD	2.2E-09	--	2.2E-09	Reproductive	2.5E-04	--	2.5E-04
			2,3,7,8-TCDF	3.4E-06	--	3.4E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDF	7.9E-07	--	7.9E-07	Reproductive	8.8E-02	--	8.8E-02
			2,3,4,7,8-PeCDF	8.9E-06	--	8.9E-06	Reproductive	9.9E-01	--	9.9E-01
			1,2,3,4,7,8-HxCDF	1.4E-06	--	1.4E-06	Reproductive	1.6E-01	--	1.6E-01
			1,2,3,6,7,8-HxCDF	1.0E-06	--	1.0E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDF	9.1E-08	--	9.1E-08	Reproductive	1.0E-02	--	1.0E-02
			2,3,4,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	2.1E-02	--	2.1E-02
			1,2,3,4,6,7,8-HpCDF	2.1E-07	--	2.1E-07	Reproductive	2.3E-02	--	2.3E-02
			1,2,3,4,7,8,9-HpCDF	7.6E-09	--	7.6E-09	Reproductive	8.5E-04	--	8.5E-04
			OCDF	5.7E-10	--	5.7E-10	Reproductive	6.3E-05	--	6.3E-05
			KM TEQ DF	1.6E-04	--	1.6E-04	Reproductive	1.8E+01	--	1.8E+01
			PCB-77	8.5E-07	--	8.5E-07	Reproductive	9.5E-02	--	9.5E-02
			PCB-81	9.6E-08	--	9.6E-08	Reproductive	1.1E-02	--	1.1E-02
			PCB-105	1.9E-06	--	1.9E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-114	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-118	7.3E-06	--	7.3E-06	Reproductive	8.1E-01	--	8.1E-01
			PCB-123	1.5E-07	--	1.5E-07	Reproductive	1.6E-02	--	1.6E-02
			PCB-126	5.3E-05	--	5.3E-05	Reproductive	5.9E+00	--	5.9E+00
			PCB-156/157	7.5E-07	--	7.5E-07	Reproductive	8.3E-02	--	8.3E-02
			PCB-167	3.0E-07	--	3.0E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-169	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-189	5.9E-08	--	5.9E-08	Reproductive	6.5E-03	--	6.5E-03
			KM TEQ PCB	6.5E-05	--	6.5E-05	Reproductive	7.2E+00	--	7.2E+00
			Non-DL PCBs							
			Total Non-DL PCBs	5.5E-05	--	5.5E-05	Whole Body	1.6E+01	--	1.6E+01
			PAHs							
			Benz(a)anthracene	3.1E-07	--	3.1E-07	--	--	--	--
			Benzo(a)pyrene	3.1E-06	--	3.1E-06	Developmental	2.9E-02	--	2.9E-02
			Benzo(b)fluoranthene	3.1E-07	--	3.1E-07	--	--	--	--
			Chrysene	3.1E-09	--	3.1E-09	--	--	--	--
			Dibenz(a,h)anthracene	3.1E-06	--	3.1E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07	--	--	--	--
			Pesticides & Organics							
			2,4'-DDD	7.1E-07	--	7.1E-07	Liver	1.2E+00	--	1.2E+00
			4,4'-DDD	2.2E-06	--	2.2E-06	Liver	3.5E+00	--	3.5E+00
			4,4'-DDE	2.4E-06	--	2.4E-06	Liver	2.7E-01	--	2.7E-01
			Dieldrin	6.8E-06	--	6.8E-06	Liver	9.9E-02	--	9.9E-02
			Heptachlor epoxide, cis-	1.1E-06	--	1.1E-06	Liver	1.1E-01	--	1.1E-01
			Inorganics							
			Arsenic, inorganic	6.7E-06	--	6.7E-06	Skin, Blood	1.7E-01	--	1.7E-01
			Methyl Mercury	--	--	--	Neurological	2.8E+00	--	2.8E+00

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Total DLCs (excluding KM TEQs)			2.3E-04				2.5E+01
			Total DLCs (based on KM TEQs)			2.2E-04				2.5E+01
			Total PCDD/Fs (excluding KM TEQ)			1.6E-04				1.8E+01
			Total PCDD/Fs (based on KM TEQ)			1.6E-04				1.8E+01
			Total DL-PCBs (excluding KM TEQ)			6.6E-05				7.4E+00
			Total DL-PCBs (based on KM TEQ)			6.5E-05				7.2E+00
			Total Non-DL PCBs			5.5E-05				1.6E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.2E-04				2.3E+01
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-04				2.3E+01
			Total PAHs			7.2E-06				2.9E-02
			Total Organics			1.3E-05				5.1E+00
			Total Inorganics			6.7E-06				3.0E+00
	White Perch Total (excluding KM TEQs)					3.1E-04				4.9E+01
	White Perch Total (based on KM TEQs)					3.1E-04				4.9E+01
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.4E-04	--	1.4E-04	Reproductive	1.5E+01	--	1.5E+01
			1,2,3,7,8-PeCDD	3.6E-06	--	3.6E-06	Reproductive	4.0E-01	--	4.0E-01
			1,2,3,4,7,8-HxCDD	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,6,7,8-HxCDD	3.1E-07	--	3.1E-07	Reproductive	3.5E-02	--	3.5E-02
			1,2,3,7,8,9-HxCDD	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,6,7,8-HpCDD	3.6E-08	--	3.6E-08	Reproductive	4.0E-03	--	4.0E-03
			OCDD	3.2E-09	--	3.2E-09	Reproductive	3.5E-04	--	3.5E-04
			2,3,7,8-TCDF	5.1E-06	--	5.1E-06	Reproductive	5.7E-01	--	5.7E-01
			1,2,3,7,8-PeCDF	3.3E-07	--	3.3E-07	Reproductive	3.7E-02	--	3.7E-02
			2,3,4,7,8-PeCDF	7.7E-06	--	7.7E-06	Reproductive	8.6E-01	--	8.6E-01
			1,2,3,4,7,8-HxCDF	2.5E-06	--	2.5E-06	Reproductive	2.7E-01	--	2.7E-01
			1,2,3,6,7,8-HxCDF	7.4E-07	--	7.4E-07	Reproductive	8.2E-02	--	8.2E-02
			1,2,3,7,8,9-HxCDF	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			2,3,4,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	2.2E-02	--	2.2E-02
			1,2,3,4,6,7,8-HpCDF	2.5E-07	--	2.5E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,4,7,8,9-HpCDF	3.5E-09	--	3.5E-09	Reproductive	3.9E-04	--	3.9E-04
			OCDF	3.9E-10	--	3.9E-10	Reproductive	4.3E-05	--	4.3E-05
			KM TEQ DF	1.6E-04	--	1.6E-04	Reproductive	1.8E+01	--	1.8E+01
			PCB-77	1.0E-06	--	1.0E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-81	1.3E-07	--	1.3E-07	Reproductive	1.5E-02	--	1.5E-02
			PCB-105	1.6E-06	--	1.6E-06	Reproductive	1.8E-01	--	1.8E-01
			PCB-114	1.4E-07	--	1.4E-07	Reproductive	1.5E-02	--	1.5E-02
			PCB-118	7.4E-06	--	7.4E-06	Reproductive	8.2E-01	--	8.2E-01
			PCB-123	1.3E-07	--	1.3E-07	Reproductive	1.4E-02	--	1.4E-02
			PCB-126	5.1E-05	--	5.1E-05	Reproductive	5.7E+00	--	5.7E+00
			PCB-156/157	5.9E-07	--	5.9E-07	Reproductive	6.6E-02	--	6.6E-02
			PCB-167	2.5E-07	--	2.5E-07	Reproductive	2.7E-02	--	2.7E-02
			PCB-169	1.7E-06	--	1.7E-06	Reproductive	1.9E-01	--	1.9E-01
			PCB-189	4.2E-08	--	4.2E-08	Reproductive	4.7E-03	--	4.7E-03
			KM TEQ PCB	6.1E-05	--	6.1E-05	Reproductive	6.8E+00	--	6.8E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.2E-05	--	2.2E-05	Whole Body	6.6E+00	--	6.6E+00
			Pesticides & Organics							
			4,4'-DDE	1.1E-06	--	1.1E-06	Liver	1.3E-01	--	1.3E-01
			Dieldrin	3.4E-06	--	3.4E-06	Liver	5.0E-02	--	5.0E-02

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Heptachlor epoxide, cis-	1.1E-06	--	1.1E-06	Liver	1.1E-01	--	1.1E-01
			Inorganics							
			Arsenic, inorganic	1.5E-05	--	1.5E-05	Skin, Blood	3.8E-01	--	3.8E-01
			Total DLCs (excluding KM TEQs)			2.2E-04				2.5E+01
			Total DLCs (based on KM TEQs)			2.2E-04				2.4E+01
			Total PCDD/Fs (excluding KM TEQ)			1.6E-04				1.8E+01
			Total PCDD/Fs (based on KM TEQ)			1.6E-04				1.8E+01
			Total DL-PCBs (excluding KM TEQ)			6.4E-05				7.1E+00
			Total DL-PCBs (based on KM TEQ)			6.1E-05				6.8E+00
			Total Non-DL PCBs			2.2E-05				6.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			8.6E-05				1.4E+01
			Total PCBs (DL & NDL; based on KM TEQ)			8.3E-05				1.3E+01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			5.7E-06				2.9E-01
			Total Inorganics			1.5E-05				3.8E-01
	Crab (H+M) Total (excluding KM TEQs)					2.7E-04				3.2E+01
	Crab (H+M) Total (based on KM TEQs)					2.6E-04				3.2E+01
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.0E-05	--	2.0E-05	Reproductive	2.3E+00	--	2.3E+00
			1,2,3,7,8-PeCDD	1.3E-06	--	1.3E-06	Reproductive	1.5E-01	--	1.5E-01
			1,2,3,4,7,8-HxCDD	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,6,7,8-HxCDD	3.6E-08	--	3.6E-08	Reproductive	4.1E-03	--	4.1E-03
			1,2,3,7,8,9-HxCDD	1.9E-08	--	1.9E-08	Reproductive	2.1E-03	--	2.1E-03
			1,2,3,4,6,7,8-HpCDD	7.1E-09	--	7.1E-09	Reproductive	7.8E-04	--	7.8E-04
			OCDD	7.3E-10	--	7.3E-10	Reproductive	8.1E-05	--	8.1E-05
			2,3,7,8-TCDF	6.1E-07	--	6.1E-07	Reproductive	6.8E-02	--	6.8E-02
			1,2,3,7,8-PeCDF	4.3E-08	--	4.3E-08	Reproductive	4.7E-03	--	4.7E-03
			2,3,4,7,8-PeCDF	7.6E-07	--	7.6E-07	Reproductive	8.5E-02	--	8.5E-02
			1,2,3,4,7,8-HxCDF	3.8E-07	--	3.8E-07	Reproductive	4.2E-02	--	4.2E-02
			1,2,3,6,7,8-HxCDF	9.5E-08	--	9.5E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,7,8,9-HxCDF	3.7E-08	--	3.7E-08	Reproductive	4.2E-03	--	4.2E-03
			2,3,4,6,7,8-HxCDF	2.4E-08	--	2.4E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,4,6,7,8-HpCDF	2.1E-08	--	2.1E-08	Reproductive	2.3E-03	--	2.3E-03
			1,2,3,4,7,8,9-HpCDF	1.8E-09	--	1.8E-09	Reproductive	2.0E-04	--	2.0E-04
			OCDF	1.5E-10	--	1.5E-10	Reproductive	1.6E-05	--	1.6E-05
			KM TEQ DF	2.3E-05	--	2.3E-05	Reproductive	2.6E+00	--	2.6E+00
			PCB-77	1.0E-07	--	1.0E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-81	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			PCB-105	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			PCB-114	1.5E-08	--	1.5E-08	Reproductive	1.6E-03	--	1.6E-03
			PCB-118	6.3E-07	--	6.3E-07	Reproductive	7.0E-02	--	7.0E-02
			PCB-123	1.2E-08	--	1.2E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-126	4.5E-06	--	4.5E-06	Reproductive	5.0E-01	--	5.0E-01
			PCB-156/157	5.1E-08	--	5.1E-08	Reproductive	5.6E-03	--	5.6E-03
			PCB-167	1.9E-08	--	1.9E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-169	1.8E-06	--	1.8E-06	Reproductive	2.0E-01	--	2.0E-01
			PCB-189	2.5E-09	--	2.5E-09	Reproductive	2.8E-04	--	2.8E-04
			KM TEQ PCB	5.4E-06	--	5.4E-06	Reproductive	6.0E-01	--	6.0E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.9E-06	--	1.9E-06	Whole Body	5.7E-01	--	5.7E-01

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PAHs							
			Benz(a)anthracene	1.9E-07	--	1.9E-07	--	--	--	--
			Benzo(a)pyrene	1.9E-06	--	1.9E-06	Developmental	1.8E-02	--	1.8E-02
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07	--	--	--	--
			Chrysene	1.9E-09	--	1.9E-09	--	--	--	--
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07	--	--	--	--
			Inorganics							
			Arsenic, inorganic	1.4E-05	--	1.4E-05	Skin, Blood	3.6E-01	--	3.6E-01
			Total DLCs (excluding KM TEQs)			3.1E-05				3.4E+00
			Total DLCs (based on KM TEQs)			2.9E-05				3.2E+00
			Total PCDD/Fs (excluding KM TEQ)			2.4E-05				2.6E+00
			Total PCDD/Fs (based on KM TEQ)			2.3E-05				2.6E+00
			Total DL-PCBs (excluding KM TEQ)			7.3E-06				8.1E-01
			Total DL-PCBs (based on KM TEQ)			5.4E-06				6.0E-01
			Total Non-DL PCBs			1.9E-06				5.7E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			9.2E-06				1.4E+00
			Total PCBs (DL & NDL; based on KM TEQ)			7.3E-06				1.2E+00
			Total PAHs			4.4E-06				1.8E-02
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.4E-05				3.6E-01
	Crab (Muscle) Total (excluding KM TEQs)					5.1E-05				4.4E+00
	Crab (Muscle) Total (based on KM TEQs)					4.9E-05				4.1E+00
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.8E-04	--	4.8E-04	Reproductive	5.3E+01	--	5.3E+01
			1,2,3,7,8-PeCDD	1.1E-05	--	1.1E-05	Reproductive	1.3E+00	--	1.3E+00
			1,2,3,4,7,8-HxCDD	3.7E-07	--	3.7E-07	Reproductive	4.1E-02	--	4.1E-02
			1,2,3,6,7,8-HxCDD	1.1E-06	--	1.1E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,7,8,9-HxCDD	3.8E-07	--	3.8E-07	Reproductive	4.2E-02	--	4.2E-02
			1,2,3,4,6,7,8-HpCDD	1.2E-07	--	1.2E-07	Reproductive	1.3E-02	--	1.3E-02
			OCDD	1.0E-08	--	1.0E-08	Reproductive	1.1E-03	--	1.1E-03
			2,3,7,8-TCDF	1.8E-05	--	1.8E-05	Reproductive	2.0E+00	--	2.0E+00
			1,2,3,7,8-PeCDF	1.2E-06	--	1.2E-06	Reproductive	1.3E-01	--	1.3E-01
			2,3,4,7,8-PeCDF	2.8E-05	--	2.8E-05	Reproductive	3.1E+00	--	3.1E+00
			1,2,3,4,7,8-HxCDF	8.7E-06	--	8.7E-06	Reproductive	9.7E-01	--	9.7E-01
			1,2,3,6,7,8-HxCDF	2.6E-06	--	2.6E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,7,8,9-HxCDF	7.2E-08	--	7.2E-08	Reproductive	8.0E-03	--	8.0E-03
			2,3,4,6,7,8-HxCDF	6.8E-07	--	6.8E-07	Reproductive	7.6E-02	--	7.6E-02
			1,2,3,4,6,7,8-HpCDF	8.9E-07	--	8.9E-07	Reproductive	9.9E-02	--	9.9E-02
			1,2,3,4,7,8,9-HpCDF	7.2E-09	--	7.2E-09	Reproductive	8.0E-04	--	8.0E-04
			OCDF	1.3E-09	--	1.3E-09	Reproductive	1.5E-04	--	1.5E-04
			KM TEQ DF	5.5E-04	--	5.5E-04	Reproductive	6.1E+01	--	6.1E+01
			PCB-77	3.6E-06	--	3.6E-06	Reproductive	4.0E-01	--	4.0E-01
			PCB-81	4.8E-07	--	4.8E-07	Reproductive	5.4E-02	--	5.4E-02
			PCB-105	5.9E-06	--	5.9E-06	Reproductive	6.5E-01	--	6.5E-01
			PCB-114	5.0E-07	--	5.0E-07	Reproductive	5.5E-02	--	5.5E-02
			PCB-118	2.7E-05	--	2.7E-05	Reproductive	3.0E+00	--	3.0E+00
			PCB-123	4.7E-07	--	4.7E-07	Reproductive	5.2E-02	--	5.2E-02
			PCB-126	1.8E-04	--	1.8E-04	Reproductive	2.1E+01	--	2.1E+01
			PCB-156/157	2.1E-06	--	2.1E-06	Reproductive	2.4E-01	--	2.4E-01

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-167	9.0E-07	--	9.0E-07	Reproductive	1.0E-01	--	1.0E-01
			PCB-169	5.7E-06	--	5.7E-06	Reproductive	6.4E-01	--	6.4E-01
			PCB-189	1.6E-07	--	1.6E-07	Reproductive	1.7E-02	--	1.7E-02
			KM TEQ PCB	2.2E-04	--	2.2E-04	Reproductive	2.5E+01	--	2.5E+01
			Non-DL PCBs							
			Total Non-DL PCBs	8.2E-05	--	8.2E-05	Whole Body	2.4E+01	--	2.4E+01
			PAHs							
			Benz(a)anthracene	4.7E-08	--	4.7E-08	--	--	--	--
			Benzo(a)pyrene	4.2E-07	--	4.2E-07	Developmental	3.9E-03	--	3.9E-03
			Benzo(b)fluoranthene	3.9E-08	--	3.9E-08	--	--	--	--
			Chrysene	6.6E-10	--	6.6E-10	--	--	--	--
			Dibenz(a,h)anthracene	4.0E-07	--	4.0E-07	--	--	--	--
			Indeno(1,2,3-c,d)-pyrene	1.1E-06	--	1.1E-06	--	--	--	--
			Pesticides & Organics							
			4,4'-DDD	1.0E-06	--	1.0E-06	Liver	1.7E+00	--	1.7E+00
			4,4'-DDE	3.9E-06	--	3.9E-06	Liver	4.4E-01	--	4.4E-01
			Dieldrin	1.1E-05	--	1.1E-05	Liver	1.7E-01	--	1.7E-01
			Heptachlor epoxide, cis-	4.2E-06	--	4.2E-06	Liver	4.1E-01	--	4.1E-01
			Heptachlor epoxide, trans-	1.2E-06	--	1.2E-06	Liver	1.2E-01	--	1.2E-01
			Inorganics							
			Arsenic, inorganic	1.8E-05	--	1.8E-05	Skin, Blood	4.7E-01	--	4.7E-01
			Total DLCs (excluding KM TEQs)			7.8E-04				8.7E+01
			Total DLCs (based on KM TEQs)			7.7E-04				8.6E+01
			Total PCDD/Fs (excluding KM TEQ)			5.5E-04				6.2E+01
			Total PCDD/Fs (based on KM TEQ)			5.5E-04				6.1E+01
			Total DL-PCBs (excluding KM TEQ)			2.3E-04				2.6E+01
			Total DL-PCBs (based on KM TEQ)			2.2E-04				2.5E+01
			Total Non-DL PCBs			8.2E-05				2.4E+01
			Total PCBs (DL & NDL; excluding KM TEQ)			3.1E-04				5.0E+01
			Total PCBs (DL & NDL; based on KM TEQ)			3.0E-04				4.9E+01
			Total PAHs			2.0E-06				3.9E-03
			Total Organics			2.2E-05				2.8E+00
			Total Inorganics			1.8E-05				4.7E-01
	Crab (Hepatopancreas) Total (excluding KM TEQs)					9.1E-04				1.1E+02
	Crab (Hepatopancreas) Total (based on KM TEQs)					9.0E-04				1.1E+02

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Mixed Fish/All Species Total				Mixed Fish/All Species Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		2.6E-01		Blood HI =		2.6E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.9E-02		Developmental HI =		1.9E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		2.4E+00		Liver HI =		2.4E+00
				Neurological HI =		2.5E+00		Neurological HI =		2.5E+00
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.0E+01		Reproductive HI =		2.1E+01
				Skin HI =		2.6E-01		Skin HI =		2.6E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.4E+01		Whole Body HI =		1.4E+01
				American Eel Total				American Eel Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		2.7E-01		Blood HI =		2.7E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		2.9E-02		Developmental HI =		2.9E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		5.1E+00		Liver HI =		5.1E+00
				Neurological HI =		3.1E+00		Neurological HI =		3.1E+00
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.6E+01		Reproductive HI =		3.2E+01
				Skin HI =		2.7E-01		Skin HI =		2.7E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		2.0E+01		Whole Body HI =		2.0E+01

TABLE 10.3.RME
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
						Crab (H+M) Total				Crab (H+M) Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.8E-01		Blood HI =		3.8E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		2.9E-01		Liver HI =		2.9E-01
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.5E+01		Reproductive HI =		2.4E+01
				Skin HI =		3.8E-01		Skin HI =		3.8E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		6.6E+00		Whole Body HI =		6.6E+00
						Crab (Muscle) Total				Crab (Muscle) Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.6E-01		Blood HI =		3.6E-01
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		1.8E-02		Developmental HI =		1.8E-02
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		3.4E+00		Reproductive HI =		3.2E+00
				Skin HI =		3.6E-01		Skin HI =		3.6E-01
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		5.7E-01		Whole Body HI =		5.7E-01

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.2E-04	--	2.2E-04
			1,2,3,7,8-PeCDD	1.2E-05	--	1.2E-05
			1,2,3,4,7,8-HxCDD	5.6E-07	--	5.6E-07
			1,2,3,6,7,8-HxCDD	1.7E-06	--	1.7E-06
			1,2,3,7,8,9-HxCDD	4.1E-07	--	4.1E-07
			1,2,3,4,6,7,8-HpCDD	1.9E-07	--	1.9E-07
			OCDD	3.4E-08	--	3.4E-08
			2,3,7,8-TCDF	4.6E-06	--	4.6E-06
			1,2,3,7,8-PeCDF	1.2E-06	--	1.2E-06
			2,3,4,7,8-PeCDF	2.0E-05	--	2.0E-05
			1,2,3,4,7,8-HxCDF	3.0E-06	--	3.0E-06
			1,2,3,6,7,8-HxCDF	2.7E-06	--	2.7E-06
			1,2,3,7,8,9-HxCDF	3.1E-07	--	3.1E-07
			2,3,4,6,7,8-HxCDF	4.6E-07	--	4.6E-07
			1,2,3,4,6,7,8-HpCDF	6.3E-07	--	6.3E-07
			1,2,3,4,7,8,9-HpCDF	2.9E-08	--	2.9E-08
			OCDF	1.9E-09	--	1.9E-09
			KM TEQ DF	2.7E-04	--	2.7E-04
			PCB-77	1.3E-06	--	1.3E-06
			PCB-81	1.6E-07	--	1.6E-07
			PCB-105	6.2E-06	--	6.2E-06
			PCB-114	4.8E-07	--	4.8E-07
			PCB-118	2.5E-05	--	2.5E-05
			PCB-123	4.6E-07	--	4.6E-07
			PCB-126	2.5E-04	--	2.5E-04
			PCB-156/157	2.3E-06	--	2.3E-06
			PCB-167	1.0E-06	--	1.0E-06
			PCB-169	3.1E-06	--	3.1E-06
			PCB-189	1.8E-07	--	1.8E-07
			KM TEQ PCB	3.1E-04	--	3.1E-04
			Non-DL PCBs			
			Total Non-DL PCBs	1.5E-04	--	1.5E-04
			PAHs			
			Benz(a)anthracene	3.1E-07	--	3.1E-07
			Benzo(a)pyrene	3.1E-06	--	3.1E-06
			Benzo(b)fluoranthene	3.1E-07	--	3.1E-07
			Chrysene	3.1E-09	--	3.1E-09
			Dibenz(a,h)anthracene	3.1E-06	--	3.1E-06

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Indeno(1,2,3-c,d)-pyrene	3.1E-07	--	3.1E-07
			Pesticides & Organics			
			4,4'-DDD	3.9E-06	--	3.9E-06
			4,4'-DDE	7.7E-06	--	7.7E-06
			Chlordane, alpha (cis)	1.0E-06	--	1.0E-06
			Dieldrin	2.2E-05	--	2.2E-05
			Heptachlor epoxide, cis-	3.1E-06	--	3.1E-06
			Inorganics			
			Arsenic, inorganic	3.1E-05	--	3.1E-05
			Total DLCs (excluding KM TEQs)			5.6E-04
			Total DLCs (based on KM TEQs)			5.8E-04
			Total PCDD/Fs (excluding KM TEQ)			2.7E-04
			Total PCDD/Fs (based on KM TEQ)			2.7E-04
			Total DL-PCBs (excluding KM TEQ)			2.9E-04
			Total DL-PCBs (based on KM TEQ)			3.1E-04
			Total Non-DL PCBs			1.5E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			4.3E-04
			Total PCBs (DL & NDL; based on KM TEQ)			4.6E-04
			Total PAHs			7.1E-06
			Total Organics			3.8E-05
			Total Inorganics			3.1E-05
	Mixed Fish/All Species Total (excluding KM TEQs)					7.8E-04
	Mixed Fish/All Species Total (based on KM TEQs)					8.0E-04
Fish	American Eel	American Eel	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.4E-04	--	2.4E-04
			1,2,3,7,8-PeCDD	1.9E-05	--	1.9E-05
			1,2,3,4,7,8-HxCDD	1.1E-06	--	1.1E-06
			1,2,3,6,7,8-HxCDD	5.2E-06	--	5.2E-06
			1,2,3,7,8,9-HxCDD	9.4E-07	--	9.4E-07
			1,2,3,4,6,7,8-HpCDD	3.5E-07	--	3.5E-07
			OCDD	2.6E-08	--	2.6E-08
			2,3,7,8-TCDF	2.9E-07	--	2.9E-07
			1,2,3,7,8-PeCDF	1.1E-06	--	1.1E-06
			2,3,4,7,8-PeCDF	3.2E-05	--	3.2E-05
			1,2,3,4,7,8-HxCDF	7.3E-06	--	7.3E-06
			1,2,3,6,7,8-HxCDF	5.5E-06	--	5.5E-06
			1,2,3,7,8,9-HxCDF	3.1E-07	--	3.1E-07

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	9.9E-07	--	9.9E-07
			1,2,3,4,6,7,8-HpCDF	1.3E-06	--	1.3E-06
			1,2,3,4,7,8,9-HpCDF	4.4E-08	--	4.4E-08
			OCDF	2.9E-09	--	2.9E-09
			KM TEQ DF	3.1E-04	--	3.1E-04
			PCB-77	2.0E-07	--	2.0E-07
			PCB-81	9.6E-08	--	9.6E-08
			PCB-105	1.7E-05	--	1.7E-05
			PCB-114	1.1E-06	--	1.1E-06
			PCB-118	5.8E-05	--	5.8E-05
			PCB-123	1.2E-06	--	1.2E-06
			PCB-126	3.3E-04	--	3.3E-04
			PCB-156/157	5.1E-06	--	5.1E-06
			PCB-167	2.2E-06	--	2.2E-06
			PCB-169	3.6E-06	--	3.6E-06
			PCB-189	3.9E-07	--	3.9E-07
			KM TEQ PCB	5.9E-04	--	5.9E-04
			Non-DL PCBs			
			Total Non-DL PCBs	2.1E-04	--	2.1E-04
			PAHs			
			Benz(a)anthracene	4.8E-07	--	4.8E-07
			Benzo(a)pyrene	4.8E-06	--	4.8E-06
			Benzo(b)fluoranthene	4.8E-07	--	4.8E-07
			Chrysene	4.8E-09	--	4.8E-09
			Dibenz(a,h)anthracene	4.8E-06	--	4.8E-06
			Indeno(1,2,3-c,d)-pyrene	4.8E-07	--	4.8E-07
			Pesticides & Organics			
			4,4'-DDD	5.7E-06	--	5.7E-06
			4,4'-DDE	1.7E-05	--	1.7E-05
			Dieldrin	4.2E-05	--	4.2E-05
			Heptachlor epoxide, cis-	6.2E-06	--	6.2E-06
			Hexachlorobenzene	1.2E-06	--	1.2E-06
			Mirex	1.4E-06	--	1.4E-06
			Nonachlor, trans-	1.7E-06	--	1.7E-06
			Inorganics			
			Arsenic, inorganic	3.2E-05	--	3.2E-05
Total DLCs (excluding KM TEQs)						7.3E-04
Total DLCs (based on KM TEQs)						9.0E-04
Total PCDD/Fs (excluding KM TEQ)						3.1E-04

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			3.1E-04
			Total DL-PCBs (excluding KM TEQ)			4.1E-04
			Total DL-PCBs (based on KM TEQ)			5.9E-04
			Total Non-DL PCBs			2.1E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			6.3E-04
			Total PCBs (DL & NDL; based on KM TEQ)			8.0E-04
			Total PAHs			1.1E-05
			Total Organics			7.5E-05
			Total Inorganics			3.2E-05
	American Eel Total (excluding KM TEQs)					1.1E-03
	American Eel Total (based on KM TEQs)					1.2E-03
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.0E-05	--	4.0E-05
			1,2,3,7,8-PeCDD	8.1E-06	--	8.1E-06
			1,2,3,4,7,8-HxCDD	2.0E-07	--	2.0E-07
			1,2,3,6,7,8-HxCDD	5.4E-07	--	5.4E-07
			1,2,3,7,8,9-HxCDD	1.9E-07	--	1.9E-07
			1,2,3,4,6,7,8-HpCDD	3.9E-08	--	3.9E-08
			OCDD	2.1E-09	--	2.1E-09
			2,3,7,8-TCDF	1.0E-06	--	1.0E-06
			1,2,3,7,8-PeCDF	5.4E-07	--	5.4E-07
			2,3,4,7,8-PeCDF	6.1E-06	--	6.1E-06
			1,2,3,4,7,8-HxCDF	2.6E-07	--	2.6E-07
			1,2,3,6,7,8-HxCDF	6.2E-07	--	6.2E-07
			1,2,3,7,8,9-HxCDF	2.3E-07	--	2.3E-07
			2,3,4,6,7,8-HxCDF	1.5E-07	--	1.5E-07
			1,2,3,4,6,7,8-HpCDF	1.8E-07	--	1.8E-07
			1,2,3,4,7,8,9-HpCDF	2.1E-08	--	2.1E-08
			OCDF	1.4E-09	--	1.4E-09
			KM TEQ DF	5.5E-05	--	5.5E-05
			PCB-77	2.7E-07	--	2.7E-07
			PCB-81	2.9E-08	--	2.9E-08
			PCB-105	1.0E-06	--	1.0E-06
			PCB-114	6.2E-08	--	6.2E-08
			PCB-118	4.3E-06	--	4.3E-06
			PCB-123	6.1E-08	--	6.1E-08
			PCB-126	1.0E-04	--	1.0E-04
			PCB-156/157	4.6E-07	--	4.6E-07

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-167	2.4E-07	--	2.4E-07
			PCB-169	1.5E-06	--	1.5E-06
			PCB-189	4.6E-08	--	4.6E-08
			KM TEQ PCB	1.1E-04	--	1.1E-04
			Non-DL PCBs			
			Total Non-DL PCBs	4.3E-05	--	4.3E-05
			PAHs			
			Benz(a)anthracene	1.9E-07	--	1.9E-07
			Benzo(a)pyrene	1.9E-06	--	1.9E-06
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07
			Chrysene	1.9E-09	--	1.9E-09
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07
			Pesticides & Organics			
			4,4'-DDE	1.9E-06	--	1.9E-06
			4,4'-DDT	1.3E-06	--	1.3E-06
			Dieldrin	1.3E-05	--	1.3E-05
			Heptachlor epoxide, cis-	2.0E-06	--	2.0E-06
			Inorganics			
			Arsenic, inorganic	2.0E-05	--	2.0E-05
			Total DLCs (excluding KM TEQs)			1.7E-04
			Total DLCs (based on KM TEQs)			1.6E-04
			Total PCDD/Fs (excluding KM TEQ)			5.9E-05
			Total PCDD/Fs (based on KM TEQ)			5.5E-05
			Total DL-PCBs (excluding KM TEQ)			1.1E-04
			Total DL-PCBs (based on KM TEQ)			1.1E-04
			Total Non-DL PCBs			4.3E-05
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-04
			Total PCBs (DL & NDL; based on KM TEQ)			1.5E-04
			Total PAHs			4.5E-06
			Total Organics			1.8E-05
			Total Inorganics			2.0E-05
	Bluefish Total (excluding KM TEQs)					2.6E-04
	Bluefish Total (based on KM TEQs)					2.5E-04
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.6E-04	--	2.6E-04
			1,2,3,7,8-PeCDD	1.5E-05	--	1.5E-05

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	5.6E-07	--	5.6E-07
			1,2,3,6,7,8-HxCDD	5.7E-07	--	5.7E-07
			1,2,3,7,8,9-HxCDD	2.3E-07	--	2.3E-07
			1,2,3,4,6,7,8-HpCDD	3.9E-07	--	3.9E-07
			OCDD	1.3E-07	--	1.3E-07
			2,3,7,8-TCDF	1.0E-05	--	1.0E-05
			1,2,3,7,8-PeCDF	1.8E-06	--	1.8E-06
			2,3,4,7,8-PeCDF	2.7E-05	--	2.7E-05
			1,2,3,4,7,8-HxCDF	1.1E-06	--	1.1E-06
			1,2,3,6,7,8-HxCDF	3.3E-06	--	3.3E-06
			1,2,3,7,8,9-HxCDF	3.3E-07	--	3.3E-07
			2,3,4,6,7,8-HxCDF	2.7E-07	--	2.7E-07
			1,2,3,4,6,7,8-HpCDF	9.0E-07	--	9.0E-07
			1,2,3,4,7,8,9-HpCDF	3.0E-08	--	3.0E-08
			OCDF	1.5E-09	--	1.5E-09
			KM TEQ DF	3.2E-04	--	3.2E-04
			PCB-77	3.1E-06	--	3.1E-06
			PCB-81	2.3E-07	--	2.3E-07
			PCB-105	4.8E-06	--	4.8E-06
			PCB-114	5.9E-07	--	5.9E-07
			PCB-118	3.1E-05	--	3.1E-05
			PCB-123	4.6E-07	--	4.6E-07
			PCB-126	5.1E-04	--	5.1E-04
			PCB-156/157	2.7E-06	--	2.7E-06
			PCB-167	1.2E-06	--	1.2E-06
			PCB-169	2.7E-06	--	2.7E-06
			PCB-189	2.3E-07	--	2.3E-07
			KM TEQ PCB	5.3E-04	--	5.3E-04
			Non-DL PCBs			
			Total Non-DL PCBs	2.6E-04	--	2.6E-04
			PAHs			
			Benz(a)anthracene	1.9E-07	--	1.9E-07
			Benzo(a)pyrene	1.9E-06	--	1.9E-06
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07
			Chrysene	1.9E-09	--	1.9E-09
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07
			Pesticides & Organics			
			2,4'-DDD	1.4E-06	--	1.4E-06

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			4,4'-DDD	5.9E-06	--	5.9E-06
			4,4'-DDE	9.6E-06	--	9.6E-06
			Chlordane, alpha (cis)	2.2E-06	--	2.2E-06
			Dieldrin	3.1E-05	--	3.1E-05
			Heptachlor epoxide, cis-	3.0E-06	--	3.0E-06
			Nonachlor, trans-	1.7E-06	--	1.7E-06
			Inorganics			
			Arsenic, inorganic	3.5E-05	--	3.5E-05
			Total DLCs (excluding KM TEQs)			8.8E-04
			Total DLCs (based on KM TEQs)			8.5E-04
			Total PCDD/Fs (excluding KM TEQ)			3.2E-04
			Total PCDD/Fs (based on KM TEQ)			3.2E-04
			Total DL-PCBs (excluding KM TEQ)			5.6E-04
			Total DL-PCBs (based on KM TEQ)			5.3E-04
			Total Non-DL PCBs			2.6E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			8.2E-04
			Total PCBs (DL & NDL; based on KM TEQ)			7.9E-04
			Total PAHs			4.5E-06
			Total Organics			5.5E-05
			Total Inorganics			3.5E-05
	Striped Bass Total (excluding KM TEQs)					1.2E-03
	Striped Bass Total (based on KM TEQs)					1.2E-03
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-04	--	1.5E-04
			1,2,3,7,8-PeCDD	6.6E-06	--	6.6E-06
			1,2,3,4,7,8-HxCDD	2.2E-07	--	2.2E-07
			1,2,3,6,7,8-HxCDD	6.9E-07	--	6.9E-07
			1,2,3,7,8,9-HxCDD	2.9E-07	--	2.9E-07
			1,2,3,4,6,7,8-HpCDD	8.5E-08	--	8.5E-08
			OCDD	3.7E-09	--	3.7E-09
			2,3,7,8-TCDF	7.3E-07	--	7.3E-07
			1,2,3,7,8-PeCDF	2.9E-07	--	2.9E-07
			2,3,4,7,8-PeCDF	7.3E-06	--	7.3E-06
			1,2,3,4,7,8-HxCDF	1.8E-06	--	1.8E-06
			1,2,3,6,7,8-HxCDF	7.2E-07	--	7.2E-07
			1,2,3,7,8,9-HxCDF	3.9E-07	--	3.9E-07
			2,3,4,6,7,8-HxCDF	3.0E-07	--	3.0E-07

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDF	1.3E-07	--	1.3E-07
			1,2,3,4,7,8,9-HpCDF	2.9E-08	--	2.9E-08
			OCDF	1.6E-09	--	1.6E-09
			KM TEQ DF	1.6E-04	--	1.6E-04
			PCB-77	3.9E-07	--	3.9E-07
			PCB-81	1.2E-07	--	1.2E-07
			PCB-105	2.2E-06	--	2.2E-06
			PCB-114	1.9E-07	--	1.9E-07
			PCB-118	9.6E-06	--	9.6E-06
			PCB-123	1.5E-07	--	1.5E-07
			PCB-126	1.2E-04	--	1.2E-04
			PCB-156/157	9.4E-07	--	9.4E-07
			PCB-167	4.3E-07	--	4.3E-07
			PCB-169	1.7E-06	--	1.7E-06
			PCB-189	6.4E-08	--	6.4E-08
			KM TEQ PCB	1.3E-04	--	1.3E-04
			Non-DL PCBs			
			Total Non-DL PCBs	5.4E-05	--	5.4E-05
			PAHs			
			Benz(a)anthracene	1.9E-07	--	1.9E-07
			Benzo(a)pyrene	1.9E-06	--	1.9E-06
			Benzo(b)fluoranthene	1.9E-07	--	1.9E-07
			Chrysene	1.9E-09	--	1.9E-09
			Dibenz(a,h)anthracene	1.9E-06	--	1.9E-06
			Indeno(1,2,3-c,d)-pyrene	1.9E-07	--	1.9E-07
			Pesticides & Organics			
			4,4'-DDE	2.5E-06	--	2.5E-06
			Dieldrin	4.1E-06	--	4.1E-06
			Inorganics			
			Arsenic, inorganic	5.0E-05	--	5.0E-05
Total DLCs (excluding KM TEQs)						3.0E-04
Total DLCs (based on KM TEQs)						3.0E-04
Total PCDD/Fs (excluding KM TEQ)						1.7E-04
Total PCDD/Fs (based on KM TEQ)						1.6E-04
Total DL-PCBs (excluding KM TEQ)						1.3E-04
Total DL-PCBs (based on KM TEQ)						1.3E-04
Total Non-DL PCBs						5.4E-05
Total PCBs (DL & NDL; excluding KM TEQ)						1.9E-04

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-04
			Total PAHs			4.5E-06
			Total Organics			6.6E-06
			Total Inorganics			5.0E-05
	Summer Flounder Total (excluding KM TEQs)					4.2E-04
	Summer Flounder Total (based on KM TEQs)					4.1E-04
Fish	White Perch	White Perch	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.4E-04	--	4.4E-04
			1,2,3,7,8-PeCDD	1.2E-05	--	1.2E-05
			1,2,3,4,7,8-HxCDD	6.6E-07	--	6.6E-07
			1,2,3,6,7,8-HxCDD	1.6E-06	--	1.6E-06
			1,2,3,7,8,9-HxCDD	3.8E-07	--	3.8E-07
			1,2,3,4,6,7,8-HpCDD	1.0E-07	--	1.0E-07
			OCDD	6.9E-09	--	6.9E-09
			2,3,7,8-TCDF	1.1E-05	--	1.1E-05
			1,2,3,7,8-PeCDF	2.5E-06	--	2.5E-06
			2,3,4,7,8-PeCDF	2.8E-05	--	2.8E-05
			1,2,3,4,7,8-HxCDF	4.4E-06	--	4.4E-06
			1,2,3,6,7,8-HxCDF	3.2E-06	--	3.2E-06
			1,2,3,7,8,9-HxCDF	2.9E-07	--	2.9E-07
			2,3,4,6,7,8-HxCDF	5.8E-07	--	5.8E-07
			1,2,3,4,6,7,8-HpCDF	6.5E-07	--	6.5E-07
			1,2,3,4,7,8,9-HpCDF	2.4E-08	--	2.4E-08
			OCDF	1.8E-09	--	1.8E-09
			KM TEQ DF	4.9E-04	--	4.9E-04
			PCB-77	2.7E-06	--	2.7E-06
			PCB-81	3.0E-07	--	3.0E-07
			PCB-105	6.1E-06	--	6.1E-06
			PCB-114	4.6E-07	--	4.6E-07
			PCB-118	2.3E-05	--	2.3E-05
			PCB-123	4.6E-07	--	4.6E-07
			PCB-126	1.6E-04	--	1.6E-04
			PCB-156/157	2.3E-06	--	2.3E-06
			PCB-167	9.5E-07	--	9.5E-07
			PCB-169	6.1E-06	--	6.1E-06
			PCB-189	1.8E-07	--	1.8E-07
			KM TEQ PCB	2.0E-04	--	2.0E-04
			Non-DL PCBs			

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total Non-DL PCBs	1.7E-04	--	1.7E-04
			PAHs			
			Benz(a)anthracene	4.8E-07	--	4.8E-07
			Benzo(a)pyrene	4.8E-06	--	4.8E-06
			Benzo(b)fluoranthene	4.8E-07	--	4.8E-07
			Chrysene	4.8E-09	--	4.8E-09
			Dibenz(a,h)anthracene	4.8E-06	--	4.8E-06
			Indeno(1,2,3-c,d)-pyrene	4.8E-07	--	4.8E-07
			Pesticides & Organics			
			2,4'-DDD	2.2E-06	--	2.2E-06
			4,4'-DDD	6.8E-06	--	6.8E-06
			4,4'-DDE	7.4E-06	--	7.4E-06
			4,4'-DDT	1.7E-06	--	1.7E-06
			Chlordane, alpha (cis)	1.5E-06	--	1.5E-06
			Dieldrin	2.1E-05	--	2.1E-05
			Heptachlor epoxide, cis-	3.5E-06	--	3.5E-06
			Mirex	1.2E-06	--	1.2E-06
			Nonachlor, trans-	1.2E-06	--	1.2E-06
			Inorganics			
			Arsenic, inorganic	2.1E-05	--	2.1E-05
			Total DLCs (excluding KM TEQs)			7.1E-04
			Total DLCs (based on KM TEQs)			7.0E-04
			Total PCDD/Fs (excluding KM TEQ)			5.0E-04
			Total PCDD/Fs (based on KM TEQ)			4.9E-04
			Total DL-PCBs (excluding KM TEQ)			2.1E-04
			Total DL-PCBs (based on KM TEQ)			2.0E-04
			Total Non-DL PCBs			1.7E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			3.8E-04
			Total PCBs (DL & NDL; based on KM TEQ)			3.7E-04
			Total PAHs			1.1E-05
			Total Organics			4.7E-05
			Total Inorganics			2.1E-05
	White Perch Total (excluding KM TEQs)					9.6E-04
	White Perch Total (based on KM TEQs)					9.5E-04
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.3E-04	--	4.3E-04
			1,2,3,7,8-PeCDD	1.1E-05	--	1.1E-05

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	3.3E-07	--	3.3E-07
			1,2,3,6,7,8-HxCDD	9.7E-07	--	9.7E-07
			1,2,3,7,8,9-HxCDD	3.5E-07	--	3.5E-07
			1,2,3,4,6,7,8-HpCDD	1.1E-07	--	1.1E-07
			OCDD	9.9E-09	--	9.9E-09
			2,3,7,8-TCDF	1.6E-05	--	1.6E-05
			1,2,3,7,8-PeCDF	1.0E-06	--	1.0E-06
			2,3,4,7,8-PeCDF	2.4E-05	--	2.4E-05
			1,2,3,4,7,8-HxCDF	7.7E-06	--	7.7E-06
			1,2,3,6,7,8-HxCDF	2.3E-06	--	2.3E-06
			1,2,3,7,8,9-HxCDF	1.4E-07	--	1.4E-07
			2,3,4,6,7,8-HxCDF	6.1E-07	--	6.1E-07
			1,2,3,4,6,7,8-HpCDF	7.7E-07	--	7.7E-07
			1,2,3,4,7,8,9-HpCDF	1.1E-08	--	1.1E-08
			OCDF	1.2E-09	--	1.2E-09
			KM TEQ DF	5.0E-04	--	5.0E-04
			PCB-77	3.2E-06	--	3.2E-06
			PCB-81	4.2E-07	--	4.2E-07
			PCB-105	5.1E-06	--	5.1E-06
			PCB-114	4.3E-07	--	4.3E-07
			PCB-118	2.3E-05	--	2.3E-05
			PCB-123	4.0E-07	--	4.0E-07
			PCB-126	1.6E-04	--	1.6E-04
			PCB-156/157	1.8E-06	--	1.8E-06
			PCB-167	7.7E-07	--	7.7E-07
			PCB-169	5.4E-06	--	5.4E-06
			PCB-189	1.3E-07	--	1.3E-07
			KM TEQ PCB	1.9E-04	--	1.9E-04
			Non-DL PCBs			
			Total Non-DL PCBs	7.0E-05	--	7.0E-05
			Pesticides & Organics			
			4,4'-DDE	3.5E-06	--	3.5E-06
			Dieldrin	1.1E-05	--	1.1E-05
			Heptachlor epoxide, cis-	3.6E-06	--	3.6E-06
			Heptachlor epoxide, trans-	1.1E-06	--	1.1E-06
			Inorganics			
			Arsenic, inorganic	4.6E-05	--	4.6E-05
Total DLCs (excluding KM TEQs)						7.0E-04
Total DLCs (based on KM TEQs)						6.9E-04

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (excluding KM TEQ)			5.0E-04
			Total PCDD/Fs (based on KM TEQ)			5.0E-04
			Total DL-PCBs (excluding KM TEQ)			2.0E-04
			Total DL-PCBs (based on KM TEQ)			1.9E-04
			Total Non-DL PCBs			7.0E-05
			Total PCBs (DL & NDL; excluding KM TEQ)			2.7E-04
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-04
			Total PAHs			0.0E+00
			Total Organics			1.9E-05
			Total Inorganics			4.6E-05
	Crab (H+M) Total (excluding KM TEQs)					8.3E-04
	Crab (H+M) Total (based on KM TEQs)					8.2E-04
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	6.4E-05	--	6.4E-05
			1,2,3,7,8-PeCDD	4.1E-06	--	4.1E-06
			1,2,3,4,7,8-HxCDD	4.5E-08	--	4.5E-08
			1,2,3,6,7,8-HxCDD	1.1E-07	--	1.1E-07
			1,2,3,7,8,9-HxCDD	5.8E-08	--	5.8E-08
			1,2,3,4,6,7,8-HpCDD	2.2E-08	--	2.2E-08
			OCDD	2.3E-09	--	2.3E-09
			2,3,7,8-TCDF	1.9E-06	--	1.9E-06
			1,2,3,7,8-PeCDF	1.3E-07	--	1.3E-07
			2,3,4,7,8-PeCDF	2.4E-06	--	2.4E-06
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06
			1,2,3,6,7,8-HxCDF	3.0E-07	--	3.0E-07
			1,2,3,7,8,9-HxCDF	1.2E-07	--	1.2E-07
			2,3,4,6,7,8-HxCDF	7.6E-08	--	7.6E-08
			1,2,3,4,6,7,8-HpCDF	6.5E-08	--	6.5E-08
			1,2,3,4,7,8,9-HpCDF	5.5E-09	--	5.5E-09
			OCDF	4.6E-10	--	4.6E-10
			KM TEQ DF	7.2E-05	--	7.2E-05
			PCB-77	3.3E-07	--	3.3E-07
			PCB-81	4.5E-08	--	4.5E-08
			PCB-105	5.2E-07	--	5.2E-07
			PCB-114	4.6E-08	--	4.6E-08
			PCB-118	2.0E-06	--	2.0E-06
			PCB-123	3.9E-08	--	3.9E-08
			PCB-126	1.4E-05	--	1.4E-05

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-156/157	1.6E-07	--	1.6E-07
			PCB-167	6.1E-08	--	6.1E-08
			PCB-169	5.6E-06	--	5.6E-06
			PCB-189	7.7E-09	--	7.7E-09
			KM TEQ PCB	1.7E-05	--	1.7E-05
			Non-DL PCBs			
			Total Non-DL PCBs	6.1E-06	--	6.1E-06
			PAHs			
			Benz(a)anthracene	2.9E-07	--	2.9E-07
			Benzo(a)pyrene	2.9E-06	--	2.9E-06
			Benzo(b)fluoranthene	2.9E-07	--	2.9E-07
			Chrysene	2.9E-09	--	2.9E-09
			Dibenz(a,h)anthracene	2.9E-06	--	2.9E-06
			Indeno(1,2,3-c,d)-pyrene	2.9E-07	--	2.9E-07
			Pesticides & Organics			
			Dieldrin	2.4E-06	--	2.4E-06
			Inorganics			
			Arsenic, inorganic	4.3E-05	--	4.3E-05
			Total DLCs (excluding KM TEQs)			9.7E-05
			Total DLCs (based on KM TEQs)			8.9E-05
			Total PCDD/Fs (excluding KM TEQ)			7.4E-05
			Total PCDD/Fs (based on KM TEQ)			7.2E-05
			Total DL-PCBs (excluding KM TEQ)			2.3E-05
			Total DL-PCBs (based on KM TEQ)			1.7E-05
			Total Non-DL PCBs			6.1E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			2.9E-05
			Total PCBs (DL & NDL; based on KM TEQ)			2.3E-05
			Total PAHs			6.6E-06
			Total Organics			2.4E-06
			Total Inorganics			4.3E-05
	Crab (Muscle) Total (excluding KM TEQs)					1.6E-04
	Crab (Muscle) Total (based on KM TEQs)					1.5E-04
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-03	--	1.5E-03
			1,2,3,7,8-PeCDD	3.6E-05	--	3.6E-05
			1,2,3,4,7,8-HxCDD	1.1E-06	--	1.1E-06
			1,2,3,6,7,8-HxCDD	3.4E-06	--	3.4E-06

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8,9-HxCDD	1.2E-06	--	1.2E-06
			1,2,3,4,6,7,8-HpCDD	3.7E-07	--	3.7E-07
			OCDD	3.2E-08	--	3.2E-08
			2,3,7,8-TCDF	5.6E-05	--	5.6E-05
			1,2,3,7,8-PeCDF	3.6E-06	--	3.6E-06
			2,3,4,7,8-PeCDF	8.7E-05	--	8.7E-05
			1,2,3,4,7,8-HxCDF	2.7E-05	--	2.7E-05
			1,2,3,6,7,8-HxCDF	8.2E-06	--	8.2E-06
			1,2,3,7,8,9-HxCDF	2.2E-07	--	2.2E-07
			2,3,4,6,7,8-HxCDF	2.1E-06	--	2.1E-06
			1,2,3,4,6,7,8-HpCDF	2.8E-06	--	2.8E-06
			1,2,3,4,7,8,9-HpCDF	2.3E-08	--	2.3E-08
			OCDF	4.1E-09	--	4.1E-09
			KM TEQ DF	1.7E-03	--	1.7E-03
			PCB-77	1.1E-05	--	1.1E-05
			PCB-81	1.5E-06	--	1.5E-06
			PCB-105	1.8E-05	--	1.8E-05
			PCB-114	1.6E-06	--	1.6E-06
			PCB-118	8.3E-05	--	8.3E-05
			PCB-123	1.5E-06	--	1.5E-06
			PCB-126	5.8E-04	--	5.8E-04
			PCB-156/157	6.7E-06	--	6.7E-06
			PCB-167	2.8E-06	--	2.8E-06
			PCB-169	1.8E-05	--	1.8E-05
			PCB-189	4.9E-07	--	4.9E-07
			KM TEQ PCB	6.9E-04	--	6.9E-04
			Non-DL PCBs			
			Total Non-DL PCBs	2.6E-04	--	2.6E-04
			PAHs			
			Benz(a)anthracene	7.1E-08	--	7.1E-08
			Benzo(a)pyrene	6.3E-07	--	6.3E-07
			Benzo(b)fluoranthene	5.9E-08	--	5.9E-08
			Chrysene	9.9E-10	--	9.9E-10
			Dibenz(a,h)anthracene	6.1E-07	--	6.1E-07
			Indeno(1,2,3-c,d)-pyrene	1.7E-06	--	1.7E-06
			Pesticides & Organics			
			4,4'-DDD	3.2E-06	--	3.2E-06
			4,4'-DDE	1.2E-05	--	1.2E-05
			Benzaldehyde	1.1E-06	--	1.1E-06

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Dieldrin	3.5E-05	--	3.5E-05
			Heptachlor epoxide, cis-	1.3E-05	--	1.3E-05
			Heptachlor epoxide, trans-	3.8E-06	--	3.8E-06
			Mirex	1.3E-06	--	1.3E-06
			Nonachlor, trans-	1.4E-06	--	1.4E-06
			Oxychlordane	2.1E-06	--	2.1E-06
			Inorganics			
			Arsenic, inorganic	5.7E-05	--	5.7E-05
			Total DLCs (excluding KM TEQs)			2.5E-03
			Total DLCs (based on KM TEQs)			2.4E-03
			Total PCDD/Fs (excluding KM TEQ)			1.7E-03
			Total PCDD/Fs (based on KM TEQ)			1.7E-03
			Total DL-PCBs (excluding KM TEQ)			7.2E-04
			Total DL-PCBs (based on KM TEQ)			6.9E-04
			Total Non-DL PCBs			2.6E-04
			Total PCBs (DL & NDL; excluding KM TEQ)			9.8E-04
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-04
			Total PAHs			3.0E-06
			Total Organics			7.4E-05
			Total Inorganics			5.7E-05
	Crab (Hepatopancreas) Total (excluding KM TEQs)					2.8E-03
	Crab (Hepatopancreas) Total (based on KM TEQs)					2.8E-03
Sediment	Sediment	Angler - Fishing Sediment	**Inorganics**			
			Arsenic, inorganic	6.5E-07	1.3E-06	1.9E-06
	Fishing - Sediment Total (excluding KM TEQs)					1.9E-06
	Fishing - Sediment Total (based on KM TEQs)					1.9E-06
Surface Water	Surface Water	Angler - Fishing Surface Water	--	--	--	--
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						7.8E-04
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						8.1E-04
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.1E-03
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.2E-03
Sediment	Sediment	Angler - Crabbing Sediment	**Inorganics**			
			Arsenic, inorganic	4.1E-07	7.9E-07	1.2E-06
	Crabbing - Sediment Total (excluding KM TEQs)					1.2E-06
	Crabbing - Sediment Total (based on KM TEQs)					1.2E-06

TABLE 10.A.RME
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Surface Water	Surface Water	Angler - Crabbing Surface Water	--	--	--	--
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						8.4E-04
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						8.2E-04
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						1.6E-04
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						1.5E-04

Note: Sediment and surface water risks are for adult only, since the child is not assumed to accompany the adult angler on fishing or crabbing trips.

Note: For fish ingestion, summary risks are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.4.RME
RISK AND HAZARD SUMMARY - ADULT WORKER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Worker Sediment	**Inorganics** Arsenic, inorganic	8.5E-07	9.0E-07	1.7E-06	Skin, Blood	5.3E-03	5.6E-03	1.1E-02
	Sediment Total (excluding KM TEQs)					1.7E-06				1.1E-02
	Sediment Total (based on KM TEQs)					1.7E-06				1.1E-02

		Sediment Total		Sediment Total
	(excluding KM TEQs) Target Organ-Specific HI		(based on KM TEQs) Target Organ-Specific HI	
	Blood HI =	1.1E-02	Blood HI =	1.1E-02
	Body Weight HI =	--	Body Weight HI =	--
	Developmental HI =	--	Developmental HI =	--
	GI Tract HI =	--	GI Tract HI =	--
	Hair HI =	--	Hair HI =	--
	Immune HI =	--	Immune HI =	--
	Kidney HI =	--	Kidney HI =	--
	Liver HI =	--	Liver HI =	--
	Neurological HI =	--	Neurological HI =	--
	No Effect HI =	--	No Effect HI =	--
	Organ Weights HI =	--	Organ Weights HI =	--
	Reproductive HI =	--	Reproductive HI =	--
	Skin HI =	1.1E-02	Skin HI =	1.1E-02
	Thymus HI =	--	Thymus HI =	--
	Thyroid HI =	--	Thyroid HI =	--
	Urinary HI =	--	Urinary HI =	--
	Whole Body HI =	--	Whole Body HI =	--

TABLE 10.5.RME
RISK AND HAZARD SUMMARY - ADULT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--	-- --	--	--	--
Sediment	Sediment	Boater Sediment	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Boater Surface Water	--	--	--	--	-- --	--	--	--

TABLE 10.6.RME
RISK AND HAZARD SUMMARY - ADOLESCENT WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--	-- --	--	--	--
Sediment	Sediment	Boater Sediment	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Boater Surface Water	--	--	--	--	-- --	--	--	--

TABLE 10.7.RME
RISK AND HAZARD SUMMARY - CHILD WADER AND SWIMMER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--	-- --	--	--	--

TABLE 10.B.RME
RISK SUMMARY - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - RME SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	**Inorganics** Arsenic, inorganic	6.7E-07	4.6E-07	1.1E-06
	Wader - Sediment Total (excluding KM TEQs)					1.1E-06
	Wader - Sediment Total (based on KM TEQs)					1.1E-06
Sediment	Sediment	Swimmer Sediment	**Inorganics** Arsenic, inorganic	6.7E-07	4.6E-07	1.1E-06
	Swimmer - Sediment Total (excluding KM TEQs)					1.1E-06
	Swimmer - Sediment Total (based on KM TEQs)					1.1E-06
Sediment	Sediment	Boater Sediment	--	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--
Wader Sediment Total + Surface Water Total (excluding KM TEQs)						1.1E-06
Wader Sediment Total + Surface Water Total (based on KM TEQs)						1.1E-06
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--
Swimmer Sediment Total + Surface Water Total (excluding KM TEQs)						1.1E-06
Swimmer Sediment Total + Surface Water Total (based on KM TEQs)						1.1E-06
Surface Water	Surface Water	Boater Surface Water	--	--	--	--

Note: Sediment and surface water boater risks are for adult only, since the child is not expected to participate in boating activities on the Bay.

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.0E-06	--	5.0E-06	Reproductive	3.7E-01	--	3.7E-01
			1,2,3,7,8-PeCDD	2.7E-07	--	2.7E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8-HxCDD	1.2E-08	--	1.2E-08	Reproductive	9.2E-04	--	9.2E-04
			1,2,3,6,7,8-HxCDD	3.8E-08	--	3.8E-08	Reproductive	2.8E-03	--	2.8E-03
			1,2,3,7,8,9-HxCDD	9.1E-09	--	9.1E-09	Reproductive	6.7E-04	--	6.7E-04
			1,2,3,4,6,7,8-HpCDD	4.3E-09	--	4.3E-09	Reproductive	3.2E-04	--	3.2E-04
			OCDD	7.6E-10	--	7.6E-10	Reproductive	5.6E-05	--	5.6E-05
			2,3,7,8-TCDF	1.0E-07	--	1.0E-07	Reproductive	7.6E-03	--	7.6E-03
			1,2,3,7,8-PeCDF	2.8E-08	--	2.8E-08	Reproductive	2.1E-03	--	2.1E-03
			2,3,4,7,8-PeCDF	4.4E-07	--	4.4E-07	Reproductive	3.3E-02	--	3.3E-02
			1,2,3,4,7,8-HxCDF	6.7E-08	--	6.7E-08	Reproductive	4.9E-03	--	4.9E-03
			1,2,3,6,7,8-HxCDF	6.0E-08	--	6.0E-08	Reproductive	4.4E-03	--	4.4E-03
			1,2,3,7,8,9-HxCDF	6.9E-09	--	6.9E-09	Reproductive	5.1E-04	--	5.1E-04
			2,3,4,6,7,8-HxCDF	1.0E-08	--	1.0E-08	Reproductive	7.6E-04	--	7.6E-04
			1,2,3,4,6,7,8-HpCDF	1.4E-08	--	1.4E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,4,7,8,9-HpCDF	6.6E-10	--	6.6E-10	Reproductive	4.9E-05	--	4.9E-05
			OCDF	4.1E-11	--	4.1E-11	Reproductive	3.1E-06	--	3.1E-06
			KM TEQ DF	6.0E-06	--	6.0E-06	Reproductive	4.4E-01	--	4.4E-01
			PCB-77	3.3E-08	--	3.3E-08	Reproductive	2.4E-03	--	2.4E-03
			PCB-81	3.8E-09	--	3.8E-09	Reproductive	2.8E-04	--	2.8E-04
			PCB-105	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-114	1.2E-08	--	1.2E-08	Reproductive	8.7E-04	--	8.7E-04
			PCB-118	6.1E-07	--	6.1E-07	Reproductive	4.6E-02	--	4.6E-02
			PCB-123	1.1E-08	--	1.1E-08	Reproductive	8.3E-04	--	8.3E-04
			PCB-126	6.0E-06	--	6.0E-06	Reproductive	4.5E-01	--	4.5E-01
			PCB-156/157	5.6E-08	--	5.6E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-167	2.5E-08	--	2.5E-08	Reproductive	1.8E-03	--	1.8E-03
			PCB-169	7.6E-08	--	7.6E-08	Reproductive	5.6E-03	--	5.6E-03
			PCB-189	4.5E-09	--	4.5E-09	Reproductive	3.3E-04	--	3.3E-04
			KM TEQ PCB	7.7E-06	--	7.7E-06	Reproductive	5.7E-01	--	5.7E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-06	--	1.8E-06	Whole Body	7.1E-01	--	7.1E-01
			Inorganics							
			Arsenic, inorganic	1.1E-06	--	1.1E-06	Skin, Blood	1.9E-02	--	1.9E-02
			Total DLCs (excluding KM TEQs)			1.3E-05				9.7E-01
			Total DLCs (based on KM TEQs)			1.4E-05				1.0E+00
			Total PCDD/Fs (excluding KM TEQ)			6.1E-06				4.5E-01
			Total PCDD/Fs (based on KM TEQ)			6.0E-06				4.4E-01
			Total DL-PCBs (excluding KM TEQ)			7.0E-06				5.2E-01
			Total DL-PCBs (based on KM TEQ)			7.7E-06				5.7E-01
			Total Non-DL PCBs			1.8E-06				7.1E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			8.8E-06				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			9.5E-06				1.3E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.1E-06				1.9E-02
	Mixed Fish/All Species Total (excluding KM TEQs)					1.6E-05				1.7E+00
	Mixed Fish/All Species Total (based on KM TEQs)					1.7E-05				1.7E+00
Fish	American Eel	American Eel	**Dioxin-like Compounds**							

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDD	5.3E-06	--	5.3E-06	Reproductive	4.0E-01	--	4.0E-01
			1,2,3,7,8-PeCDD	4.3E-07	--	4.3E-07	Reproductive	3.2E-02	--	3.2E-02
			1,2,3,4,7,8-HxCDD	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDD	1.2E-07	--	1.2E-07	Reproductive	8.5E-03	--	8.5E-03
			1,2,3,7,8,9-HxCDD	2.1E-08	--	2.1E-08	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,4,6,7,8-HpCDD	7.9E-09	--	7.9E-09	Reproductive	5.8E-04	--	5.8E-04
			OCDD	5.8E-10	--	5.8E-10	Reproductive	4.3E-05	--	4.3E-05
			2,3,7,8-TCDF	6.4E-09	--	6.4E-09	Reproductive	4.7E-04	--	4.7E-04
			1,2,3,7,8-PeCDF	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			2,3,4,7,8-PeCDF	7.0E-07	--	7.0E-07	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,4,7,8-HxCDF	1.6E-07	--	1.6E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,6,7,8-HxCDF	1.2E-07	--	1.2E-07	Reproductive	9.1E-03	--	9.1E-03
			1,2,3,7,8,9-HxCDF	6.9E-09	--	6.9E-09	Reproductive	5.1E-04	--	5.1E-04
			2,3,4,6,7,8-HxCDF	2.2E-08	--	2.2E-08	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,4,6,7,8-HpCDF	2.9E-08	--	2.9E-08	Reproductive	2.1E-03	--	2.1E-03
			1,2,3,4,7,8,9-HpCDF	9.8E-10	--	9.8E-10	Reproductive	7.3E-05	--	7.3E-05
			OCDF	6.6E-11	--	6.6E-11	Reproductive	4.9E-06	--	4.9E-06
			KM TEQ DF	6.8E-06	--	6.8E-06	Reproductive	5.1E-01	--	5.1E-01
			PCB-77	5.0E-09	--	5.0E-09	Reproductive	3.7E-04	--	3.7E-04
			PCB-81	2.3E-09	--	2.3E-09	Reproductive	1.7E-04	--	1.7E-04
			PCB-105	4.1E-07	--	4.1E-07	Reproductive	3.1E-02	--	3.1E-02
			PCB-114	2.6E-08	--	2.6E-08	Reproductive	2.0E-03	--	2.0E-03
			PCB-118	1.4E-06	--	1.4E-06	Reproductive	1.1E-01	--	1.1E-01
			PCB-123	2.8E-08	--	2.8E-08	Reproductive	2.1E-03	--	2.1E-03
			PCB-126	8.0E-06	--	8.0E-06	Reproductive	5.9E-01	--	5.9E-01
			PCB-156/157	1.2E-07	--	1.2E-07	Reproductive	9.2E-03	--	9.2E-03
			PCB-167	5.4E-08	--	5.4E-08	Reproductive	4.0E-03	--	4.0E-03
			PCB-169	8.7E-08	--	8.7E-08	Reproductive	6.5E-03	--	6.5E-03
			PCB-189	9.7E-09	--	9.7E-09	Reproductive	7.2E-04	--	7.2E-04
			KM TEQ PCB	1.4E-05	--	1.4E-05	Reproductive	1.1E+00	--	1.1E+00
			Non-DL PCBs							
			Total Non-DL PCBs	2.6E-06	--	2.6E-06	Whole Body	1.0E+00	--	1.0E+00
			Inorganics							
			Arsenic, inorganic	1.1E-06	--	1.1E-06	Skin, Blood	1.9E-02	--	1.9E-02
			Total DLCs (excluding KM TEQs)			1.7E-05				1.3E+00
			Total DLCs (based on KM TEQs)			2.1E-05				1.6E+00
			Total PCDD/Fs (excluding KM TEQ)			7.0E-06				5.2E-01
			Total PCDD/Fs (based on KM TEQ)			6.8E-06				5.1E-01
			Total DL-PCBs (excluding KM TEQ)			1.0E-05				7.5E-01
			Total DL-PCBs (based on KM TEQ)			1.4E-05				1.1E+00
			Total Non-DL PCBs			2.6E-06				1.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-05				1.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.7E-05				2.1E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.1E-06				1.9E-02
	American Eel Total (excluding KM TEQs)					2.1E-05				2.3E+00
	American Eel Total (based on KM TEQs)					2.5E-05				2.6E+00
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.0E-07	--	9.0E-07	Reproductive	6.7E-02	--	6.7E-02

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,7,8-HxCDD	4.4E-09	--	4.4E-09	Reproductive	3.3E-04	--	3.3E-04
			1,2,3,6,7,8-HxCDD	1.2E-08	--	1.2E-08	Reproductive	9.0E-04	--	9.0E-04
			1,2,3,7,8,9-HxCDD	4.2E-09	--	4.2E-09	Reproductive	3.1E-04	--	3.1E-04
			1,2,3,4,6,7,8-HpCDD	8.6E-10	--	8.6E-10	Reproductive	6.4E-05	--	6.4E-05
			OCDD	4.7E-11	--	4.7E-11	Reproductive	3.5E-06	--	3.5E-06
			2,3,7,8-TCDF	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,7,8-PeCDF	1.2E-08	--	1.2E-08	Reproductive	9.0E-04	--	9.0E-04
			2,3,4,7,8-PeCDF	1.4E-07	--	1.4E-07	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,7,8-HxCDF	5.7E-09	--	5.7E-09	Reproductive	4.2E-04	--	4.2E-04
			1,2,3,6,7,8-HxCDF	1.4E-08	--	1.4E-08	Reproductive	1.0E-03	--	1.0E-03
			1,2,3,7,8,9-HxCDF	5.2E-09	--	5.2E-09	Reproductive	3.8E-04	--	3.8E-04
			2,3,4,6,7,8-HxCDF	3.4E-09	--	3.4E-09	Reproductive	2.5E-04	--	2.5E-04
			1,2,3,4,6,7,8-HpCDF	4.0E-09	--	4.0E-09	Reproductive	3.0E-04	--	3.0E-04
			1,2,3,4,7,8,9-HpCDF	4.6E-10	--	4.6E-10	Reproductive	3.4E-05	--	3.4E-05
			OCDF	3.1E-11	--	3.1E-11	Reproductive	2.3E-06	--	2.3E-06
			KM TEQ DF	1.2E-06	--	1.2E-06	Reproductive	9.1E-02	--	9.1E-02
			PCB-77	6.5E-09	--	6.5E-09	Reproductive	4.8E-04	--	4.8E-04
			PCB-81	7.2E-10	--	7.2E-10	Reproductive	5.3E-05	--	5.3E-05
			PCB-105	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			PCB-114	1.5E-09	--	1.5E-09	Reproductive	1.1E-04	--	1.1E-04
			PCB-118	1.1E-07	--	1.1E-07	Reproductive	7.8E-03	--	7.8E-03
			PCB-123	1.5E-09	--	1.5E-09	Reproductive	1.1E-04	--	1.1E-04
			PCB-126	2.6E-06	--	2.6E-06	Reproductive	1.9E-01	--	1.9E-01
			PCB-156/157	1.1E-08	--	1.1E-08	Reproductive	8.4E-04	--	8.4E-04
			PCB-167	5.8E-09	--	5.8E-09	Reproductive	4.3E-04	--	4.3E-04
			PCB-169	3.6E-08	--	3.6E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-189	1.1E-09	--	1.1E-09	Reproductive	8.4E-05	--	8.4E-05
			KM TEQ PCB	2.7E-06	--	2.7E-06	Reproductive	2.0E-01	--	2.0E-01
			Total DLCs (excluding KM TEQs)			4.1E-06				3.0E-01
			Total DLCs (based on KM TEQs)			3.9E-06				2.9E-01
			Total PCDD/Fs (excluding KM TEQ)			1.3E-06				9.7E-02
			Total PCDD/Fs (based on KM TEQ)			1.2E-06				9.1E-02
			Total DL-PCBs (excluding KM TEQ)			2.8E-06				2.0E-01
			Total DL-PCBs (based on KM TEQ)			2.7E-06				2.0E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.8E-06				2.0E-01
			Total PCBs (DL & NDL; based on KM TEQ)			2.7E-06				2.0E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Bluefish Total (excluding KM TEQs)					4.1E-06				3.0E-01
	Bluefish Total (based on KM TEQs)					3.9E-06				2.9E-01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.7E-06	--	5.7E-06	Reproductive	4.2E-01	--	4.2E-01
			1,2,3,7,8-PeCDD	3.3E-07	--	3.3E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,4,7,8-HxCDD	1.2E-08	--	1.2E-08	Reproductive	9.2E-04	--	9.2E-04
			1,2,3,6,7,8-HxCDD	1.3E-08	--	1.3E-08	Reproductive	9.4E-04	--	9.4E-04
			1,2,3,7,8,9-HxCDD	5.2E-09	--	5.2E-09	Reproductive	3.9E-04	--	3.9E-04
			1,2,3,4,6,7,8-HpCDD	8.7E-09	--	8.7E-09	Reproductive	6.5E-04	--	6.5E-04

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			OCDD	2.9E-09	--	2.9E-09	Reproductive	2.2E-04	--	2.2E-04
			2,3,7,8-TCDF	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	4.0E-08	--	4.0E-08	Reproductive	3.0E-03	--	3.0E-03
			2,3,4,7,8-PeCDF	6.0E-07	--	6.0E-07	Reproductive	4.4E-02	--	4.4E-02
			1,2,3,4,7,8-HxCDF	2.5E-08	--	2.5E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDF	7.4E-08	--	7.4E-08	Reproductive	5.5E-03	--	5.5E-03
			1,2,3,7,8,9-HxCDF	7.3E-09	--	7.3E-09	Reproductive	5.4E-04	--	5.4E-04
			2,3,4,6,7,8-HxCDF	6.0E-09	--	6.0E-09	Reproductive	4.4E-04	--	4.4E-04
			1,2,3,4,6,7,8-HpCDF	2.0E-08	--	2.0E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	6.6E-10	--	6.6E-10	Reproductive	4.9E-05	--	4.9E-05
			OCDF	3.4E-11	--	3.4E-11	Reproductive	2.6E-06	--	2.6E-06
			KM TEQ DF	7.1E-06	--	7.1E-06	Reproductive	5.2E-01	--	5.2E-01
			PCB-77	7.6E-08	--	7.6E-08	Reproductive	5.6E-03	--	5.6E-03
			PCB-81	5.7E-09	--	5.7E-09	Reproductive	4.2E-04	--	4.2E-04
			PCB-105	1.2E-07	--	1.2E-07	Reproductive	8.8E-03	--	8.8E-03
			PCB-114	1.4E-08	--	1.4E-08	Reproductive	1.1E-03	--	1.1E-03
			PCB-118	7.5E-07	--	7.5E-07	Reproductive	5.5E-02	--	5.5E-02
			PCB-123	1.1E-08	--	1.1E-08	Reproductive	8.4E-04	--	8.4E-04
			PCB-126	1.3E-05	--	1.3E-05	Reproductive	9.3E-01	--	9.3E-01
			PCB-156/157	6.6E-08	--	6.6E-08	Reproductive	4.9E-03	--	4.9E-03
			PCB-167	2.9E-08	--	2.9E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-169	6.7E-08	--	6.7E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-189	5.7E-09	--	5.7E-09	Reproductive	4.2E-04	--	4.2E-04
			KM TEQ PCB	1.3E-05	--	1.3E-05	Reproductive	9.6E-01	--	9.6E-01
			Non-DL PCBs							
			Total Non-DL PCBs	3.2E-06	--	3.2E-06	Whole Body	1.2E+00	--	1.2E+00
			Inorganics							
			Arsenic, inorganic	1.2E-06	--	1.2E-06	Skin, Blood	2.0E-02	--	2.0E-02
			Total DLCs (excluding KM TEQs)			2.1E-05				1.5E+00
			Total DLCs (based on KM TEQs)			2.0E-05				1.5E+00
			Total PCDD/Fs (excluding KM TEQ)			7.1E-06				5.2E-01
			Total PCDD/Fs (based on KM TEQ)			7.1E-06				5.2E-01
			Total DL-PCBs (excluding KM TEQ)			1.4E-05				1.0E+00
			Total DL-PCBs (based on KM TEQ)			1.3E-05				9.6E-01
			Total Non-DL PCBs			3.2E-06				1.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.7E-05				2.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.6E-05				2.2E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.2E-06				2.0E-02
	Striped Bass Total (excluding KM TEQs)					2.5E-05				2.8E+00
	Striped Bass Total (based on KM TEQs)					2.4E-05				2.7E+00
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.3E-06	--	3.3E-06	Reproductive	2.5E-01	--	2.5E-01
			1,2,3,7,8-PeCDD	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,7,8-HxCDD	4.9E-09	--	4.9E-09	Reproductive	3.6E-04	--	3.6E-04
			1,2,3,6,7,8-HxCDD	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,7,8,9-HxCDD	6.5E-09	--	6.5E-09	Reproductive	4.8E-04	--	4.8E-04
			1,2,3,4,6,7,8-HpCDD	1.9E-09	--	1.9E-09	Reproductive	1.4E-04	--	1.4E-04
			OCDD	8.2E-11	--	8.2E-11	Reproductive	6.1E-06	--	6.1E-06

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,7,8-TCDF	1.6E-08	--	1.6E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8-PeCDF	6.4E-09	--	6.4E-09	Reproductive	4.7E-04	--	4.7E-04
			2,3,4,7,8-PeCDF	1.6E-07	--	1.6E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,7,8-HxCDF	4.0E-08	--	4.0E-08	Reproductive	2.9E-03	--	2.9E-03
			1,2,3,6,7,8-HxCDF	1.6E-08	--	1.6E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8,9-HxCDF	8.7E-09	--	8.7E-09	Reproductive	6.4E-04	--	6.4E-04
			2,3,4,6,7,8-HxCDF	6.6E-09	--	6.6E-09	Reproductive	4.9E-04	--	4.9E-04
			1,2,3,4,6,7,8-HpCDF	3.0E-09	--	3.0E-09	Reproductive	2.2E-04	--	2.2E-04
			1,2,3,4,7,8,9-HpCDF	6.5E-10	--	6.5E-10	Reproductive	4.8E-05	--	4.8E-05
			OCDF	3.6E-11	--	3.6E-11	Reproductive	2.7E-06	--	2.7E-06
			KM TEQ DF	3.7E-06	--	3.7E-06	Reproductive	2.7E-01	--	2.7E-01
			PCB-77	9.5E-09	--	9.5E-09	Reproductive	7.1E-04	--	7.1E-04
			PCB-81	3.0E-09	--	3.0E-09	Reproductive	2.2E-04	--	2.2E-04
			PCB-105	5.5E-08	--	5.5E-08	Reproductive	4.1E-03	--	4.1E-03
			PCB-114	4.7E-09	--	4.7E-09	Reproductive	3.5E-04	--	3.5E-04
			PCB-118	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-123	3.6E-09	--	3.6E-09	Reproductive	2.7E-04	--	2.7E-04
			PCB-126	2.9E-06	--	2.9E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-156/157	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-167	1.1E-08	--	1.1E-08	Reproductive	7.9E-04	--	7.9E-04
			PCB-169	4.1E-08	--	4.1E-08	Reproductive	3.0E-03	--	3.0E-03
			PCB-189	1.6E-09	--	1.6E-09	Reproductive	1.2E-04	--	1.2E-04
			KM TEQ PCB	3.2E-06	--	3.2E-06	Reproductive	2.4E-01	--	2.4E-01
			Inorganics							
			Arsenic, inorganic	1.7E-06	--	1.7E-06	Skin, Blood	2.9E-02	--	2.9E-02
			Total DLCs (excluding KM TEQs)			7.1E-06				5.2E-01
			Total DLCs (based on KM TEQs)			6.9E-06				5.1E-01
			Total PCDD/Fs (excluding KM TEQ)			3.8E-06				2.8E-01
			Total PCDD/Fs (based on KM TEQ)			3.7E-06				2.7E-01
			Total DL-PCBs (excluding KM TEQ)			3.3E-06				2.4E-01
			Total DL-PCBs (based on KM TEQ)			3.2E-06				2.4E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.3E-06				2.4E-01
			Total PCBs (DL & NDL; based on KM TEQ)			3.2E-06				2.4E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.7E-06				2.9E-02
	Summer Flounder Total (excluding KM TEQs)					8.7E-06				5.5E-01
	Summer Flounder Total (based on KM TEQs)					8.6E-06				5.4E-01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.8E-06	--	9.8E-06	Reproductive	7.2E-01	--	7.2E-01
			1,2,3,7,8-PeCDD	2.6E-07	--	2.6E-07	Reproductive	1.9E-02	--	1.9E-02
			1,2,3,4,7,8-HxCDD	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	3.7E-08	--	3.7E-08	Reproductive	2.7E-03	--	2.7E-03
			1,2,3,7,8,9-HxCDD	8.5E-09	--	8.5E-09	Reproductive	6.3E-04	--	6.3E-04
			1,2,3,4,6,7,8-HpCDD	2.2E-09	--	2.2E-09	Reproductive	1.7E-04	--	1.7E-04
			OCDD	1.5E-10	--	1.5E-10	Reproductive	1.1E-05	--	1.1E-05
			2,3,7,8-TCDF	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			1,2,3,7,8-PeCDF	5.5E-08	--	5.5E-08	Reproductive	4.1E-03	--	4.1E-03
			2,3,4,7,8-PeCDF	6.2E-07	--	6.2E-07	Reproductive	4.6E-02	--	4.6E-02

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDF	9.9E-08	--	9.9E-08	Reproductive	7.3E-03	--	7.3E-03
			1,2,3,6,7,8-HxCDF	7.2E-08	--	7.2E-08	Reproductive	5.4E-03	--	5.4E-03
			1,2,3,7,8,9-HxCDF	6.4E-09	--	6.4E-09	Reproductive	4.7E-04	--	4.7E-04
			2,3,4,6,7,8-HxCDF	1.3E-08	--	1.3E-08	Reproductive	9.6E-04	--	9.6E-04
			1,2,3,4,6,7,8-HpCDF	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,7,8,9-HpCDF	5.3E-10	--	5.3E-10	Reproductive	3.9E-05	--	3.9E-05
			OCDF	4.0E-11	--	4.0E-11	Reproductive	2.9E-06	--	2.9E-06
			KM TEQ DF	1.1E-05	--	1.1E-05	Reproductive	8.2E-01	--	8.2E-01
			PCB-77	6.5E-08	--	6.5E-08	Reproductive	4.8E-03	--	4.8E-03
			PCB-81	7.4E-09	--	7.4E-09	Reproductive	5.5E-04	--	5.5E-04
			PCB-105	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-114	1.1E-08	--	1.1E-08	Reproductive	8.4E-04	--	8.4E-04
			PCB-118	5.6E-07	--	5.6E-07	Reproductive	4.2E-02	--	4.2E-02
			PCB-123	1.1E-08	--	1.1E-08	Reproductive	8.3E-04	--	8.3E-04
			PCB-126	4.0E-06	--	4.0E-06	Reproductive	3.0E-01	--	3.0E-01
			PCB-156/157	5.7E-08	--	5.7E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-167	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-169	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-189	4.5E-09	--	4.5E-09	Reproductive	3.3E-04	--	3.3E-04
			KM TEQ PCB	5.0E-06	--	5.0E-06	Reproductive	3.7E-01	--	3.7E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.1E-06	--	2.1E-06	Whole Body	8.2E-01	--	8.2E-01
			Inorganics							
			Arsenic, inorganic	7.1E-07	--	7.1E-07	Skin, Blood	1.2E-02	--	1.2E-02
			Total DLCs (excluding KM TEQs)			1.6E-05				1.2E+00
			Total DLCs (based on KM TEQs)			1.6E-05				1.2E+00
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05				8.3E-01
			Total PCDD/Fs (based on KM TEQ)			1.1E-05				8.2E-01
			Total DL-PCBs (excluding KM TEQ)			5.1E-06				3.8E-01
			Total DL-PCBs (based on KM TEQ)			5.0E-06				3.7E-01
			Total Non-DL PCBs			2.1E-06				8.2E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			7.2E-06				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			7.1E-06				1.2E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			7.1E-07				1.2E-02
	White Perch Total (excluding KM TEQs)					1.9E-05				2.0E+00
	White Perch Total (based on KM TEQs)					1.9E-05				2.0E+00
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.9E-05	--	1.9E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	5.0E-07	--	5.0E-07	Reproductive	3.7E-02	--	3.7E-02
			1,2,3,4,7,8-HxCDD	1.4E-08	--	1.4E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	4.3E-08	--	4.3E-08	Reproductive	3.2E-03	--	3.2E-03
			1,2,3,7,8,9-HxCDD	1.5E-08	--	1.5E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,6,7,8-HpCDD	4.9E-09	--	4.9E-09	Reproductive	3.6E-04	--	3.6E-04
			OCDD	4.4E-10	--	4.4E-10	Reproductive	3.2E-05	--	3.2E-05
			2,3,7,8-TCDF	7.0E-07	--	7.0E-07	Reproductive	5.2E-02	--	5.2E-02
			1,2,3,7,8-PeCDF	4.6E-08	--	4.6E-08	Reproductive	3.4E-03	--	3.4E-03
			2,3,4,7,8-PeCDF	1.1E-06	--	1.1E-06	Reproductive	7.8E-02	--	7.8E-02
			1,2,3,4,7,8-HxCDF	3.4E-07	--	3.4E-07	Reproductive	2.5E-02	--	2.5E-02

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,6,7,8-HxCDF	1.0E-07	--	1.0E-07	Reproductive	7.5E-03	--	7.5E-03
			1,2,3,7,8,9-HxCDF	6.2E-09	--	6.2E-09	Reproductive	4.6E-04	--	4.6E-04
			2,3,4,6,7,8-HxCDF	2.7E-08	--	2.7E-08	Reproductive	2.0E-03	--	2.0E-03
			1,2,3,4,6,7,8-HpCDF	3.4E-08	--	3.4E-08	Reproductive	2.5E-03	--	2.5E-03
			1,2,3,4,7,8,9-HpCDF	4.8E-10	--	4.8E-10	Reproductive	3.6E-05	--	3.6E-05
			OCDF	5.3E-11	--	5.3E-11	Reproductive	3.9E-06	--	3.9E-06
			KM TEQ DF	2.2E-05	--	2.2E-05	Reproductive	1.6E+00	--	1.6E+00
			PCB-77	1.4E-07	--	1.4E-07	Reproductive	1.0E-02	--	1.0E-02
			PCB-81	1.8E-08	--	1.8E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-105	2.3E-07	--	2.3E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-114	1.9E-08	--	1.9E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-118	1.0E-06	--	1.0E-06	Reproductive	7.5E-02	--	7.5E-02
			PCB-123	1.8E-08	--	1.8E-08	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	7.0E-06	--	7.0E-06	Reproductive	5.2E-01	--	5.2E-01
			PCB-156/157	8.1E-08	--	8.1E-08	Reproductive	6.0E-03	--	6.0E-03
			PCB-167	3.4E-08	--	3.4E-08	Reproductive	2.5E-03	--	2.5E-03
			PCB-169	2.4E-07	--	2.4E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-189	5.8E-09	--	5.8E-09	Reproductive	4.3E-04	--	4.3E-04
			KM TEQ PCB	8.4E-06	--	8.4E-06	Reproductive	6.2E-01	--	6.2E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.5E-06	--	1.5E-06	Whole Body	6.0E-01	--	6.0E-01
			Inorganics							
			Arsenic, inorganic	2.0E-06	--	2.0E-06	Skin, Blood	3.5E-02	--	3.5E-02
			Total DLCs (excluding KM TEQs)			3.1E-05				2.3E+00
			Total DLCs (based on KM TEQs)			3.0E-05				2.2E+00
			Total PCDD/Fs (excluding KM TEQ)			2.2E-05				1.6E+00
			Total PCDD/Fs (based on KM TEQ)			2.2E-05				1.6E+00
			Total DL-PCBs (excluding KM TEQ)			8.8E-06				6.5E-01
			Total DL-PCBs (based on KM TEQ)			8.4E-06				6.2E-01
			Total Non-DL PCBs			1.5E-06				6.0E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			1.0E-05				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			9.9E-06				1.2E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			2.0E-06				3.5E-02
	Crab (H+M) Total (excluding KM TEQs)					3.4E-05				2.9E+00
	Crab (H+M) Total (based on KM TEQs)					3.4E-05				2.9E+00
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.8E-06	--	2.8E-06	Reproductive	2.1E-01	--	2.1E-01
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	1.3E-02	--	1.3E-02
			1,2,3,4,7,8-HxCDD	2.0E-09	--	2.0E-09	Reproductive	1.5E-04	--	1.5E-04
			1,2,3,6,7,8-HxCDD	5.0E-09	--	5.0E-09	Reproductive	3.7E-04	--	3.7E-04
			1,2,3,7,8,9-HxCDD	2.6E-09	--	2.6E-09	Reproductive	1.9E-04	--	1.9E-04
			1,2,3,4,6,7,8-HpCDD	9.7E-10	--	9.7E-10	Reproductive	7.2E-05	--	7.2E-05
			OCDD	1.0E-10	--	1.0E-10	Reproductive	7.4E-06	--	7.4E-06
			2,3,7,8-TCDF	8.4E-08	--	8.4E-08	Reproductive	6.2E-03	--	6.2E-03
			1,2,3,7,8-PeCDF	5.8E-09	--	5.8E-09	Reproductive	4.3E-04	--	4.3E-04
			2,3,4,7,8-PeCDF	1.0E-07	--	1.0E-07	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,4,7,8-HxCDF	5.2E-08	--	5.2E-08	Reproductive	3.8E-03	--	3.8E-03
			1,2,3,6,7,8-HxCDF	1.3E-08	--	1.3E-08	Reproductive	9.7E-04	--	9.7E-04

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8,9-HxCDF	5.1E-09	--	5.1E-09	Reproductive	3.8E-04	--	3.8E-04
			2,3,4,6,7,8-HxCDF	3.3E-09	--	3.3E-09	Reproductive	2.5E-04	--	2.5E-04
			1,2,3,4,6,7,8-HpCDF	2.8E-09	--	2.8E-09	Reproductive	2.1E-04	--	2.1E-04
			1,2,3,4,7,8,9-HpCDF	2.4E-10	--	2.4E-10	Reproductive	1.8E-05	--	1.8E-05
			OCDF	2.0E-11	--	2.0E-11	Reproductive	1.5E-06	--	1.5E-06
			KM TEQ DF	3.2E-06	--	3.2E-06	Reproductive	2.4E-01	--	2.4E-01
			PCB-77	1.4E-08	--	1.4E-08	Reproductive	1.1E-03	--	1.1E-03
			PCB-81	2.0E-09	--	2.0E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-105	2.3E-08	--	2.3E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-114	2.0E-09	--	2.0E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-118	8.6E-08	--	8.6E-08	Reproductive	6.4E-03	--	6.4E-03
			PCB-123	1.7E-09	--	1.7E-09	Reproductive	1.3E-04	--	1.3E-04
			PCB-126	6.1E-07	--	6.1E-07	Reproductive	4.5E-02	--	4.5E-02
			PCB-156/157	7.0E-09	--	7.0E-09	Reproductive	5.2E-04	--	5.2E-04
			PCB-167	2.7E-09	--	2.7E-09	Reproductive	2.0E-04	--	2.0E-04
			PCB-169	2.5E-07	--	2.5E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-189	3.4E-10	--	3.4E-10	Reproductive	2.5E-05	--	2.5E-05
			KM TEQ PCB	7.4E-07	--	7.4E-07	Reproductive	5.4E-02	--	5.4E-02
			Inorganics							
			Arsenic, inorganic	1.9E-06	--	1.9E-06	Skin, Blood	3.3E-02	--	3.3E-02
			Total DLCs (excluding KM TEQs)			4.3E-06				3.2E-01
			Total DLCs (based on KM TEQs)			3.9E-06				2.9E-01
			Total PCDD/Fs (excluding KM TEQ)			3.3E-06				2.4E-01
			Total PCDD/Fs (based on KM TEQ)			3.2E-06				2.4E-01
			Total DL-PCBs (excluding KM TEQ)			1.0E-06				7.4E-02
			Total DL-PCBs (based on KM TEQ)			7.4E-07				5.4E-02
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.0E-06				7.4E-02
			Total PCBs (DL & NDL; based on KM TEQ)			7.4E-07				5.4E-02
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.9E-06				3.3E-02
	Crab (Muscle) Total (excluding KM TEQs)					6.2E-06				3.5E-01
	Crab (Muscle) Total (based on KM TEQs)					5.8E-06				3.2E-01
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.6E-05	--	6.6E-05	Reproductive	4.9E+00	--	4.9E+00
			1,2,3,7,8-PeCDD	1.6E-06	--	1.6E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,4,7,8-HxCDD	5.0E-08	--	5.0E-08	Reproductive	3.7E-03	--	3.7E-03
			1,2,3,6,7,8-HxCDD	1.5E-07	--	1.5E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,7,8,9-HxCDD	5.2E-08	--	5.2E-08	Reproductive	3.8E-03	--	3.8E-03
			1,2,3,4,6,7,8-HpCDD	1.6E-08	--	1.6E-08	Reproductive	1.2E-03	--	1.2E-03
			OCDD	1.4E-09	--	1.4E-09	Reproductive	1.0E-04	--	1.0E-04
			2,3,7,8-TCDF	2.5E-06	--	2.5E-06	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,7,8-PeCDF	1.6E-07	--	1.6E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,7,8-PeCDF	3.8E-06	--	3.8E-06	Reproductive	2.8E-01	--	2.8E-01
			1,2,3,4,7,8-HxCDF	1.2E-06	--	1.2E-06	Reproductive	8.9E-02	--	8.9E-02
			1,2,3,6,7,8-HxCDF	3.6E-07	--	3.6E-07	Reproductive	2.7E-02	--	2.7E-02
			1,2,3,7,8,9-HxCDF	9.8E-09	--	9.8E-09	Reproductive	7.3E-04	--	7.3E-04
			2,3,4,6,7,8-HxCDF	9.4E-08	--	9.4E-08	Reproductive	7.0E-03	--	7.0E-03
			1,2,3,4,6,7,8-HpCDF	1.2E-07	--	1.2E-07	Reproductive	9.1E-03	--	9.1E-03

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8,9-HpCDF	9.9E-10	--	9.9E-10	Reproductive	7.4E-05	--	7.4E-05
			OCDF	1.8E-10	--	1.8E-10	Reproductive	1.3E-05	--	1.3E-05
			KM TEQ DF	7.6E-05	--	7.6E-05	Reproductive	5.6E+00	--	5.6E+00
			PCB-77	5.0E-07	--	5.0E-07	Reproductive	3.7E-02	--	3.7E-02
			PCB-81	6.6E-08	--	6.6E-08	Reproductive	4.9E-03	--	4.9E-03
			PCB-105	8.1E-07	--	8.1E-07	Reproductive	6.0E-02	--	6.0E-02
			PCB-114	6.9E-08	--	6.9E-08	Reproductive	5.1E-03	--	5.1E-03
			PCB-118	3.7E-06	--	3.7E-06	Reproductive	2.7E-01	--	2.7E-01
			PCB-123	6.4E-08	--	6.4E-08	Reproductive	4.7E-03	--	4.7E-03
			PCB-126	2.5E-05	--	2.5E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-156/157	2.9E-07	--	2.9E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-167	1.2E-07	--	1.2E-07	Reproductive	9.1E-03	--	9.1E-03
			PCB-169	7.9E-07	--	7.9E-07	Reproductive	5.8E-02	--	5.8E-02
			PCB-189	2.2E-08	--	2.2E-08	Reproductive	1.6E-03	--	1.6E-03
			KM TEQ PCB	3.0E-05	--	3.0E-05	Reproductive	2.2E+00	--	2.2E+00
			Non-DL PCBs							
			Total Non-DL PCBs	5.6E-06	--	5.6E-06	Whole Body	2.2E+00	--	2.2E+00
			Pesticides & Organics							
			Dieldrin	1.6E-06	--	1.6E-06	Liver	--	--	--
			Inorganics							
			Arsenic, inorganic	2.5E-06	--	2.5E-06	Skin, Blood	4.3E-02	--	4.3E-02
			Total DLCs (excluding KM TEQs)			1.1E-04				8.0E+00
			Total DLCs (based on KM TEQs)			1.1E-04				7.8E+00
			Total PCDD/Fs (excluding KM TEQ)			7.6E-05				5.6E+00
			Total PCDD/Fs (based on KM TEQ)			7.6E-05				5.6E+00
			Total DL-PCBs (excluding KM TEQ)			3.2E-05				2.4E+00
			Total DL-PCBs (based on KM TEQ)			3.0E-05				2.2E+00
			Total Non-DL PCBs			5.6E-06				2.2E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.7E-05				4.5E+00
			Total PCBs (DL & NDL; based on KM TEQ)			3.6E-05				4.4E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			1.6E-06				0.0E+00
			Total Inorganics			2.5E-06				4.3E-02
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.2E-04				1.0E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.2E-04				1.0E+01
Sediment	Sediment	Angler - Fishing Sediment	--	--	--	--	--	--	--	--
Surface Water	Surface Water	Angler - Fishing Surface Water	--	--	--	--	--	--	--	--
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.6E-05				1.7E+00
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.7E-05				1.7E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						2.1E-05				2.3E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						2.5E-05				2.6E+00
Sediment	Sediment	Angler - Crabbing Sediment	--	--	--	--	--	--	--	--
Surface Water	Surface Water	Angler - Crabbing Surface Water	--	--	--	--	--	--	--	--
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						3.4E-05				2.9E+00

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						3.4E-05				2.9E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						6.2E-06				3.5E-01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						5.8E-06				3.2E-01

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-02		Blood HI =		1.9E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		9.7E-01		Reproductive HI =		1.0E+00
				Skin HI =		1.9E-02		Skin HI =		1.9E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		7.1E-01		Whole Body HI =		7.1E-01
			American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		1.9E-02		Blood HI =		1.9E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.3E+00		Reproductive HI =		1.6E+00
				Skin HI =		1.9E-02		Skin HI =		1.9E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.0E+00		Whole Body HI =		1.0E+00

TABLE 10.1.CTE
RISK AND HAZARD SUMMARY - ADULT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.5E-02		Blood HI =		3.5E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.3E+00		Reproductive HI =		2.2E+00
				Skin HI =		3.5E-02		Skin HI =		3.5E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		6.0E-01		Whole Body HI =		6.0E-01
			Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.3E-02		Blood HI =		3.3E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		3.2E-01		Reproductive HI =		2.9E-01
				Skin HI =		3.3E-02		Skin HI =		3.3E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		--		Whole Body HI =		--

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.4E-06	--	3.4E-06	Reproductive	3.8E-01	--	3.8E-01
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8-HxCDD	8.5E-09	--	8.5E-09	Reproductive	9.4E-04	--	9.4E-04
			1,2,3,6,7,8-HxCDD	2.6E-08	--	2.6E-08	Reproductive	2.9E-03	--	2.9E-03
			1,2,3,7,8,9-HxCDD	6.2E-09	--	6.2E-09	Reproductive	6.9E-04	--	6.9E-04
			1,2,3,4,6,7,8-HpCDD	2.9E-09	--	2.9E-09	Reproductive	3.3E-04	--	3.3E-04
			OCDD	5.2E-10	--	5.2E-10	Reproductive	5.8E-05	--	5.8E-05
			2,3,7,8-TCDF	7.0E-08	--	7.0E-08	Reproductive	7.8E-03	--	7.8E-03
			1,2,3,7,8-PeCDF	1.9E-08	--	1.9E-08	Reproductive	2.1E-03	--	2.1E-03
			2,3,4,7,8-PeCDF	3.0E-07	--	3.0E-07	Reproductive	3.4E-02	--	3.4E-02
			1,2,3,4,7,8-HxCDF	4.5E-08	--	4.5E-08	Reproductive	5.1E-03	--	5.1E-03
			1,2,3,6,7,8-HxCDF	4.1E-08	--	4.1E-08	Reproductive	4.5E-03	--	4.5E-03
			1,2,3,7,8,9-HxCDF	4.7E-09	--	4.7E-09	Reproductive	5.2E-04	--	5.2E-04
			2,3,4,6,7,8-HxCDF	7.0E-09	--	7.0E-09	Reproductive	7.8E-04	--	7.8E-04
			1,2,3,4,6,7,8-HpCDF	9.7E-09	--	9.7E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,7,8,9-HpCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			OCDF	2.8E-11	--	2.8E-11	Reproductive	3.2E-06	--	3.2E-06
			KM TEQ DF	4.1E-06	--	4.1E-06	Reproductive	4.5E-01	--	4.5E-01
			PCB-77	2.2E-08	--	2.2E-08	Reproductive	2.5E-03	--	2.5E-03
			PCB-81	2.6E-09	--	2.6E-09	Reproductive	2.9E-04	--	2.9E-04
			PCB-105	1.0E-07	--	1.0E-07	Reproductive	1.2E-02	--	1.2E-02
			PCB-114	8.0E-09	--	8.0E-09	Reproductive	8.9E-04	--	8.9E-04
			PCB-118	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			PCB-123	7.6E-09	--	7.6E-09	Reproductive	8.5E-04	--	8.5E-04
			PCB-126	4.1E-06	--	4.1E-06	Reproductive	4.6E-01	--	4.6E-01
			PCB-156/157	3.8E-08	--	3.8E-08	Reproductive	4.3E-03	--	4.3E-03
			PCB-167	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			PCB-169	5.2E-08	--	5.2E-08	Reproductive	5.8E-03	--	5.8E-03
			PCB-189	3.1E-09	--	3.1E-09	Reproductive	3.4E-04	--	3.4E-04
			KM TEQ PCB	5.2E-06	--	5.2E-06	Reproductive	5.8E-01	--	5.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.2E-06	--	1.2E-06	Whole Body	7.3E-01	--	7.3E-01
			Total DLCs (excluding KM TEQs)			8.9E-06				9.9E-01
			Total DLCs (based on KM TEQs)			9.3E-06				1.0E+00
			Total PCDD/Fs (excluding KM TEQ)			4.2E-06				4.6E-01
			Total PCDD/Fs (based on KM TEQ)			4.1E-06				4.5E-01
			Total DL-PCBs (excluding KM TEQ)			4.8E-06				5.3E-01
			Total DL-PCBs (based on KM TEQ)			5.2E-06				5.8E-01
			Total Non-DL PCBs			1.2E-06				7.3E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-06				1.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			6.5E-06				1.3E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					1.0E-05				1.7E+00
	Mixed Fish/All Species Total (based on KM TEQs)					1.1E-05				1.8E+00
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.6E-06	--	3.6E-06	Reproductive	4.1E-01	--	4.1E-01
			1,2,3,7,8-PeCDD	2.9E-07	--	2.9E-07	Reproductive	3.2E-02	--	3.2E-02

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDD	7.9E-08	--	7.9E-08	Reproductive	8.7E-03	--	8.7E-03
			1,2,3,7,8,9-HxCDD	1.4E-08	--	1.4E-08	Reproductive	1.6E-03	--	1.6E-03
			1,2,3,4,6,7,8-HpCDD	5.4E-09	--	5.4E-09	Reproductive	6.0E-04	--	6.0E-04
			OCDD	3.9E-10	--	3.9E-10	Reproductive	4.4E-05	--	4.4E-05
			2,3,7,8-TCDF	4.4E-09	--	4.4E-09	Reproductive	4.8E-04	--	4.8E-04
			1,2,3,7,8-PeCDF	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			2,3,4,7,8-PeCDF	4.8E-07	--	4.8E-07	Reproductive	5.3E-02	--	5.3E-02
			1,2,3,4,7,8-HxCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,6,7,8-HxCDF	8.4E-08	--	8.4E-08	Reproductive	9.3E-03	--	9.3E-03
			1,2,3,7,8,9-HxCDF	4.7E-09	--	4.7E-09	Reproductive	5.3E-04	--	5.3E-04
			2,3,4,6,7,8-HxCDF	1.5E-08	--	1.5E-08	Reproductive	1.7E-03	--	1.7E-03
			1,2,3,4,6,7,8-HpCDF	2.0E-08	--	2.0E-08	Reproductive	2.2E-03	--	2.2E-03
			1,2,3,4,7,8,9-HpCDF	6.7E-10	--	6.7E-10	Reproductive	7.4E-05	--	7.4E-05
			OCDF	4.5E-11	--	4.5E-11	Reproductive	5.0E-06	--	5.0E-06
			KM TEQ DF	4.7E-06	--	4.7E-06	Reproductive	5.2E-01	--	5.2E-01
			PCB-77	3.4E-09	--	3.4E-09	Reproductive	3.8E-04	--	3.8E-04
			PCB-81	1.6E-09	--	1.6E-09	Reproductive	1.8E-04	--	1.8E-04
			PCB-105	2.8E-07	--	2.8E-07	Reproductive	3.2E-02	--	3.2E-02
			PCB-114	1.8E-08	--	1.8E-08	Reproductive	2.0E-03	--	2.0E-03
			PCB-118	9.7E-07	--	9.7E-07	Reproductive	1.1E-01	--	1.1E-01
			PCB-123	1.9E-08	--	1.9E-08	Reproductive	2.1E-03	--	2.1E-03
			PCB-126	5.5E-06	--	5.5E-06	Reproductive	6.1E-01	--	6.1E-01
			PCB-156/157	8.5E-08	--	8.5E-08	Reproductive	9.4E-03	--	9.4E-03
			PCB-167	3.7E-08	--	3.7E-08	Reproductive	4.1E-03	--	4.1E-03
			PCB-169	6.0E-08	--	6.0E-08	Reproductive	6.6E-03	--	6.6E-03
			PCB-189	6.6E-09	--	6.6E-09	Reproductive	7.4E-04	--	7.4E-04
			KM TEQ PCB	9.9E-06	--	9.9E-06	Reproductive	1.1E+00	--	1.1E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.8E-06	--	1.8E-06	Whole Body	1.1E+00	--	1.1E+00
			Total DLCs (excluding KM TEQs)			1.2E-05				1.3E+00
			Total DLCs (based on KM TEQs)			1.5E-05				1.6E+00
			Total PCDD/Fs (excluding KM TEQ)			4.8E-06				5.3E-01
			Total PCDD/Fs (based on KM TEQ)			4.7E-06				5.2E-01
			Total DL-PCBs (excluding KM TEQ)			6.9E-06				7.7E-01
			Total DL-PCBs (based on KM TEQ)			9.9E-06				1.1E+00
			Total Non-DL PCBs			1.8E-06				1.1E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			8.7E-06				1.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.2E-05				2.1E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	American Eel Total (excluding KM TEQs)					1.4E-05				2.4E+00
	American Eel Total (based on KM TEQs)					1.6E-05				2.7E+00
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.2E-07	--	6.2E-07	Reproductive	6.9E-02	--	6.9E-02
			1,2,3,7,8-PeCDD	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8-HxCDD	3.0E-09	--	3.0E-09	Reproductive	3.4E-04	--	3.4E-04
			1,2,3,6,7,8-HxCDD	8.3E-09	--	8.3E-09	Reproductive	9.2E-04	--	9.2E-04
			1,2,3,7,8,9-HxCDD	2.9E-09	--	2.9E-09	Reproductive	3.2E-04	--	3.2E-04

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	5.9E-10	--	5.9E-10	Reproductive	6.5E-05	--	6.5E-05
			OCDD	3.2E-11	--	3.2E-11	Reproductive	3.6E-06	--	3.6E-06
			2,3,7,8-TCDF	1.6E-08	--	1.6E-08	Reproductive	1.8E-03	--	1.8E-03
			1,2,3,7,8-PeCDF	8.3E-09	--	8.3E-09	Reproductive	9.2E-04	--	9.2E-04
			2,3,4,7,8-PeCDF	9.4E-08	--	9.4E-08	Reproductive	1.0E-02	--	1.0E-02
			1,2,3,4,7,8-HxCDF	3.9E-09	--	3.9E-09	Reproductive	4.3E-04	--	4.3E-04
			1,2,3,6,7,8-HxCDF	9.5E-09	--	9.5E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,7,8,9-HxCDF	3.5E-09	--	3.5E-09	Reproductive	3.9E-04	--	3.9E-04
			2,3,4,6,7,8-HxCDF	2.3E-09	--	2.3E-09	Reproductive	2.6E-04	--	2.6E-04
			1,2,3,4,6,7,8-HpCDF	2.7E-09	--	2.7E-09	Reproductive	3.0E-04	--	3.0E-04
			1,2,3,4,7,8,9-HpCDF	3.2E-10	--	3.2E-10	Reproductive	3.5E-05	--	3.5E-05
			OCDF	2.1E-11	--	2.1E-11	Reproductive	2.4E-06	--	2.4E-06
			KM TEQ DF	8.4E-07	--	8.4E-07	Reproductive	9.3E-02	--	9.3E-02
			PCB-77	4.5E-09	--	4.5E-09	Reproductive	5.0E-04	--	5.0E-04
			PCB-81	4.9E-10	--	4.9E-10	Reproductive	5.5E-05	--	5.5E-05
			PCB-105	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			PCB-114	1.0E-09	--	1.0E-09	Reproductive	1.2E-04	--	1.2E-04
			PCB-118	7.2E-08	--	7.2E-08	Reproductive	8.0E-03	--	8.0E-03
			PCB-123	1.0E-09	--	1.0E-09	Reproductive	1.1E-04	--	1.1E-04
			PCB-126	1.8E-06	--	1.8E-06	Reproductive	1.9E-01	--	1.9E-01
			PCB-156/157	7.8E-09	--	7.8E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-167	4.0E-09	--	4.0E-09	Reproductive	4.4E-04	--	4.4E-04
			PCB-169	2.4E-08	--	2.4E-08	Reproductive	2.7E-03	--	2.7E-03
			PCB-189	7.7E-10	--	7.7E-10	Reproductive	8.6E-05	--	8.6E-05
			KM TEQ PCB	1.8E-06	--	1.8E-06	Reproductive	2.0E-01	--	2.0E-01
			Total DLCs (excluding KM TEQs)			2.8E-06				3.1E-01
			Total DLCs (based on KM TEQs)			2.7E-06				3.0E-01
			Total PCDD/Fs (excluding KM TEQ)			9.0E-07				1.0E-01
			Total PCDD/Fs (based on KM TEQ)			8.4E-07				9.3E-02
			Total DL-PCBs (excluding KM TEQ)			1.9E-06				2.1E-01
			Total DL-PCBs (based on KM TEQ)			1.8E-06				2.0E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.9E-06				2.1E-01
			Total PCBs (DL & NDL; based on KM TEQ)			1.8E-06				2.0E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Bluefish Total (excluding KM TEQs)					2.8E-06				3.1E-01
	Bluefish Total (based on KM TEQs)					2.7E-06				3.0E-01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.9E-06	--	3.9E-06	Reproductive	4.3E-01	--	4.3E-01
			1,2,3,7,8-PeCDD	2.3E-07	--	2.3E-07	Reproductive	2.5E-02	--	2.5E-02
			1,2,3,4,7,8-HxCDD	8.5E-09	--	8.5E-09	Reproductive	9.4E-04	--	9.4E-04
			1,2,3,6,7,8-HxCDD	8.6E-09	--	8.6E-09	Reproductive	9.6E-04	--	9.6E-04
			1,2,3,7,8,9-HxCDD	3.6E-09	--	3.6E-09	Reproductive	4.0E-04	--	4.0E-04
			1,2,3,4,6,7,8-HpCDD	6.0E-09	--	6.0E-09	Reproductive	6.6E-04	--	6.6E-04
			OCDD	2.0E-09	--	2.0E-09	Reproductive	2.2E-04	--	2.2E-04
			2,3,7,8-TCDF	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,7,8-PeCDF	2.7E-08	--	2.7E-08	Reproductive	3.1E-03	--	3.1E-03
			2,3,4,7,8-PeCDF	4.1E-07	--	4.1E-07	Reproductive	4.5E-02	--	4.5E-02

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDF	1.7E-08	--	1.7E-08	Reproductive	1.9E-03	--	1.9E-03
			1,2,3,6,7,8-HxCDF	5.1E-08	--	5.1E-08	Reproductive	5.6E-03	--	5.6E-03
			1,2,3,7,8,9-HxCDF	5.0E-09	--	5.0E-09	Reproductive	5.6E-04	--	5.6E-04
			2,3,4,6,7,8-HxCDF	4.1E-09	--	4.1E-09	Reproductive	4.5E-04	--	4.5E-04
			1,2,3,4,6,7,8-HpCDF	1.4E-08	--	1.4E-08	Reproductive	1.5E-03	--	1.5E-03
			1,2,3,4,7,8,9-HpCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			OCDF	2.4E-11	--	2.4E-11	Reproductive	2.6E-06	--	2.6E-06
			KM TEQ DF	4.8E-06	--	4.8E-06	Reproductive	5.4E-01	--	5.4E-01
			PCB-77	5.2E-08	--	5.2E-08	Reproductive	5.8E-03	--	5.8E-03
			PCB-81	3.9E-09	--	3.9E-09	Reproductive	4.3E-04	--	4.3E-04
			PCB-105	8.1E-08	--	8.1E-08	Reproductive	9.0E-03	--	9.0E-03
			PCB-114	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			PCB-118	5.1E-07	--	5.1E-07	Reproductive	5.7E-02	--	5.7E-02
			PCB-123	7.8E-09	--	7.8E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-126	8.6E-06	--	8.6E-06	Reproductive	9.6E-01	--	9.6E-01
			PCB-156/157	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-167	2.0E-08	--	2.0E-08	Reproductive	2.2E-03	--	2.2E-03
			PCB-169	4.6E-08	--	4.6E-08	Reproductive	5.1E-03	--	5.1E-03
			PCB-189	3.9E-09	--	3.9E-09	Reproductive	4.3E-04	--	4.3E-04
			KM TEQ PCB	8.9E-06	--	8.9E-06	Reproductive	9.9E-01	--	9.9E-01
			Non-DL PCBs							
			Total Non-DL PCBs	2.2E-06	--	2.2E-06	Whole Body	1.3E+00	--	1.3E+00
			Total DLCs (excluding KM TEQs)			1.4E-05				1.6E+00
			Total DLCs (based on KM TEQs)			1.4E-05				1.5E+00
			Total PCDD/Fs (excluding KM TEQ)			4.8E-06				5.4E-01
			Total PCDD/Fs (based on KM TEQ)			4.8E-06				5.4E-01
			Total DL-PCBs (excluding KM TEQ)			9.4E-06				1.0E+00
			Total DL-PCBs (based on KM TEQ)			8.9E-06				9.9E-01
			Total Non-DL PCBs			2.2E-06				1.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.2E-05				2.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-05				2.2E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Striped Bass Total (excluding KM TEQs)					1.6E-05				2.8E+00
	Striped Bass Total (based on KM TEQs)					1.6E-05				2.8E+00
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.3E-06	--	2.3E-06	Reproductive	2.5E-01	--	2.5E-01
			1,2,3,7,8-PeCDD	1.0E-07	--	1.0E-07	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,7,8-HxCDD	3.4E-09	--	3.4E-09	Reproductive	3.7E-04	--	3.7E-04
			1,2,3,6,7,8-HxCDD	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8,9-HxCDD	4.5E-09	--	4.5E-09	Reproductive	5.0E-04	--	5.0E-04
			1,2,3,4,6,7,8-HpCDD	1.3E-09	--	1.3E-09	Reproductive	1.4E-04	--	1.4E-04
			OCDD	5.6E-11	--	5.6E-11	Reproductive	6.2E-06	--	6.2E-06
			2,3,7,8-TCDF	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8-PeCDF	4.4E-09	--	4.4E-09	Reproductive	4.8E-04	--	4.8E-04
			2,3,4,7,8-PeCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,4,7,8-HxCDF	2.7E-08	--	2.7E-08	Reproductive	3.0E-03	--	3.0E-03
			1,2,3,6,7,8-HxCDF	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,7,8,9-HxCDF	5.9E-09	--	5.9E-09	Reproductive	6.6E-04	--	6.6E-04

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	4.5E-09	--	4.5E-09	Reproductive	5.0E-04	--	5.0E-04
			1,2,3,4,6,7,8-HpCDF	2.1E-09	--	2.1E-09	Reproductive	2.3E-04	--	2.3E-04
			1,2,3,4,7,8,9-HpCDF	4.5E-10	--	4.5E-10	Reproductive	5.0E-05	--	5.0E-05
			OCDF	2.5E-11	--	2.5E-11	Reproductive	2.8E-06	--	2.8E-06
			KM TEQ DF	2.5E-06	--	2.5E-06	Reproductive	2.8E-01	--	2.8E-01
			PCB-77	6.5E-09	--	6.5E-09	Reproductive	7.2E-04	--	7.2E-04
			PCB-81	2.0E-09	--	2.0E-09	Reproductive	2.3E-04	--	2.3E-04
			PCB-105	3.8E-08	--	3.8E-08	Reproductive	4.2E-03	--	4.2E-03
			PCB-114	3.2E-09	--	3.2E-09	Reproductive	3.6E-04	--	3.6E-04
			PCB-118	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-123	2.4E-09	--	2.4E-09	Reproductive	2.7E-04	--	2.7E-04
			PCB-126	2.0E-06	--	2.0E-06	Reproductive	2.2E-01	--	2.2E-01
			PCB-156/157	1.6E-08	--	1.6E-08	Reproductive	1.8E-03	--	1.8E-03
			PCB-167	7.3E-09	--	7.3E-09	Reproductive	8.1E-04	--	8.1E-04
			PCB-169	2.8E-08	--	2.8E-08	Reproductive	3.1E-03	--	3.1E-03
			PCB-189	1.1E-09	--	1.1E-09	Reproductive	1.2E-04	--	1.2E-04
			KM TEQ PCB	2.2E-06	--	2.2E-06	Reproductive	2.4E-01	--	2.4E-01
			Inorganics							
			Arsenic, inorganic	1.2E-06	--	1.2E-06	Skin, Blood	3.0E-02	--	3.0E-02
			Total DLCs (excluding KM TEQs)			4.8E-06				5.4E-01
			Total DLCs (based on KM TEQs)			4.7E-06				5.2E-01
			Total PCDD/Fs (excluding KM TEQ)			2.6E-06				2.9E-01
			Total PCDD/Fs (based on KM TEQ)			2.5E-06				2.8E-01
			Total DL-PCBs (excluding KM TEQ)			2.3E-06				2.5E-01
			Total DL-PCBs (based on KM TEQ)			2.2E-06				2.4E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.3E-06				2.5E-01
			Total PCBs (DL & NDL; based on KM TEQ)			2.2E-06				2.4E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.2E-06				3.0E-02
	Summer Flounder Total (excluding KM TEQs)					6.0E-06				5.7E-01
	Summer Flounder Total (based on KM TEQs)					5.9E-06				5.5E-01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	6.7E-06	--	6.7E-06	Reproductive	7.4E-01	--	7.4E-01
			1,2,3,7,8-PeCDD	1.8E-07	--	1.8E-07	Reproductive	2.0E-02	--	2.0E-02
			1,2,3,4,7,8-HxCDD	1.0E-08	--	1.0E-08	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	2.5E-08	--	2.5E-08	Reproductive	2.8E-03	--	2.8E-03
			1,2,3,7,8,9-HxCDD	5.8E-09	--	5.8E-09	Reproductive	6.5E-04	--	6.5E-04
			1,2,3,4,6,7,8-HpCDD	1.5E-09	--	1.5E-09	Reproductive	1.7E-04	--	1.7E-04
			OCDD	1.1E-10	--	1.1E-10	Reproductive	1.2E-05	--	1.2E-05
			2,3,7,8-TCDF	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,7,8-PeCDF	3.8E-08	--	3.8E-08	Reproductive	4.2E-03	--	4.2E-03
			2,3,4,7,8-PeCDF	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			1,2,3,4,7,8-HxCDF	6.7E-08	--	6.7E-08	Reproductive	7.5E-03	--	7.5E-03
			1,2,3,6,7,8-HxCDF	4.9E-08	--	4.9E-08	Reproductive	5.5E-03	--	5.5E-03
			1,2,3,7,8,9-HxCDF	4.4E-09	--	4.4E-09	Reproductive	4.8E-04	--	4.8E-04
			2,3,4,6,7,8-HxCDF	8.9E-09	--	8.9E-09	Reproductive	9.9E-04	--	9.9E-04
			1,2,3,4,6,7,8-HpCDF	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,4,7,8,9-HpCDF	3.6E-10	--	3.6E-10	Reproductive	4.1E-05	--	4.1E-05

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			OCDF	2.7E-11	--	2.7E-11	Reproductive	3.0E-06	--	3.0E-06
			KM TEQ DF	7.5E-06	--	7.5E-06	Reproductive	8.4E-01	--	8.4E-01
			PCB-77	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-81	5.0E-09	--	5.0E-09	Reproductive	5.6E-04	--	5.6E-04
			PCB-105	1.0E-07	--	1.0E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-114	7.7E-09	--	7.7E-09	Reproductive	8.6E-04	--	8.6E-04
			PCB-118	3.8E-07	--	3.8E-07	Reproductive	4.3E-02	--	4.3E-02
			PCB-123	7.6E-09	--	7.6E-09	Reproductive	8.5E-04	--	8.5E-04
			PCB-126	2.8E-06	--	2.8E-06	Reproductive	3.1E-01	--	3.1E-01
			PCB-156/157	3.9E-08	--	3.9E-08	Reproductive	4.3E-03	--	4.3E-03
			PCB-167	1.6E-08	--	1.6E-08	Reproductive	1.8E-03	--	1.8E-03
			PCB-169	1.0E-07	--	1.0E-07	Reproductive	1.1E-02	--	1.1E-02
			PCB-189	3.1E-09	--	3.1E-09	Reproductive	3.4E-04	--	3.4E-04
			KM TEQ PCB	3.4E-06	--	3.4E-06	Reproductive	3.8E-01	--	3.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-06	--	1.4E-06	Whole Body	8.4E-01	--	8.4E-01
			Total DLCs (excluding KM TEQs)			1.1E-05				1.2E+00
			Total DLCs (based on KM TEQs)			1.1E-05				1.2E+00
			Total PCDD/Fs (excluding KM TEQ)			7.7E-06				8.5E-01
			Total PCDD/Fs (based on KM TEQ)			7.5E-06				8.4E-01
			Total DL-PCBs (excluding KM TEQ)			3.5E-06				3.9E-01
			Total DL-PCBs (based on KM TEQ)			3.4E-06				3.8E-01
			Total Non-DL PCBs			1.4E-06				8.4E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			4.9E-06				1.2E+00
			Total PCBs (DL & NDL; based on KM TEQ)			4.8E-06				1.2E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	White Perch Total (excluding KM TEQs)					1.3E-05				2.1E+00
	White Perch Total (based on KM TEQs)					1.2E-05				2.1E+00
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.3E-05	--	1.3E-05	Reproductive	1.4E+00	--	1.4E+00
			1,2,3,7,8-PeCDD	3.4E-07	--	3.4E-07	Reproductive	3.8E-02	--	3.8E-02
			1,2,3,4,7,8-HxCDD	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			1,2,3,6,7,8-HxCDD	2.9E-08	--	2.9E-08	Reproductive	3.2E-03	--	3.2E-03
			1,2,3,7,8,9-HxCDD	1.0E-08	--	1.0E-08	Reproductive	1.2E-03	--	1.2E-03
			1,2,3,4,6,7,8-HpCDD	3.4E-09	--	3.4E-09	Reproductive	3.7E-04	--	3.7E-04
			OCDD	3.0E-10	--	3.0E-10	Reproductive	3.3E-05	--	3.3E-05
			2,3,7,8-TCDF	4.8E-07	--	4.8E-07	Reproductive	5.3E-02	--	5.3E-02
			1,2,3,7,8-PeCDF	3.1E-08	--	3.1E-08	Reproductive	3.5E-03	--	3.5E-03
			2,3,4,7,8-PeCDF	7.2E-07	--	7.2E-07	Reproductive	8.0E-02	--	8.0E-02
			1,2,3,4,7,8-HxCDF	2.3E-07	--	2.3E-07	Reproductive	2.6E-02	--	2.6E-02
			1,2,3,6,7,8-HxCDF	6.9E-08	--	6.9E-08	Reproductive	7.7E-03	--	7.7E-03
			1,2,3,7,8,9-HxCDF	4.2E-09	--	4.2E-09	Reproductive	4.7E-04	--	4.7E-04
			2,3,4,6,7,8-HxCDF	1.8E-08	--	1.8E-08	Reproductive	2.0E-03	--	2.0E-03
			1,2,3,4,6,7,8-HpCDF	2.3E-08	--	2.3E-08	Reproductive	2.6E-03	--	2.6E-03
			1,2,3,4,7,8,9-HpCDF	3.3E-10	--	3.3E-10	Reproductive	3.7E-05	--	3.7E-05
			OCDF	3.6E-11	--	3.6E-11	Reproductive	4.0E-06	--	4.0E-06
			KM TEQ DF	1.5E-05	--	1.5E-05	Reproductive	1.7E+00	--	1.7E+00
			PCB-77	9.6E-08	--	9.6E-08	Reproductive	1.1E-02	--	1.1E-02

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-81	1.3E-08	--	1.3E-08	Reproductive	1.4E-03	--	1.4E-03
			PCB-105	1.5E-07	--	1.5E-07	Reproductive	1.7E-02	--	1.7E-02
			PCB-114	1.3E-08	--	1.3E-08	Reproductive	1.5E-03	--	1.5E-03
			PCB-118	6.9E-07	--	6.9E-07	Reproductive	7.7E-02	--	7.7E-02
			PCB-123	1.2E-08	--	1.2E-08	Reproductive	1.3E-03	--	1.3E-03
			PCB-126	4.8E-06	--	4.8E-06	Reproductive	5.3E-01	--	5.3E-01
			PCB-156/157	5.5E-08	--	5.5E-08	Reproductive	6.1E-03	--	6.1E-03
			PCB-167	2.3E-08	--	2.3E-08	Reproductive	2.6E-03	--	2.6E-03
			PCB-169	1.6E-07	--	1.6E-07	Reproductive	1.8E-02	--	1.8E-02
			PCB-189	4.0E-09	--	4.0E-09	Reproductive	4.4E-04	--	4.4E-04
			KM TEQ PCB	5.7E-06	--	5.7E-06	Reproductive	6.4E-01	--	6.4E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-06	--	1.1E-06	Whole Body	6.2E-01	--	6.2E-01
			Inorganics							
			Arsenic, inorganic	1.4E-06	--	1.4E-06	Skin, Blood	3.6E-02	--	3.6E-02
			Total DLCs (excluding KM TEQs)			2.1E-05				2.3E+00
			Total DLCs (based on KM TEQs)			2.1E-05				2.3E+00
			Total PCDD/Fs (excluding KM TEQ)			1.5E-05				1.7E+00
			Total PCDD/Fs (based on KM TEQ)			1.5E-05				1.7E+00
			Total DL-PCBs (excluding KM TEQ)			6.0E-06				6.7E-01
			Total DL-PCBs (based on KM TEQ)			5.7E-06				6.4E-01
			Total Non-DL PCBs			1.1E-06				6.2E-01
			Total PCBs (DL & NDL; excluding KM TEQ)			7.1E-06				1.3E+00
			Total PCBs (DL & NDL; based on KM TEQ)			6.8E-06				1.3E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.4E-06				3.6E-02
	Crab (H+M) Total (excluding KM TEQs)					2.3E-05				3.0E+00
	Crab (H+M) Total (based on KM TEQs)					2.3E-05				2.9E+00
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.9E-06	--	1.9E-06	Reproductive	2.1E-01	--	2.1E-01
			1,2,3,7,8-PeCDD	1.2E-07	--	1.2E-07	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8-HxCDD	1.4E-09	--	1.4E-09	Reproductive	1.5E-04	--	1.5E-04
			1,2,3,6,7,8-HxCDD	3.4E-09	--	3.4E-09	Reproductive	3.8E-04	--	3.8E-04
			1,2,3,7,8,9-HxCDD	1.8E-09	--	1.8E-09	Reproductive	2.0E-04	--	2.0E-04
			1,2,3,4,6,7,8-HpCDD	6.6E-10	--	6.6E-10	Reproductive	7.4E-05	--	7.4E-05
			OCDD	6.8E-11	--	6.8E-11	Reproductive	7.6E-06	--	7.6E-06
			2,3,7,8-TCDF	5.7E-08	--	5.7E-08	Reproductive	6.3E-03	--	6.3E-03
			1,2,3,7,8-PeCDF	4.0E-09	--	4.0E-09	Reproductive	4.4E-04	--	4.4E-04
			2,3,4,7,8-PeCDF	7.1E-08	--	7.1E-08	Reproductive	7.9E-03	--	7.9E-03
			1,2,3,4,7,8-HxCDF	3.5E-08	--	3.5E-08	Reproductive	3.9E-03	--	3.9E-03
			1,2,3,6,7,8-HxCDF	8.9E-09	--	8.9E-09	Reproductive	9.9E-04	--	9.9E-04
			1,2,3,7,8,9-HxCDF	3.5E-09	--	3.5E-09	Reproductive	3.9E-04	--	3.9E-04
			2,3,4,6,7,8-HxCDF	2.3E-09	--	2.3E-09	Reproductive	2.5E-04	--	2.5E-04
			1,2,3,4,6,7,8-HpCDF	1.9E-09	--	1.9E-09	Reproductive	2.2E-04	--	2.2E-04
			1,2,3,4,7,8,9-HpCDF	1.7E-10	--	1.7E-10	Reproductive	1.9E-05	--	1.9E-05
			OCDF	1.4E-11	--	1.4E-11	Reproductive	1.5E-06	--	1.5E-06
			KM TEQ DF	2.2E-06	--	2.2E-06	Reproductive	2.4E-01	--	2.4E-01
			PCB-77	9.9E-09	--	9.9E-09	Reproductive	1.1E-03	--	1.1E-03
			PCB-81	1.3E-09	--	1.3E-09	Reproductive	1.5E-04	--	1.5E-04

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-105	1.6E-08	--	1.6E-08	Reproductive	1.7E-03	--	1.7E-03
			PCB-114	1.4E-09	--	1.4E-09	Reproductive	1.5E-04	--	1.5E-04
			PCB-118	5.9E-08	--	5.9E-08	Reproductive	6.5E-03	--	6.5E-03
			PCB-123	1.2E-09	--	1.2E-09	Reproductive	1.3E-04	--	1.3E-04
			PCB-126	4.2E-07	--	4.2E-07	Reproductive	4.7E-02	--	4.7E-02
			PCB-156/157	4.8E-09	--	4.8E-09	Reproductive	5.3E-04	--	5.3E-04
			PCB-167	1.8E-09	--	1.8E-09	Reproductive	2.0E-04	--	2.0E-04
			PCB-169	1.7E-07	--	1.7E-07	Reproductive	1.9E-02	--	1.9E-02
			PCB-189	2.3E-10	--	2.3E-10	Reproductive	2.6E-05	--	2.6E-05
			KM TEQ PCB	5.0E-07	--	5.0E-07	Reproductive	5.6E-02	--	5.6E-02
			Inorganics							
			Arsenic, inorganic	1.3E-06	--	1.3E-06	Skin, Blood	3.4E-02	--	3.4E-02
			Total DLCs (excluding KM TEQs)			2.9E-06				3.2E-01
			Total DLCs (based on KM TEQs)			2.7E-06				3.0E-01
			Total PCDD/Fs (excluding KM TEQ)			2.2E-06				2.5E-01
			Total PCDD/Fs (based on KM TEQ)			2.2E-06				2.4E-01
			Total DL-PCBs (excluding KM TEQ)			6.8E-07				7.6E-02
			Total DL-PCBs (based on KM TEQ)			5.0E-07				5.6E-02
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.8E-07				7.6E-02
			Total PCBs (DL & NDL; based on KM TEQ)			5.0E-07				5.6E-02
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.3E-06				3.4E-02
	Crab (Muscle) Total (excluding KM TEQs)					4.2E-06				3.6E-01
	Crab (Muscle) Total (based on KM TEQs)					4.0E-06				3.3E-01
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.5E-05	--	4.5E-05	Reproductive	5.0E+00	--	5.0E+00
			1,2,3,7,8-PeCDD	1.1E-06	--	1.1E-06	Reproductive	1.2E-01	--	1.2E-01
			1,2,3,4,7,8-HxCDD	3.4E-08	--	3.4E-08	Reproductive	3.8E-03	--	3.8E-03
			1,2,3,6,7,8-HxCDD	1.0E-07	--	1.0E-07	Reproductive	1.2E-02	--	1.2E-02
			1,2,3,7,8,9-HxCDD	3.5E-08	--	3.5E-08	Reproductive	3.9E-03	--	3.9E-03
			1,2,3,4,6,7,8-HpCDD	1.1E-08	--	1.1E-08	Reproductive	1.2E-03	--	1.2E-03
			OCDD	9.6E-10	--	9.6E-10	Reproductive	1.1E-04	--	1.1E-04
			2,3,7,8-TCDF	1.7E-06	--	1.7E-06	Reproductive	1.9E-01	--	1.9E-01
			1,2,3,7,8-PeCDF	1.1E-07	--	1.1E-07	Reproductive	1.2E-02	--	1.2E-02
			2,3,4,7,8-PeCDF	2.6E-06	--	2.6E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,4,7,8-HxCDF	8.2E-07	--	8.2E-07	Reproductive	9.1E-02	--	9.1E-02
			1,2,3,6,7,8-HxCDF	2.5E-07	--	2.5E-07	Reproductive	2.8E-02	--	2.8E-02
			1,2,3,7,8,9-HxCDF	6.7E-09	--	6.7E-09	Reproductive	7.5E-04	--	7.5E-04
			2,3,4,6,7,8-HxCDF	6.4E-08	--	6.4E-08	Reproductive	7.1E-03	--	7.1E-03
			1,2,3,4,6,7,8-HpCDF	8.4E-08	--	8.4E-08	Reproductive	9.3E-03	--	9.3E-03
			1,2,3,4,7,8,9-HpCDF	6.8E-10	--	6.8E-10	Reproductive	7.5E-05	--	7.5E-05
			OCDF	1.2E-10	--	1.2E-10	Reproductive	1.4E-05	--	1.4E-05
			KM TEQ DF	5.2E-05	--	5.2E-05	Reproductive	5.7E+00	--	5.7E+00
			PCB-77	3.4E-07	--	3.4E-07	Reproductive	3.8E-02	--	3.8E-02
			PCB-81	4.5E-08	--	4.5E-08	Reproductive	5.0E-03	--	5.0E-03
			PCB-105	5.5E-07	--	5.5E-07	Reproductive	6.1E-02	--	6.1E-02
			PCB-114	4.7E-08	--	4.7E-08	Reproductive	5.2E-03	--	5.2E-03
			PCB-118	2.5E-06	--	2.5E-06	Reproductive	2.8E-01	--	2.8E-01

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-123	4.4E-08	--	4.4E-08	Reproductive	4.9E-03	--	4.9E-03
			PCB-126	1.7E-05	--	1.7E-05	Reproductive	1.9E+00	--	1.9E+00
			PCB-156/157	2.0E-07	--	2.0E-07	Reproductive	2.2E-02	--	2.2E-02
			PCB-167	8.4E-08	--	8.4E-08	Reproductive	9.4E-03	--	9.4E-03
			PCB-169	5.4E-07	--	5.4E-07	Reproductive	6.0E-02	--	6.0E-02
			PCB-189	1.5E-08	--	1.5E-08	Reproductive	1.6E-03	--	1.6E-03
			KM TEQ PCB	2.1E-05	--	2.1E-05	Reproductive	2.3E+00	--	2.3E+00
			Non-DL PCBs							
			Total Non-DL PCBs	3.9E-06	--	3.9E-06	Whole Body	2.3E+00	--	2.3E+00
			Pesticides & Organics							
			Dieldrin	1.1E-06	--	1.1E-06	Liver	1.6E-02	--	1.6E-02
			Inorganics							
			Arsenic, inorganic	1.7E-06	--	1.7E-06	Skin, Blood	4.4E-02	--	4.4E-02
			Total DLCs (excluding KM TEQs)			7.4E-05				8.2E+00
			Total DLCs (based on KM TEQs)			7.2E-05				8.0E+00
			Total PCDD/Fs (excluding KM TEQ)			5.2E-05				5.8E+00
			Total PCDD/Fs (based on KM TEQ)			5.2E-05				5.7E+00
			Total DL-PCBs (excluding KM TEQ)			2.2E-05				2.4E+00
			Total DL-PCBs (based on KM TEQ)			2.1E-05				2.3E+00
			Total Non-DL PCBs			3.9E-06				2.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-05				4.7E+00
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-05				4.6E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			1.1E-06				1.6E-02
			Total Inorganics			1.7E-06				4.4E-02
	Crab (Hepatopancreas) Total (excluding KM TEQs)					8.0E-05				1.0E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					7.9E-05				1.0E+01
Sediment	Sediment	Angler - Fishing Sediment	--	--	--	--	--	--	--	--
Surface Water	Surface Water	Angler - Fishing Surface Water	--	--	--	--	--	--	--	--
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.0E-05				1.7E+00
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.1E-05				1.8E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						1.4E-05				2.4E+00
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						1.6E-05				2.7E+00
Sediment	Sediment	Angler - Crabbing Sediment	--	--	--	--	--	--	--	--
Surface Water	Surface Water	Angler - Crabbing Surface Water	--	--	--	--	--	--	--	--
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						2.3E-05				3.0E+00
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						2.3E-05				2.9E+00
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						4.2E-06				3.6E-01
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						4.0E-06				3.3E-01

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		--		Blood HI =		--
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		9.9E-01		Reproductive HI =		1.0E+00
				Skin HI =		--		Skin HI =		--
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		7.3E-01		Whole Body HI =		7.3E-01
			American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		--		Blood HI =		--
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.3E+00		Reproductive HI =		1.6E+00
				Skin HI =		--		Skin HI =		--
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.1E+00		Whole Body HI =		1.1E+00

TABLE 10.2.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.6E-02		Blood HI =		3.6E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.3E+00		Reproductive HI =		2.3E+00
				Skin HI =		3.6E-02		Skin HI =		3.6E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		6.2E-01		Whole Body HI =		6.2E-01
			Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs) Target Organ-Specific HI				Crab (Muscle)+ Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		3.4E-02		Blood HI =		3.4E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		3.2E-01		Reproductive HI =		3.0E-01
				Skin HI =		3.4E-02		Skin HI =		3.4E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		--		Whole Body HI =		--

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.6E-06	–	2.6E-06	Reproductive	5.8E-01	–	5.8E-01
			1,2,3,7,8-PeCDD	1.4E-07	–	1.4E-07	Reproductive	3.1E-02	–	3.1E-02
			1,2,3,4,7,8-HxCDD	6.5E-09	–	6.5E-09	Reproductive	1.4E-03	–	1.4E-03
			1,2,3,6,7,8-HxCDD	2.0E-08	–	2.0E-08	Reproductive	4.5E-03	–	4.5E-03
			1,2,3,7,8,9-HxCDD	4.8E-09	–	4.8E-09	Reproductive	1.1E-03	–	1.1E-03
			1,2,3,4,6,7,8-HpCDD	2.3E-09	–	2.3E-09	Reproductive	5.0E-04	–	5.0E-04
			OCDD	4.0E-10	–	4.0E-10	Reproductive	8.8E-05	–	8.8E-05
			2,3,7,8-TCDF	5.4E-08	–	5.4E-08	Reproductive	1.2E-02	–	1.2E-02
			1,2,3,7,8-PeCDF	1.5E-08	–	1.5E-08	Reproductive	3.2E-03	–	3.2E-03
			2,3,4,7,8-PeCDF	2.3E-07	–	2.3E-07	Reproductive	5.2E-02	–	5.2E-02
			1,2,3,4,7,8-HxCDF	3.5E-08	–	3.5E-08	Reproductive	7.7E-03	–	7.7E-03
			1,2,3,6,7,8-HxCDF	3.1E-08	–	3.1E-08	Reproductive	7.0E-03	–	7.0E-03
			1,2,3,7,8,9-HxCDF	3.6E-09	–	3.6E-09	Reproductive	8.0E-04	–	8.0E-04
			2,3,4,6,7,8-HxCDF	5.3E-09	–	5.3E-09	Reproductive	1.2E-03	–	1.2E-03
			1,2,3,4,6,7,8-HpCDF	7.4E-09	–	7.4E-09	Reproductive	1.6E-03	–	1.6E-03
			1,2,3,4,7,8,9-HpCDF	3.4E-10	–	3.4E-10	Reproductive	7.6E-05	–	7.6E-05
			OCDF	2.2E-11	–	2.2E-11	Reproductive	4.8E-06	–	4.8E-06
			KM TEQ DF	3.1E-06	–	3.1E-06	Reproductive	6.9E-01	–	6.9E-01
			PCB-77	1.7E-08	–	1.7E-08	Reproductive	3.8E-03	–	3.8E-03
			PCB-81	2.0E-09	–	2.0E-09	Reproductive	4.4E-04	–	4.4E-04
			PCB-105	8.0E-08	–	8.0E-08	Reproductive	1.8E-02	–	1.8E-02
			PCB-114	6.1E-09	–	6.1E-09	Reproductive	1.4E-03	–	1.4E-03
			PCB-118	3.2E-07	–	3.2E-07	Reproductive	7.1E-02	–	7.1E-02
			PCB-123	5.8E-09	–	5.8E-09	Reproductive	1.3E-03	–	1.3E-03
			PCB-126	3.1E-06	–	3.1E-06	Reproductive	7.0E-01	–	7.0E-01
			PCB-156/157	2.9E-08	–	2.9E-08	Reproductive	6.5E-03	–	6.5E-03
			PCB-167	1.3E-08	–	1.3E-08	Reproductive	2.9E-03	–	2.9E-03
			PCB-169	4.0E-08	–	4.0E-08	Reproductive	8.8E-03	–	8.8E-03
			PCB-189	2.4E-09	–	2.4E-09	Reproductive	5.2E-04	–	5.2E-04
			KM TEQ PCB	4.0E-06	–	4.0E-06	Reproductive	8.9E-01	–	8.9E-01
			Non-DL PCBs							
			Total Non-DL PCBs	9.5E-07	–	9.5E-07	Whole Body	1.1E+00	–	1.1E+00
			Total DLCs (excluding KM TEQs)			6.8E-06				1.5E+00
			Total DLCs (based on KM TEQs)			7.1E-06				1.6E+00
			Total PCDD/Fs (excluding KM TEQ)			3.2E-06				7.1E-01
			Total PCDD/Fs (based on KM TEQ)			3.1E-06				6.9E-01
			Total DL-PCBs (excluding KM TEQ)			3.7E-06				8.1E-01
			Total DL-PCBs (based on KM TEQ)			4.0E-06				8.9E-01
			Total Non-DL PCBs			9.5E-07				1.1E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.6E-06				1.9E+00
			Total PCBs (DL & NDL; based on KM TEQ)			5.0E-06				2.0E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Mixed Fish/All Species Total (excluding KM TEQs)					7.8E-06				2.6E+00
	Mixed Fish/All Species Total (based on KM TEQs)					8.1E-06				2.7E+00
Fish	American Eel	American Eel	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	2.8E-06	–	2.8E-06	Reproductive	6.2E-01	–	6.2E-01
			1,2,3,7,8-PeCDD	2.2E-07	–	2.2E-07	Reproductive	4.9E-02	–	4.9E-02

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	1.3E-08	–	1.3E-08	Reproductive	3.0E-03	–	3.0E-03
			1,2,3,6,7,8-HxCDD	6.0E-08	–	6.0E-08	Reproductive	1.3E-02	–	1.3E-02
			1,2,3,7,8,9-HxCDD	1.1E-08	–	1.1E-08	Reproductive	2.4E-03	–	2.4E-03
			1,2,3,4,6,7,8-HpCDD	4.1E-09	–	4.1E-09	Reproductive	9.1E-04	–	9.1E-04
			OCDD	3.0E-10	–	3.0E-10	Reproductive	6.7E-05	–	6.7E-05
			2,3,7,8-TCDF	3.3E-09	–	3.3E-09	Reproductive	7.4E-04	–	7.4E-04
			1,2,3,7,8-PeCDF	1.3E-08	–	1.3E-08	Reproductive	3.0E-03	–	3.0E-03
			2,3,4,7,8-PeCDF	3.7E-07	–	3.7E-07	Reproductive	8.2E-02	–	8.2E-02
			1,2,3,4,7,8-HxCDF	8.6E-08	–	8.6E-08	Reproductive	1.9E-02	–	1.9E-02
			1,2,3,6,7,8-HxCDF	6.4E-08	–	6.4E-08	Reproductive	1.4E-02	–	1.4E-02
			1,2,3,7,8,9-HxCDF	3.6E-09	–	3.6E-09	Reproductive	8.1E-04	–	8.1E-04
			2,3,4,6,7,8-HxCDF	1.2E-08	–	1.2E-08	Reproductive	2.6E-03	–	2.6E-03
			1,2,3,4,6,7,8-HpCDF	1.5E-08	–	1.5E-08	Reproductive	3.4E-03	–	3.4E-03
			1,2,3,4,7,8,9-HpCDF	5.1E-10	–	5.1E-10	Reproductive	1.1E-04	–	1.1E-04
			OCDF	3.4E-11	–	3.4E-11	Reproductive	7.6E-06	–	7.6E-06
			KM TEQ DF	3.6E-06	–	3.6E-06	Reproductive	7.9E-01	–	7.9E-01
			PCB-77	2.6E-09	–	2.6E-09	Reproductive	5.8E-04	–	5.8E-04
			PCB-81	1.2E-09	–	1.2E-09	Reproductive	2.7E-04	–	2.7E-04
			PCB-105	2.2E-07	–	2.2E-07	Reproductive	4.8E-02	–	4.8E-02
			PCB-114	1.4E-08	–	1.4E-08	Reproductive	3.1E-03	–	3.1E-03
			PCB-118	7.5E-07	–	7.5E-07	Reproductive	1.7E-01	–	1.7E-01
			PCB-123	1.5E-08	–	1.5E-08	Reproductive	3.3E-03	–	3.3E-03
			PCB-126	4.2E-06	–	4.2E-06	Reproductive	9.3E-01	–	9.3E-01
			PCB-156/157	6.5E-08	–	6.5E-08	Reproductive	1.4E-02	–	1.4E-02
			PCB-167	2.8E-08	–	2.8E-08	Reproductive	6.3E-03	–	6.3E-03
			PCB-169	4.6E-08	–	4.6E-08	Reproductive	1.0E-02	–	1.0E-02
			PCB-189	5.1E-09	–	5.1E-09	Reproductive	1.1E-03	–	1.1E-03
			KM TEQ PCB	7.6E-06	–	7.6E-06	Reproductive	1.7E+00	–	1.7E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.4E-06	–	1.4E-06	Whole Body	1.6E+00	–	1.6E+00
			Total DLCs (excluding KM TEQs)			9.0E-06				2.0E+00
			Total DLCs (based on KM TEQs)			1.1E-05				2.5E+00
			Total PCDD/Fs (excluding KM TEQ)			3.7E-06				8.1E-01
			Total PCDD/Fs (based on KM TEQ)			3.6E-06				7.9E-01
			Total DL-PCBs (excluding KM TEQ)			5.3E-06				1.2E+00
			Total DL-PCBs (based on KM TEQ)			7.6E-06				1.7E+00
			Total Non-DL PCBs			1.4E-06				1.6E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			6.7E-06				2.8E+00
			Total PCBs (DL & NDL; based on KM TEQ)			8.9E-06				3.3E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	American Eel Total (excluding KM TEQs)					1.0E-05				3.6E+00
	American Eel Total (based on KM TEQs)					1.3E-05				4.1E+00
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	4.7E-07	–	4.7E-07	Reproductive	1.0E-01	–	1.0E-01
			1,2,3,7,8-PeCDD	9.5E-08	–	9.5E-08	Reproductive	2.1E-02	–	2.1E-02
			1,2,3,4,7,8-HxCDD	2.3E-09	–	2.3E-09	Reproductive	5.1E-04	–	5.1E-04
			1,2,3,6,7,8-HxCDD	6.3E-09	–	6.3E-09	Reproductive	1.4E-03	–	1.4E-03
			1,2,3,7,8,9-HxCDD	2.2E-09	–	2.2E-09	Reproductive	4.9E-04	–	4.9E-04

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,6,7,8-HpCDD	4.5E-10	–	4.5E-10	Reproductive	1.0E-04	–	1.0E-04
			OCDD	2.5E-11	–	2.5E-11	Reproductive	5.5E-06	–	5.5E-06
			2,3,7,8-TCDF	1.2E-08	–	1.2E-08	Reproductive	2.7E-03	–	2.7E-03
			1,2,3,7,8-PeCDF	6.3E-09	–	6.3E-09	Reproductive	1.4E-03	–	1.4E-03
			2,3,4,7,8-PeCDF	7.2E-08	–	7.2E-08	Reproductive	1.6E-02	–	1.6E-02
			1,2,3,4,7,8-HxCDF	3.0E-09	–	3.0E-09	Reproductive	6.6E-04	–	6.6E-04
			1,2,3,6,7,8-HxCDF	7.3E-09	–	7.3E-09	Reproductive	1.6E-03	–	1.6E-03
			1,2,3,7,8,9-HxCDF	2.7E-09	–	2.7E-09	Reproductive	6.0E-04	–	6.0E-04
			2,3,4,6,7,8-HxCDF	1.8E-09	–	1.8E-09	Reproductive	4.0E-04	–	4.0E-04
			1,2,3,4,6,7,8-HpCDF	2.1E-09	–	2.1E-09	Reproductive	4.7E-04	–	4.7E-04
			1,2,3,4,7,8,9-HpCDF	2.4E-10	–	2.4E-10	Reproductive	5.4E-05	–	5.4E-05
			OCDF	1.6E-11	–	1.6E-11	Reproductive	3.6E-06	–	3.6E-06
			KM TEQ DF	6.4E-07	–	6.4E-07	Reproductive	1.4E-01	–	1.4E-01
			PCB-77	3.4E-09	–	3.4E-09	Reproductive	7.6E-04	–	7.6E-04
			PCB-81	3.8E-10	–	3.8E-10	Reproductive	8.3E-05	–	8.3E-05
			PCB-105	1.3E-08	–	1.3E-08	Reproductive	2.9E-03	–	2.9E-03
			PCB-114	8.0E-10	–	8.0E-10	Reproductive	1.8E-04	–	1.8E-04
			PCB-118	5.5E-08	–	5.5E-08	Reproductive	1.2E-02	–	1.2E-02
			PCB-123	7.8E-10	–	7.8E-10	Reproductive	1.7E-04	–	1.7E-04
			PCB-126	1.3E-06	–	1.3E-06	Reproductive	3.0E-01	–	3.0E-01
			PCB-156/157	5.9E-09	–	5.9E-09	Reproductive	1.3E-03	–	1.3E-03
			PCB-167	3.0E-09	–	3.0E-09	Reproductive	6.8E-04	–	6.8E-04
			PCB-169	1.9E-08	–	1.9E-08	Reproductive	4.2E-03	–	4.2E-03
			PCB-189	5.9E-10	–	5.9E-10	Reproductive	1.3E-04	–	1.3E-04
			KM TEQ PCB	1.4E-06	–	1.4E-06	Reproductive	3.1E-01	–	3.1E-01
			Total DLCs (excluding KM TEQs)			2.1E-06				4.7E-01
			Total DLCs (based on KM TEQs)			2.0E-06				4.6E-01
			Total PCDD/Fs (excluding KM TEQ)			6.8E-07				1.5E-01
			Total PCDD/Fs (based on KM TEQ)			6.4E-07				1.4E-01
			Total DL-PCBs (excluding KM TEQ)			1.4E-06				3.2E-01
			Total DL-PCBs (based on KM TEQ)			1.4E-06				3.1E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.4E-06				3.2E-01
			Total PCBs (DL & NDL; based on KM TEQ)			1.4E-06				3.1E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Bluefish Total (excluding KM TEQs)					2.1E-06				4.7E-01
	Bluefish Total (based on KM TEQs)					2.0E-06				4.6E-01
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.0E-06	–	3.0E-06	Reproductive	6.6E-01	–	6.6E-01
			1,2,3,7,8-PeCDD	1.7E-07	–	1.7E-07	Reproductive	3.9E-02	–	3.9E-02
			1,2,3,4,7,8-HxCDD	6.5E-09	–	6.5E-09	Reproductive	1.4E-03	–	1.4E-03
			1,2,3,6,7,8-HxCDD	6.6E-09	–	6.6E-09	Reproductive	1.5E-03	–	1.5E-03
			1,2,3,7,8,9-HxCDD	2.7E-09	–	2.7E-09	Reproductive	6.0E-04	–	6.0E-04
			1,2,3,4,6,7,8-HpCDD	4.6E-09	–	4.6E-09	Reproductive	1.0E-03	–	1.0E-03
			OCDD	1.5E-09	–	1.5E-09	Reproductive	3.4E-04	–	3.4E-04
			2,3,7,8-TCDF	1.2E-07	–	1.2E-07	Reproductive	2.7E-02	–	2.7E-02
			1,2,3,7,8-PeCDF	2.1E-08	–	2.1E-08	Reproductive	4.7E-03	–	4.7E-03
			2,3,4,7,8-PeCDF	3.1E-07	–	3.1E-07	Reproductive	6.9E-02	–	6.9E-02

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDF	1.3E-08	–	1.3E-08	Reproductive	2.9E-03	–	2.9E-03
			1,2,3,6,7,8-HxCDF	3.9E-08	–	3.9E-08	Reproductive	8.6E-03	–	8.6E-03
			1,2,3,7,8,9-HxCDF	3.8E-09	–	3.8E-09	Reproductive	8.5E-04	–	8.5E-04
			2,3,4,6,7,8-HxCDF	3.1E-09	–	3.1E-09	Reproductive	6.9E-04	–	6.9E-04
			1,2,3,4,6,7,8-HpCDF	1.1E-08	–	1.1E-08	Reproductive	2.3E-03	–	2.3E-03
			1,2,3,4,7,8,9-HpCDF	3.4E-10	–	3.4E-10	Reproductive	7.7E-05	–	7.7E-05
			OCDF	1.8E-11	–	1.8E-11	Reproductive	4.0E-06	–	4.0E-06
			KM TEQ DF	3.7E-06	–	3.7E-06	Reproductive	8.2E-01	–	8.2E-01
			PCB-77	4.0E-08	–	4.0E-08	Reproductive	8.9E-03	–	8.9E-03
			PCB-81	3.0E-09	–	3.0E-09	Reproductive	6.6E-04	–	6.6E-04
			PCB-105	6.2E-08	–	6.2E-08	Reproductive	1.4E-02	–	1.4E-02
			PCB-114	7.6E-09	–	7.6E-09	Reproductive	1.7E-03	–	1.7E-03
			PCB-118	3.9E-07	–	3.9E-07	Reproductive	8.7E-02	–	8.7E-02
			PCB-123	5.9E-09	–	5.9E-09	Reproductive	1.3E-03	–	1.3E-03
			PCB-126	6.6E-06	–	6.6E-06	Reproductive	1.5E+00	–	1.5E+00
			PCB-156/157	3.4E-08	–	3.4E-08	Reproductive	7.6E-03	–	7.6E-03
			PCB-167	1.5E-08	–	1.5E-08	Reproductive	3.4E-03	–	3.4E-03
			PCB-169	3.5E-08	–	3.5E-08	Reproductive	7.8E-03	–	7.8E-03
			PCB-189	3.0E-09	–	3.0E-09	Reproductive	6.6E-04	–	6.6E-04
			KM TEQ PCB	6.8E-06	–	6.8E-06	Reproductive	1.5E+00	–	1.5E+00
			Non-DL PCBs							
			Total Non-DL PCBs	1.7E-06	–	1.7E-06	Whole Body	1.9E+00	–	1.9E+00
			Total DLCs (excluding KM TEQs)			1.1E-05				2.4E+00
			Total DLCs (based on KM TEQs)			1.0E-05				2.3E+00
			Total PCDD/Fs (excluding KM TEQ)			3.7E-06				8.2E-01
			Total PCDD/Fs (based on KM TEQ)			3.7E-06				8.2E-01
			Total DL-PCBs (excluding KM TEQ)			7.2E-06				1.6E+00
			Total DL-PCBs (based on KM TEQ)			6.8E-06				1.5E+00
			Total Non-DL PCBs			1.7E-06				1.9E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			8.8E-06				3.5E+00
			Total PCBs (DL & NDL; based on KM TEQ)			8.4E-06				3.4E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Striped Bass Total (excluding KM TEQs)					1.3E-05				4.3E+00
	Striped Bass Total (based on KM TEQs)					1.2E-05				4.3E+00
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.7E-06	–	1.7E-06	Reproductive	3.9E-01	–	3.9E-01
			1,2,3,7,8-PeCDD	7.7E-08	–	7.7E-08	Reproductive	1.7E-02	–	1.7E-02
			1,2,3,4,7,8-HxCDD	2.6E-09	–	2.6E-09	Reproductive	5.7E-04	–	5.7E-04
			1,2,3,6,7,8-HxCDD	8.1E-09	–	8.1E-09	Reproductive	1.8E-03	–	1.8E-03
			1,2,3,7,8,9-HxCDD	3.4E-09	–	3.4E-09	Reproductive	7.6E-04	–	7.6E-04
			1,2,3,4,6,7,8-HpCDD	9.9E-10	–	9.9E-10	Reproductive	2.2E-04	–	2.2E-04
			OCDD	4.3E-11	–	4.3E-11	Reproductive	9.5E-06	–	9.5E-06
			2,3,7,8-TCDF	8.5E-09	–	8.5E-09	Reproductive	1.9E-03	–	1.9E-03
			1,2,3,7,8-PeCDF	3.3E-09	–	3.3E-09	Reproductive	7.4E-04	–	7.4E-04
			2,3,4,7,8-PeCDF	8.5E-08	–	8.5E-08	Reproductive	1.9E-02	–	1.9E-02
			1,2,3,4,7,8-HxCDF	2.1E-08	–	2.1E-08	Reproductive	4.6E-03	–	4.6E-03
			1,2,3,6,7,8-HxCDF	8.4E-09	–	8.4E-09	Reproductive	1.9E-03	–	1.9E-03
			1,2,3,7,8,9-HxCDF	4.5E-09	–	4.5E-09	Reproductive	1.0E-03	–	1.0E-03

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			2,3,4,6,7,8-HxCDF	3.5E-09	–	3.5E-09	Reproductive	7.7E-04	–	7.7E-04
			1,2,3,4,6,7,8-HpCDF	1.6E-09	–	1.6E-09	Reproductive	3.5E-04	–	3.5E-04
			1,2,3,4,7,8,9-HpCDF	3.4E-10	–	3.4E-10	Reproductive	7.6E-05	–	7.6E-05
			OCDF	1.9E-11	–	1.9E-11	Reproductive	4.2E-06	–	4.2E-06
			KM TEQ DF	1.9E-06	–	1.9E-06	Reproductive	4.3E-01	–	4.3E-01
			PCB-77	5.0E-09	–	5.0E-09	Reproductive	1.1E-03	–	1.1E-03
			PCB-81	1.6E-09	–	1.6E-09	Reproductive	3.5E-04	–	3.5E-04
			PCB-105	2.9E-08	–	2.9E-08	Reproductive	6.4E-03	–	6.4E-03
			PCB-114	2.5E-09	–	2.5E-09	Reproductive	5.5E-04	–	5.5E-04
			PCB-118	1.2E-07	–	1.2E-07	Reproductive	2.7E-02	–	2.7E-02
			PCB-123	1.9E-09	–	1.9E-09	Reproductive	4.2E-04	–	4.2E-04
			PCB-126	1.5E-06	–	1.5E-06	Reproductive	3.4E-01	–	3.4E-01
			PCB-156/157	1.2E-08	–	1.2E-08	Reproductive	2.7E-03	–	2.7E-03
			PCB-167	5.5E-09	–	5.5E-09	Reproductive	1.2E-03	–	1.2E-03
			PCB-169	2.1E-08	–	2.1E-08	Reproductive	4.7E-03	–	4.7E-03
			PCB-189	8.3E-10	–	8.3E-10	Reproductive	1.8E-04	–	1.8E-04
			KM TEQ PCB	1.7E-06	–	1.7E-06	Reproductive	3.7E-01	–	3.7E-01
			Total DLCs (excluding KM TEQs)			3.7E-06				8.2E-01
			Total DLCs (based on KM TEQs)			3.6E-06				8.0E-01
			Total PCDD/Fs (excluding KM TEQ)			2.0E-06				4.4E-01
			Total PCDD/Fs (based on KM TEQ)			1.9E-06				4.3E-01
			Total DL-PCBs (excluding KM TEQ)			1.7E-06				3.8E-01
			Total DL-PCBs (based on KM TEQ)			1.7E-06				3.7E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.7E-06				3.8E-01
			Total PCBs (DL & NDL; based on KM TEQ)			1.7E-06				3.7E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Summer Flounder Total (excluding KM TEQs)					3.7E-06				8.2E-01
	Summer Flounder Total (based on KM TEQs)					3.6E-06				8.0E-01
Fish	White Perch	White Perch	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	5.1E-06	–	5.1E-06	Reproductive	1.1E+00	–	1.1E+00
			1,2,3,7,8-PeCDD	1.3E-07	–	1.3E-07	Reproductive	3.0E-02	–	3.0E-02
			1,2,3,4,7,8-HxCDD	7.7E-09	–	7.7E-09	Reproductive	1.7E-03	–	1.7E-03
			1,2,3,6,7,8-HxCDD	1.9E-08	–	1.9E-08	Reproductive	4.3E-03	–	4.3E-03
			1,2,3,7,8,9-HxCDD	4.4E-09	–	4.4E-09	Reproductive	9.9E-04	–	9.9E-04
			1,2,3,4,6,7,8-HpCDD	1.2E-09	–	1.2E-09	Reproductive	2.6E-04	–	2.6E-04
			OCDD	8.1E-11	–	8.1E-11	Reproductive	1.8E-05	–	1.8E-05
			2,3,7,8-TCDF	1.2E-07	–	1.2E-07	Reproductive	2.7E-02	–	2.7E-02
			1,2,3,7,8-PeCDF	2.9E-08	–	2.9E-08	Reproductive	6.4E-03	–	6.4E-03
			2,3,4,7,8-PeCDF	3.2E-07	–	3.2E-07	Reproductive	7.2E-02	–	7.2E-02
			1,2,3,4,7,8-HxCDF	5.2E-08	–	5.2E-08	Reproductive	1.1E-02	–	1.1E-02
			1,2,3,6,7,8-HxCDF	3.8E-08	–	3.8E-08	Reproductive	8.4E-03	–	8.4E-03
			1,2,3,7,8,9-HxCDF	3.3E-09	–	3.3E-09	Reproductive	7.4E-04	–	7.4E-04
			2,3,4,6,7,8-HxCDF	6.8E-09	–	6.8E-09	Reproductive	1.5E-03	–	1.5E-03
			1,2,3,4,6,7,8-HpCDF	7.6E-09	–	7.6E-09	Reproductive	1.7E-03	–	1.7E-03
			1,2,3,4,7,8,9-HpCDF	2.8E-10	–	2.8E-10	Reproductive	6.2E-05	–	6.2E-05
			OCDF	2.1E-11	–	2.1E-11	Reproductive	4.6E-06	–	4.6E-06
			KM TEQ DF	5.8E-06	–	5.8E-06	Reproductive	1.3E+00	–	1.3E+00

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-77	3.4E-08	–	3.4E-08	Reproductive	7.6E-03	–	7.6E-03
			PCB-81	3.8E-09	–	3.8E-09	Reproductive	8.6E-04	–	8.6E-04
			PCB-105	7.8E-08	–	7.8E-08	Reproductive	1.7E-02	–	1.7E-02
			PCB-114	5.9E-09	–	5.9E-09	Reproductive	1.3E-03	–	1.3E-03
			PCB-118	2.9E-07	–	2.9E-07	Reproductive	6.5E-02	–	6.5E-02
			PCB-123	5.8E-09	–	5.8E-09	Reproductive	1.3E-03	–	1.3E-03
			PCB-126	2.1E-06	–	2.1E-06	Reproductive	4.7E-01	–	4.7E-01
			PCB-156/157	3.0E-08	–	3.0E-08	Reproductive	6.6E-03	–	6.6E-03
			PCB-167	1.2E-08	–	1.2E-08	Reproductive	2.7E-03	–	2.7E-03
			PCB-169	7.8E-08	–	7.8E-08	Reproductive	1.7E-02	–	1.7E-02
			PCB-189	2.4E-09	–	2.4E-09	Reproductive	5.2E-04	–	5.2E-04
			KM TEQ PCB	2.6E-06	–	2.6E-06	Reproductive	5.8E-01	–	5.8E-01
			Non-DL PCBs							
			Total Non-DL PCBs	1.1E-06	–	1.1E-06	Whole Body	1.3E+00	–	1.3E+00
			Total DLCs (excluding KM TEQs)			8.5E-06				1.9E+00
			Total DLCs (based on KM TEQs)			8.4E-06				1.9E+00
			Total PCDD/Fs (excluding KM TEQ)			5.9E-06				1.3E+00
			Total PCDD/Fs (based on KM TEQ)			5.8E-06				1.3E+00
			Total DL-PCBs (excluding KM TEQ)			2.7E-06				5.9E-01
			Total DL-PCBs (based on KM TEQ)			2.6E-06				5.8E-01
			Total Non-DL PCBs			1.1E-06				1.3E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			3.8E-06				1.9E+00
			Total PCBs (DL & NDL; based on KM TEQ)			3.7E-06				1.9E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	White Perch Total (excluding KM TEQs)					9.6E-06				3.2E+00
	White Perch Total (based on KM TEQs)					9.5E-06				3.1E+00
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	9.9E-06	–	9.9E-06	Reproductive	2.2E+00	–	2.2E+00
			1,2,3,7,8-PeCDD	2.6E-07	–	2.6E-07	Reproductive	5.8E-02	–	5.8E-02
			1,2,3,4,7,8-HxCDD	7.6E-09	–	7.6E-09	Reproductive	1.7E-03	–	1.7E-03
			1,2,3,6,7,8-HxCDD	2.2E-08	–	2.2E-08	Reproductive	5.0E-03	–	5.0E-03
			1,2,3,7,8,9-HxCDD	7.9E-09	–	7.9E-09	Reproductive	1.8E-03	–	1.8E-03
			1,2,3,4,6,7,8-HpCDD	2.6E-09	–	2.6E-09	Reproductive	5.7E-04	–	5.7E-04
			OCDD	2.3E-10	–	2.3E-10	Reproductive	5.1E-05	–	5.1E-05
			2,3,7,8-TCDF	3.7E-07	–	3.7E-07	Reproductive	8.1E-02	–	8.1E-02
			1,2,3,7,8-PeCDF	2.4E-08	–	2.4E-08	Reproductive	5.3E-03	–	5.3E-03
			2,3,4,7,8-PeCDF	5.5E-07	–	5.5E-07	Reproductive	1.2E-01	–	1.2E-01
			1,2,3,4,7,8-HxCDF	1.8E-07	–	1.8E-07	Reproductive	3.9E-02	–	3.9E-02
			1,2,3,6,7,8-HxCDF	5.3E-08	–	5.3E-08	Reproductive	1.2E-02	–	1.2E-02
			1,2,3,7,8,9-HxCDF	3.2E-09	–	3.2E-09	Reproductive	7.2E-04	–	7.2E-04
			2,3,4,6,7,8-HxCDF	1.4E-08	–	1.4E-08	Reproductive	3.1E-03	–	3.1E-03
			1,2,3,4,6,7,8-HpCDF	1.8E-08	–	1.8E-08	Reproductive	3.9E-03	–	3.9E-03
			1,2,3,4,7,8,9-HpCDF	2.5E-10	–	2.5E-10	Reproductive	5.6E-05	–	5.6E-05
			OCDF	2.8E-11	–	2.8E-11	Reproductive	6.1E-06	–	6.1E-06
			KM TEQ DF	1.1E-05	–	1.1E-05	Reproductive	2.5E+00	–	2.5E+00
			PCB-77	7.4E-08	–	7.4E-08	Reproductive	1.6E-02	–	1.6E-02
			PCB-81	9.7E-09	–	9.7E-09	Reproductive	2.1E-03	–	2.1E-03
			PCB-105	1.2E-07	–	1.2E-07	Reproductive	2.6E-02	–	2.6E-02

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-114	1.0E-08	–	1.0E-08	Reproductive	2.2E-03	–	2.2E-03
			PCB-118	5.3E-07	–	5.3E-07	Reproductive	1.2E-01	–	1.2E-01
			PCB-123	9.3E-09	–	9.3E-09	Reproductive	2.1E-03	–	2.1E-03
			PCB-126	3.7E-06	–	3.7E-06	Reproductive	8.1E-01	–	8.1E-01
			PCB-156/157	4.2E-08	–	4.2E-08	Reproductive	9.4E-03	–	9.4E-03
			PCB-167	1.8E-08	–	1.8E-08	Reproductive	3.9E-03	–	3.9E-03
			PCB-169	1.2E-07	–	1.2E-07	Reproductive	2.7E-02	–	2.7E-02
			PCB-189	3.0E-09	–	3.0E-09	Reproductive	6.8E-04	–	6.8E-04
			KM TEQ PCB	4.4E-06	–	4.4E-06	Reproductive	9.7E-01	–	9.7E-01
			Inorganics							
			Arsenic, inorganic	1.1E-06	–	1.1E-06	Skin, Blood	5.5E-02	–	5.5E-02
			Total DLCs (excluding KM TEQs)			1.6E-05				3.6E+00
			Total DLCs (based on KM TEQs)			1.6E-05				3.5E+00
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05				2.5E+00
			Total PCDD/Fs (based on KM TEQ)			1.1E-05				2.5E+00
			Total DL-PCBs (excluding KM TEQ)			4.6E-06				1.0E+00
			Total DL-PCBs (based on KM TEQ)			4.4E-06				9.7E-01
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.6E-06				1.0E+00
			Total PCBs (DL & NDL; based on KM TEQ)			4.4E-06				9.7E-01
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.1E-06				5.5E-02
	Crab (H+M) Total (excluding KM TEQs)					1.7E-05				3.6E+00
	Crab (H+M) Total (based on KM TEQs)					1.7E-05				3.6E+00
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	1.5E-06	–	1.5E-06	Reproductive	3.2E-01	–	3.2E-01
			1,2,3,7,8-PeCDD	9.5E-08	–	9.5E-08	Reproductive	2.1E-02	–	2.1E-02
			1,2,3,4,7,8-HxCDD	1.0E-09	–	1.0E-09	Reproductive	2.3E-04	–	2.3E-04
			1,2,3,6,7,8-HxCDD	2.6E-09	–	2.6E-09	Reproductive	5.8E-04	–	5.8E-04
			1,2,3,7,8,9-HxCDD	1.3E-09	–	1.3E-09	Reproductive	3.0E-04	–	3.0E-04
			1,2,3,4,6,7,8-HpCDD	5.1E-10	–	5.1E-10	Reproductive	1.1E-04	–	1.1E-04
			OCDD	5.2E-11	–	5.2E-11	Reproductive	1.2E-05	–	1.2E-05
			2,3,7,8-TCDF	4.4E-08	–	4.4E-08	Reproductive	9.7E-03	–	9.7E-03
			1,2,3,7,8-PeCDF	3.1E-09	–	3.1E-09	Reproductive	6.8E-04	–	6.8E-04
			2,3,4,7,8-PeCDF	5.5E-08	–	5.5E-08	Reproductive	1.2E-02	–	1.2E-02
			1,2,3,4,7,8-HxCDF	2.7E-08	–	2.7E-08	Reproductive	6.0E-03	–	6.0E-03
			1,2,3,6,7,8-HxCDF	6.8E-09	–	6.8E-09	Reproductive	1.5E-03	–	1.5E-03
			1,2,3,7,8,9-HxCDF	2.7E-09	–	2.7E-09	Reproductive	6.0E-04	–	6.0E-04
			2,3,4,6,7,8-HxCDF	1.7E-09	–	1.7E-09	Reproductive	3.9E-04	–	3.9E-04
			1,2,3,4,6,7,8-HpCDF	1.5E-09	–	1.5E-09	Reproductive	3.3E-04	–	3.3E-04
			1,2,3,4,7,8,9-HpCDF	1.3E-10	–	1.3E-10	Reproductive	2.8E-05	–	2.8E-05
			OCDF	1.1E-11	–	1.1E-11	Reproductive	2.4E-06	–	2.4E-06
			KM TEQ DF	1.7E-06	–	1.7E-06	Reproductive	3.7E-01	–	3.7E-01
			PCB-77	7.5E-09	–	7.5E-09	Reproductive	1.7E-03	–	1.7E-03
			PCB-81	1.0E-09	–	1.0E-09	Reproductive	2.3E-04	–	2.3E-04
			PCB-105	1.2E-08	–	1.2E-08	Reproductive	2.7E-03	–	2.7E-03
			PCB-114	1.1E-09	–	1.1E-09	Reproductive	2.3E-04	–	2.3E-04
			PCB-118	4.5E-08	–	4.5E-08	Reproductive	1.0E-02	–	1.0E-02
			PCB-123	8.9E-10	–	8.9E-10	Reproductive	2.0E-04	–	2.0E-04

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			PCB-126	3.2E-07	--	3.2E-07	Reproductive	7.1E-02	--	7.1E-02
			PCB-156/157	3.6E-09	--	3.6E-09	Reproductive	8.1E-04	--	8.1E-04
			PCB-167	1.4E-09	--	1.4E-09	Reproductive	3.1E-04	--	3.1E-04
			PCB-169	1.3E-07	--	1.3E-07	Reproductive	2.9E-02	--	2.9E-02
			PCB-189	1.8E-10	--	1.8E-10	Reproductive	4.0E-05	--	4.0E-05
			KM TEQ PCB	3.8E-07	--	3.8E-07	Reproductive	8.5E-02	--	8.5E-02
			Total DLCs (excluding KM TEQs)			2.2E-06				4.9E-01
			Total DLCs (based on KM TEQs)			2.0E-06				4.5E-01
			Total PCDD/Fs (excluding KM TEQ)			1.7E-06				3.8E-01
			Total PCDD/Fs (based on KM TEQ)			1.7E-06				3.7E-01
			Total DL-PCBs (excluding KM TEQ)			5.2E-07				1.2E-01
			Total DL-PCBs (based on KM TEQ)			3.8E-07				8.5E-02
			Total Non-DL PCBs			0.0E+00				0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			5.2E-07				1.2E-01
			Total PCBs (DL & NDL; based on KM TEQ)			3.8E-07				8.5E-02
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			0.0E+00				0.0E+00
	Crab (Muscle) Total (excluding KM TEQs)					2.2E-06				4.9E-01
	Crab (Muscle) Total (based on KM TEQs)					2.0E-06				4.5E-01
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**							
			2,3,7,8-TCDD	3.4E-05	--	3.4E-05	Reproductive	7.7E+00	--	7.7E+00
			1,2,3,7,8-PeCDD	8.2E-07	--	8.2E-07	Reproductive	1.8E-01	--	1.8E-01
			1,2,3,4,7,8-HxCDD	2.6E-08	--	2.6E-08	Reproductive	5.8E-03	--	5.8E-03
			1,2,3,6,7,8-HxCDD	7.9E-08	--	7.9E-08	Reproductive	1.8E-02	--	1.8E-02
			1,2,3,7,8,9-HxCDD	2.7E-08	--	2.7E-08	Reproductive	6.0E-03	--	6.0E-03
			1,2,3,4,6,7,8-HpCDD	8.6E-09	--	8.6E-09	Reproductive	1.9E-03	--	1.9E-03
			OCDD	7.3E-10	--	7.3E-10	Reproductive	1.6E-04	--	1.6E-04
			2,3,7,8-TCDF	1.3E-06	--	1.3E-06	Reproductive	2.9E-01	--	2.9E-01
			1,2,3,7,8-PeCDF	8.4E-08	--	8.4E-08	Reproductive	1.9E-02	--	1.9E-02
			2,3,4,7,8-PeCDF	2.0E-06	--	2.0E-06	Reproductive	4.4E-01	--	4.4E-01
			1,2,3,4,7,8-HxCDF	6.3E-07	--	6.3E-07	Reproductive	1.4E-01	--	1.4E-01
			1,2,3,6,7,8-HxCDF	1.9E-07	--	1.9E-07	Reproductive	4.2E-02	--	4.2E-02
			1,2,3,7,8,9-HxCDF	5.1E-09	--	5.1E-09	Reproductive	1.1E-03	--	1.1E-03
			2,3,4,6,7,8-HxCDF	4.9E-08	--	4.9E-08	Reproductive	1.1E-02	--	1.1E-02
			1,2,3,4,6,7,8-HpCDF	6.4E-08	--	6.4E-08	Reproductive	1.4E-02	--	1.4E-02
			1,2,3,4,7,8,9-HpCDF	5.2E-10	--	5.2E-10	Reproductive	1.2E-04	--	1.2E-04
			OCDF	9.5E-11	--	9.5E-11	Reproductive	2.1E-05	--	2.1E-05
			KM TEQ DF	4.0E-05	--	4.0E-05	Reproductive	8.8E+00	--	8.8E+00
			PCB-77	2.6E-07	--	2.6E-07	Reproductive	5.8E-02	--	5.8E-02
			PCB-81	3.5E-08	--	3.5E-08	Reproductive	7.7E-03	--	7.7E-03
			PCB-105	4.2E-07	--	4.2E-07	Reproductive	9.4E-02	--	9.4E-02
			PCB-114	3.6E-08	--	3.6E-08	Reproductive	8.0E-03	--	8.0E-03
			PCB-118	1.9E-06	--	1.9E-06	Reproductive	4.3E-01	--	4.3E-01
			PCB-123	3.3E-08	--	3.3E-08	Reproductive	7.4E-03	--	7.4E-03
			PCB-126	1.3E-05	--	1.3E-05	Reproductive	2.9E+00	--	2.9E+00
			PCB-156/157	1.5E-07	--	1.5E-07	Reproductive	3.4E-02	--	3.4E-02
			PCB-167	6.4E-08	--	6.4E-08	Reproductive	1.4E-02	--	1.4E-02
			PCB-169	4.1E-07	--	4.1E-07	Reproductive	9.1E-02	--	9.1E-02
			PCB-189	1.1E-08	--	1.1E-08	Reproductive	2.5E-03	--	2.5E-03

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
			KM TEQ PCB	1.6E-05	--	1.6E-05	Reproductive	3.5E+00	--	3.5E+00
			Non-DL PCBs							
			Total Non-DL PCBs	3.0E-06	--	3.0E-06	Whole Body	3.4E+00	--	3.4E+00
			Inorganics							
			Arsenic, inorganic	1.3E-06	--	1.3E-06	Skin, Blood	6.8E-02	--	6.8E-02
			Total DLCs (excluding KM TEQs)			5.6E-05				1.3E+01
			Total DLCs (based on KM TEQs)			5.5E-05				1.2E+01
			Total PCDD/Fs (excluding KM TEQ)			4.0E-05				8.8E+00
			Total PCDD/Fs (based on KM TEQ)			4.0E-05				8.8E+00
			Total DL-PCBs (excluding KM TEQ)			1.7E-05				3.7E+00
			Total DL-PCBs (based on KM TEQ)			1.6E-05				3.5E+00
			Total Non-DL PCBs			3.0E-06				3.4E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			2.0E-05				7.1E+00
			Total PCBs (DL & NDL; based on KM TEQ)			1.9E-05				7.0E+00
			Total PAHs			0.0E+00				0.0E+00
			Total Organics			0.0E+00				0.0E+00
			Total Inorganics			1.3E-06				6.8E-02
	Crab (Hepatopancreas) Total (excluding KM TEQs)					6.1E-05				1.6E+01
	Crab (Hepatopancreas) Total (based on KM TEQs)					6.0E-05				1.6E+01

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
				Mixed Fish/All Species Total				Mixed Fish/All Species Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		--		Blood HI =		--
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		1.5E+00		Reproductive HI =		1.6E+00
				Skin HI =		--		Skin HI =		--
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.1E+00		Whole Body HI =		1.1E+00
				American Eel Total				American Eel Total		
				(excluding KM TEQs) Target Organ-Specific HI				(based on KM TEQs) Target Organ-Specific HI		
				Blood HI =		--		Blood HI =		--
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		2.0E+00		Reproductive HI =		2.5E+00
				Skin HI =		--		Skin HI =		--
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		1.6E+00		Whole Body HI =		1.6E+00

TABLE 10.3.CTE
RISK AND HAZARD SUMMARY - CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
						Crab (H+M) Total				Crab (H+M) Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		5.5E-02		Blood HI =		5.5E-02
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		3.6E+00		Reproductive HI =		3.5E+00
				Skin HI =		5.5E-02		Skin HI =		5.5E-02
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		--		Whole Body HI =		--
						Crab (Muscle) Total				Crab (Muscle) Total
				(excluding KM TEQs) Target Organ-Specific HI			(based on KM TEQs) Target Organ-Specific HI			
				Blood HI =		--		Blood HI =		--
				Body Weight HI =		--		Body Weight HI =		--
				Developmental HI =		--		Developmental HI =		--
				GI Tract HI =		--		GI Tract HI =		--
				Hair HI =		--		Hair HI =		--
				Immune HI =		--		Immune HI =		--
				Kidney HI =		--		Kidney HI =		--
				Liver HI =		--		Liver HI =		--
				Neurological HI =		--		Neurological HI =		--
				No Effect HI =		--		No Effect HI =		--
				Organ Weights HI =		--		Organ Weights HI =		--
				Reproductive HI =		4.9E-01		Reproductive HI =		4.5E-01
				Skin HI =		--		Skin HI =		--
				Thymus HI =		--		Thymus HI =		--
				Thyroid HI =		--		Thyroid HI =		--
				Urinary HI =		--		Urinary HI =		--
				Whole Body HI =		--		Whole Body HI =		--

Note: For fish ingestion, summary risks/hazards are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks/hazards are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks/hazards are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Fish	Mixed Fish/All Species	Mixed Fish/All Species	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	7.6E-06	--	7.6E-06
			1,2,3,7,8-PeCDD	4.1E-07	--	4.1E-07
			1,2,3,4,7,8-HxCDD	1.9E-08	--	1.9E-08
			1,2,3,6,7,8-HxCDD	5.8E-08	--	5.8E-08
			1,2,3,7,8,9-HxCDD	1.4E-08	--	1.4E-08
			1,2,3,4,6,7,8-HpCDD	6.6E-09	--	6.6E-09
			OCDD	1.2E-09	--	1.2E-09
			2,3,7,8-TCDF	1.6E-07	--	1.6E-07
			1,2,3,7,8-PeCDF	4.2E-08	--	4.2E-08
			2,3,4,7,8-PeCDF	6.8E-07	--	6.8E-07
			1,2,3,4,7,8-HxCDF	1.0E-07	--	1.0E-07
			1,2,3,6,7,8-HxCDF	9.1E-08	--	9.1E-08
			1,2,3,7,8,9-HxCDF	1.1E-08	--	1.1E-08
			2,3,4,6,7,8-HxCDF	1.6E-08	--	1.6E-08
			1,2,3,4,6,7,8-HpCDF	2.1E-08	--	2.1E-08
			1,2,3,4,7,8,9-HpCDF	1.0E-09	--	1.0E-09
			OCDF	6.3E-11	--	6.3E-11
			KM TEQ DF	9.1E-06	--	9.1E-06
			PCB-77	5.0E-08	--	5.0E-08
			PCB-81	5.8E-09	--	5.8E-09
			PCB-105	2.3E-07	--	2.3E-07
			PCB-114	1.8E-08	--	1.8E-08
			PCB-118	9.4E-07	--	9.4E-07
			PCB-123	1.7E-08	--	1.7E-08
			PCB-126	9.2E-06	--	9.2E-06
			PCB-156/157	8.6E-08	--	8.6E-08
			PCB-167	3.7E-08	--	3.7E-08
			PCB-169	1.2E-07	--	1.2E-07
			PCB-189	6.9E-09	--	6.9E-09
			KM TEQ PCB	1.2E-05	--	1.2E-05
			Non-DL PCBs			
			Total Non-DL PCBs	2.8E-06	--	2.8E-06
			Inorganics			
			Arsenic, inorganic	1.6E-06	--	1.6E-06
			Total DLCs (excluding KM TEQs)			2.0E-05
			Total DLCs (based on KM TEQs)			2.1E-05
			Total PCDD/Fs (excluding KM TEQ)			9.2E-06

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total PCDD/Fs (based on KM TEQ)			9.1E-06
			Total DL-PCBs (excluding KM TEQ)			1.1E-05
			Total DL-PCBs (based on KM TEQ)			1.2E-05
			Total Non-DL PCBs			2.8E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.3E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.4E-05
			Total PAHs			0.0E+00
			Total Organics			0.0E+00
			Total Inorganics			1.6E-06
	Mixed Fish/All Species Total (excluding KM TEQs)					2.4E-05
	Mixed Fish/All Species Total (based on KM TEQs)					2.5E-05
Fish	American Eel	American Eel	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	8.1E-06	--	8.1E-06
			1,2,3,7,8-PeCDD	6.5E-07	--	6.5E-07
			1,2,3,4,7,8-HxCDD	3.9E-08	--	3.9E-08
			1,2,3,6,7,8-HxCDD	1.8E-07	--	1.8E-07
			1,2,3,7,8,9-HxCDD	3.2E-08	--	3.2E-08
			1,2,3,4,6,7,8-HpCDD	1.2E-08	--	1.2E-08
			OCDD	8.8E-10	--	8.8E-10
			2,3,7,8-TCDF	9.7E-09	--	9.7E-09
			1,2,3,7,8-PeCDF	3.9E-08	--	3.9E-08
			2,3,4,7,8-PeCDF	1.1E-06	--	1.1E-06
			1,2,3,4,7,8-HxCDF	2.5E-07	--	2.5E-07
			1,2,3,6,7,8-HxCDF	1.9E-07	--	1.9E-07
			1,2,3,7,8,9-HxCDF	1.1E-08	--	1.1E-08
			2,3,4,6,7,8-HxCDF	3.4E-08	--	3.4E-08
			1,2,3,4,6,7,8-HpCDF	4.4E-08	--	4.4E-08
			1,2,3,4,7,8,9-HpCDF	1.5E-09	--	1.5E-09
			OCDF	1.0E-10	--	1.0E-10
			KM TEQ DF	1.0E-05	--	1.0E-05
			PCB-77	7.6E-09	--	7.6E-09
			PCB-81	3.6E-09	--	3.6E-09
			PCB-105	6.3E-07	--	6.3E-07
			PCB-114	4.0E-08	--	4.0E-08
			PCB-118	2.2E-06	--	2.2E-06
			PCB-123	4.3E-08	--	4.3E-08
			PCB-126	1.2E-05	--	1.2E-05
			PCB-156/157	1.9E-07	--	1.9E-07

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-167	8.2E-08	--	8.2E-08
			PCB-169	1.3E-07	--	1.3E-07
			PCB-189	1.5E-08	--	1.5E-08
			KM TEQ PCB	2.2E-05	--	2.2E-05
			Non-DL PCBs			
			Total Non-DL PCBs	4.0E-06	--	4.0E-06
			Pesticides & Organics			
			Dieldrin	1.5E-06	--	1.5E-06
			Inorganics			
			Arsenic, inorganic	1.7E-06	--	1.7E-06
			Total DLCs (excluding KM TEQs)			2.6E-05
			Total DLCs (based on KM TEQs)			3.2E-05
			Total PCDD/Fs (excluding KM TEQ)			1.1E-05
			Total PCDD/Fs (based on KM TEQ)			1.0E-05
			Total DL-PCBs (excluding KM TEQ)			1.5E-05
			Total DL-PCBs (based on KM TEQ)			2.2E-05
			Total Non-DL PCBs			4.0E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.9E-05
			Total PCBs (DL & NDL; based on KM TEQ)			2.6E-05
			Total PAHs			0.0E+00
			Total Organics			1.5E-06
			Total Inorganics			1.7E-06
	American Eel Total (excluding KM TEQs)					3.3E-05
	American Eel Total (based on KM TEQs)					4.0E-05
Fish	Bluefish	Bluefish	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.4E-06	--	1.4E-06
			1,2,3,7,8-PeCDD	2.8E-07	--	2.8E-07
			1,2,3,4,7,8-HxCDD	6.7E-09	--	6.7E-09
			1,2,3,6,7,8-HxCDD	1.8E-08	--	1.8E-08
			1,2,3,7,8,9-HxCDD	6.4E-09	--	6.4E-09
			1,2,3,4,6,7,8-HpCDD	1.3E-09	--	1.3E-09
			OCDD	7.1E-11	--	7.1E-11
			2,3,7,8-TCDF	3.5E-08	--	3.5E-08
			1,2,3,7,8-PeCDF	1.8E-08	--	1.8E-08
			2,3,4,7,8-PeCDF	2.1E-07	--	2.1E-07
			1,2,3,4,7,8-HxCDF	8.7E-09	--	8.7E-09
			1,2,3,6,7,8-HxCDF	2.1E-08	--	2.1E-08

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,7,8,9-HxCDF	7.9E-09	--	7.9E-09
			2,3,4,6,7,8-HxCDF	5.2E-09	--	5.2E-09
			1,2,3,4,6,7,8-HpCDF	6.1E-09	--	6.1E-09
			1,2,3,4,7,8,9-HpCDF	7.0E-10	--	7.0E-10
			OCDF	4.7E-11	--	4.7E-11
			KM TEQ DF	1.9E-06	--	1.9E-06
			PCB-77	9.9E-09	--	9.9E-09
			PCB-81	1.1E-09	--	1.1E-09
			PCB-105	3.8E-08	--	3.8E-08
			PCB-114	2.3E-09	--	2.3E-09
			PCB-118	1.6E-07	--	1.6E-07
			PCB-123	2.3E-09	--	2.3E-09
			PCB-126	3.9E-06	--	3.9E-06
			PCB-156/157	1.7E-08	--	1.7E-08
			PCB-167	8.9E-09	--	8.9E-09
			PCB-169	5.4E-08	--	5.4E-08
			PCB-189	1.7E-09	--	1.7E-09
			KM TEQ PCB	4.1E-06	--	4.1E-06
			Inorganics			
			Arsenic, inorganic	1.0E-06	--	1.0E-06
			Total DLCs (excluding KM TEQs)			6.2E-06
			Total DLCs (based on KM TEQs)			6.0E-06
			Total PCDD/Fs (excluding KM TEQ)			2.0E-06
			Total PCDD/Fs (based on KM TEQ)			1.9E-06
			Total DL-PCBs (excluding KM TEQ)			4.2E-06
			Total DL-PCBs (based on KM TEQ)			4.1E-06
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			4.2E-06
			Total PCBs (DL & NDL; based on KM TEQ)			4.1E-06
			Total PAHs			0.0E+00
			Total Organics			0.0E+00
			Total Inorganics			1.0E-06
	Bluefish Total (excluding KM TEQs)					7.2E-06
	Bluefish Total (based on KM TEQs)					7.0E-06
Fish	Striped Bass	Striped Bass	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	8.7E-06	--	8.7E-06
			1,2,3,7,8-PeCDD	5.1E-07	--	5.1E-07

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	1.9E-08	--	1.9E-08
			1,2,3,6,7,8-HxCDD	1.9E-08	--	1.9E-08
			1,2,3,7,8,9-HxCDD	7.9E-09	--	7.9E-09
			1,2,3,4,6,7,8-HpCDD	1.3E-08	--	1.3E-08
			OCDD	4.5E-09	--	4.5E-09
			2,3,7,8-TCDF	3.5E-07	--	3.5E-07
			1,2,3,7,8-PeCDF	6.1E-08	--	6.1E-08
			2,3,4,7,8-PeCDF	9.1E-07	--	9.1E-07
			1,2,3,4,7,8-HxCDF	3.8E-08	--	3.8E-08
			1,2,3,6,7,8-HxCDF	1.1E-07	--	1.1E-07
			1,2,3,7,8,9-HxCDF	1.1E-08	--	1.1E-08
			2,3,4,6,7,8-HxCDF	9.1E-09	--	9.1E-09
			1,2,3,4,6,7,8-HpCDF	3.1E-08	--	3.1E-08
			1,2,3,4,7,8,9-HpCDF	1.0E-09	--	1.0E-09
			OCDF	5.3E-11	--	5.3E-11
			KM TEQ DF	1.1E-05	--	1.1E-05
			PCB-77	1.2E-07	--	1.2E-07
			PCB-81	8.6E-09	--	8.6E-09
			PCB-105	1.8E-07	--	1.8E-07
			PCB-114	2.2E-08	--	2.2E-08
			PCB-118	1.1E-06	--	1.1E-06
			PCB-123	1.7E-08	--	1.7E-08
			PCB-126	1.9E-05	--	1.9E-05
			PCB-156/157	1.0E-07	--	1.0E-07
			PCB-167	4.5E-08	--	4.5E-08
			PCB-169	1.0E-07	--	1.0E-07
			PCB-189	8.7E-09	--	8.7E-09
			KM TEQ PCB	2.0E-05	--	2.0E-05
			Non-DL PCBs			
			Total Non-DL PCBs	4.8E-06	--	4.8E-06
			Pesticides & Organics			
			Dieldrin	1.1E-06	--	1.1E-06
			Inorganics			
			Arsenic, inorganic	1.8E-06	--	1.8E-06
Total DLCs (excluding KM TEQs)						3.2E-05
Total DLCs (based on KM TEQs)						3.1E-05
Total PCDD/Fs (excluding KM TEQ)						1.1E-05
Total PCDD/Fs (based on KM TEQ)						1.1E-05

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total DL-PCBs (excluding KM TEQ)			2.1E-05
			Total DL-PCBs (based on KM TEQ)			2.0E-05
			Total Non-DL PCBs			4.8E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			2.6E-05
			Total PCBs (DL & NDL; based on KM TEQ)			2.5E-05
			Total PAHs			0.0E+00
			Total Organics			1.1E-06
			Total Inorganics			1.8E-06
	Striped Bass Total (excluding KM TEQs)					3.9E-05
	Striped Bass Total (based on KM TEQs)					3.8E-05
Fish	Summer Flounder	Summer Flounder	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	5.1E-06	--	5.1E-06
			1,2,3,7,8-PeCDD	2.2E-07	--	2.2E-07
			1,2,3,4,7,8-HxCDD	7.5E-09	--	7.5E-09
			1,2,3,6,7,8-HxCDD	2.4E-08	--	2.4E-08
			1,2,3,7,8,9-HxCDD	1.0E-08	--	1.0E-08
			1,2,3,4,6,7,8-HpCDD	2.9E-09	--	2.9E-09
			OCDD	1.3E-10	--	1.3E-10
			2,3,7,8-TCDF	2.5E-08	--	2.5E-08
			1,2,3,7,8-PeCDF	9.7E-09	--	9.7E-09
			2,3,4,7,8-PeCDF	2.5E-07	--	2.5E-07
			1,2,3,4,7,8-HxCDF	6.0E-08	--	6.0E-08
			1,2,3,6,7,8-HxCDF	2.5E-08	--	2.5E-08
			1,2,3,7,8,9-HxCDF	1.3E-08	--	1.3E-08
			2,3,4,6,7,8-HxCDF	1.0E-08	--	1.0E-08
			1,2,3,4,6,7,8-HpCDF	4.6E-09	--	4.6E-09
			1,2,3,4,7,8,9-HpCDF	1.0E-09	--	1.0E-09
			OCDF	5.5E-11	--	5.5E-11
			KM TEQ DF	5.6E-06	--	5.6E-06
			PCB-77	1.5E-08	--	1.5E-08
			PCB-81	4.5E-09	--	4.5E-09
			PCB-105	8.4E-08	--	8.4E-08
			PCB-114	7.2E-09	--	7.2E-09
			PCB-118	3.6E-07	--	3.6E-07
			PCB-123	5.5E-09	--	5.5E-09
			PCB-126	4.4E-06	--	4.4E-06
			PCB-156/157	3.5E-08	--	3.5E-08
			PCB-167	1.6E-08	--	1.6E-08

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-169	6.2E-08	--	6.2E-08
			PCB-189	2.4E-09	--	2.4E-09
			KM TEQ PCB	4.9E-06	--	4.9E-06
			Non-DL PCBs			
			Total Non-DL PCBs	1.0E-06	--	1.0E-06
			Inorganics			
			Arsenic, inorganic	2.6E-06	--	2.6E-06
			Total DLCs (excluding KM TEQs)			1.1E-05
			Total DLCs (based on KM TEQs)			1.0E-05
			Total PCDD/Fs (excluding KM TEQ)			5.7E-06
			Total PCDD/Fs (based on KM TEQ)			5.6E-06
			Total DL-PCBs (excluding KM TEQ)			5.0E-06
			Total DL-PCBs (based on KM TEQ)			4.9E-06
			Total Non-DL PCBs			1.0E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			6.0E-06
			Total PCBs (DL & NDL; based on KM TEQ)			5.9E-06
			Total PAHs			0.0E+00
			Total Organics			0.0E+00
			Total Inorganics			2.6E-06
	Summer Flounder Total (excluding KM TEQs)					1.4E-05
	Summer Flounder Total (based on KM TEQs)					1.4E-05
Fish	White Perch	White Perch	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.5E-05	--	1.5E-05
			1,2,3,7,8-PeCDD	3.9E-07	--	3.9E-07
			1,2,3,4,7,8-HxCDD	2.2E-08	--	2.2E-08
			1,2,3,6,7,8-HxCDD	5.6E-08	--	5.6E-08
			1,2,3,7,8,9-HxCDD	1.3E-08	--	1.3E-08
			1,2,3,4,6,7,8-HpCDD	3.4E-09	--	3.4E-09
			OCDD	2.3E-10	--	2.3E-10
			2,3,7,8-TCDF	3.6E-07	--	3.6E-07
			1,2,3,7,8-PeCDF	8.4E-08	--	8.4E-08
			2,3,4,7,8-PeCDF	9.4E-07	--	9.4E-07
			1,2,3,4,7,8-HxCDF	1.5E-07	--	1.5E-07
			1,2,3,6,7,8-HxCDF	1.1E-07	--	1.1E-07
			1,2,3,7,8,9-HxCDF	9.7E-09	--	9.7E-09
			2,3,4,6,7,8-HxCDF	2.0E-08	--	2.0E-08
			1,2,3,4,6,7,8-HpCDF	2.2E-08	--	2.2E-08

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8,9-HpCDF	8.1E-10	--	8.1E-10
			OCDF	6.1E-11	--	6.1E-11
			KM TEQ DF	1.7E-05	--	1.7E-05
			PCB-77	1.0E-07	--	1.0E-07
			PCB-81	1.1E-08	--	1.1E-08
			PCB-105	2.3E-07	--	2.3E-07
			PCB-114	1.7E-08	--	1.7E-08
			PCB-118	8.5E-07	--	8.5E-07
			PCB-123	1.7E-08	--	1.7E-08
			PCB-126	6.2E-06	--	6.2E-06
			PCB-156/157	8.7E-08	--	8.7E-08
			PCB-167	3.5E-08	--	3.5E-08
			PCB-169	2.3E-07	--	2.3E-07
			PCB-189	6.8E-09	--	6.8E-09
			KM TEQ PCB	7.5E-06	--	7.5E-06
			Non-DL PCBs			
			Total Non-DL PCBs	3.2E-06	--	3.2E-06
			Inorganics			
			Aluminum	--	--	--
			Arsenic, inorganic	1.1E-06	--	1.1E-06
			Total DLCs (excluding KM TEQs)			2.5E-05
			Total DLCs (based on KM TEQs)			2.4E-05
			Total PCDD/Fs (excluding KM TEQ)			1.7E-05
			Total PCDD/Fs (based on KM TEQ)			1.7E-05
			Total DL-PCBs (excluding KM TEQ)			7.7E-06
			Total DL-PCBs (based on KM TEQ)			7.5E-06
			Total Non-DL PCBs			3.2E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.1E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-05
			Total PAHs			0.0E+00
			Total Organics			0.0E+00
			Total Inorganics			1.1E-06
	White Perch Total (excluding KM TEQs)					2.9E-05
	White Perch Total (based on KM TEQs)					2.9E-05
Crab	Crab (H+M)	Crab (H+M)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	2.9E-05	--	2.9E-05
			1,2,3,7,8-PeCDD	7.6E-07	--	7.6E-07

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			1,2,3,4,7,8-HxCDD	2.2E-08	--	2.2E-08
			1,2,3,6,7,8-HxCDD	6.5E-08	--	6.5E-08
			1,2,3,7,8,9-HxCDD	2.3E-08	--	2.3E-08
			1,2,3,4,6,7,8-HpCDD	7.5E-09	--	7.5E-09
			OCDD	6.6E-10	--	6.6E-10
			2,3,7,8-TCDF	1.1E-06	--	1.1E-06
			1,2,3,7,8-PeCDF	6.9E-08	--	6.9E-08
			2,3,4,7,8-PeCDF	1.6E-06	--	1.6E-06
			1,2,3,4,7,8-HxCDF	5.2E-07	--	5.2E-07
			1,2,3,6,7,8-HxCDF	1.5E-07	--	1.5E-07
			1,2,3,7,8,9-HxCDF	9.5E-09	--	9.5E-09
			2,3,4,6,7,8-HxCDF	4.1E-08	--	4.1E-08
			1,2,3,4,6,7,8-HpCDF	5.2E-08	--	5.2E-08
			1,2,3,4,7,8,9-HpCDF	7.3E-10	--	7.3E-10
			OCDF	8.1E-11	--	8.1E-11
			KM TEQ DF	3.3E-05	--	3.3E-05
			PCB-77	2.1E-07	--	2.1E-07
			PCB-81	2.8E-08	--	2.8E-08
			PCB-105	3.4E-07	--	3.4E-07
			PCB-114	2.9E-08	--	2.9E-08
			PCB-118	1.5E-06	--	1.5E-06
			PCB-123	2.7E-08	--	2.7E-08
			PCB-126	1.1E-05	--	1.1E-05
			PCB-156/157	1.2E-07	--	1.2E-07
			PCB-167	5.1E-08	--	5.1E-08
			PCB-169	3.6E-07	--	3.6E-07
			PCB-189	8.8E-09	--	8.8E-09
			KM TEQ PCB	1.3E-05	--	1.3E-05
			Non-DL PCBs			
			Total Non-DL PCBs	2.3E-06	--	2.3E-06
			Inorganics			
			Arsenic, inorganic	3.1E-06	--	3.1E-06
Total DLCs (excluding KM TEQs)						4.7E-05
Total DLCs (based on KM TEQs)						4.6E-05
Total PCDD/Fs (excluding KM TEQ)						3.3E-05
Total PCDD/Fs (based on KM TEQ)						3.3E-05
Total DL-PCBs (excluding KM TEQ)						1.3E-05
Total DL-PCBs (based on KM TEQ)						1.3E-05

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			Total Non-DL PCBs			2.3E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			1.6E-05
			Total PCBs (DL & NDL; based on KM TEQ)			1.5E-05
			Total PAHs			0.0E+00
			Total Organics			0.0E+00
			Total Inorganics			3.1E-06
	Crab (H+M) Total (excluding KM TEQs)					5.2E-05
	Crab (H+M) Total (based on KM TEQs)					5.1E-05
Crab	Crab (Muscle)	Crab (Muscle)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	4.3E-06	--	4.3E-06
			1,2,3,7,8-PeCDD	2.8E-07	--	2.8E-07
			1,2,3,4,7,8-HxCDD	3.0E-09	--	3.0E-09
			1,2,3,6,7,8-HxCDD	7.6E-09	--	7.6E-09
			1,2,3,7,8,9-HxCDD	3.9E-09	--	3.9E-09
			1,2,3,4,6,7,8-HpCDD	1.5E-09	--	1.5E-09
			OCDD	1.5E-10	--	1.5E-10
			2,3,7,8-TCDF	1.3E-07	--	1.3E-07
			1,2,3,7,8-PeCDF	8.9E-09	--	8.9E-09
			2,3,4,7,8-PeCDF	1.6E-07	--	1.6E-07
			1,2,3,4,7,8-HxCDF	7.9E-08	--	7.9E-08
			1,2,3,6,7,8-HxCDF	2.0E-08	--	2.0E-08
			1,2,3,7,8,9-HxCDF	7.8E-09	--	7.8E-09
			2,3,4,6,7,8-HxCDF	5.1E-09	--	5.1E-09
			1,2,3,4,6,7,8-HpCDF	4.3E-09	--	4.3E-09
			1,2,3,4,7,8,9-HpCDF	3.7E-10	--	3.7E-10
			OCDF	3.1E-11	--	3.1E-11
			KM TEQ DF	4.8E-06	--	4.8E-06
			PCB-77	2.2E-08	--	2.2E-08
			PCB-81	3.0E-09	--	3.0E-09
			PCB-105	3.5E-08	--	3.5E-08
			PCB-114	3.1E-09	--	3.1E-09
			PCB-118	1.3E-07	--	1.3E-07
			PCB-123	2.6E-09	--	2.6E-09
			PCB-126	9.3E-07	--	9.3E-07
			PCB-156/157	1.1E-08	--	1.1E-08
			PCB-167	4.1E-09	--	4.1E-09
			PCB-169	3.8E-07	--	3.8E-07
			PCB-189	5.2E-10	--	5.2E-10

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			KM TEQ PCB	1.1E-06	--	1.1E-06
			Inorganics			
			Arsenic, inorganic	2.9E-06	--	2.9E-06
			Total DLCs (excluding KM TEQs)			6.5E-06
			Total DLCs (based on KM TEQs)			6.0E-06
			Total PCDD/Fs (excluding KM TEQ)			5.0E-06
			Total PCDD/Fs (based on KM TEQ)			4.8E-06
			Total DL-PCBs (excluding KM TEQ)			1.5E-06
			Total DL-PCBs (based on KM TEQ)			1.1E-06
			Total Non-DL PCBs			0.0E+00
			Total PCBs (DL & NDL; excluding KM TEQ)			1.5E-06
			Total PCBs (DL & NDL; based on KM TEQ)			1.1E-06
			Total PAHs			0.0E+00
			Total Organics			0.0E+00
			Total Inorganics			2.9E-06
	Crab (Muscle) Total (excluding KM TEQs)					9.4E-06
	Crab (Muscle) Total (based on KM TEQs)					8.8E-06
Crab	Crab (Hepatopancreas)	Crab (Hepatopancreas)	**Dioxin-like Compounds**			
			2,3,7,8-TCDD	1.0E-04	--	1.0E-04
			1,2,3,7,8-PeCDD	2.4E-06	--	2.4E-06
			1,2,3,4,7,8-HxCDD	7.6E-08	--	7.6E-08
			1,2,3,6,7,8-HxCDD	2.3E-07	--	2.3E-07
			1,2,3,7,8,9-HxCDD	7.8E-08	--	7.8E-08
			1,2,3,4,6,7,8-HpCDD	2.5E-08	--	2.5E-08
			OCDD	2.1E-09	--	2.1E-09
			2,3,7,8-TCDF	3.8E-06	--	3.8E-06
			1,2,3,7,8-PeCDF	2.4E-07	--	2.4E-07
			2,3,4,7,8-PeCDF	5.8E-06	--	5.8E-06
			1,2,3,4,7,8-HxCDF	1.8E-06	--	1.8E-06
			1,2,3,6,7,8-HxCDF	5.5E-07	--	5.5E-07
			1,2,3,7,8,9-HxCDF	1.5E-08	--	1.5E-08
			2,3,4,6,7,8-HxCDF	1.4E-07	--	1.4E-07
			1,2,3,4,6,7,8-HpCDF	1.9E-07	--	1.9E-07
			1,2,3,4,7,8,9-HpCDF	1.5E-09	--	1.5E-09
			OCDF	2.8E-10	--	2.8E-10
			KM TEQ DF	1.2E-04	--	1.2E-04
			PCB-77	7.6E-07	--	7.6E-07

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
			PCB-81	1.0E-07	--	1.0E-07
			PCB-105	1.2E-06	--	1.2E-06
			PCB-114	1.0E-07	--	1.0E-07
			PCB-118	5.6E-06	--	5.6E-06
			PCB-123	9.7E-08	--	9.7E-08
			PCB-126	3.9E-05	--	3.9E-05
			PCB-156/157	4.5E-07	--	4.5E-07
			PCB-167	1.9E-07	--	1.9E-07
			PCB-169	1.2E-06	--	1.2E-06
			PCB-189	3.3E-08	--	3.3E-08
			KM TEQ PCB	4.6E-05	--	4.6E-05
			Non-DL PCBs			
			Total Non-DL PCBs	8.6E-06	--	8.6E-06
			Pesticides & Organics			
			Dieldrin	2.4E-06	--	2.4E-06
			Inorganics			
			Arsenic, inorganic	3.8E-06	--	3.8E-06
			Total DLCs (excluding KM TEQs)			1.6E-04
			Total DLCs (based on KM TEQs)			1.6E-04
			Total PCDD/Fs (excluding KM TEQ)			1.2E-04
			Total PCDD/Fs (based on KM TEQ)			1.2E-04
			Total DL-PCBs (excluding KM TEQ)			4.8E-05
			Total DL-PCBs (based on KM TEQ)			4.6E-05
			Total Non-DL PCBs			8.6E-06
			Total PCBs (DL & NDL; excluding KM TEQ)			5.7E-05
			Total PCBs (DL & NDL; based on KM TEQ)			5.5E-05
			Total PAHs			0.0E+00
			Total Organics			2.4E-06
			Total Inorganics			3.8E-06
	Crab (Hepatopancreas) Total (excluding KM TEQs)					1.8E-04
	Crab (Hepatopancreas) Total (based on KM TEQs)					1.8E-04
Sediment	Sediment	Angler - Fishing Sediment	--	--	--	--
Surface Water	Surface Water	Angler - Fishing Surface Water	--	--	--	--
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						2.4E-05
Mixed Fish/All Species + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						2.5E-05

TABLE 10.A.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD ANGLER/SPORTSMAN - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Angler/Recreator (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
American Eel + Fishing Sediment Total + Fishing Surface Water Total (excluding KM TEQs)						3.3E-05
American Eel + Fishing Sediment Total + Fishing Surface Water Total (based on KM TEQs)						4.0E-05
Sediment	Sediment	Angler - Crabbing Sediment	--	--	--	--
Surface Water	Surface Water	Angler - Crabbing Surface Water	--	--	--	--
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						5.2E-05
Crab (H+M) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						5.1E-05
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (excluding KM TEQs)						9.4E-06
Crab (Muscle) + Crabbing Sediment Total + Crabbing Surface Water Total (based on KM TEQs)						8.8E-06

Note: Sediment and surface water risks are for adult only, since the child is not assumed to accompany the adult angler on fishing or crabbing trips.

Note: For fish ingestion, summary risks are presented for Mixed Fish/All Species, since these values are representative of a diet of mixed fish from the NBSA. Summary risks are also presented for American Eel, since this species is among the highest risks and hazards. For crab ingestion, summary risks are presented for Crab (H+M) and Crab Muscle, since it is unlikely the hepatopancreas will be consumed alone.

TABLE 10.4.CTE
RISK AND HAZARD SUMMARY - ADULT WORKER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Worker (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Worker Sediment	--	--	--	--	--	--	--	--

TABLE 10.5.CTE
RISK AND HAZARD SUMMARY - ADULT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adult)
Receptor Age: >18 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--	-- --	--	--	--
Sediment	Sediment	Boater Sediment	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Boater Surface Water	--	--	--	--	-- --	--	--	--

TABLE 10.6.CTE
RISK AND HAZARD SUMMARY - ADOLESCENT WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Adolescent)
Receptor Age: 7-<19 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--	-- --	--	--	--
Sediment	Sediment	Boater Sediment	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Boater Surface Water	--	--	--	--	-- --	--	--	--

TABLE 10.7.CTE
RISK AND HAZARD SUMMARY - CHILD WADER AND SWIMMER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer (Child)
Receptor Age: 1-<7 Years

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			Non-Carcinogenic Hazard Quotient			
				Ingestion	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--	-- --	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--	-- --	--	--	--

TABLE 10.B.CTE
RISK SUMMARY - COMBINED ADULT AND CHILD WADER, SWIMMER, AND BOATER - CTE SCENARIO
BASELINE HUMAN HEALTH RISK ASSESSMENT
NEWARK BAY STUDY AREA

Scenario Timeframe: Current/Future
Receptor Population: Wader, Swimmer, Boater (Combined Adult/Child)
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk		
				Ingestion	Dermal	Exposure Routes Total
Sediment	Sediment	Wader Sediment	--	--	--	--
Sediment	Sediment	Swimmer Sediment	--	--	--	--
Sediment	Sediment	Boater Sediment	--	--	--	--
Surface Water	Surface Water	Wader Surface Water	--	--	--	--
Surface Water	Surface Water	Swimmer Surface Water	--	--	--	--
Surface Water	Surface Water	Boater Surface Water	--	--	--	--

Note: Sediment and surface water boater risks are for adult only, since the child is not expected to participate in boating activities on the Bay.

Appendix J

APPENDIX J
ARSENIC SPECIATION

J-1 Introduction

Crab and fish tissue samples collected from the Newark Bay Study Area (NBSA) were analyzed for total arsenic, which includes both inorganic and organic arsenic, whereas the U.S. Environmental Protection Agency (USEPA) cancer slope factor and reference dose values are specifically for the more toxic inorganic arsenic. As shown in the Baseline Human Health Risk Assessment for the Lower Passaic River Study Area (LPRSA BHHRA), this distinction is important for assessing the potential risk associated with ingestion of arsenic in crab and fish tissues, because the less toxic organic arsenic predominates in these tissues. In the absence of species-specific data for the NBSA, extrapolating from data collected for the LPRSA BHHRA was explored; however, it became clear that there are substantial limitations to this approach. As an alternative, prior regulatory determinations based on data in the published literature was also explored. Each of these approaches is discussed further below.

J-2 Model Based on LPRSA BHHRA Data

Both total arsenic (total As) and inorganic arsenic (inorganic As) species were measured in biota samples collected in support of the LPRSA BHHRA; organic arsenic concentrations were estimated by subtracting the inorganic As concentration from the total As concentration (AECOM, 2017). The goal of this evaluation was to ascertain whether a linear model could be fit to the inorganic and total As data from the LPRSA BHHRA that could then be applied to the NBSA data for total As to predict inorganic As. For purposes of this evaluation, data from Table A-18 in Appendix A to the final LPRSA BHHRA were extracted and imported into R (R Core Team 2017). In all fish (but not crab) tissue samples, inorganic As was non-detect (flagged "U"). It is not possible to evaluate a relationship between inorganic As and total As when inorganic As is non-detect, because the true concentration of inorganic arsenic cannot be determined for non-detect values, which were reported as one of three fixed values that appear to represent limits of detection (0.008, 0.009, or 0.01 mg/kg). Therefore, the remainder of this evaluation applies only to blue crab tissue. This represents a substantial limitation of the model-based approach.

Data are available for three kinds of blue crab tissue: muscle, hepatopancreas, and combined muscle/hepatopancreas. Only samples in which both inorganic As and total As were detected (reported with either no flag or a flag of "J") were included in the analysis. Measured concentrations ranged across orders of magnitude; therefore, to reduce the effect of outliers, a natural log transformation was applied to both inorganic As and total As before proceeding with the analysis. Initially, a linear model was fit regressing log inorganic As onto log organic As, controlling for tissue type. Results of this model indicated the slope and intercept for muscle/hepatopancreas were not significantly different from those for muscle alone. Therefore, data for muscle and muscle/hepatopancreas were pooled. Two separate linear models were fit: one to the pooled muscle and muscle/hepatopancreas data (n=43), and one to the hepatopancreas-only data (n=7).

Muscle and muscle/hepatopancreas model

The best-fit model equation (adjusted $R^2 = 0.61$) is

$$\log \text{Inorganic As} = -4.171 + 0.380 \log \text{Total As}$$

or equivalently,

$$\text{Inorganic As} = 0.0154 \times \text{Total As}^{0.380}$$

Concentrations of total arsenic range from 0.16 to 2.1 mg/kg, and for inorganic As, from 0.007 to 0.04 mg/kg. By comparison, in NBSA data for blue crab, muscle/hepatopancreas concentrations of total As range from 1.51 to 3.99 mg/kg, and muscle concentrations of total As range from 1.37 to 3.81 mg/kg. The NBSA EPC for total As in muscle/hepatopancreas is 2.81 mg/kg, and in muscle is 2.62 mg/kg.

Hepatopancreas model

The best-fit model equation (adjusted $R^2 = 0.84$) is

$$\log \text{Inorganic As} = -3.354 + 0.675 \log \text{Total As}$$

or equivalently,

$$\text{Inorganic As} = 0.0350 \times \text{Total As}^{0.675}$$

Concentrations of total As range from 0.37 to 2 mg/kg, and for inorganic As, from 0.017 to 0.062 mg/kg. By comparison, in NBSA data for blue crab, hepatopancreas concentrations of total As range from 0.77 to 6.16 mg/kg, and the EPC is 3.46 mg/kg.

Model predictions

As noted above, the NBSA EPCs are above the range of LPRSA data for both models; therefore, applying the models to NBSA data would require extrapolating outside the observed range of the LPRSA data. This is another substantial limitation of the model-based approach.

The model predictions with extrapolations are as follows. Importantly, the 95% prediction interval includes both uncertainty in the model parameters and residual variability around the best-fit line. The residual variability is substantial, particularly for the muscle and muscle/ hepatopancreas model.

Tissue	NBSA Total As EPC (mg/kg)	Model-Predicted Inorganic As (mg/kg)	95% Prediction Interval
Muscle	2.62	0.022	0.013–0.039
Muscle/hepatopancreas	2.81	0.023	0.013–0.040
Hepatopancreas	3.46	0.081	0.043–0.151

These model predictions correspond to less than 1% of total As present as inorganic As (in the case of muscle and muscle/hepatopancreas), or approximately 2% of total As present as inorganic As (in the case of hepatopancreas).

J-3 Prior Regulatory Determinations

Several different values have been used by state and federal agencies to estimate the proportion of total arsenic present as inorganic arsenic. For example, USEPA states in its Technical Summary of Information Available on the Bioaccumulation of Arsenic in Aquatic Organisms that the consensus in the literature is that

approximately 10% of arsenic is present as inorganic arsenic in marine fish and shellfish (USEPA 2003). USEPA further states that, while less is known about arsenic speciation in freshwater fish and shellfish, it is believed that 10% or less of arsenic is present as inorganic arsenic. Although federal water quality criteria for arsenic do not apply this or any assumption about the proportion of total arsenic present as inorganic arsenic, the 10% factor has been applied by the Oregon Department of Environmental Quality (ODEQ) in developing arsenic water quality criteria, which were accepted by USEPA (ODEQ 2011). As part of its analysis, ODEQ (2011) cites a 2002 USEPA study that used an assumption of 10% inorganic arsenic proportion in all freshwater fish species for risk assessment. The USEPA study reported the following findings from a 1996 Tetra Tech fish-tissue study:

- Overall arithmetic average inorganic arsenic proportion for all composite samples: 6.5%
- Average inorganic proportion by species: from 0.5% (in carp) to 9.2% (in sturgeon)
- Average inorganic proportion in anadromous species: 1.0%
- Average inorganic proportion in resident species: 9%.

The 2002 USEPA study also reported the following findings from a study of fish tissue in the Willamette River (EVS 2000):

- Average inorganic proportion in carp (whole body): 4.2%
- Average inorganic proportion in bass (fillet): 3.8%.

ODEQ further notes a review of 20 studies (Schoof and Yager 2007), which found that, in freshwater finfish, 10% represented the 75th percentile of inorganic proportions observed.

As a point of comparison, ODEQ reports that the State of Maryland uses a value of 4%, whereas USEPA Region 6 and the State of Colorado use a value of 30% (ODEQ 2011) to account for the proportion of inorganic arsenic. Collectively, a value of 10% appears to represent a reasonably conservative (but not unreasonably conservative) estimate of the proportion of inorganic arsenic; 4% (as used by the State of Maryland) may not be sufficiently conservative. Finally, a 2009 review found that the percent inorganic arsenic for freshwater finfish “is generally <10%, but ranges up to nearly 30%” (Lorenzana et al. 2009); this result implies that 30% (as used by Region 6 and the State of Colorado) is a worst-case or upper-bound value.[1]

J-4 Conclusions

Based on the results of this analysis, it was assumed that 10% of the total arsenic in fish and crab is inorganic arsenic, and 90% of the total arsenic is organic arsenic for purposes of the NBSA BHHRA. As noted above, the analysis of LPRSA BHHRA data in blue crab suggests that the average inorganic arsenic proportion is on the order of 1% in those samples. Accordingly, while the LPRSA BHHRA data are insufficient to develop a site-specific inorganic arsenic proportion for NBSA fish and crab species, they do suggest that a 10% inorganic proportion is likely to be health-protective.

[1] It should be noted that the conclusion of Lorenzana et al. (2009) is that no general inorganic arsenic proportion can be derived for seafood. However, EPA does not appear to have adopted this position, as it has used and accepted “default” inorganic proportion values for fish and shellfish.

J-5 References

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